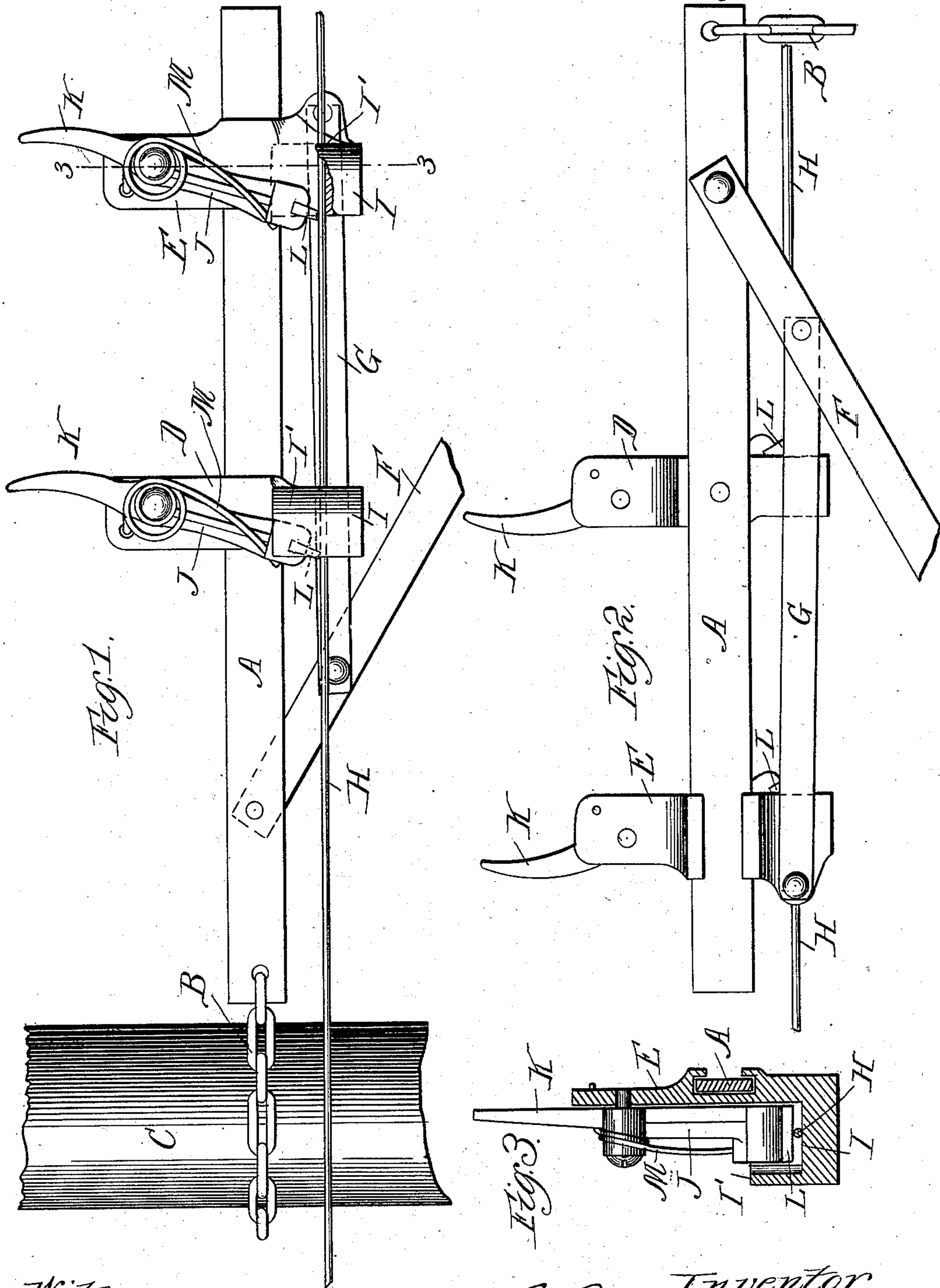


(No Model.)

C. C. SHEPARD.
WIRE STRETCHER.

No. 560,867.

Patented May 26, 1896.



Witnesses.
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UNITED STATES PATENT OFFICE.

CHARLES C. SHEPARD, OF ELGIN, ILLINOIS.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 560,867, dated May 26, 1896.

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To all whom it may concern:

Be it known that I, CHARLES C. SHEPARD, a citizen of the United States, residing at Elgin, county of Kane, State of Illinois, have invented certain new and useful Improvements in Wire-Stretchers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to improvements in that class of wire-stretchers in which a fixed and a movable jaw are so supported and operated with relation to each other that the fixed jaw automatically holds the slack taken out of the wire by the movable jaw at each successive operation thereof.

The objects of this invention are simplicity, durability, and economy of construction combined with ease and certainty of operation and avoidance of the lateral strain common to devices of this class as heretofore constructed, necessitating the use of both hands and considerable skill and strength in operating them. These objects are attained by the devices illustrated in the accompanying drawings, in which—

Figure 1 represents a side elevation of a wire-stretcher embodying my invention, showing the same in operative position. Fig. 2 represents a similar view of the reverse side of the device; and Fig. 3 represents a transverse vertical section on the line 3 3 of Fig. 1, showing the gripping-jaw in elevation.

Similar letters of reference represent the same parts in the several figures of the drawings.

Referring by letter to the accompanying drawings, A indicates a supporting-bar, which, at its rear end, is attached by a chain or wire B or other suitable fastening to a corner-post C, a telegraph-pole, an electric-wire pole, or to a special post, according to the conditions of use of the device. About the center of length of the said bar or back of the center, at any desired point, is rigidly secured to said bar a fixed jaw D, by riveting or in any other suitable manner, and between this fixed jaw and the front end of the bar is slidingly mounted upon the bar a movable jaw E, having a dovetail, tongue-and-groove, or other sliding connection with said bar. This movable jaw

is actuated back and forth upon the bar by means of a hand-lever F, pivoted to the rear end of the bar A, beyond the fixed jaw D, and connected by a link G with the movable jaw at a point below the bar A and in a line with the point of engagement of the movable jaw with the wire H which is being operated upon. With the exception of being relatively fixed and movable, the jaws D and E are duplicates and a description of one of course applies to the other. Each jaw has at one side thereof, as more clearly illustrated in Fig. 3, an open guide-socket I for reception of the wire, which is inserted in the socket from the upper end thereof.

Pivoted to the upper portion of the jaw and preferably above the bar A is a dog J, the upper end of which terminates in a thumb-piece K for convenience of manipulation, and the lower end of the jaw is either serrated or carries fixedly attached thereto a serrated steel block L, which, with the jaw, fits within the sockets I, completely filling the socket transversely, so that the wire H, which comes between the block L or end of the dog and the bottom of the socket I, cannot rise past the gripping-jaw once the wire is engaged in the socket. A coil-spring M is provided for normally maintaining the dog in close relation with the wire, one end of the spring being attached to the jaw and the other free end bearing upon the dog near the upper end thereof. It will be observed that the dogs are of greater length than the distance between their pivots and the bottom of the sockets I, so that they normally stand in a slightly-inclined position, and the wire can only be drawn past the dogs in the direction in which they incline, as any movement of the wire in the other direction would be prevented by its being gripped between the dogs and the bottom of the sockets.

The outer wall I' of each of the sockets terminates at its forward edge in an outwardly-curved guide-lip, which serves to guide the wire in its movements through the jaws and also prevents the accidental disengagement of the wire from the jaws by jumping or otherwise in the event the wire should be twisted or bent, this wall of the socket, with its oppositely-curved lip, extending some distance

above the lower end of the dog, which works between it and the body of the jaw, as before stated.

As shown in Fig. 1, the parts are in position for movement to stretch the wire, and upon drawing back the lever F the movable jaw E will be caused to approach the fixed jaw D, carrying with it the wire H, which by such action is forced through the fixed jaw; but as soon as the movement of the lever and movable jaw ceases the wire will be gripped by the fixed jaw and prevented from returning. Upon the reversed movement of the lever F the movable jaw will be restored to the position shown in the drawings, the pivoted dog thereon dragging over the wire without effect, but upon a repetition of the action before described another portion of the slack in the wire will be taken up, and this operation may be repeated as often as necessary to bring the wire to the desired tautness. It will be observed that the power is applied to the movable jaw in the same plane with the gripping-jaw and both slightly to one side of the wire being operated upon, and by having the fixed jaw to the rear of the movable jaw and as close as possible to the post against which the stretcher is pulling not only is the tendency of the device to throw out of line or move laterally overcome, but so little slack is left between the fixed holding-jaw and the post that the wire may be stapled directly to the post without any additional stretching, and the last section of the fence or the section of wire of whatever kind upon which the stretcher is operating will be practically as taut as any of the other sections forward of the stretcher. This advantage will be particularly appreciated when it is borne in mind that in building wire fences the stretching is generally done from one corner-post to another, and the wire fastened to the intermediate posts when stretched. With the stretchers now on the market the wire is clamped five or six feet from the corner-post and it is now necessary to either use an extra post, a wagon, or some other separate support for the wire to tighten up the last section of the fence, or else have the last section very slack. With my device and by the arrangement of the fixed and movable jaws no such extra post or support for the stretcher is necessary, and, furthermore, as the stretcher is suspended between the post and the wire being stretched it would make no particular difference whether the stretcher swung out of line or not, because it will assume its proper position as soon as a little strain comes upon

it from the stretching of the wire, and then the operator can grasp the lever with both hands and exert all his strength in the stretching operation, for the tighter the wire is stretched the less tendency there is for the stretcher to throw out of line.

A wire-stretcher constructed in accordance with my invention is both simple and durable in construction, and may be manufactured at comparatively small cost. Besides enabling the wire to be stretched to almost any desired degree of tautness and overcoming the tendency to throw out of line it enables the use of practically the full power of the operator, a part of which is dissipated in the use of previous machines by the necessity of holding the stretcher against the sideways movement or tendency of the stretcher to throw out of line.

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

1. In a wire-stretcher, the combination with a supporting-bar, of a fixed jaw attached to said bar, having a guide-socket at its lower end and a spring-actuated dog upon its upper end, which dog normally rests in the guide-socket, a movable jaw slidably mounted upon the bar in front of the fixed jaw and having a guide-socket and spring-actuated dog, substantially as described, a lever pivoted to the bar at the rear of the fixed jaw, and a link connecting said lever and movable jaw on a line with the guide-socket through which the wire passes, substantially as shown and described.

2. In a wire-stretcher, the combination with a supporting-bar adapted to draw at its rear end against a post, of a fixed jaw rigidly secured to said bar, a movable jaw slidably mounted upon said bar forward of the fixed jaw, a lever pivoted to said bar to the rear of the fixed jaw, and a link connecting said lever with the movable jaw, said fixed and movable jaws each comprising a body portion, an open guide-socket at one side thereof, an inclined dog terminating at its upper end in the thumb-piece and at its lower end in a serrated block fitting and working in the guide-socket, and a coil-spring secured at one end to said body portion and at its opposite end bearing upon the lower end of the dog, substantially as described.

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Witnesses:

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