

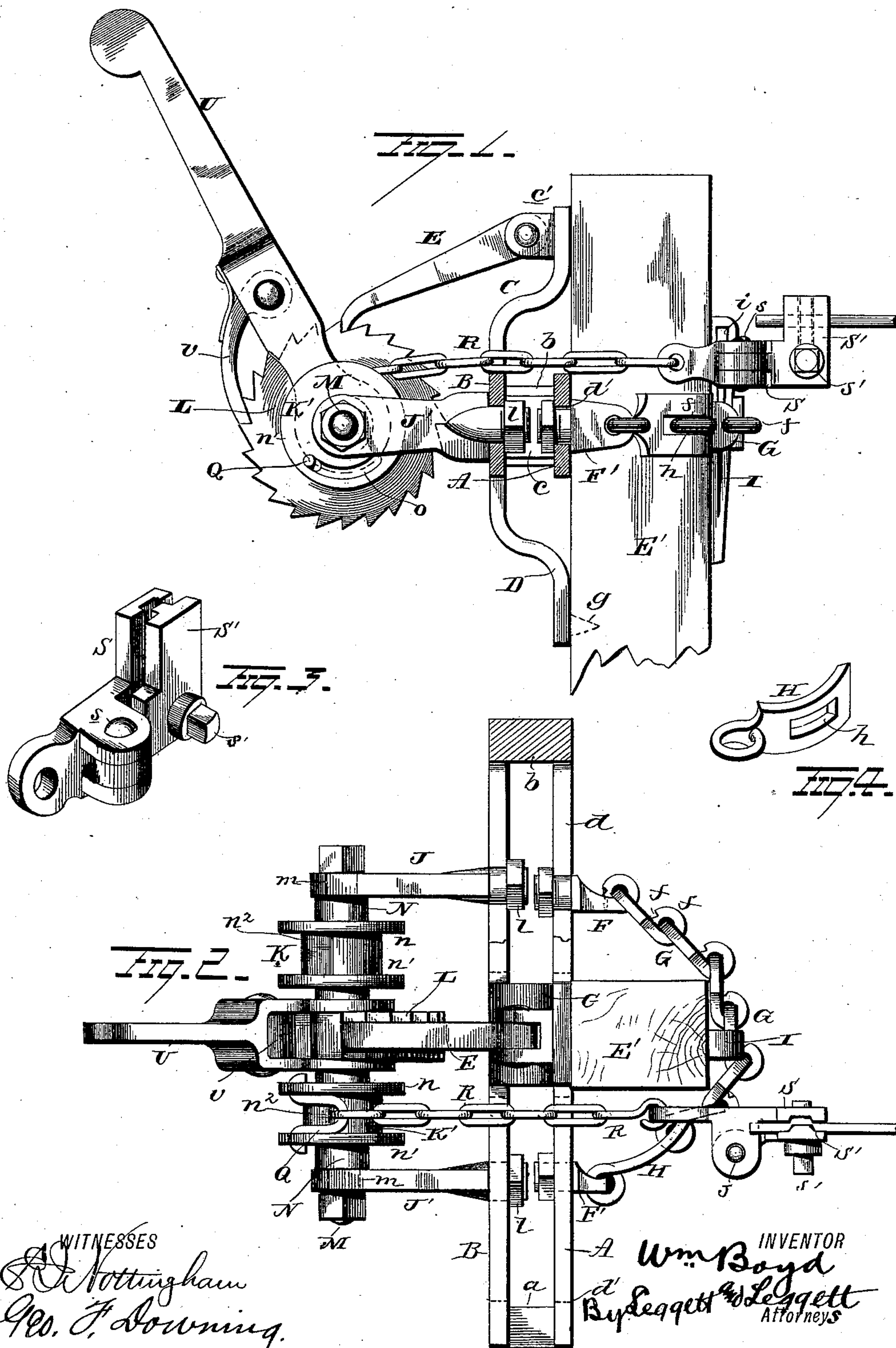
(No Model.)

W. BOYD.

WIRE STRETCHING DEVICE.

No. 362,600.

Patented May 10, 1887.



UNITED STATES PATENT OFFICE.

WILLIAM BOYD, OF HARTFORD, NEW YORK.

WIRE-STRETCHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 362,600, dated May 10, 1887.

Application filed June 10, 1886. Serial No. 204,771. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BOYD, of Hartford, in the county of Washington and State of New York, have invented certain new and useful Improvements in Wire-Stretching Devices; 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 an improvement in wire-stretchers, the object being to provide a device which will be capable of stretching the wire on the same side of the fence-posts, irrespective of the direction of draft.

A further object is to provide a wire-stretcher which may be adjusted to any sized post, and which will draw the wire in contact with the side thereof.

A further object is to provide a wire stretcher of durable construction which may be easily operated, and one which may be manufactured at a low cost.

With these ends in view my invention consists in certain features of construction and combinations of parts, as will be hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in elevation, partly in section, of my improved stretcher secured to a post in operating adjustment. Fig. 2 is a plan view. Fig. 3 is a detached view of the wire-holding clamp, and Fig. 4 is a detached view of the chain and chain-lock or grasping-link H.

A and B represent a pair of parallel plates, preferably held apart by three spacing-blocks, *a*, *b*, and *c*, rigidly secured to or formed integral with the adjacent faces of the plates. The outer edges of the blocks *a* and *b* are flush with the ends of the plates A and B, while the block *c* is located midway between *a* and *b*.

A pair of goose-necked arms, C and D, the ends of which extend to the plane of the plate A, are formed integral with and at right angles to the plate B. The upper of these arms, C, is provided with a pair of ears or a bifurcated lug, *c'*, in which the gravity-pawl E is pivoted. A pointed lug, *g*, formed on the outer face of the arm D, pierces the post E' and prevents any lateral or downward sliding of the device.

The plate A is provided with a pair of elongated slots, *d d'*, in which the swivels or end

links, F F', are loosely secured to admit of their being slid backward and forward relative to the width of the various-sized posts on which the wire-stretcher is attached.

Each link of the chain G consists of a piece of metal preferably slightly enlarged and flattened at one end, so as to form space for a perforation to receive the eye of an adjacent link, and bent into an eye, *f*, at the opposite end, which hooks into the perforation of its adjacent link. A V-shaped notch, *f'*, is formed on the edge of each eye at a point near the flattened portion of the link. One end of chain G is attached to the eye of the swivel F, while the free end is adapted to be engaged by the grasping-link H, which is attached to the swivel F'. The grasping-link H is simply a modified form of the links of the chain G, the flattened portion being elongated and curved backward, and the perforation being lengthened into a slot, *h*, the outer end of which is beveled to form a secure fastening with one of the V-shaped notches *e'* when the grasping-link H is looped over an eye of the chain-link. After the device is placed in position against a post, and the chain is drawn around and coupled, the slack is taken up and the parts held from unfastening by inserting the skeleton wedge I between the post and the chain. The said wedge I may be of any approved form; but as the strain on it is slight a skeleton form is desirable for obvious reasons—namely, it is lighter, cheaper, and presents a more finished appearance. Also, the slot *i* admits the entrance of a wire or convenient flexible connection to keep the wedge from being lost or misplaced.

The plate B is provided with a pair of slots similar to plate A, to enable the standards J J' to be shifted to the right or left, so that the wire being stretched shall be drawn against the side of the post. This shifting of the standard is easily accomplished by loosening the nuts *l*. Through the perforations *m* of the standards J J' extends a bolt, M, on which is loosely mounted the sleeve N, carrying the centrally-located ratchet-toothed wheel L and the winding-drums K K', one located on either side of the wheel. The drums K K' are preferably enlarged parts of the sleeve N, having a pair of slotted end flanges, *n n'*, the said slots *o* being located opposite a flattened portion, *n''*, of the drums,

and adapted to receive the outwardly - projecting ends of the U-shaped link Q, to which an end of the chain R is attached. The link Q is adapted to lie on the flattened part of the drum between the flanges n n' , where it is secured against longitudinal displacement, but free to be slid out laterally. The enlarged middle of the winding-drums strengthens them and forms an enlarged surface or periphery on which to wind the chain R. The chain R is provided on its free end with a clamp, which consists of a pair of jaws, S S', hinged together, as shown at s, and operated by any approved form of set-screw, such as the one shown at s'. The jaws S S' may be of any desired shape, though a convenient form is L-shaped, and their gripping-faces are preferably of the tongue-and-groove form, so that when the wire to be stretched is placed between them it is made to take a kink, which prevents the wire from drawing out of the clamp's grasp. The gripping-faces prevent the wire from interfering with the hinge or screw of the main part of the clamp by holding the wire off to one side.

The branches of the bifurcated operating-lever U are loosely mounted on the sleeve N, one on either side of the ratchet-toothed wheel L. The operation of the lever is such that when depressed the spring-actuated dog v, pivoted between the branches of the lever, falls against the teeth of the wheel P, turning it, together with the sleeve N and drums K K', while the gravity-pawl E falls against the wheel and locks it against reaction until another hold is taken by the lever V by elevating it to vertical adjustment, during which movement the dog v slides over the ratchet-teeth.

By the use of two drums the machine may be operated in both directions along the fence and on the same side thereof, saving the heretofore waste of time in returning.

It is evident that slight changes might be resorted to in the form and construction of the parts described without departing from the spirit and scope of my invention; hence I do not wish to limit myself strictly to the particular construction herein set forth; but,

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

1. In a wire-stretcher, the combination, with a frame having oblong slots therein and adapted to be secured to a post, of bearings adjustably secured in said slots, a shaft journaled in said bearings, and a drum mounted on the shaft, substantially as set forth.

2. In a wire-stretcher, the combination,

with a supporting-frame adapted to be secured to a post and bearings adjustably secured to said frame, of a bolt or shaft mounted in said bearings and a pair of stretching-drums on said bolt or shaft, substantially as set forth.

3. In a wire-stretcher, the combination, with a supporting-frame adapted to be secured to a post, and consisting of a pair of parallel posts and standards, of a bolt or shaft mounted in said frame, a pair of stretching-drums journaled on said shaft, and a single lever for operating both drums, substantially as set forth.

4. In a wire-stretcher, the combination, with a frame having an enlarged base adapted to rest in contact with a fence-post, standards secured to said frame, and a bolt or shaft secured in said standards, of a sleeve mounted on said bolt or shaft and having stretching-drums integral therewith, and a single lever for operating both drums, substantially as set forth.

5. In a wire-stretcher, the combination, with a frame carrying a stretching-drum and a chain adjustably secured at one end to said frame, of a grasping-link adjustably secured to the frame and adapted to engage a shoulder on the chain for locking the frame to the post, substantially as set forth.

6. In a wire-stretcher, the combination, with a drum the side flanges of which are provided with elongated slots, of a U-shaped link having outwardly-bent ends, which latter are removably secured in the slots of the flanges of the drum, substantially as set forth.

7. In a wire-stretcher, the combination, with a frame, standards adjustably secured thereto, a bolt or shaft secured to said standards, a sleeve journaled on said bolt or shaft and provided with stretching-drums, and a ratchet-toothed wheel located between said drums, of a bifurcated operating-lever having a spring-actuated dog pivoted between its branches, and a gravity-pawl pivoted to the supporting-frame, for the purpose substantially as set forth.

8. In a wire-stretcher, the combination, with a frame carrying a stretching-drum and having slots therein, of a securing-chain, the ends of which are adapted to slide within the slots in said frame, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM BOYD.

Witnesses:

H. C. SWAIN,

H. H. INGALSBY.