

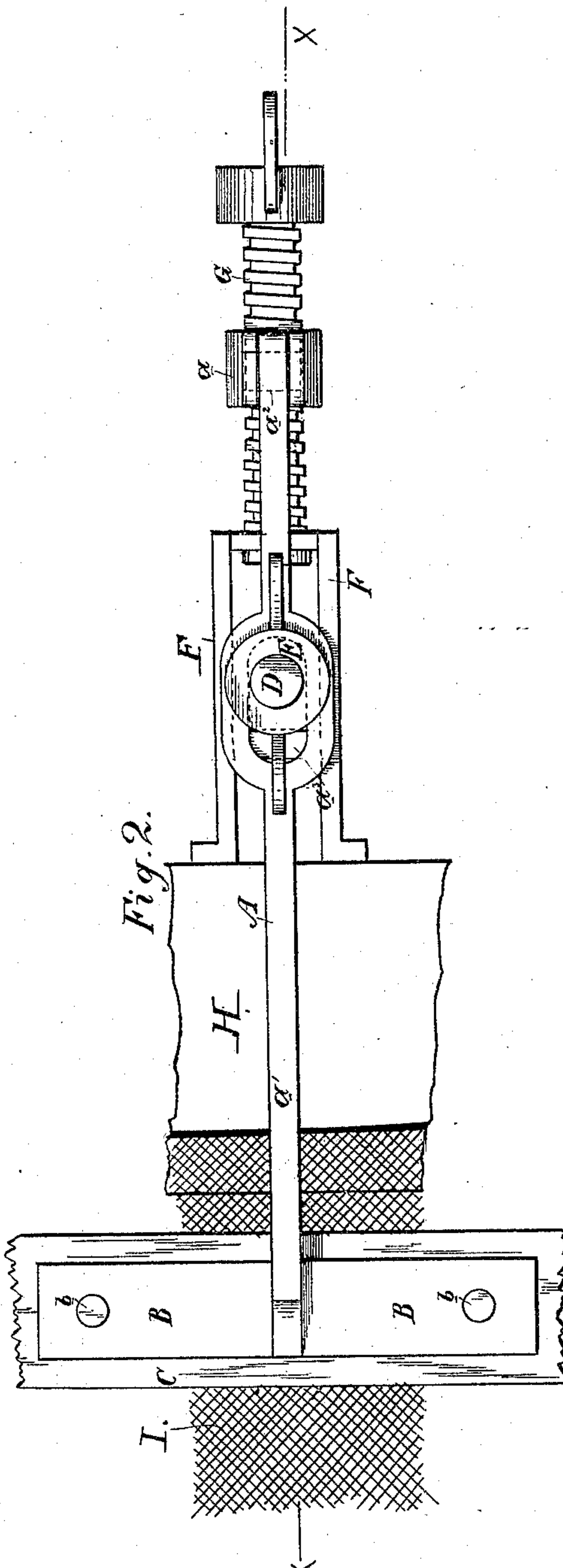
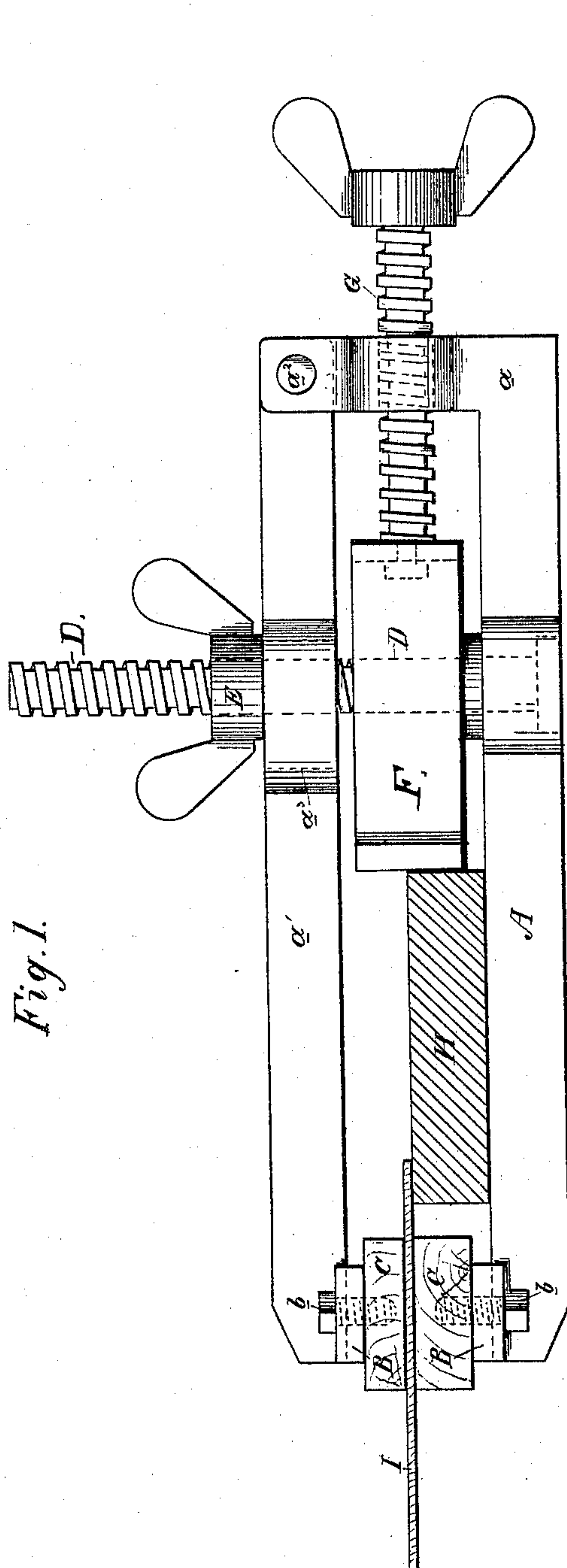
(No Model.)

2 Sheets—Sheet 1.

C. EHRENFELD.
WIRE SCREEN STRETCHER.

No. 324,673.

Patented Aug. 18, 1885.



Witnesses,
Geo. H. Strong,
J. H. House.

Inventor,
C. Ehrenfeld
By Dervey & Co.
Attorneys

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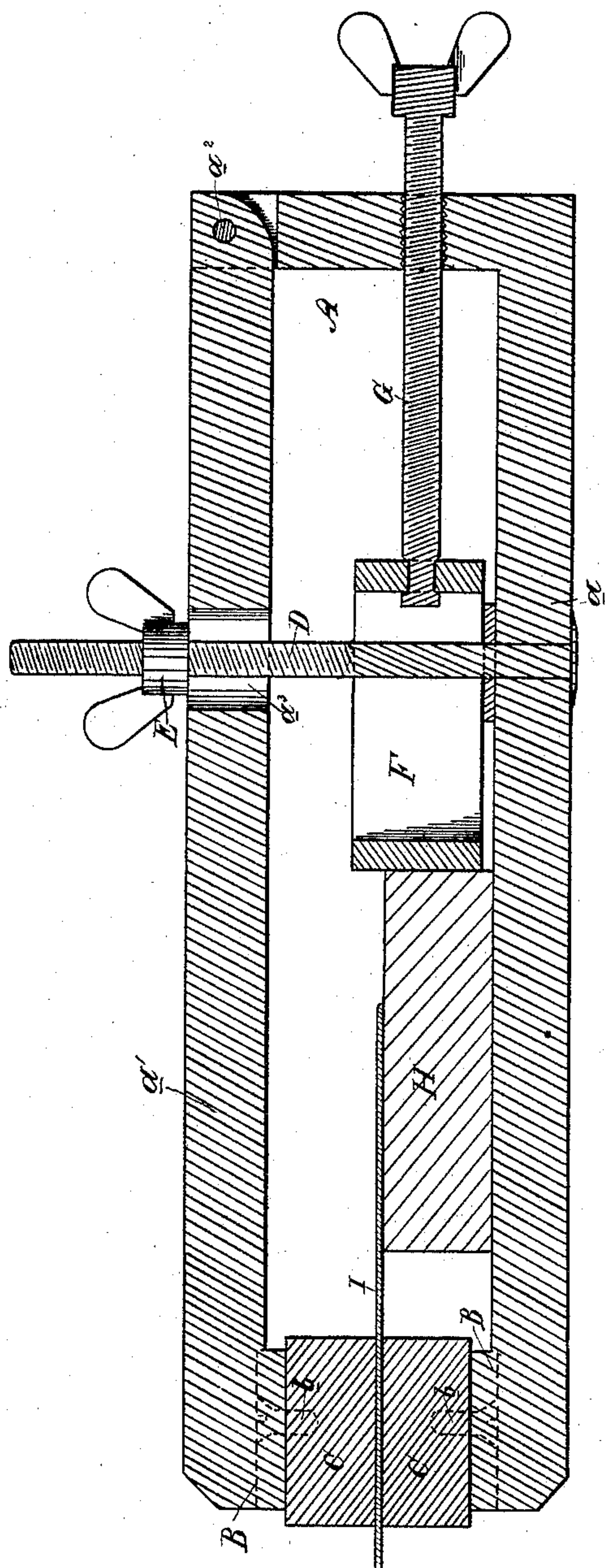
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Fig. 3.



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UNITED STATES PATENT OFFICE.

CHARLES EHRENFELD, OF PASADENA, CALIFORNIA.

WIRE-SCREEN STRETCHER.

SPECIFICATION forming part of Letters Patent No. 324,673, dated August 18, 1885.

Application filed February 12, 1885. (No model.)

To all whom it may concern:

Be it known that I, CHARLES EHRENFELD, of Pasadena, county of Los Angeles, and State of California, have invented an Improvement in Wire-Screen Stretchers; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a new and useful stretcher especially adapted for stretching wire-screens over doors, windows, &c., though it may be used for othersimilar purposes, and as a clamp for holding articles and tools to be worked upon—such, for example, as a saw which has to be filed.

My invention consists in an adjustable frame adapted to straddle the sash or door stile, and provided with clamps for seizing and holding the screen, a bolt and nut for operating the adjustable frame and clamps, a sliding block between the bars of the frame and adapted to bear against the outer edge of the stile, and a screw for setting the block up, whereby the frame is moved back and the screen stretched to its place, all of which I shall hereinafter fully describe by reference to the accompanying drawings, in which—

Figure 1 is a front elevation of my stretcher. Fig. 2 is a top view of same. Fig. 3 is a longitudinal sectional view on the line $x x$ of Fig. 2.

The object of my invention is to provide a simple and effective implement, machine, or tool for stretching wire screens over the parts they are to cover. This has heretofore been accomplished by hand, and has therefore not been done satisfactorily, for the utmost power which the hand can exert is insufficient to stretch the screen tightly enough to prevent its slacking in a short while.

A is a frame which consists of an angular bar, a , and a straight bar, a' , the two being pivoted or hinged together by a bolt or pivot, a^2 . In the end of the bars are the cross-clamps B, to which are secured, by means of screws b , the long wood cleats C, the lower one of which has a thickness equal to that of the sash or door stile, for the purpose I shall presently describe.

D is a bolt, the head of which is secured in the lower bar, a , of the frame. The bolt extends transversely of the frame, passing through the upper bar, a' , in an elongated

slot, a^3 , whereby it may have a play to permit of the adjustment of the frame.

Upon the bolt D is threaded a thumb or crank nut, E, which bears down upon the upper bar, a' , of the frame, and forces the said frame to contract.

Between the bars of the frame, and slotted upon the bolt D, is a block, F, adapted to have a longitudinal movement or adjustment by means of a screw, G, which is seated in the angular portion or arm of the bar a and engages with the rear of said block.

The operation of the device is as follows: H represents the door or sash stile, and I is the wire screen. I first tack the other end of the wire screen to the opposite stile, and then with the hands stretch the screen as much as possible to its place, and tack it down at the corners and sides, as may be necessary. I then slip the frame A over the stile, its bar a' passing above the stile and the bar a below it. The wire screen lies between the two wood cleats C, if such are used, or between the clamps B when the wood cleats are dispensed with.

It will be observed that when the wood cleats are used, they, being long, cover the whole or nearly the whole of the width of the wire screen, thereby enabling me to use a single implement or structure, and at the same time produce an equalized strain upon the screen.

When the wood cleats are dispensed with and the short clamps only used, it may be necessary to use either two stretchers or the same stretcher in successive operations upon different portions of the screen. The lower wood cleat being of the same thickness as that of the stile, causes a straight strain to be exerted upon the screen.

When the implement is in place, I turn down the nut E, whereby the two bars of the frame A are forced together, thereby causing their clamps to bind firmly upon and hold the screen. I then operate the screw G, which forces the sliding block F forward and causes it to bear against the outer edge of the stile. This has the effect of drawing back the frame A, which thus stretches the wire screen to its position, when it may be suitably tacked down.

For doors and sashes of different sizes I may use different sizes of stretchers.

The device may also be used for the purpose

of a clamp for holding saws when they have to be filed. To do this, the frame A is set in an upright position, and should be secured upon the top of a standard of a sufficient
 5 height to enable a man to work without stooping. The saw-blade is then placed horizontally between the wood cleats C, and is there clamped. The long wood cleats in this case serve for the purpose of producing a binding
 10 effect on the whole length of the saw-blade and hold it securely, so that there is no necessity to move the blade during the operation of filing.

The device may further be used for stretching screens of any nature over suitable frames
 15 other than doors and sashes.

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

1. A wire-screen stretcher consisting of an
 20 adjustable frame adapted to straddle the sash or door stile and provided with clamps for seizing and holding the screen, and an adjustable block moving in the frame and adapted to bear against the outer edge of the stile,
 25 whereby the frame is forced back and the screen stretched, substantially as herein described.

2. A wire-screen stretcher consisting of an adjustable frame adapted to straddle the sash
 30 or door stile and provided with clamps for seizing and holding the screen, an adjustable block moving in the frame and adapted to bear against the outer edge of the stile, and a screw seated in the end of the frame and engaging the block, whereby it is set up, substantially as and for the purpose herein described.

3. A wire screen stretcher consisting of an adjustable frame adapted to straddle the sash
 40 or door stile and provided with clamps for seizing and holding the screen, a bolt passing transversely through the frame, and provided with a crank or thumb-nut threaded thereon by which the frame is contracted and its clamps
 45 caused to grip the screen, an adjustable block moving in the frame and adapted to bear against the outer edge of the stile, and a screw seated in the end of the frame and engaging

the block, substantially as and for the purpose herein described.

4. In a wire-screen stretcher, the frame A, consisting of the angular bar *a* and straight bar *a'*, pivoted thereto, said bars passing on each side of the sash or door stile, the cross-clamps B in their ends, and a means for forcing the bars together to cause their clamps to
 55 seize and hold the screen, in combination with the block F, sliding between the arms and adapted to bear against the outer edge of the stile, and the screw G, seated in the angular bar *a* and engaging the block, substantially as herein described.

5. In a wire-screen stretcher, the frame A, consisting of the angular bar *a* and straight bar *a'*, pivoted thereto, the cross-clamps B in
 65 the ends, the transverse bolt D, passing through the bars, and the crank or thumb-nut E, threaded on the bolt, whereby the frame is contracted, in combination with the sliding block F, slotted on the bolt, and the screw G, seated in
 70 the bar *a* and engaging the block, substantially as and for the purpose herein described.

6. A wire-screen stretcher consisting of the combination of the adjustable frame A, adapted to straddle the sash or door stile, the cross-clamps B, secured to the end of the frame, the
 75 long cleats C, secured to the clamps B, the lower one of which has a thickness equal to that of the stile, for the purpose described, the loosely-playing transverse bolt D, seated
 80 in the frame, the crank or thumb-nut E, threaded on the bolt and bearing on the frame, the longitudinally-adjustable sliding block F, slotted on the bolt and adapted to bear against the outer edge of the stile, and the screw
 85 G, seated in the end of the frame and engaging the block, all arranged and adapted to operate substantially as and for the purpose herein described.

In witness whereof I have hereunto set my
 90 hand.

CHARLES EHRENFELD.

Witnesses:

ISAAC S. GOLDMAN,
 JOHN LOWE.