

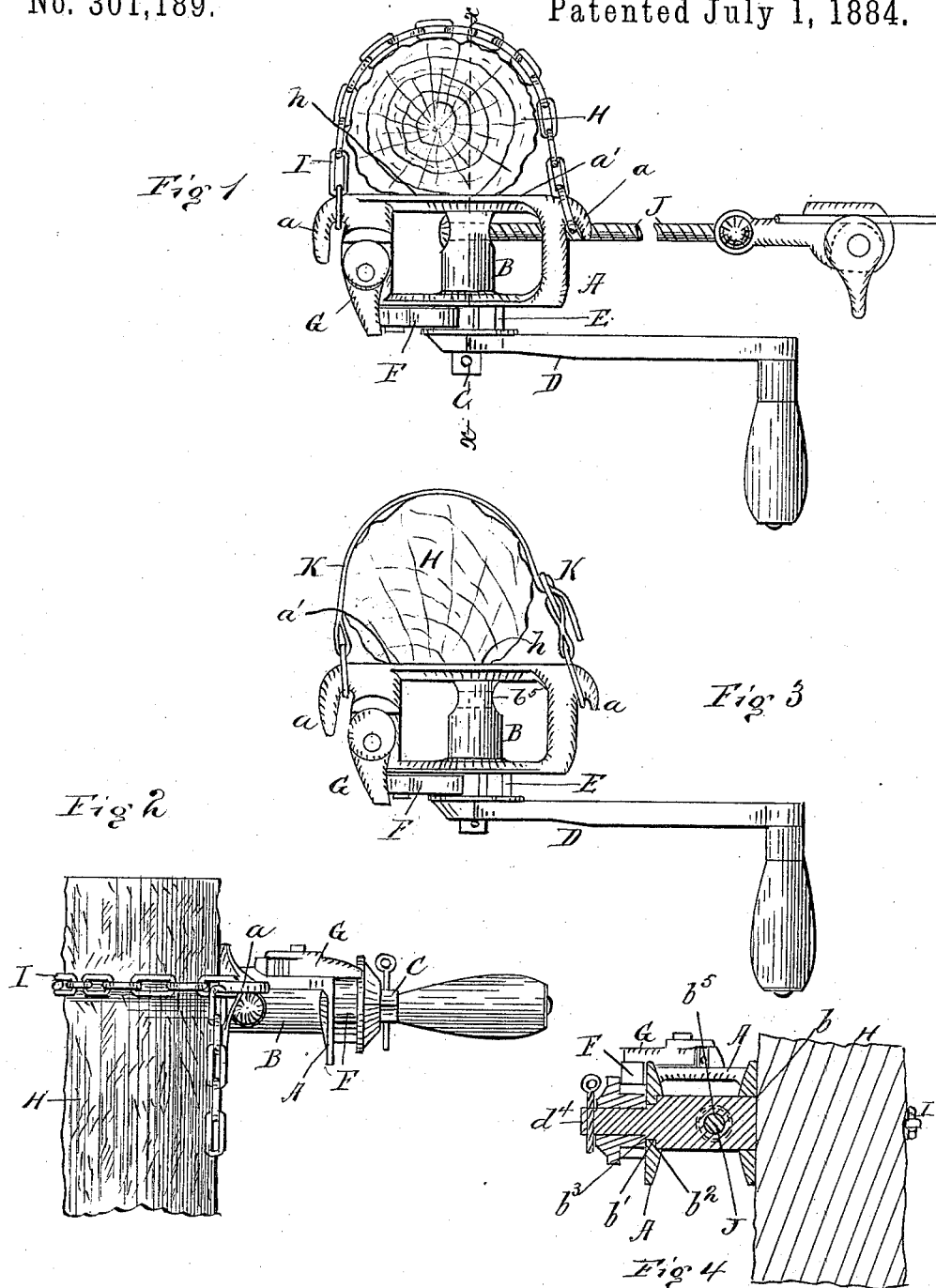
(No Model.)

W. C. WATKINS.

WIRE STRETCHER.

No. 301,189.

Patented July 1, 1884.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM C. WATKINS, OF SYCAMORE, ILLINOIS, ASSIGNOR OF ONE-HALF
TO GEORGE M. WALRATH, OF SAME PLACE.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 301,189, dated July 1, 1884.

Application filed December 26, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. WATKINS, a citizen of the United States, and residing at Sycamore, in the county of De Kalb and State of Illinois, have invented certain new and useful Improvements in Wire-Stretchers, which are fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a plan view of my improved stretcher applied to a fence-wire post in the operation of stretching the wire; Fig. 2, a side elevation of the same; Fig. 3, a similar plan view showing a modification of the device for fastening the stretcher to the post, and Fig. 4 a transverse section taken on the line *x x* Fig. 1.

My invention relates to those hand-machines now generally in use for the purpose of stretching and tightening the wires of wire-fences. In most of these machines the attachment is made to the post on one side or the other in the direction in which the wire runs, and in this position, when the machine is operated to tighten the wire by turning the crank or other device, obviously the whole frame will have a tendency to twist or turn partially over, as there is no support to the side of the frame, and thus a portion of the power applied to tighten the wire is lost. The main object of my present improvement is to overcome this defect by constructing the frame of the machine in such a manner that it may be applied to the front or back of the post opposite to the direction of the wire, and so held from twisting.

I will proceed to describe in detail the construction and operation of my improved wire-stretcher, and will then point out definitely in the claims the special improvements which I believe to be new and wish to protect by Letters Patent.

In the drawings, A represents the frame of the machine, which is in general form rectangular and open in the center. At each end of the frame is a hook, *a*, and that side of the frame which is opposite to the crank and intended to be placed against the post is flat and straight. This side of the frame is des-

ignated by *a'* in the drawings. A spool, B, is mounted, as usual, in the open space of the frame, around which the usual clamp-rope is wound, and the shaft C of this spool is provided at its outer end with a crank, D, by means of which it is turned. I also provide the shaft with the usual ratchet-wheel, E, and pawl F, by means of which it is held at any point to which it may be turned up in straining the wire. On one end of the frame there is also a wire-clamp, G, made of any suitable construction, for use, as usual, in splicing. When in use, the machine is placed with its flat side against the front of the post H, and is fastened to the latter by means of a chain, I, passing around the post, and fastened to the hooks on the frame, as shown in Fig. 1 of the drawings. In operation, after the machine has been fastened to the post, as described above, the clamp on the end of the rope J is fastened to the wire, and the spool is then turned in the proper direction to wind the rope thereon until the wire is strained to the sufficient degree of tightness, when it is secured to the posts in the usual way.

Instead of the chain shown in Fig. 1 of the drawings, a strap, K, may be employed, consisting of two parts, each attached to one of the hooks on the frame by a link or ring, and one of the parts being provided with a buckle, by means of which the two parts are fastened together in order to secure the machine to the post. The spool and shaft are made in one piece, the spool being preferably rather smaller than usual, and one end of the spool, left at its full size, is mounted in an opening, *b*, in the inner side of the frame, which serves as a bearing for this end of the spool. The other end of the spool is cut down so as to make a smaller section, *b'*, but leaving a shoulder on the inside thereof, *b''*. The bearing-opening *b''* on the outside of the frame, corresponds to this reduced section of the spool, and the shoulder mentioned above abuts against the inside of this portion of the frame when in position. The extreme outer end or shank, *d'*, of the pool is reduced in size and rectangular in form, so that the crank may be applied thereto in a well-known way to turn the spool,

and when the crank (of which also the ratchet-wheel is preferably made a part) is put in place on the square shank of the spool it is secured by a pin, as shown in the drawings, or by a nut, or in any other suitable manner, and by thus fastening the crank in place the spool is also secured to the frame. The spool is placed in and removed from the frame by slipping it through the larger opening in the inner side of the latter, being inserted shank end first, of course. The rope J is attached to the spool B by means of a hole, b^5 , passing straight through the spool near one end thereof, as shown in the drawings. This hole on opposite sides of the spool is made somewhat flaring. The end of the rope is passed through from one side and a knot made therein, which is pulled down into the flaring opening, so that it will not interfere with the winding of the rope directly around and over it. I thus save some space on the spool, and make a clean, even wind of the rope thereon.

It will also be obvious that with the construction and arrangement of the parts shown and described, and the attachment of the stretcher to the side of the post, as shown in the drawings, the necessity of detaching the stretcher and changing it about from one side of the post to the other, in order to strain wires on different sides thereof, will be obviated. With my construction and arrangement I simply change the clamp-rope from one side to the other without detaching the frame from the post, in order to strain a wire on one side or the other to the latter, as may be desired, it being understood, of course, that the rope will be passed over or under the frame, according to circumstances. I thus gain an advantage by my improvement over the usual construction of wire-stretchers which compels the detachment of the stretcher from the post, and its reversal and reattachment to the post in order to stretch wires from opposite directions.

Usually at least one substantially straight face will be found on the posts used for fencing, as shown at h in the drawings. This

should be set for the front side of the fence, and my machine is then applied to this side of the post, as shown in the drawings. Obviously when the crank is turned to tighten the wire the twisting strain on the frame will be entirely counteracted by the resistance of the post against the inner side of the frame, and so the entire force applied to the crank will be utilized in drawing the wire taut in a straight direction, and none of it lost by the twisting of the frame, as is the case in the operation of these machines as generally constructed and used. The same result will follow if the posts are substantially round, though the steadiness of the frame will not be quite so well maintained, as in case it rests against the flat side.

I do not wish to be understood as limiting myself to details of construction which are not important to the main feature of my invention, which obviously may be used with wire-stretchers of varied construction in other respects.

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

1. In a wire-stretcher, the frame having a flat side, and provided with a hook arranged at each end of that side, for the purpose of facilitating a firm attachment to the fence-post, substantially as described.

2. The stretcher-frame A, provided with the large bearing-aperture b in its inner wall, and the small bearing-aperture b^3 in its outer wall, in combination with the undivided spool and shaft B, equal in its greatest diameter to the aperture b , and being of that diameter from the farther side of the inner wall to the inner side of the outer wall, but reduced at that point to the diameter of the aperture b^3 , substantially as and for the purpose described.

This 21st day of December, A. D. 1883.

WILLIAM C. WATKINS.

Witnesses:

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A. M. STARK.