

(No Model.)

D. R. DE HAVEN.
WIRE STRETCHER.

No. 356,869.

Patented Feb. 1, 1887.

Fig. 1.

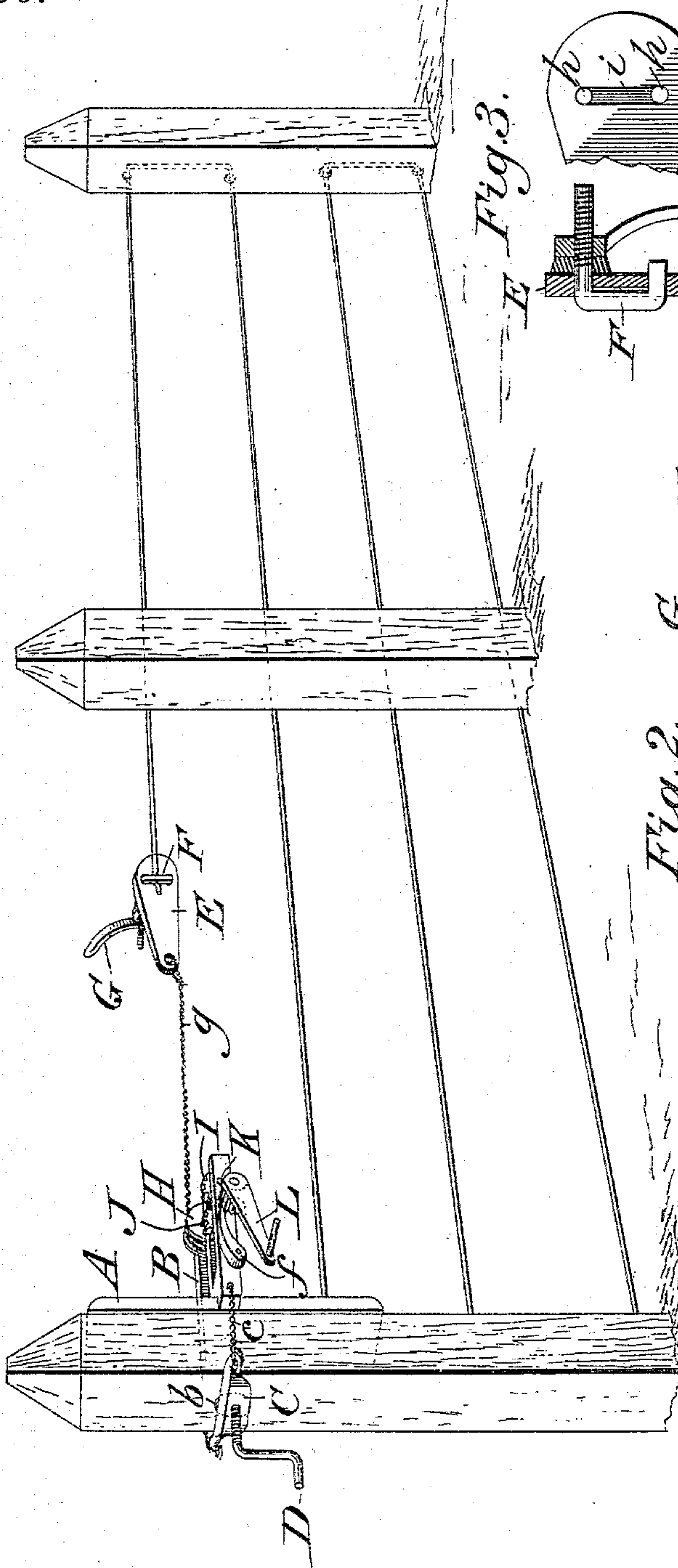


Fig. 3.

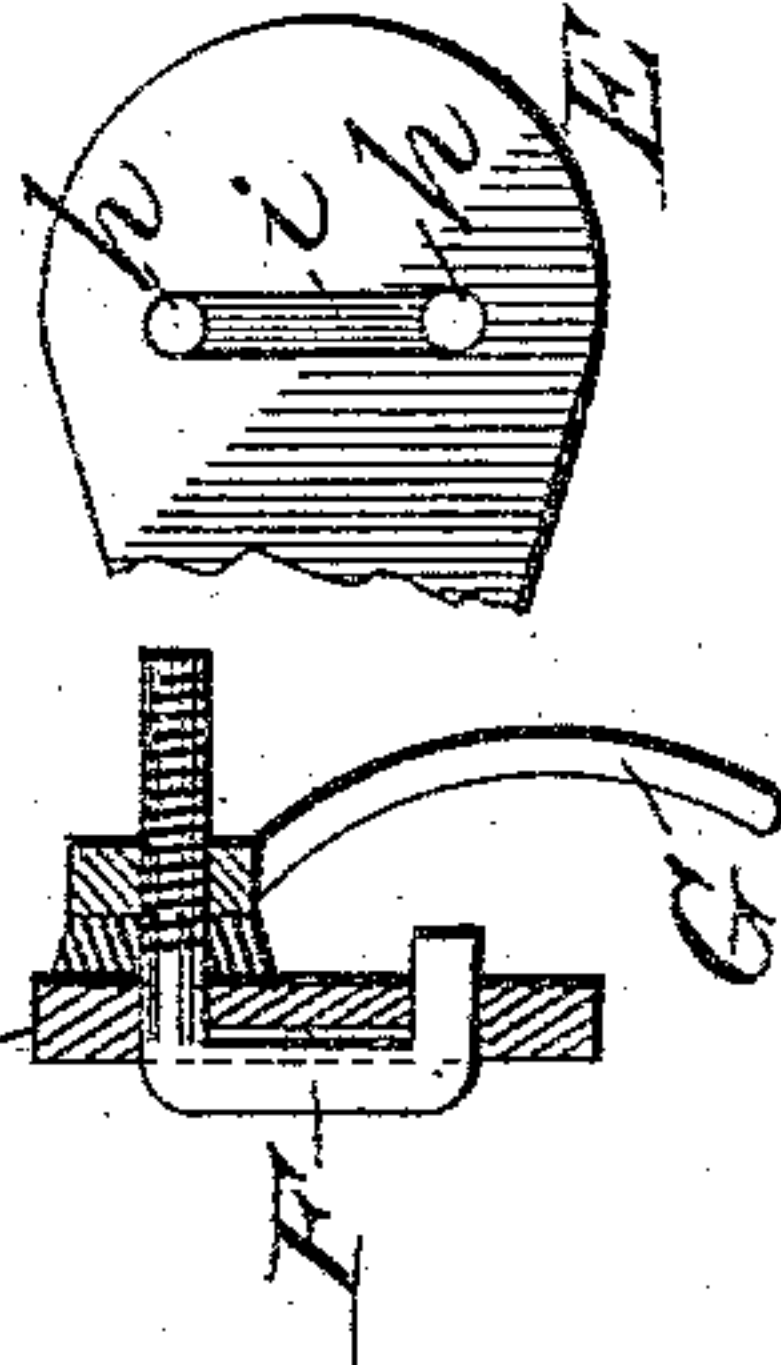
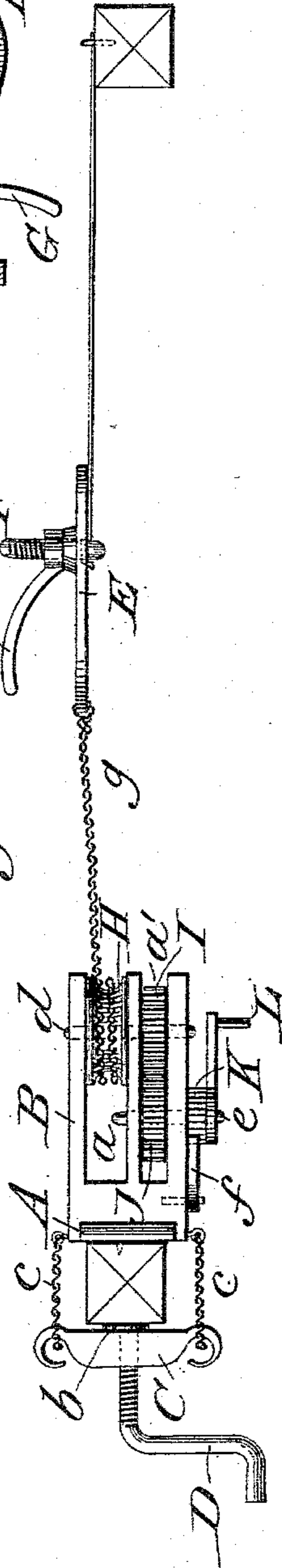


Fig. 2.



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UNITED STATES PATENT OFFICE.

DAVID R. DE HAVEN, OF SPREAD EAGLE, PENNSYLVANIA.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 356,869, dated February 1, 1887.

Application filed November 1, 1886. Serial No. 217,709. (No model.)

To all whom it may concern:

Be it known that I, DAVID R. DE HAVEN, a citizen of the United States, residing at Spread Eagle, in the county of Chester and State of Pennsylvania, have invented certain new and useful Improvements in Wire-Stretchers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to a wire-stretcher or a device for stretching tightly the wires of fences and for other like purposes; and it consists in the construction, arrangement, and combination of parts, as will be hereinafter described and claimed.

In the annexed drawings, illustrating my invention, Figure 1 is a perspective view of a wire fence with my improved wire-stretcher applied thereto in operative position for stretching the wires. Fig. 2 is a top plan view of the same. Fig. 3 represents details of the clamp which grasps the wire to be stretched.

Like letters of reference designate like parts in all the figures.

The main frame of my improved wire-stretcher consists of a vertical strip, A, and a horizontal portion, B, which is secured at right angles to the strip A, and is provided with two parallel longitudinal slots, *a a'*.

When the device is in operative position, the vertical strip A will be situated alongside one of the posts at a greater or less distance from the bottom of the same, as desired, and fastened firmly to said post by mechanism consisting of a crank, D, screw-threaded near one end, where it is passed through an interiorly-screw-threaded perforation in a cross-bar, C. The extremity of the screw-threaded portion of the crank is preferably provided with a washer or disk, *b*, which is adapted to rest against the fence-post, while the cross-bar C is arranged horizontally on the side of the post opposite to the main frame, as shown. Said cross-bar C connects with the main frame by means of chains or cords *c c*, passing on opposite sides of the post, and affixed in any suitable manner to the cross-bar and the main frame,

respectively. It will therefore be evident that the main frame can be securely fastened to the post at any desired point by rotating the crank and drawing the chains *c c* tight, which will cause the vertical portion of the frame to lie closely against the post, the horizontal portion of the frame being in consequence held immovably, without liability of sagging or slipping out of place.

The stretching mechanism for the wire is arranged within the horizontal portion B of the frame. A horizontal spindle or shaft, *d*, is journaled transversely in the part B, and carries a grooved pulley or drum, H, which is located in the slot *a*, and a gear-wheel, I, which is located in the slot *a'*. Parallel with the shaft *d* is located a second shaft, *e*, provided with a gear, J, that meshes with the gear I, and also with a ratchet-wheel, K, located on the outside of the frame, and adapted to be held in position at any point of its revolution by a pawl, *f*. The shaft *e* is further provided with a crank, L. Obviously the actuation of the crank will rotate the grooved pulley H, while all the mechanism just described may be held at any point secure against a backward rotation by means of the pawl *f*.

Around the grooved pulley H is wound a chain, rope, or other species of cordage, *g*, one end of which is fastened to the device which grips the wire. This device consists of a plate, E, of any suitable shape and form, to one end of which the chain *g* is fastened, said plate being provided with two perforations, *h h*, which are connected on one side of the plate by the transverse depression or groove *i*. Through the perforations *h h* passes an angular rod, F, one leg of which is screw-threaded and is provided with a nut having a handle, G, a washer being preferably interposed between the nut and the plate E. One portion of the rod F will lie directly over the groove *i*, toward or away from which it may be moved; and the purpose of this construction is to allow the fence-wire to be placed between the plate and the rod, when the rotation of the hand-nut will cause the wire to be grasped firmly, the groove *i* being for the purpose of giving additional strength to the grip.

The operation of my improved wire-stretcher will be obvious from the foregoing descrip-

tion. The fence-wire is first grasped tightly by the clamp. Then the handle of the stretching mechanism is rotated, which results in winding the chain *g* upon its pulley, and consequently in drawing the wire taut, after which it is fastened to the post.

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

10 1. In a wire-stretcher, the combination of the main frame, consisting of the vertical portion A and the horizontal slotted portion B, the transverse shaft *d*, journaled in the frame, and carrying drum H and gear I, the actuating
15 mechanism for said shaft, and the mechanism for securing the frame to the post, consisting of the crank D, cross-bar C, and chains *c c*, all arranged and operated substantially as described.

20 2. The combination of the main frame, consisting of a vertical portion and a horizontal slotted portion, the pulley for chain *g*, and the actuating mechanism for said pulley, situated in

the horizontal portion, the devices for attaching the frame to the post, consisting of crank D, 25 cross-bar C, and chains *c c*, and the clamp for the wire, consisting of the perforated plate E, attached to chain *g*, the angular rod F, and the hand-nut G, substantially as shown, and for the purposes set forth.

3. In a wire-stretcher, the combination, with the frame for the wire-stretching mechanism, of means for firmly attaching the same to the fence-post, consisting of the cross-bar C, having an interiorly-screw-threaded perforation, 35 the crank D, having a screw-threaded portion passing through said perforation and provided with a terminal washer, *b*, and the chains or cords *c c*, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID R. DE HAVEN.

Witnesses:

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