

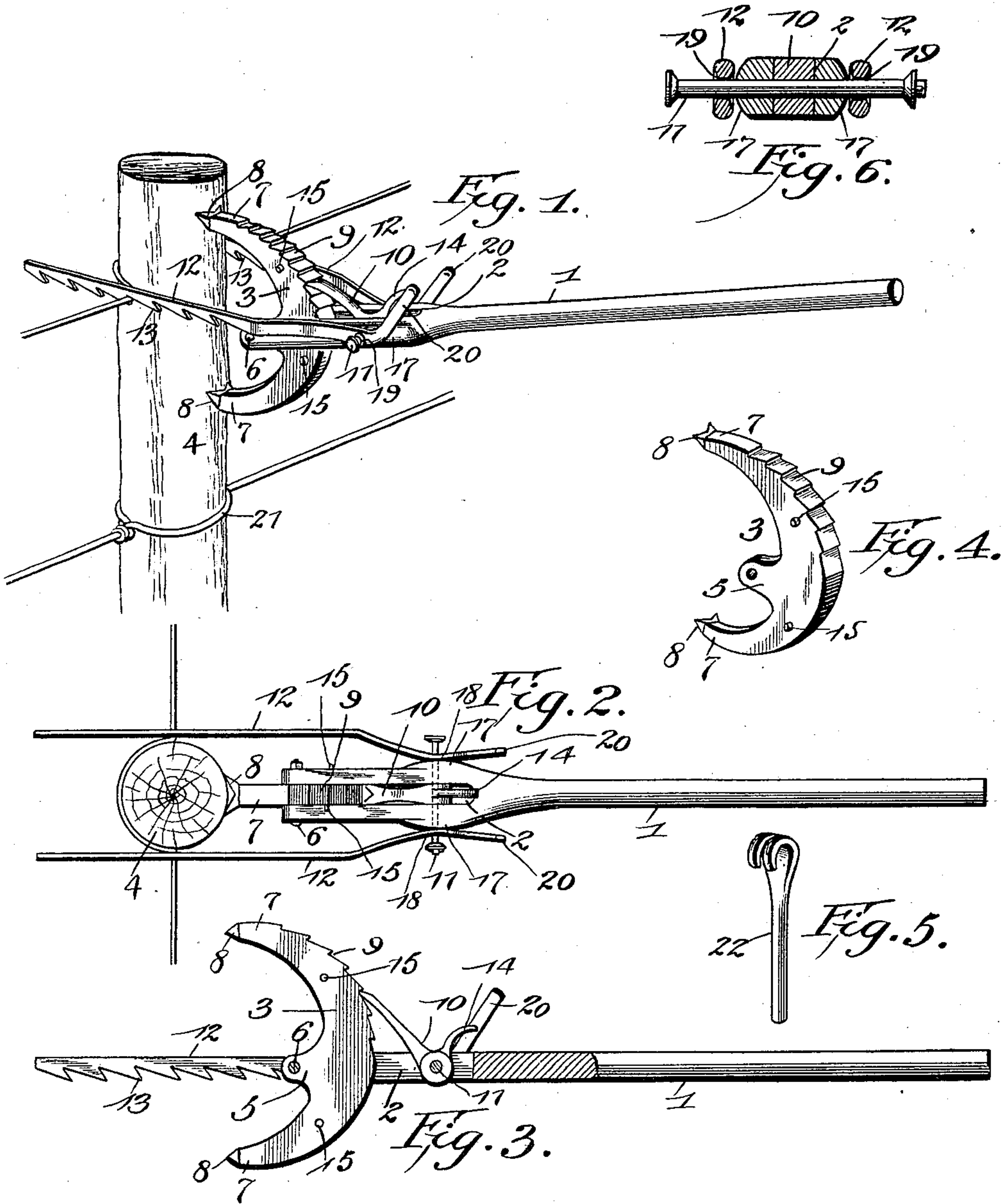
No. 658,335.

Patented Sept. 25, 1900.

S. T. BEAL.  
WIRE TIGHTENER.

(Application filed Apr. 12, 1899.)

(No Model.)



Witnesses

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# UNITED STATES PATENT OFFICE.

SAMUEL T. BEAL, OF CONWAY SPRINGS, KANSAS, ASSIGNOR OF TWO-THIRDS TO WILLIAM H. BEAL AND ROBERT McKIBBEN, OF WICHITA, KANSAS.

## WIRE-TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 658,335, dated September 25, 1900.

Application filed April 12, 1899. Serial No. 712,782. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL T. BEAL, a citizen of the United States, residing at Conway Springs, in the county of Sumner and State of Kansas, have invented a new and useful Wire-Tightener, of which the following is a specification.

The invention relates to improvements in wire-tighteners.

10 The object of the present invention is to improve the construction of wire-tighteners and to provide a simple, inexpensive, and efficient device adapted to be readily operated and capable of enabling the wires of a fence  
15 to be stretched and secured at the desired tension without withdrawing staples preparatory to tightening the wires and without restapling them after they have been stretched.

20 The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

25 In the drawings, Figure 1 is a perspective view of a wire-stretcher constructed in accordance with this invention and shown engaging the fence-wire. Fig. 2 is a plan view of the same. Fig. 3 is a longitudinal sectional view of the device detached. Fig. 4 is  
30 a detail perspective view of the substantially U-shaped support. Fig. 5 is a detail perspective view of a twisting implement.

35 Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates an operating-lever provided at its inner end with a slot or bifurcation 2, in the outer portion of which is pivoted a substantially U-shaped support 3, adapted to engage a fence-post 4, as clearly illustrated in Fig. 1 of the accompanying drawings. The curved support 3 is provided near its center with an ear 5, which is perforated for the reception of the pivot bolt or pin 6, and the  
40 ends 7 of the curved body portion of the support are provided with claws 8, which are adapted to prevent the support from slipping on the rounded face of a fence-post. The upper arm of the support is provided at its  
50 outer edge with ratchet-teeth 9, which are

adapted to be engaged by a pivoted pawl or dog 10, fulcrumed on a transverse bolt or pin 11 in the inner portion of the slot or bifurcation 2 of the operating-lever. The pin 11, which projects laterally beyond the sides of  
55 the operating-lever, connects a pair of wire-engaging arms or bars 12 to the said lever.

The wire-engaging arms or bars, which are arranged to engage a fence-wire at opposite sides of the post, are provided at their lower  
60 edges with notches or teeth 13 to receive the fence-wire. The support is placed against the rear face of the post in a substantially-vertical position, with its diverging arms arranged above and below the operating-lever, 65 which is swung upward preparatory to engaging the fence-wires with the arms or bars, and after such engagement is effected the operating-lever is swung downward, whereby the bars or arms 12 are drawn rearward, 70 thereby stretching the wire around the post at opposite sides thereof. The pawl or dog, which is arranged to lock the operating-lever at the desired adjustment, is provided with an arm or handle 14, arranged to be engaged  
75 and depressed by the thumb of the operator. The said pawl or dog will lock the lever against upward movement, and the device is adapted to remain on the fence-post and hold the fence-wire while the latter is being se-  
80 cured in its adjusted position.

The support upon which the lever is fulcrumed is provided at opposite sides with lateral projections or stops 15, arranged in pairs and adapted to limit the movement of the  
85 lever on the support and capable of preventing the support from swinging beyond the operating-lever. These stops retain the support in position, so that the device may be readily applied to a post without adjusting  
90 or holding the said support.

The operating-lever is slightly enlarged at opposite sides of the bifurcation to form convex bearings 17 around the transverse pivot or pin 11, and the inner portions of the wire-  
95 engaging arms or bars are bent to form curved bearings 18, presenting inner convex faces and adapted to permit the bars or arms to be readily adjusted laterally to arrange them the desired distance apart in order that they  
100



may engage a fence-wire properly at opposite sides of a fence-post. The openings or perforations 19 of the arms or bars are countersunk to facilitate the adjustment, and the said arms or bars are provided with extensions 20, extending upward and inward and forming handles or grips adapted to be readily grasped by the operator in placing the device against the post. They enable the arms or bars to be readily held in the desired position when applying the device, and by depressing them the arms or bars may be readily disengaged from a fence-wire.

After a fence-wire has been stretched to the desired tension it is secured by means of wire ties arranged around the back of the post and having their ends twisted around the fence-wire, as clearly illustrated in Fig. 1 of the accompanying drawings. The terminals of the ties 21 may be twisted by any suitable means; but a twisting instrument 22, such as is shown in Fig. 5 of the accompanying drawings, is preferably employed.

The invention has the following advantages: The wire stretcher or tightener, which is simple, strong, and durable, is adapted to be readily handled, and it will enable the wires of a fence to be readily tightened to the desired extent without withdrawing the staples before stretching and restapling after stretching. Barbed wire may be stretched and secured without the hands of the operator coming in contact with the barbs, and the ratchet mechanism will hold the device while the wire ties are being applied. The extensions at the inner ends of the wire-engaging bars or arms form handles or grips to enable the operator to adjust the said wire-engaging arms or bars while the device is being applied to a fence-post and in removing it therefrom, and the curved inner portions 18, which present the inner convex faces, greatly increase the adjustment of the wire-engaging arms or bars and enable the same to be brought close together and to be separated a great distance, so that the device may be applied to fence-posts of all sizes. The claws at the ends of the sides or arms of the support prevent the device from slipping on smooth fence-posts, and the handle or arm of the pawl or dog enables the latter to be readily disengaged from the ratchet-teeth of the support.

Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

1. A wire-stretcher comprising a support having integral diverging arms, an operating-lever having a slot or bifurcation in its lower end and receiving and extending on opposite sides of the support and fulcrumed thereon, the wire-engaging arms arranged at opposite

sides of the lever, and a locking-pawl pivotally mounted in the bifurcated portion of the lever and engaging an arm of the support to hold the lever and the wire-engaging arms in their adjusted positions, substantially as described.

2. A wire-stretcher comprising a support having the oppositely-inclined arms, an operating-lever having its inner end bifurcated and extending on opposite sides of the support, a fastening device connecting the lever with the support, wire-engaging arms arranged at opposite sides of the lever, a pivot connecting the arms and extending across the bifurcation of the lever, and a pawl mounted on the said pivot and arranged to engage one of the arms of the support, substantially as described.

3. A wire-stretcher comprising a support, an operating-lever fulcrumed on the support, wire-engaging arms located at opposite sides of the lever and having convex portions pivoted to the same, said arms being provided with extensions arranged at an angle and forming handles or grips, and a locking-pawl mounted on the lever and engaging the support and provided with an arm or handle located between the handles or grips of the wire-engaging arms, substantially as described.

4. A wire-stretcher comprising a support having upper and lower arms and provided with stops, a lever fulcrumed on the support and arranged between the stops, wire-engaging arms pivoted to the lever at opposite sides thereof, and a locking device, substantially as described.

5. A wire-stretcher comprising a support having upper and lower arms provided at their terminals with claws, said support being provided between its ends with a perforated ear, stops mounted on the body and located above and below the ear, a bifurcated lever receiving the support and pivoted to the said ear, wire-engaging arms connected with the lever, and a locking device for securing the parts at the desired adjustment, substantially as described.

6. A wire-stretcher comprising a support having diverging arms, an operating-lever having a slot or bifurcation receiving the support, the wire-engaging arms arranged at opposite sides of the lever, and a locking-pawl mounted on the lever and engaging the support to hold the wire-engaging arms and the lever in their adjusted positions, substantially as described.

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

SAMUEL T. BEAL.

Witnesses:

CHAS. ALDERSON,  
G. A. FITCH.