

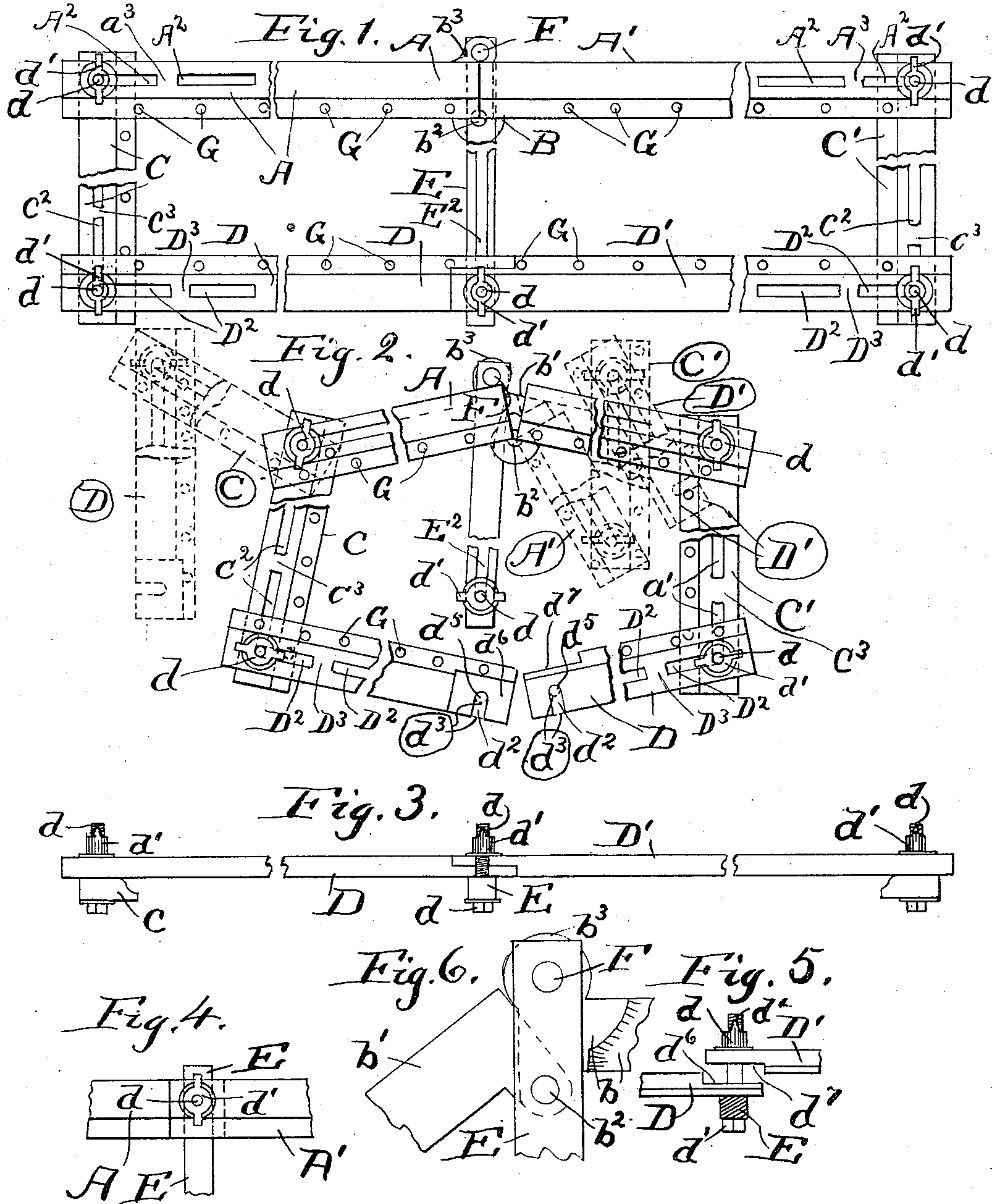
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Patented Sept. 6, 1898.

J. C. WHIPPLE.
LACE CURTAIN STRETCHER.

(Application filed Mar. 9, 1893.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES C. WHIPPLE, OF CHICAGO, ILLINOIS, ASSIGNOR TO RILEY T. WHIPPLE,
OF SAME PLACE.

LACE-CURTAIN STRETCHER.

SPECIFICATION forming part of Letters Patent No. 610,294, dated September 6, 1898.

Application filed March 9, 1898. Serial No. 673,207. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. WHIPPLE, a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Lace-Curtain Stretchers, of which the following, when taken in connection with the drawings accompanying and forming a part of the invention, is a full and complete description sufficient to enable those skilled in the art to which it pertains to understand, make, and use the same.

This invention relates to lace-curtain stretchers which are designed to be adjustable to a limited extent, different sizes being used where great difference in size of curtains exists, and which are intended to be taken down when not in use; and the object of this invention is to obtain a lace-curtain stretcher which can be taken down without detaching the several bars forming the side rails and end rails of the curtain-stretcher from each other, so that such curtain-stretcher can be at any time put into operative condition with but little trouble and with each part coming into proper relative position with the other parts thereof.

A further object of this invention is to obtain a lace-curtain stretcher which can be folded into small space when not in use, which will be made of light material, will be strong and durable, and not yielding to any considerable extent to the strain thereon by a curtain stretched thereover.

Figure 1 of the drawings is a top plan view of a curtain-stretcher embodying the invention with the several parts thereof in operative position. Fig. 2 is a top plan view of the same with the several parts thereof in a partially-folded position and showing by dotted lines the manner in which the several bars are folded together. Fig. 3 is a side elevation of the curtain-stretcher in an operative position. Fig. 4 is a plan view of a modification of the manner of joining together the side bars lettered A A' in Fig. 1, such modification being the same kind of a joining as that by which the side bars D D' in such Fig. 1 are joined together when a slot is not used in such side bars, but in place thereof a hole through them is made for the tightening-bolt. Fig. 5 is a side elevation of the adjacent ends of

bars D D' in Fig. 1, with such bars partially off the bolt joining them together. Fig. 6 is an enlarged bottom plan view of the hinge by means of which the side bars A A' of Fig. 1 are pivotally secured together; and Fig. 7 is a side elevation of such hinge shown in Fig. 6 with a cross-sectional view of the cross-bar of the curtain-stretcher, with the bolt pivotally securing such cross-bar to one of the leaves of the hinge indicated by dotted lines through such cross-bar.

In the drawings referred to and forming a part of this specification a reference-letter applied to designate a given part is used to indicate such part throughout the several figures of the drawings wherever the same appears.

A A' are side bars pivotally secured together by pivotal hinge B, forming one of the rails of the lace-curtain stretcher.

A² A² are slots in the respective side bars A A'.

To obtain a curtain-stretcher frame on which lace curtains varying largely in size may be placed and at the same time to obviate the necessity of making the several bars of the frame of heavy sticks of wood—that is, large in cross-section—more than one adjustment-slot of the several series are made in the several bars forming the frame. A single slot of sufficient length for any required adjustment of the frame may be made in such bars, if desired; but I prefer to have separately-made slots—that is, slots separated by a portion of the bar which is not cut out, as indicated in the bars A A' by the reference-letter A³.

Pivotal hinge B is formed of leaves b b' and pivot b². Leaf b has thereon the flange or projecting part b³, (see Figs. 1 and 6,) to which is pivotally secured the cross-bar E by pivot F.

C C' are the end bars of the curtain-stretcher, having slots C² C² therein, the several slots in each end bar being separated by the portion of the bar which is not cut out, (lettered C³.) The end bars are pivotally secured to side bars A A', respectively, by the bolts having fly-nuts d' thereon. When the nuts d' are loosened, the several bars can be pivotally moved relative to each other on

the bolts d ; but when tightened such bars are firmly and rigidly held in any adjusted position thereby.

$D D'$ are side bars, having therein, respectively, slots $D^2 D^2$, through which bolts $d d$ extend, such bolts also passing through one end of the side bars $C C'$, respectively. The slots $D^2 D^2$ in each cross-bar are separated by portion D^3 of the bar which is not cut out. Cross-bar E has therein slot E^2 , and bars $D D'$ have therein, respectively, the transverse slots $d^2 d^2$. One of the bolts extends through the slot E^2 in bar E , and when the curtain-stretcher is in position for use such bolt also extends through the slots $d^2 d^2$ in bars $D D'$, being tightened by nut d' to hold the adjacent ends of the bars $D D'$ and cross-bar E firmly and rigidly together. The slots $d^2 d^2$ are used to permit the curtain-stretcher to be taken down without removing bolt d , passing there-through, (as last above described when the curtain-stretcher is in position for use,) from the frame, it being in such case simply necessary to loosen the nut d' on such bolt to withdraw the adjacent ends of such side bars $D D'$ therefrom; but if it is preferred holes, as $d^5 d^5$, may be used in place of the slots $d^2 d^2$, in which case the parts of the side rails indicated by the dotted lines lettered $d^3 d^3$ are not cut out therefrom. The adjacent ends of the rails $D D'$ are also cut away, as at $d^6 d^7$, Figs. 3 and 5, so that the rails will be in the same horizontal plane when the apparatus is in operative position.

The curtain-stretcher embodying this invention is illustrated in operative position in Fig. 1 of the drawings, it simply being necessary to attach the curtain to be stretched thereon on the pins $G G G$.

When it is desired to take the stretcher down from its operative position, it is simply necessary to loosen the several nuts $d' d'$, disengage the adjacent ends of bars D, D' , and E , and fold the several bars into about the position of the bars A', C' , and D' , as indicated by the dotted lines in Fig. 2. To thus fold the several bars, bars C and A and bars C' and A' are respectively folded outwardly, as is well indicated with reference to bars $A C$ in Fig. 2, where the same are shown as partially folded, and the bars $C D$ and $C' D'$ are folded inwardly, as is indicated by the dotted lines in Fig. 2.

The several bars forming this curtain-stretcher may be of substantially the same

length and of comparatively light material, because of the manner in which the adjustment-slots are made and the several bars are joined together and also because of the cross-bar E , while when not in use the stretcher can be folded into small compass, easy for transportation and in good shape to be laid aside until again wanted for use, when the several bars can be again brought into the position thereof illustrated in Fig. 1 of the drawings, the nuts $d' d'$ tightened, and the same is ready for use.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a curtain-stretcher, the combination of side and end bars, such bars having slots adjacent to one of the ends thereof, the slots in the end of each bar separated by an integral portion of the bar, bolts passing, respectively, through a bar and one of the slots in a second bar, pivotally securing the bars together at adjacent ends, a hinge secured to the side bars on one side of the stretcher, whereby such side bars are hinged together, a cross-bar forming a brace pivotally secured to such hinge, and thumb-nuts on the bolts, respectively, whereby the several bars may be rigidly secured together; substantially as described.

2. In a lace-curtain stretcher, the combination of side bars, a pivotal hinge secured to the side bars, pivotally securing adjacent ends of the side bars together, a projecting flange to one of the leaves of the hinge, and a cross-bar pivotally secured to such projecting flange; substantially as described.

3. In a curtain-stretcher, the combination of side and end bars, a pivotal hinge secured to the rails forming the side bar on one side of the curtain-stretcher at adjacent ends of such rails, transverse slots in the adjacent ends of the rails forming the other side bar, a projecting flange to one of the leaves of the hinge, a cross-bar pivotally secured to such projecting flange, and a bolt passing through the cross-bar and through the transverse slots in the adjacent ends of the rails forming the side bar on the opposite side of the curtain-stretcher; substantially as described.

JAMES C. WHIPPLE.

In presence of—

FRANK B. MEECH,

CHARLES TURNER BROWN.