No. 839,969. PATENTED JAN. 1, 1907.

F. S. STANFIELD.

CURTAIN STRETCHER.

APPLICATION FILED DEC. 12, 1905.

Fig. 1.

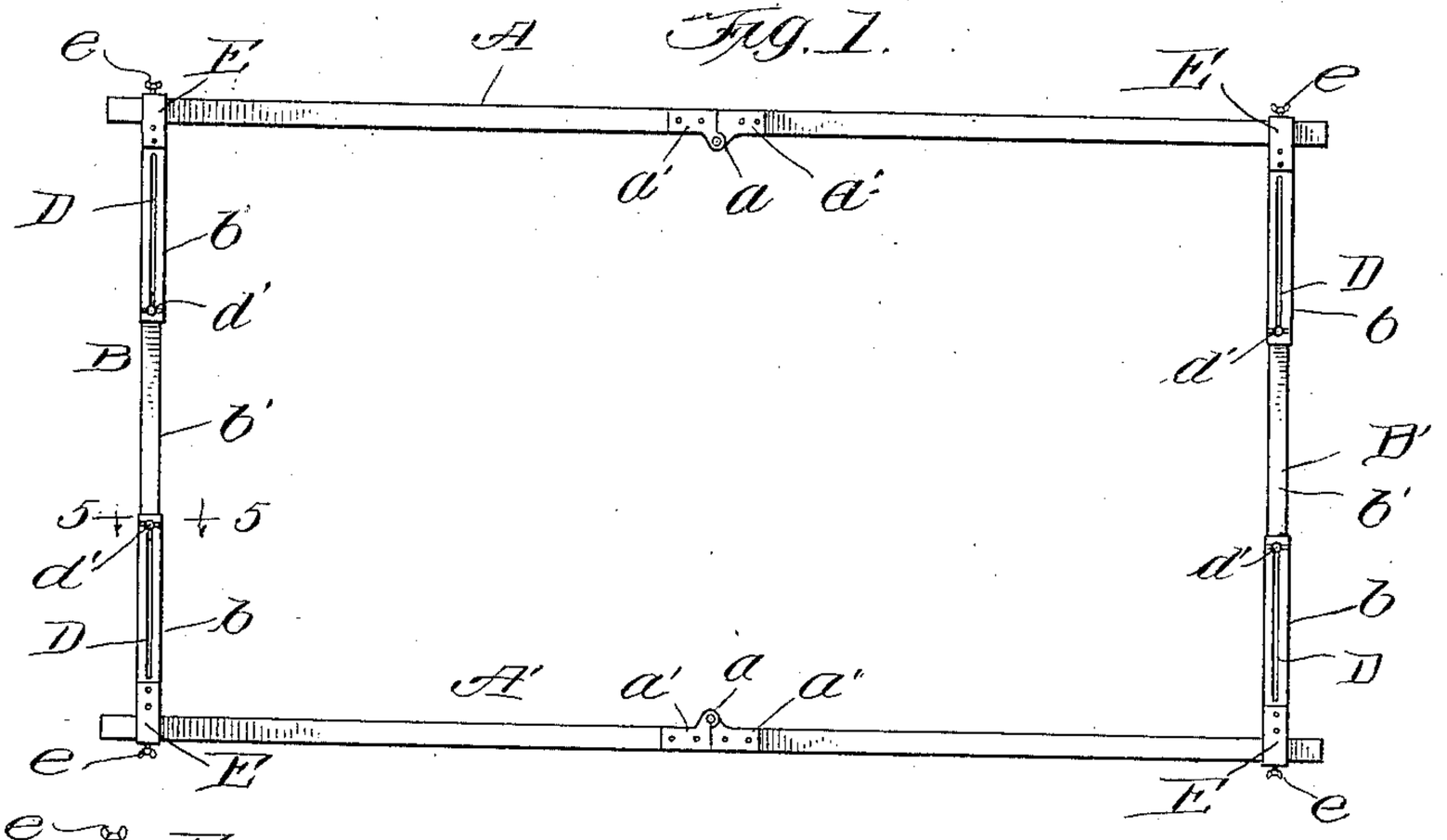


Fig. 4.

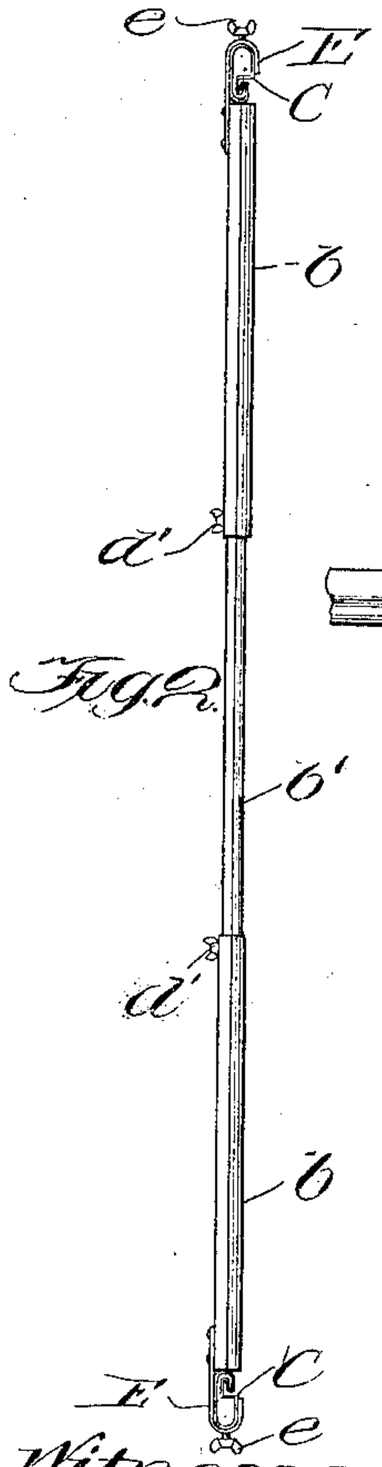


Fig. 2.

Fig. 3.

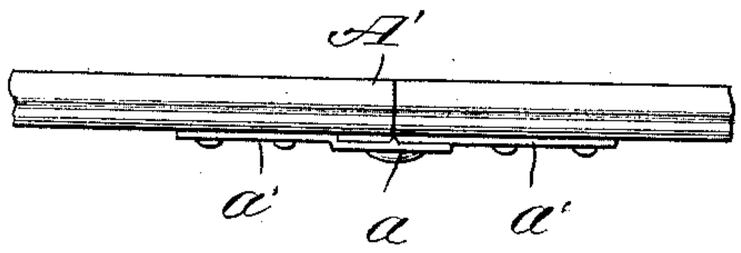


Fig. 6.

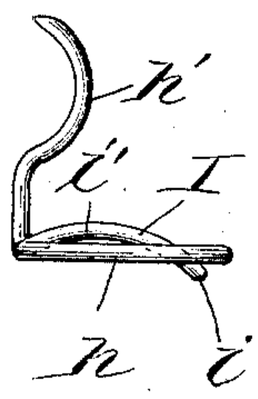
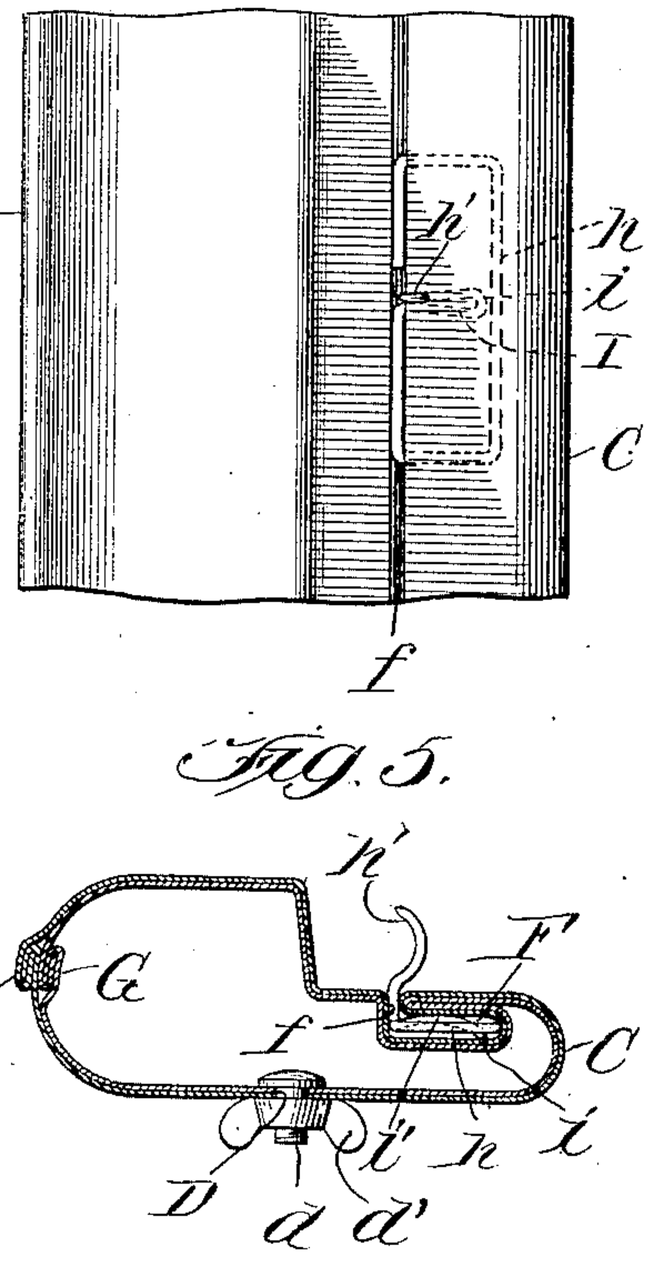


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

FRANK S. STANFIELD, OF CLEVELAND, OHIO.

CURTAIN-STRETCHER.

No. 839,969. Specification of Letters Patent. Patented Jan. 1, 1907.

Application filed December 12, 1905. Serial No. 291,495.

To all whom it may concern:

Be it known that I, FRANK S. STANFIELD, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Curtain-Stretchers, of which the following is a specification.

The object of this invention is to provide a curtain-stretcher of simple construction which can be easily set up and adjusted to accommodate curtains of different sizes and conveniently folded into compact form for storage or shipment.

A further object of the invention is to provide a metal frame for a curtain-stretcher which shall be light in weight, strong and substantial, capable of being adjusted for curtains of different sizes, and folded into compact form for storage and shipment.

A still further object of the invention is to provide a metallic stretcher-frame in which the four bars are alined with each other and support the pins to carry the curtain in a single plane.

In the accompanying drawings, which illustrate one embodiment of the invention, Figure 1 is a rear view of the frame. Fig. 2 is an end view. Fig. 3 is a detail of one side bar, showing the hinge. Fig. 4 is a top plan view of a section of a bar, showing a pin. Fig. 5 is a sectional view on the line 5 5 of Fig. 1. Fig. 6 is a detail view of the pin.

The frame is composed of two long bars A A′ and two short bars B B′, which are adapted to be fastened together into a rectangular frame and adjusted to accommodate curtains of various sizes. The long bars will be referred to as "side" bars and the short bars as "end" bars. The bars are made of sheet metal stamped, pressed, or otherwise formed into the proper shape, as shown in Fig. 5, each bar having an extension C to receive the pins and provide, in effect, a rabbeted edge for the bar to protect the pins when the bars are folded together.

The side bars A A′ are each made in two sections, and the sections are hinged together, the hinge *a* being preferably located at the inner edge of each bar, so that the bar will fold with its inner edges together. This arrangement of the hinges, which are each formed of two plates *a′*, Fig. 3, fastened on the back or under side of the bars, enables the two sections of the bar to abut at their meeting ends, and thus provides for maintaining the two sections of each side bar in exact alinement when the frame is set up and for resisting the strain of the curtain.

The end bars are each preferably composed of two end sections *b* and a middle section *b′*, the latter being constructed to telescope in the end sections. The end sections *b* are each provided with a slot D, and the middle section has a pin *d* at each end which works in said slot and carries a thumb-nut *d′*, whereby the several sections of the end bar can be rigidly fastened together after the bar has been adjusted to its proper length.

A guide E is provided on each end of each end bar, and these guides are shaped to receive the side bars, which are slidable therein. Set-screws *e* are provided in the guides to lock the end bars and side bars together after they have been properly adjusted.

Each of the bars is provided with a groove F for the pins, which are shaped to fit the groove. I have found it convenient to make the groove and pin L-shaped, Fig. 5; but I do not confine the invention to this particular construction, although it is desirable to make the groove as simple as possible to enable the sections of the end bars to telescope easily. The seam G on the middle section *b′* is conveniently located within the bar, and the seam *g* on the end section *b* is located on the outside of the bar to facilitate the telescoping operation.

I may use pins of various forms; but I prefer a pin bent up from a single piece of wire, as illustrated in Fig. 6, and having a substantially rectangular base *h* and a curtain-engaging portion extending upwardly from the base and bent into a hook *h′*. I also prefer to construct the pin so that it will stay in any position to which it is adjusted by frictional engagement with the walls of the groove in which it travels, and for this purpose the pin may be shaped in various ways to provide a spring-action which will at all times insure a sufficient frictional engagement of the pin with the bar. This is accomplished in one way by bending the wire to form a foot I at the base of the curtain-engaging hook *h′*, and this foot is located within the rectangular base and is bent to extend above and below the base and frictionally engage the top and bottom wall of the groove, as clearly shown in Fig. 5. In the particular construction illustrated the end *i* of the foot will bear upon the bottom wall of the groove and the upwardly-bent central portion *i′* will bear against the top wall of the groove. As this

foot is formed by folding the wire upon itself, Fig. 4, it will be strong and substantial and at all times provide sufficient frictional engagement with the walls of the groove to hold the pin in its adjusted position. The neck *f* of the groove through which the hook portion *h'* of the pin extends upwardly may be made of just sufficient width to permit the pin to be adjusted without undue friction between the pin and the side walls of said neck, and with such construction the strain of the curtain attached to the pin will pull the upstanding hook portion of the pin tightly against the wall of the neck of the groove without affecting its base.

A metallic stretcher-frame is of especial importance in laundries, where the frames are in constant use, because it will not be affected by dampness and water like wooden frames, which often swell and warp so badly that the pins cannot be adjusted. I contemplate nickel-plating or japanning or otherwise coating the metal bars to protect them against rust and enhancing the appearance. Making the bars hollow and out of sheet metal avoids any material increase in weight over the ordinary wooden bars and does not increase the cost to manufacture materially. The frame is easily adjusted to accommodate curtains of different sizes, and it is strong and substantial and will hold its rectangular shape.

Instead of making the side bars foldable they may be made telescopic like the end bars; but for simplicity I prefer to make the end bars telescopic and easily adjustable on the side bars, as shown, which gives a satisfactory adjustment of the length and width of the frame. The base of the pin is made so that it will slide freely from one of the telescopic sections to the other, and the spring-foot will give sufficiently to permit this movement and hold the pin in place while it is in the larger slot of one section as well as when it is in the smaller slot of the other section.

What I claim, and desire to secure by Letters Patent, is—

1. A curtain-stretcher pin having a base, and a foot bent to extend above and below the base.

2. A curtain-stretcher pin having a base, an upwardly-extending curtain-engaging portion, and a foot within the base at the bottom of said upwardly-extending portion, said foot being bent to extend above and below the base.

3. The combination of a curtain-stretcher bar having a pin-groove, a pin having a base movable in said groove, and a foot on said base bent to engage the top and bottom walls of the groove.

4. The combination of a curtain-stretcher bar having a pin-groove, a pin having a base movable in said groove, an upwardly-extending curtain-engaging portion, and a foot within the base at the bottom of said upwardly-extending portion, said foot being bent to engage the top and bottom walls of the groove.

5. A curtain-stretcher frame consisting of two hollow sheet-metal side bars, said side bars being each made in two sections, a hinge connecting the adjacent ends of said sections and located at the inner edge of the bar so that the sections will fold with their inner edges together, two hollow sheet-metal end bars, each of said end bars being composed of two end sections and a middle section constructed to telescope in the end sections, guides on the ends of the end bars shaped to receive the side bars, and means for securing the side bars in adjusted position in said guides.

6. A curtain-stretcher frame composed of two side bars and two end bars, each of said end bars consisting of two hollow end sections and a hollow middle section telescopic in the end sections, said sections being made of sheet metal and seamed, the seam on the middle section being located within said section and the seam on each end section being located on the outside of said section.

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Witnesses:
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