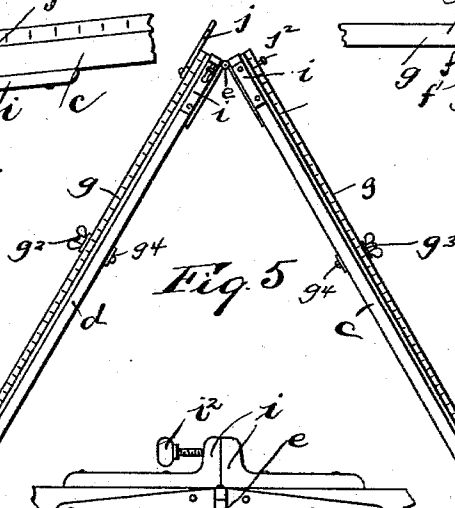
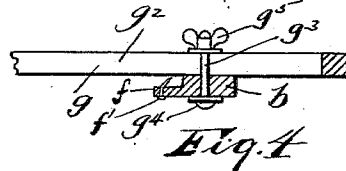
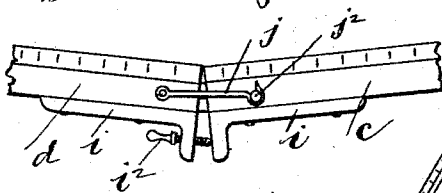
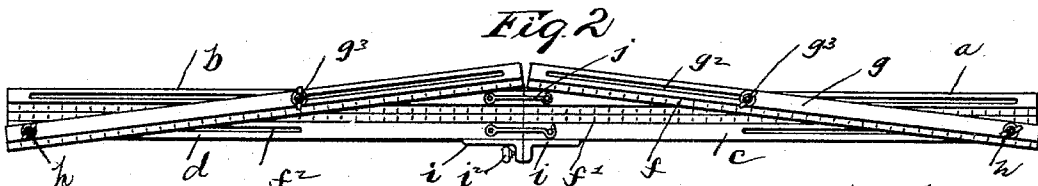
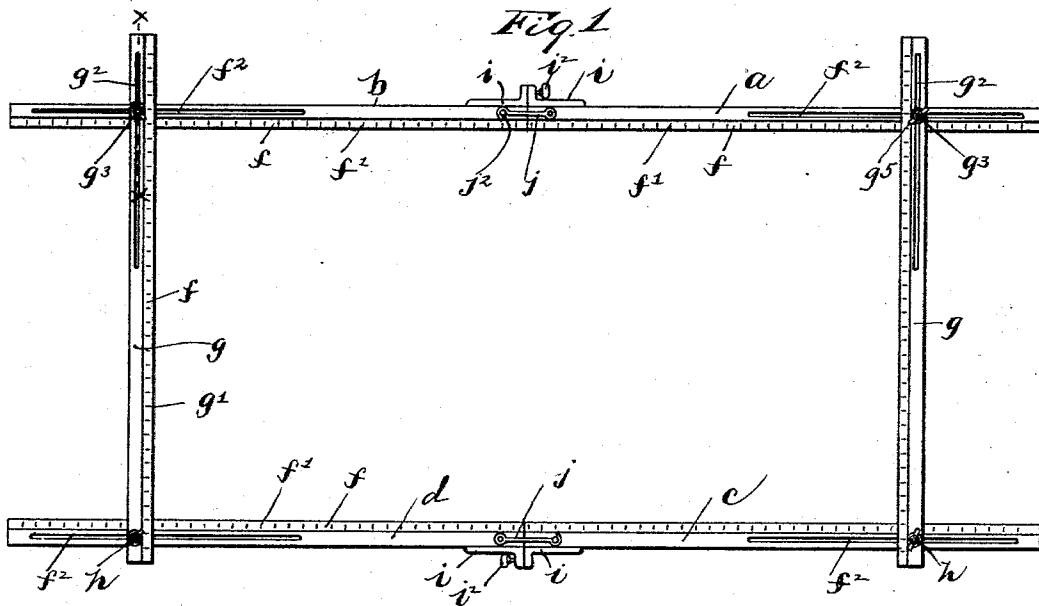


(No Model.)

G. A. WARD.
CURTAIN STRETCHER FRAME.

No. 551,423.

Patented Dec. 17, 1895.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE A. WARD, OF COLUMBUS, OHIO.

CURTAIN-STRETCHER FRAME.

SPECIFICATION forming part of Letters Patent No. 551,423, dated December 17, 1895.

Application filed January 3, 1895. Serial No. 533,737. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. WARD, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Curtain-Stretcher Frames, of which the following is a specification.

My invention relates to the improvement of curtain-stretching frames, and the objects of my invention are to provide an improved frame of this class adapted for use in stretching and drying lace-curtains; to provide improved means for adjusting the frame to facilitate the stretching of curtains of varying sizes; to so construct said frame as to admit of its being folded into compact form when not in use; to provide improved means for preventing the central portions of the side arms being bowed inward, and to produce other improvements in details of construction which will be more fully pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of my improved stretcher-frame in position for use. Fig. 2 is a view of the same with its sides folded together. Fig. 3 is a detail view of the under sides of portions of two adjoining side-arm sections showing the manner of drawing the central portions of said frame-sides outward. Fig. 4 is a detail sectional view on line *xx* of Fig. 1. Fig. 5 is a side view of the frame showing its halves partially folded together, and Fig. 6 is a detail view of the under side of the frame portions shown in Fig. 3.

Similar letters refer to similar parts throughout the several views.

In the construction of my improved curtain-stretcher frame I form each of the side or longer arms thereof in two sections, said sections being indicated respectively at *a b* and *c d*. The inner ends of these side-arm sections are hinged together on their under sides by suitable hinges *e*. The inner sides of the side frame-arms thus formed are rabbeted, as indicated at *f*. From the upper sides of said rabbeted portions project upwardly at suitable intervals pins *f'*, said pins being preferably bent slightly outward. Each of the side frame-piece sections is provided in its outer portion with an elongated slotted opening or

mortise *f*². The oppositely-located arm-sections *b* and *d* and *a* and *c* are connected, as shown, by end frame-arms *g*, the inner portions of which are rabbeted to correspond with the portions *f* of the side arms, said rabbeted portions being provided with pins *g'* which correspond with the pins *f'*. Each of these end arms *g* is provided in one of its end portions with a longitudinal slotted opening or mortise *g*². Through this mortise *g*² pass clamping-bolts *g*³, said bolts extending loosely through the mortises *f*² of the side-arm sections *a* and *b* and being provided on their under sides with heads *g*⁴ which are adapted to bear or clamp against the undersides of said side-arm sections. The bolts *g*³ are also provided on their outer ends with suitable thumb-nuts *g*⁵. The opposite ends of the end arms *g* from those containing the slotted openings *g*² are provided with bolt-holes through which pass clamping-bolts *h*, said clamping-bolts being constructed as described for the bolts *g*³ and being made to pass through the slotted openings *f*² of the side-arm sections *c* and *d*.

The inner end of each of the sections *a* and *b* *c* and *d* has secured on its outer side an angular plate *i*, the outturned inner ends of said plates being flush with the ends of said sections. Through one of said outturned plate ends is adapted to pass a set-screw *i*², the inner end of which is adapted to bear against the inner face of the adjoining plate *i*. On the upper sides of the sections *a* and *d* are pivoted catch-hooks *j*, the hook terminations of which are adapted to engage with pins *j*², which project from the upper sides of the sections *b* and *c*, thus admitting of a substantially-rigid connection of the sections of the side frame-arms.

By arranging the arms of my improved frame in the position shown in Fig. 1 of the drawings—that is, by hooking together the arm-sections *a b* and *c d* and clamping the end arms *g* in positions at right angles with said side arms—it will be seen that a substantially-rectangular frame is produced, upon the projecting pins *f'* and *g'* of which may be hooked the edges of a curtain. It is evident that the curtain may be stretched lengthwise in this position by loosening the clamps *g*³ and *h* and moving the end frame-arms outward, or said curtain may be stretched laterally by

loosening said clamps and moving the side arms outward. In case there is a tendency of the longer side arms to sag inward at the points of connection of their sections, said sections may have their inner ends forced outward, as illustrated in Fig. 3 of the drawings, by turning inward the set-screw i^2 , thus causing a slight separation of the plates i .

The operation of folding my improved curtain-stretcher into a compact form consists in loosening the clamping-screws g^3 and h , and so inclining the end arms g as to bring the clamping-screws g^3 in the inner ends of the slots f^2 of the sections a b and the screws h in the outer ends of the slots of the sections c d . The longer side arms are then forced inward one against the other to the position shown in Fig. 2 of the drawings, after which the hooks j are disconnected from the pins j^2 and the two halves of the frame may be folded together, as partially shown in Fig. 5 of the drawings.

From the construction and operation which I have described, it will readily be seen that

a simple, reliable, and effective stretcher-frame is produced on which curtains of varying sizes may be uniformly stretched, and it will also be seen that said frame may be folded into a compact form when not in use.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

In a curtain stretcher frame the combination with the side arms formed of jointedly connected sections as described pins projecting from said side arm sections, angle plates i affixed to the inner ends of said side arm sections and set screws i^2 adapted to separate said angle plates as described, of end arms g having pins projecting therefrom, said end arms having an adjustable and folding connection with said side arm sections, substantially as and for the purpose specified.

GEORGE A. WARD.

In presence of—

C. C. SHEPHERD,

BARTON GRIFFITH.