(No Model.)

2 Sheets—Sheet 1.

F. H. BISSELL.

WIRE STRETCHER.

No. 305,420. Patented Sept. 23, 1884.

Fig. 1.

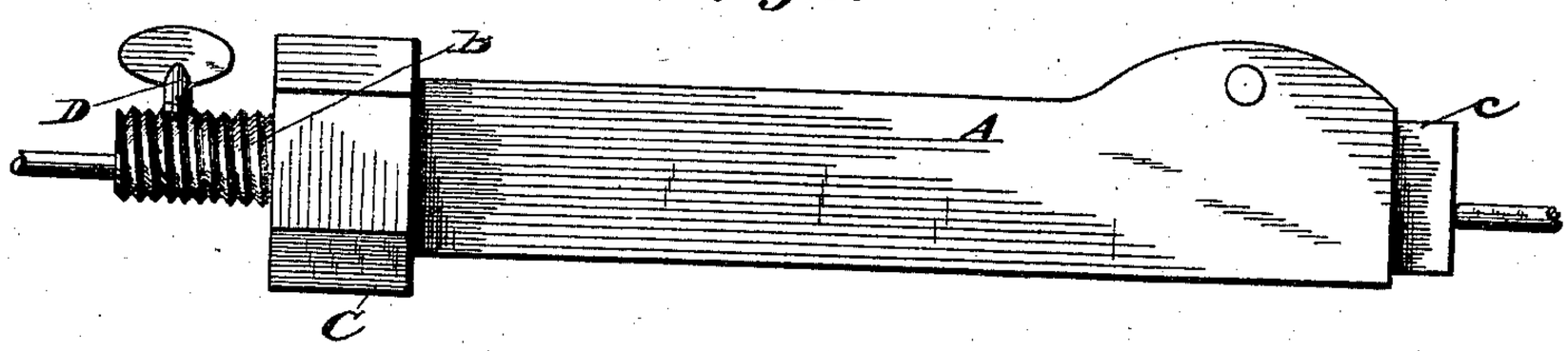


Fig. 2.

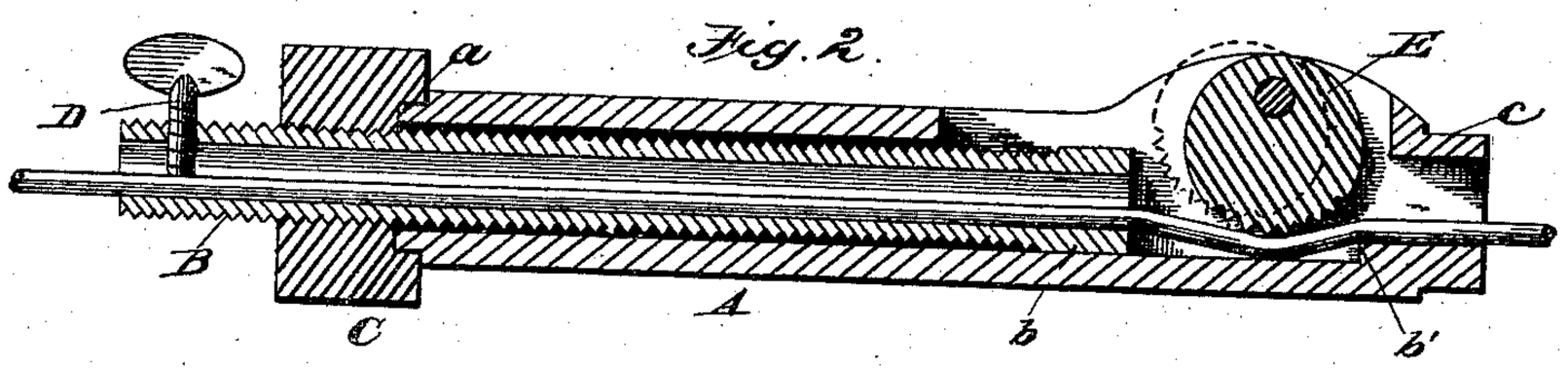
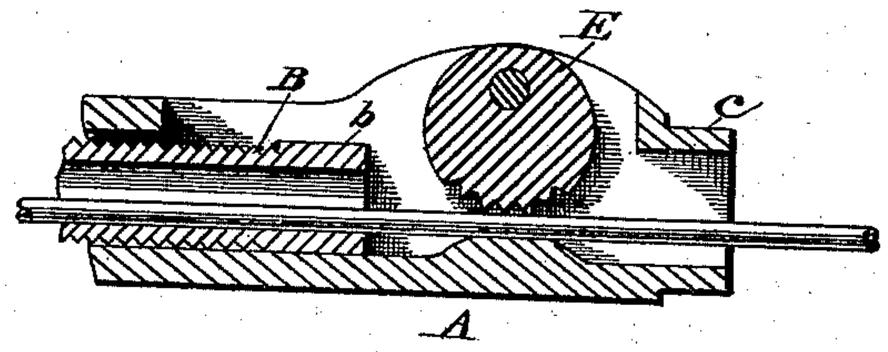


Fig. 3.

Fig. 4.



Attest:

W. H. H. Knight.

Fred F. Church

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His Attys.

(No Model.)

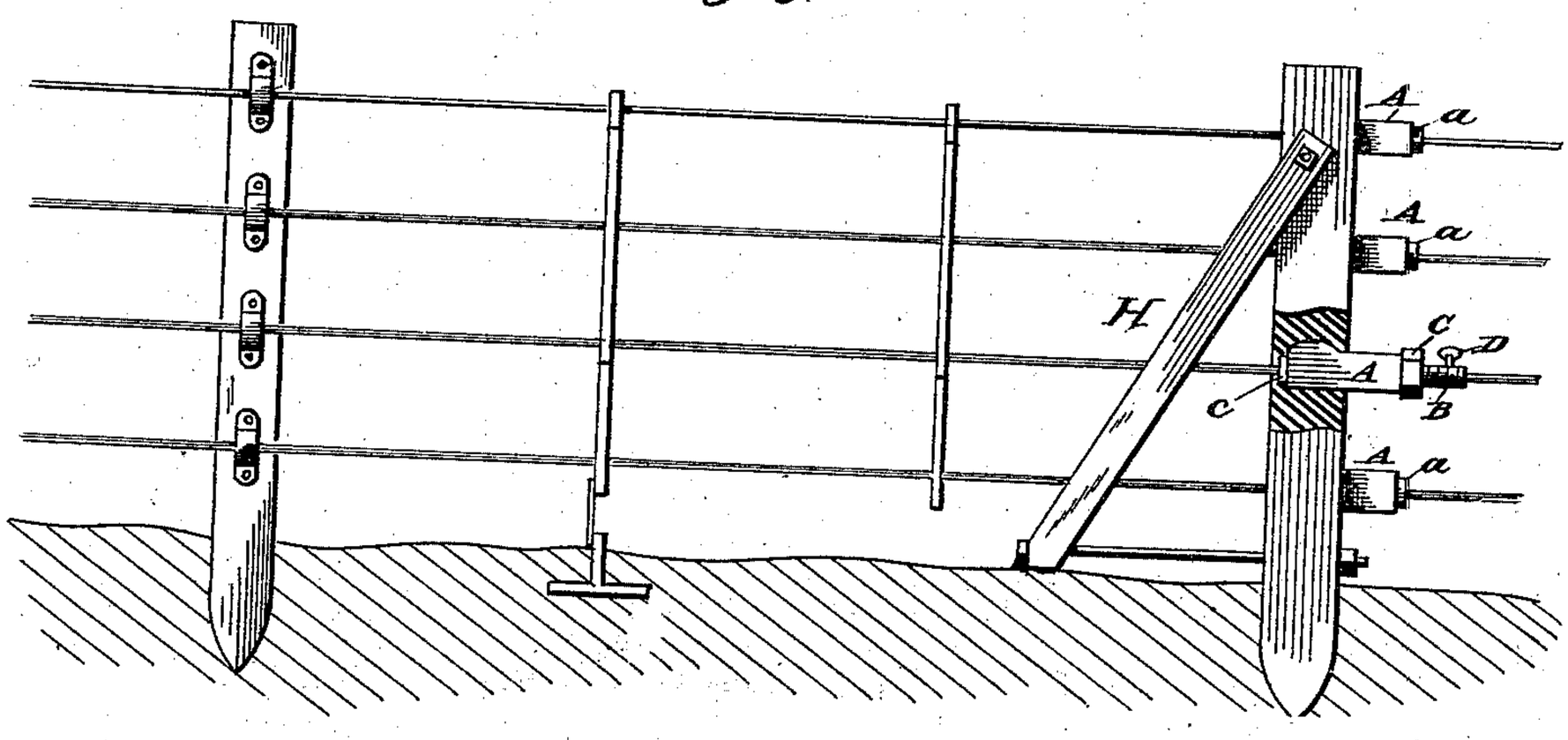
2 Sheets—Sheet 2.

F. H. BISSELL.

WIRE STRETCHER.

No. 305,420. Patented Sept. 23, 1884.

Fig. 5.



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UNITED STATES PATENT OFFICE.

FRANK H. BISSELL, OF SHELBYVILLE, KENTUCKY.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 305,420, dated September 23, 1884.

Application filed December 22, 1883. (No model.)

To all whom it may concern:

Be it known that I, FRANK H. BISSELL, of Shelbyville, in the county of Shelby and State of Kentucky, have invented certain new and useful Improvements in Wire-Stretchers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, and to the figures and letters of reference marked thereon.

My invention has for its object to provide an improved means for stretching wire, that is small, compact, and easily operated, and which, when the wire is once stretched, will hold the same under tension; and it consists in certain novel details of construction, which I will first describe, and then point out particularly in the claims at the end of this specification.

In the accompanying drawings, Figures 1, 2, and 3 represent, respectively, a side view, a longitudinal sectional view, and a top view, of the means for stretching and holding the wire. Fig. 4 is a view of a modification of the means for clamping and holding the wire, and Fig. 5 is a view showing the application of my improved stretcher to a wire fence.

Similar letters of reference in the several figures denote the same parts.

The present improvements are applicable to wire fences, either plain or barbed, and to fence-posts made of wood, though any other material may be employed, the means of attaching being modified accordingly.

My improved stretcher consists of a tubular body or holder, A, a hollow screw, B, sliding freely therein, a nut, C, bearing against the end of the tubular body A and working upon the hollow screw B, a clamping device, D, in the hollow screw, for clamping the wire, and a pivoted clamp, E, near the end of the tubular body, for preventing the return of the wire after it has been drawn through by the screw and nut. The end of the body A may be shouldered, as at *a*, and the nut correspondingly recessed, whereby a bearing is formed, upon which the nut can be turned. The bore of the tubular body A and the head *b* of the screw B are formed square or angular in cross-section, so that the screw may slide freely in and out without turning, or they may be made round and furnished with a feather and groove to effect the same object. The eccentric dog E may be serrated or provided with teeth upon its periphery to enable it to more firmly grasp the wire, and it is so pivoted as to permit the wire to pass freely beneath it in one direction, but to clamp and hold it firmly when pulled in the opposite direction. The offset or shoulder *b'*, located within the body A slightly in advance of the pivoted dog, serves, when the latter is drawn down upon the wire, to form a slight kink or bend, which assists materially in preventing the wire from being withdrawn; but in case barbed wire is employed it may be found advantageous to substitute for the shoulder a rib or projection located immediately beneath the dog E, as shown in Fig. 4.

My improved stretcher, although equally well adapted for stretching any wire, is more especially adapted for use as a means for stretching the wire used in the construction of wire fences, and accordingly I have shown it in Fig. 5 applied to such a fence. In this figure the post to which the stretcher is applied is mortised to receive and sustain the tubular body, a suitable opening being made for the passage of the wire.

Other means for attaching or sustaining the tension device may be employed, and a tenon may be formed on the end of the tubular body A, as shown at *c*, to fit an opening extending from a mortise through or into the body of the post. The wires having been properly placed, the stretcher or tension device is slipped on and brought into position in the post, the end carrying the pivoted dog resting within or facing the post. The wire is then clamped or fastened within the hollow screw B by means of the screw D, and upon turning the nut C, with a wrench or other suitable device, the wire is drawn through the tubular body A and under the clamp in the end thereof. As soon, however, as the wire is released and tends to move backward, it is caught by the clamp E within the body A, where it is held and retained after the screw B is removed.

The advantage of this improved clamp and stretcher will be apparent to those skilled in the art. The wire is not bent or otherwise

disturbed or mutilated during the stretching operation. No supplemental clamping or holding device is necessary, nor is there any opportunity afforded for the wire to slacken up after it is once stretched. The same screw and nut may be applied to any of the holders, as it is removed after the stretching is completed. The screw, nut, and holder, or the two former, may, if desired, be slotted longitudinally, so as to be readily applied to a wire already strung, and removed at pleasure. This would be an advantage in case it should become necessary to take up slack in a long or heavy wire where the tubular holders were applied at intermediate points. In such cases the screw and nut could be slipped onto the wire and operated in connection with the holder already in position, or new holders could be applied or old ones removed without cutting or otherwise disturbing the wire itself.

It is found advantageous to employ, in connection with the described stretcher and clamp, a tension or tightening post in which the clamps are seated, as shown in Fig. 5. Two braces, H, are fastened near the top of the post by a bolt passing through all three. The lower ends of the braces rest upon the ground, and are connected to a brace-rod, the end of which passes through the post and is provided with a nut, whereby the lower ends of the braces may be drawn toward the base of the post. The wires pass between the braces.

In another application filed by me in the Patent Office on the 2d day of February, 1884, Serial No. 119,953, I have shown, described, and claimed the bracing device for the end posts, and therefore make no claim thereto in this application.

I claim as my invention—

1. The combination, in a wire-stretcher, of a tubular casing, to be inserted in the post, and provided with a gripper, and a longitudinal traverser carrying a clamp located and operating within the casing, as and for the purpose set forth.

2. In a wire-stretcher, the combination of a tubular casing, a tubular screw adjustable therein, means for moving the screw longitudinally, and means for clamping the wire to the screw, substantially as described.

3. The combination of the tubular casing, the eccentric gripper arranged therein, the tubular screw, the nut for giving the screw a longitudinal movement, and means for clamping the wire to the screw, substantially as described.

4. The combination of the squared tubular casing, the eccentric gripper, the tubular screw having the squared end, the nut working on the screw and against the end of the casing, and the screw-clamp for clamping the wire to the screw, whereby when the wire is stretched and held by the gripper the screw and its clamp and the nut may be removed, leaving the casing and gripper in position within the post, substantially as described.

FRANK H. BISSELL.

Witnesses:

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