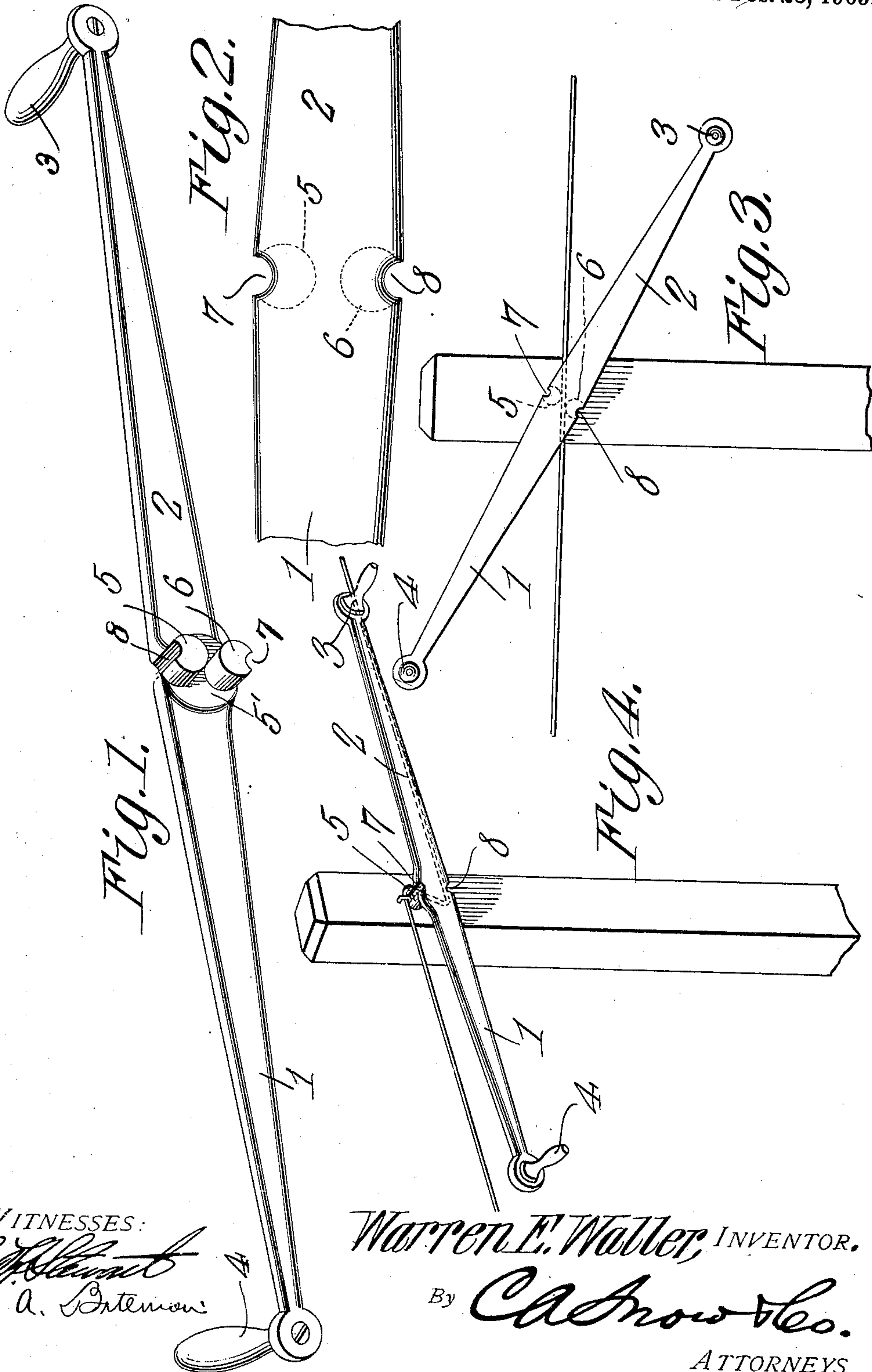


W. E. WALLER.
WIRE TIGHTENER.
APPLICATION FILED MAR. 19, 1907.

913,590.

Patented Feb. 23, 1909.



WITNESSES:
E. H. [Signature]
C. A. [Signature]

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UNITED STATES PATENT OFFICE.

WARREN E. WALLER, OF CHARLES CITY, IOWA.

WIRE-TIGHTENER.

No. 913,590.

Specification of Letters Patent.

Patented Feb. 23, 1909.

Application filed March 19, 1907. Serial No. 363,191.

To all whom it may concern:

Be it known that I, WARREN E. WALLER, a citizen of the United States, residing at Charles City, in the county of Floyd and State of Iowa, have invented a new and useful Wire-Tightener, of which the following is a specification.

The present invention relates to improvements in devices for tightening or stretching wire and the like, and it is more especially adapted for use in putting up wire fences where it is desirable to apply the strand wires to the posts under such tension that there will be no appreciable slack in the fencing between the posts, and it has for its object to provide a device of this character that can be made very cheaply and in use is capable of being readily applied to the wire and manipulated until the desired tension is obtained, the device being adapted to receive a staple adapted to be driven into the post to secure the wire in fastened position.

To these and other ends, the invention consists in certain improvements and combinations and arrangements of parts, all as will be hereinafter more fully described, the novel features being pointed out more particularly in the claim at the end of the specification.

In the accompanying drawings, Figure 1 is a perspective view of a wire tightener constructed in accordance with my present invention, the device being viewed from the rear. Fig. 2 is a front view of a portion of the device shown in Fig. 1. Fig. 3 is a view showing how the device is applied to the wire. Fig. 4 is a perspective view showing the device turned into a position to fasten the wire and receive the fastening staple.

Corresponding parts in the several figures are indicated throughout by similar characters of reference.

The wire tightener shown in the present embodiment of the invention is especially adapted for use in tensioning the strand wires of wire fences, and it is composed, in the present instance, of a bar forming a pair of oppositely extending crank arms 1 and 2, the latter being preferably arranged in alignment and provided at their outer ends with suitable handles 4 and 3 adapted to be grasped by the operator during the tightening operation. These crank arms are preferably formed integrally at their inner ends and are provided with a circular boss 5' from which extends a pair of parallel cylindrical

projections 5 and 6 having their axes arranged transversely of the length of the bar formed by the crank arms and providing winding surfaces for the wire to be tightened, these projections being spaced sufficiently to admit the wire between them when the device is applied, as shown in Fig. 3. In the projections are formed staple receiving grooves 7 and 8, the latter extending preferably in a direction axially of the respective projections and adapted to receive one arm of a staple while the wire wound about the projection bridges the groove, as shown in Fig. 4.

In manipulating a wire tightener constructed in accordance with the invention, the device is applied to the wire in the manner shown in Fig. 3, that is to say, it is so placed that the wire enters the space between the two projections and, while the wire is thus engaged, the handles 3 and 4 are grasped by the hands of the operator, and the device is given a turn about an axis substantially parallel to the axes of the wire receiving projections, the turning movement continuing until the desired tension of the wire is obtained. The wire in winding about the projections will bridge the staple receiving grooves, and while the device is held in tightened position, one arm of the staple may be readily inserted into each groove so as to straddle the wire, and when the staple is driven into the post, it will serve to sustain the tension on the wire and retain the latter in fastened condition, and after the wire has been thus fastened, the device may be readily withdrawn by a movement in a direction of the axes of the projections.

Of course, it will be understood that, if so desired, one of the crank arms may be omitted, and although this would cheapen the cost of the device, it is preferable to employ the double crank arm construction, for the reason that it enables the device to be grasped in both hands and thus balanced and steadied during the turning or tightening movement.

A wire tightener constructed in accordance with the present invention may be readily applied to a wire and easily turned to tension it, no special attention being required on the part of the operator to retain the wire in co-operative relation with the device, for the reason that the wire engaging projections are so arranged that disengagement of the wire during tightening cannot occur, and the de-

vice may be constructed at small cost, as the tightening projections and the crank arms may be made integrally or as a single casting of malleable iron. By providing the boss 5' the wire being tightened is held spaced from the arms 1 and 2, so that said arms can be rotated rapidly without coming into contact with the wire.

What is claimed is:—

10 A wire tightener comprising a bar forming a pair of oppositely extending cranks arranged in alinement, there being a boss upon one face of the middle portion of the bar and constituting spacing means and similar op-
15 positely disposed wire engaging projections integral with the boss on the bar and having their longitudinal axes in a plane extending

transversely of the bar, each of said projections having longitudinal staple receiving grooves in the outer portions of their periph- 20 eries and extending through the sides of the bar, said projections having a wire receiving space therebetween and being disposed perpendicularly to the bar, said space extending from one face of the bar and being disposed 25 upon the longitudinal center of the bar.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WARREN E. WALLER.

Witnesses:

A. M. HAUSER,
E. S. MANENME.