

No. 623,122.

Patented Apr. 18, 1899.

H. C. ARNOLD.
WIRE STRETCHER.

(Application filed June 30, 1898.)

(No Model.)

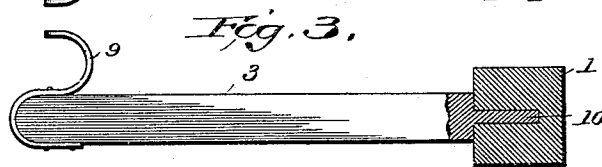
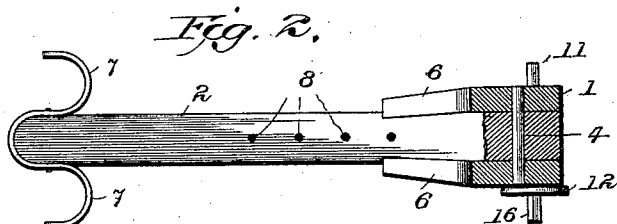
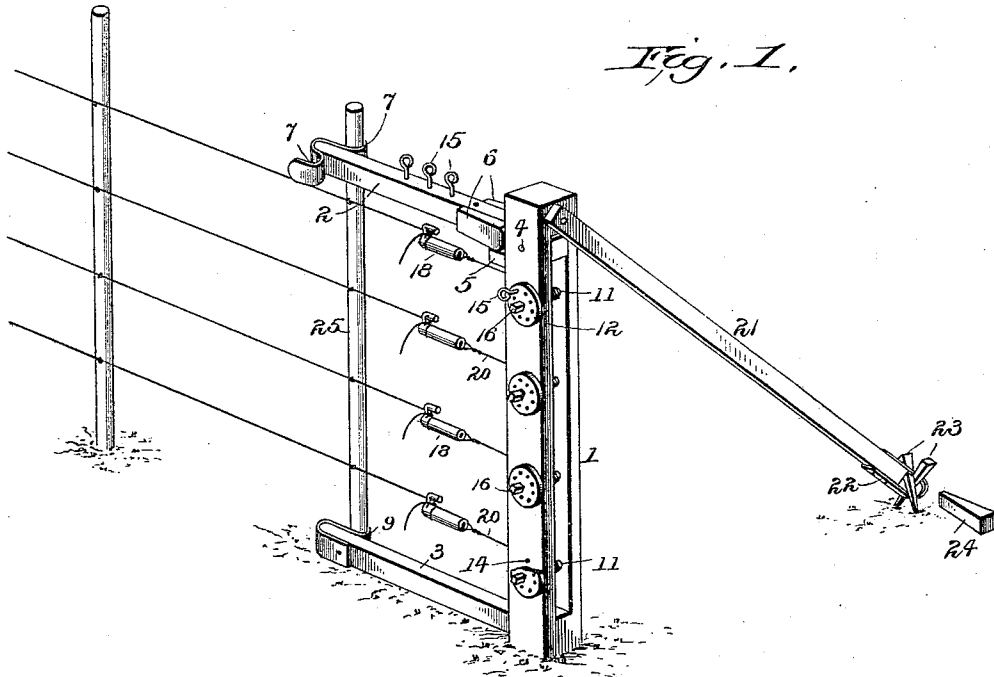
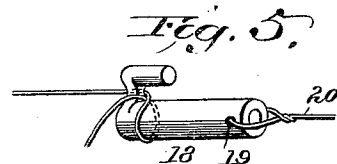
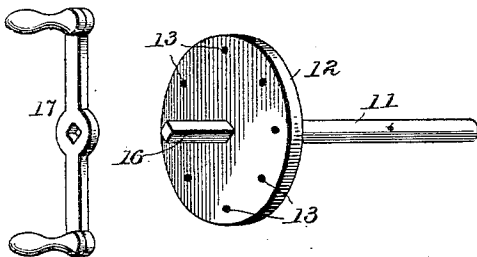


Fig. 4.



Witnesses
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HORATIO CONSTANTINE ARNOLD, OF LAS ANIMAS, COLORADO.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 623,122, dated April 18, 1899.

Application filed June 30, 1898. Serial No. 684,806. (No model.)

To all whom it may concern:

Be it known that I, HORATIO CONSTANTINE ARNOLD, a citizen of the United States, residing at Las Animas, in the county of Bent and State of Colorado, have invented certain new and useful Improvements in Machines for Stretching Wires; and I do hereby 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.

My invention relates to machines for stringing or stretching fence-wires.

The object of the present invention is the provision of an improved machine of the class described which will be inexpensive, strong and durable, and simple in construction and operation, and adapted for stretching the wires in such a novel manner that their tension or strain will be exerted on the end post during the stretching operation, thereby preventing the wires from bending or inclining the end post and becoming loose or slack after they have been stapled and disconnected from the machine.

Having the foregoing objects in view, the invention consists of certain improved features of construction and novel arrangements of parts, as set forth in detail hereinafter and embodied in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view of my improved machine shown in use in connection with a section of fence; Fig. 2, a horizontal section taken above the upper brace-bar; Fig. 3, a horizontal section taken above the lower brace-bar; Fig. 4, a detail of one of the winding-shafts and its locking mechanism, and Fig. 5 a detail of a wire-clamp.

The frame 1 of the machine is equipped with upper and lower braces 2 and 3. The upper brace 2 is pivoted in the frame at 4 and is supported in a horizontal position by a cleat 5, the object being to provide for any necessary adjustments of the brace in relation to the end post. This brace has side extensions 6, which bear against the frame and relieve the pivot from a part of the pressure transmitted through the brace when the device is in use. On opposite sides of the brace, at its end, are post-engaging hooks 7 7. The brace 2 is preferably provided with a

series of apertures 8 to hold the pins that lock the winding-shafts when not in use. The two hooks 7 7 are employed so that the fence-wires can be strung on either side of the fence-posts by moving the machine one way or the other in a sidewise direction. The lower brace has a single hook 9 at its end, and this brace is provided with pin 10, which removably fits in an opening in frame 1. This permits the removal and turning of the brace on its longitudinal axis to bring its hook 9 in vertical alinement with the hook 7 in use at the time.

There is a plurality of tubular winding-shafts 11 journaled in the frame and provided with integral locking-disks 12 near their ends and adjacent to the outside of the frame. These disks have pin-openings 13 arranged in a circle near their periphery, which are adapted to register with single openings 14 in the frame. Removable pins 15 when passed through any one of the openings 13 and into the openings 14 lock the shafts. This locking mechanism is superior to the pawl and ratchet commonly employed, because there is no liability of accidental disengagement of parts. These pins when not in use are placed in the apertures 8. The ends 16 of the winding-shafts are square and solid, and over them are fitted handles or cranks 17, which are connected at points intermediate between their ends to the shafts. The advantage of such a construction is that the operator can use both hands, one at each end of the handle, to turn the shaft when stretching the fence-wire, and the strain on the shaft is equalized, and wrenching of the parts is thereby obviated.

My improved wire-clamps 18 are of substantial J shape and made hollow for the sake of lightness. The body portion is cylindrical and of considerably greater diameter than the hook and is provided with an aperture 19 to afford a connection for a wire, which is fastened to the winding-shaft. The fence-wire is caught around the body and in the hook of the clamp in the manner shown, and slipping of the wire is absolutely prevented. The cylindrical shape of the shank causes the wire to conform thereto, which insures a tight hold. In fact, the greater the pull on the wire the tighter will it be gripped by the clamp.

The numeral 21 designates a stay for the frame, which has a loop 22 at its end. In anchoring this stay spikes 23 are passed through the loop and driven into the ground in crossed arrangement, and a wedge 24 is then passed through the loop. The wedge prevents the loop from becoming detached from the spikes, and a secure anchorage is thus provided.

The end post of a fence in process of construction is shown at 25. In using the device the lower end of the frame is first entered in the ground a few inches and the stay anchored. The hooks on the braces are then made to embrace the end post and the fence-wires applied to the clamps. Upon turning the winding-shafts the fence-wires are tightened, and the winding mechanism can then be locked by inserting the pins, as before described. Stapling of the wires can then be had.

It will be observed that by reason of the employment of the upper and lower braces the tension of the fence-wires as they are being tightened is transferred to the end post 25, and consequently the latter will during the stretching operation lean, settle, or yield to the same extent as it would if this tension were exerted on it after the wires had been stapled and the machine removed. This co-operation of the machine with the end post constitutes an important part of my invention, because the strain exerted on the end post by the wires is no greater after the wires have been stapled than when they were being stretched, and hence there is no sagging or loosening of the wires after the fence has been formed. Heretofore in machines of this kind where the device is disconnected from the fence-post during the stretching operation the winding mechanism has received all the strain or tension exerted by the wires while being stretched, which tension or strain was transferred to the end post when the wires were stapled and the machine removed, and consequently the strain of the wires would in the course of time cause the post to lean or slant and the wires to become slack, thereby impairing the efficiency of the fence. My invention by its coaction with the end post obviates this difficulty completely.

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

1. In a machine for stretching fence-wires,

the combination with a frame, and wire-stretching mechanism thereon, of a brace extending out from the frame, in a substantially horizontal position and independent laterally-disposed hooks connected to the brace at opposite sides thereof and adapted to engage the fence-post.

2. In a machine for stretching fence-wires, the combination with a frame, and wire-stretching mechanism thereon, of a brace movably connected to the frame in a substantially horizontal position so as to be adapted for turning on its longitudinal axis, and a post-engaging hook connected to one side of the brace.

3. In a machine for stretching fence-wires, the combination with a frame, and wire-stretching mechanism thereon, of an upper brace extending out from the frame in a substantially horizontal position, independent laterally-disposed hooks connected to the brace at opposite sides thereof and adapted to engage the fence-post, and a lower brace disposed in substantial vertical alinement with the upper brace and arranged substantially horizontal and having a single post-engaging hook connected to one of its sides, said lower brace being movably connected to the frame so as to be adapted for turning on its longitudinal axis to bring its hook in vertical alinement with either one of the hooks on the upper brace.

4. In a machine for stretching fence-wires, the combination with a frame, and wire-stretching means thereon, of a substantially horizontal fence-post brace having a pin which is detachably received in a pocket in the frame, so that said brace can be removed and turned on its longitudinal axis, and a post-engaging hook secured to one side of the brace.

5. In a machine for stretching fence-wires, the combination with a frame, of a winding-shaft journaled therein, locking mechanism for said shaft, and a turning-handle connected at a point approximately midway its ends to said shaft and having both ends free.

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

HORATIO CONSTANTINE ARNOLD.

Witnesses:

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