

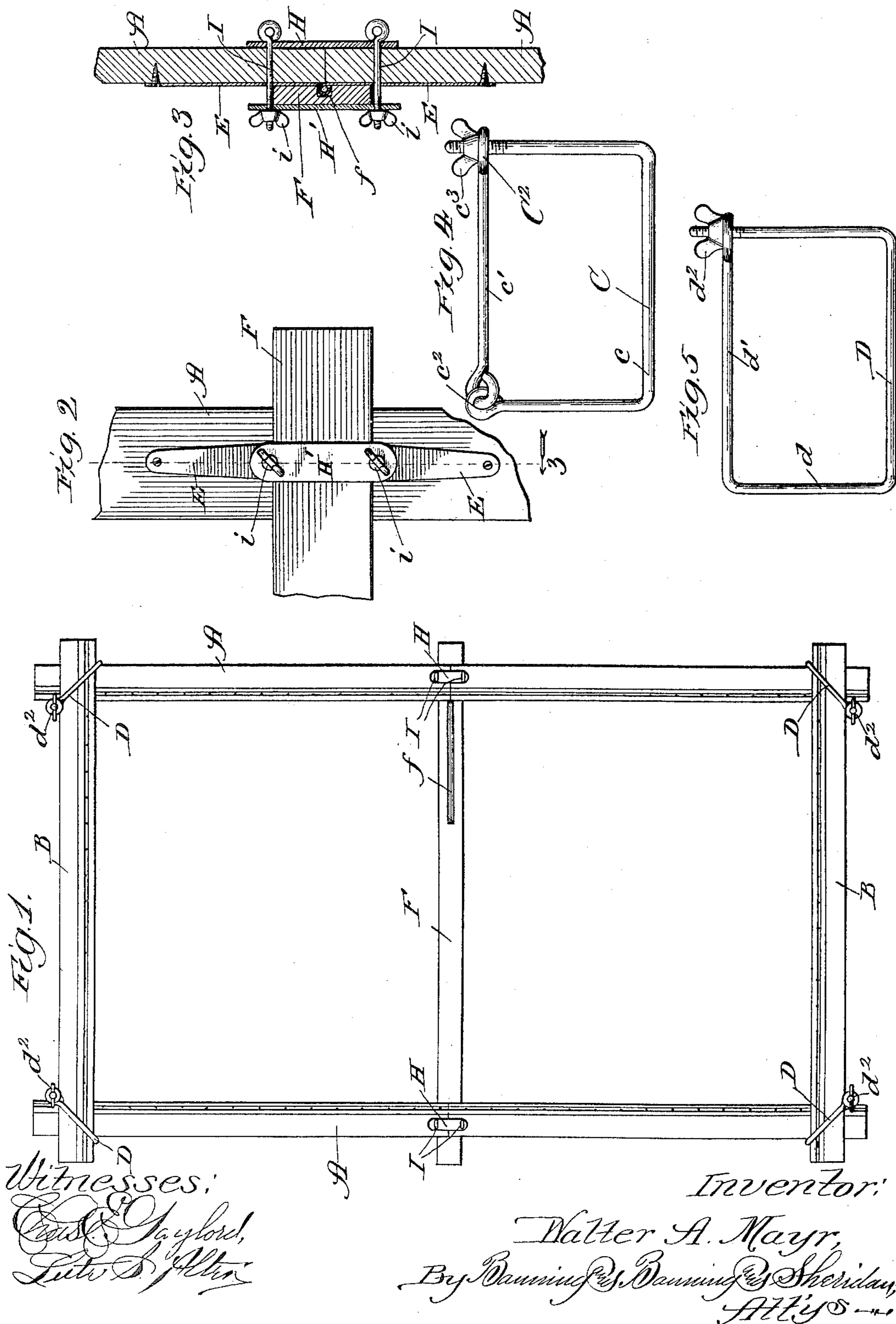
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Patented Jan. 2, 1900.

W. A. MAYR.
CURTAIN STRETCHER.

(Application filed Dec. 2, 1898.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

WALTER A. MAYR, OF CHICAGO, ILLINOIS.

CURTAIN-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 640,214, dated January 2, 1900.

Application filed December 2, 1898. Serial No. 698,104. (No model.)

To all whom it may concern:

Be it known that I, WALTER A. MAYR, a citizen of the United States, residing at Chicago, Illinois, have invented certain new and useful Improvements in Curtain-Stretchers, of which the following is a specification.

The object of my invention is to make a frame on which lace curtains can be stretched and dried which shall be light, cheap, easily adjusted to different sizes, strong, and durable; and my invention consists in the features and details of construction hereinafter described and claimed.

In the drawings, Figure 1 is a plan view of my improved curtain-stretcher; Fig. 2, an enlarged plan view of a portion of the frame, taken at the intersection of one of the longitudinal bars and the intermediate cross or strengthening bar; Fig. 3, a side elevation of a longitudinal section taken in line 3 of Fig. 2, and Figs. 4 and 5 elevations of corner-clamps.

In making my improved curtain-stretcher frame I make longitudinal side bars A and end bars B of the desired length and size to make a frame of the desired dimensions. These side and end bars may be made quite slender and small as compared with the bars that are now generally in use, owing to the peculiar means of attaching them together and strengthening and supporting them which I employ and which will be hereinafter explained. Owing to these means, also, I am able to dispense with slotting the side and end bars to permit the frame to be varied in size, as is commonly done, which of course avoids weakening the bars and admits of their being made of a diminished size. In order to fasten and secure the bars together in the frame, I prefer to employ corner-clamps C or D, like those shown in Figs. 4 and 5. In Fig. 4 the clamp is made of two pieces of wire *c* and *c'*. The wire *c* is bent into a U shape to form the three sides of a quadrilateral loop, and the wire *c'* is intended to form the fourth side or top of the loop. The two pieces of wire are fastened together by an eye connection at *c*². The opposite end of the wire *c* is screw-threaded and intended to pass through an eye *C*² at the free end of the piece *c'*. After being passed through the eye a thumb-nut *c*³ is screwed onto it to prevent the piece *c'* from being removed and to ad-

just its position up or down, so as to regulate its clamping contact with the bars when in place. To put it into position to hold and clamp the bars at the corners of the frame, the thumb-nut is removed and the piece *e'* lifted up, when the U-shaped piece is inserted diagonally across the corner, as shown in Fig. 1. The top or hinge piece *c'* is then turned down into place with its eye over the threaded end of the wire *c* and the thumb-nut screwed on into place. The more tightly it be screwed down the more tightly will the clamp hold and bear against the bars, so that they may be clamped and held together with any desired degree of tightness and firmness. In Fig. 5 I have shown the entire quadrilateral loop made of a single piece of spring-wire *d* instead of being made of two pieces of wire hinged together by an eye-joint, as in Fig. 4. This clamp is inserted or removed by lifting up the top side *d'* of the loop and springing it over the bars at the corners and then applying the thumb-screw *d*², by which it may be pressed down and clamped against the intersecting bars on all sides with the desired degree of closeness and firmness to hold them securely in place. The side bars are of such length that it is desirable that a provision may be made for permitting them to be folded or doubled upon themselves, and to this end they are made jointed at or about midway of their length and held together by strap-hinges E. (Particularly shown in Figs. 2 and 3.) These hinges are placed on the back or reverse side of the bars, so that weight or pressure on the bars when placed face up in a horizontal position only brings the abutting ends of the bars more closely together and so prevents sagging of the bars at the joints. The presence of the joints makes it desirable also to employ a strengthening or reinforcing piece to prevent any sagging or giving way of the frame when loaded with curtains stretched upon it, although, as already pointed out, the arrangement of the hinges on the backs of the bars tends to prevent sagging. When so loaded, the frame may be in a horizontal position, as shown particularly in Fig. 1, and a number of curtains stretched on it at the same time. I therefore employ a transverse bar F, intended to cross the frame at the axes of the hinges. This bar is provided with

grooves *f*, one of which is shown in Fig. 3, of a depth to receive the protruding ridges of the hinges at their pintles or axes. One of these grooves may be short—merely of a length to receive the ridge of the hinge—while the other—the one shown in Fig. 1—may be of sufficient length to permit the adjustment of one of the side bars toward and from the other to narrow or widen the frame. In order to hold this transverse bar in place firmly and securely, I show in the drawings washers, preferably compound washers H and H', provided with holes in them far enough apart to register with holes through the straps or leaves of the hinges. These washers are intended to be placed on opposite sides of the side bars and so as to inclose the transverse bar, as shown particularly in Fig. 3. Bolts I are then inserted through the holes of the washers and through the holes of the leaves or straps of the hinges and fastened in place by thumb-nuts *i*, as shown in Fig. 3. By tightening the nuts the washers are turned tightly against the side bars and the transverse bar over the axes of the hinges, so that the parts are firmly and securely fastened together. When it is desired to fold the side bars at their joints, the thumb-nuts are removed, the bolts I are withdrawn, the washers are taken off, and the transverse bar removed. When it is desired to adjust the size of the frame—to make it smaller, for instance—the corner-clamps and the washers are loosened by turning their respective nuts, when the end bars may be slid toward each other along the side bars and the side bar at the right of Fig. 1 may be moved toward the other side bar. When the desired size has been reached, the thumb-nuts are again tightened and the frame is fastened securely in its new or adjusted position.

While I have described the washers and bolts as the means employed for fastening the transverse bar and the side bars together, yet I do not mean to confine myself to such means, as any other among a large number of suitable devices may be made use of. I simply propose to show and describe one practical way of doing the work and leave myself at liberty to use any that I may find convenient and desirable.

The transverse bar, passing over the ridges or axes of the hinges, which are received in grooves of a size to admit them, serves to insure the arrangement of the frame-bars so that the frame will be rectangular—that is,

all of the angles will be right angles. This causes the side bars to constantly be parallel with each other and the end bars to be constantly parallel with each other, and the angles at the corners and at the intersecting bar to be right angles. This result is also aided by the peculiar corner-clamps employed, which assist in creating right angles at the points of intersection. This is an important advantage in a curtain-stretcher frame, as when curtains are washed and stretched on the frame to dry it is important that they be dried straight and not askew or drawn out of proper position. Not only does the transverse bar aid to prevent sagging of the frame when it is arranged in a horizontal position with its face up and curtains stretched on it, but it prevents the side bars from sagging when the curtain is set up on edge. The side bars are prevented from sagging no matter what position the frame is placed in.

What I regard as new, and desire to secure by Letters Patent, is—

1. In an adjustable curtain-stretcher frame, the combination of end bars, sectional side bars adjustably held thereon and having their sections connected together by hinges which have their pintles transverse to the side bars and parallel with and raised above their faces and which permit the sections of the side bars to fold together upon themselves, and a transverse bar provided with longitudinal grooves to receive the ridges or axes of the hinges and which act as a guide therefor, substantially as described.

2. In an adjustable curtain-stretcher frame, the combination of end bars, sectional side bars adjustably held thereon and having their sections connected together by hinges which have their pintles transverse to the side bars and parallel with and raised above their faces and which permit the sections of the side bars to fold together upon themselves, a transverse bar provided with longitudinal grooves to receive the ridges or axes of the hinges and which act as a guide therefor, and means for securing the transverse bar to the side bar whereby sagging of the side bars is prevented when the frame is on its edge, substantially as described.

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Witnesses:

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