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R. A. BRADSHAW.

WIRE STRETCHER.

APPLICATION FILED MAY 9, 1906.

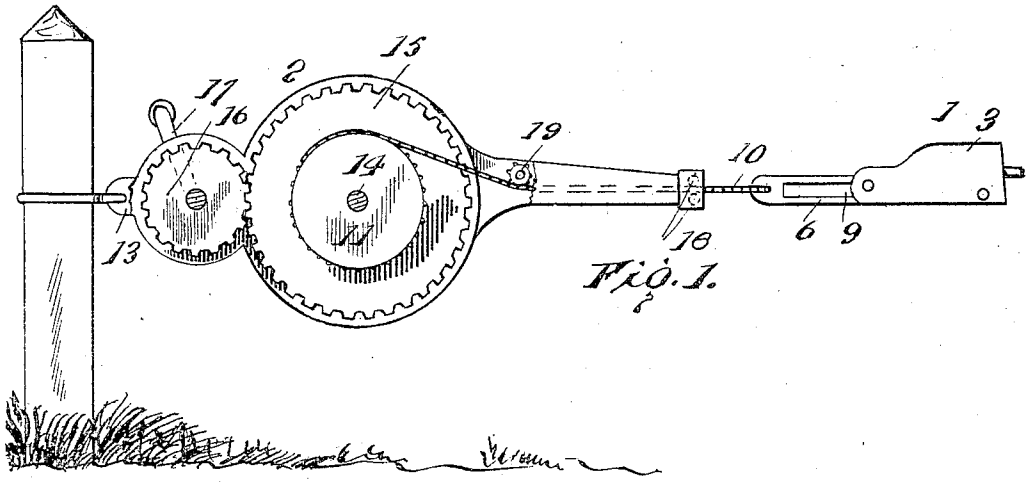


Fig. 1.

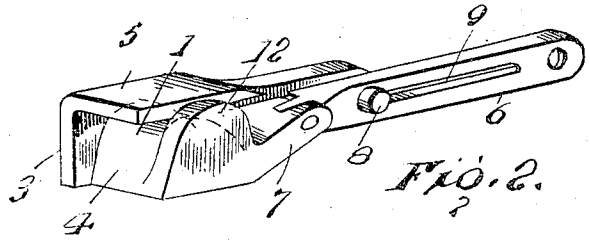


Fig. 2.

Fig. 3.

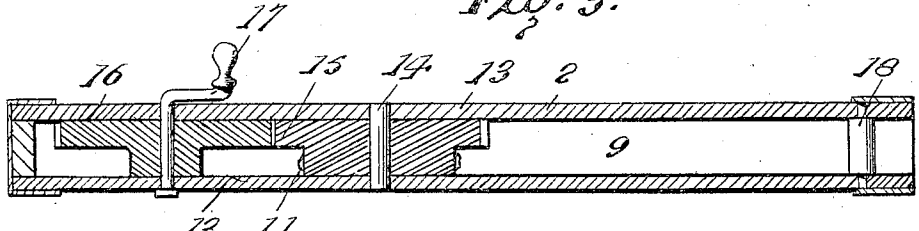
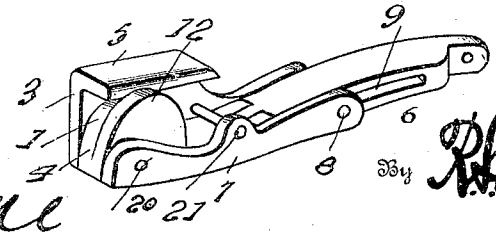


Fig. 4.



Witnesses

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WIRE-STRETCHER.

No. 838,680. Specification of Letters Patent. Patented Dec. 18, 1906.

Application filed May 9, 1906. Serial No. 315,872.

To all whom it may concern:

Be it known that I, RICHARD A. BRADSHAW, a citizen of the United States, residing at Anna, in the county of Collin and State of Texas, have invented certain new and useful Improvements in Wire-Stretchers, of which the following is a specification.

The present invention relates to an improved device for stretching the wires employed in connection with telegraphs, telephones, fences, or for analogous purposes, and has for its object to provide a stretcher of this character which can be readily operated by hand, which will be very efficient in taking up slack, and which is so constructed as to enable a fresh grip to be taken upon the wire at any time.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a side elevation of the wire-stretcher, parts being broken away. Fig. 2 is a perspective view of the gripping device. Fig. 3 is a horizontal sectional view through the frame, having the cog and gear wheels mounted therein. Fig. 4 is a perspective view of a modified form of clamp.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The wire-stretcher comprising this invention consists, essentially, of a gripping device 1 for engaging the wire and a reel 2 for stretching the wire and taking up the slack.

The gripping device is in the nature of a clamp in which the numeral 3 designates the base, and 4 an eccentric clamping member pivoted to the base. A shoulder 5 projects upwardly from one of the sides of the base 3 and coöperates with the eccentric member 4 to form the clamp. A bar 6 is employed for actuating the clamp, and this bar has one end pivotally connected to an arm 7, projecting from the eccentric member 4, and is loosely connected to the base 3 by means of a pin 8, projecting from one end of the base and operating in a longitudinal slot 9 in the bar. The slot 9 and pin 6 are so arranged with relation to each other that when the pin is at the outer end of the slot the eccentric member 4 is turned away from the shoulder 5, while when the pin is at the inner end of the slot the eccentric member is thrown toward the shoulder and the clamp caused to grip the wire.

A modified form of clamp is shown in Fig. 4, in which a side piece 20 fits against the eccentric clamping member 4 and the bar 6 and is held in position by the pin 8 and the pin upon which the clamping member is pivoted. A third pin 21 may also be employed and is preferably located so as to serve as a stop for the arm 7. The gripping device is connected to the reel by means of a flexible member, such as the chain 10, which has one end secured to the outer extremity of the bar 6, while the opposite end passes over a cog 11, which in this instance constitutes the reel. With this construction it will be apparent that any longitudinal pull upon the chain will tend to move the bar 6 so as to throw the pin 8 toward the inner end of the slot 9, and thereby cause the eccentric member 4 to force the wire into a close engagement with the shoulder 5. In other words, the harder the longitudinal pull upon the wire the closer will be the gripping action of the eccentric member 4. In order to hold the wire against slipping transversely out of the clamp, a flange 12 projects laterally from the outer portion of the eccentric member and is so arranged as to fit over the shoulder 5 and confine the wire in the space between the said shoulder and the eccentric member.

The device 2 for stretching the wire comprises a framework having the cog 11 mounted therein for coöperating with the chain 10 and also gearing for turning the cog-wheel. The frame is in the nature of two side pieces 13, between which the shaft 14 is journaled upon which the cog 11 is keyed. A gear-wheel 15, which is preferably larger than the cog, is keyed upon the same shaft and intermeshes with a smaller gear-wheel 16, which is also mounted between the side pieces 13 and is actuated by means of a crank 17. It will thus be understood that by turning the crank 17 the cog 11 will be turned in such a manner as to take in the chain 10 and stretch the wire and that this can be done very efficiently, owing to the fact that a mechanical advantage is obtained by the use of the small gear-wheel 16 and the larger gear-wheel 15. The ends of the side bars 13 project beyond the sprocket 11 and are provided at their extremities with two idlers 18, between which the chain 10 passes. A third idler 19 is mounted between the side bars 13 adjacent the cog, and this idler is so placed

as to hold the chain in engagement with the sprocket.

In the operation of the device the framework is secured to a post or other stationary member by any suitable means, such as indicated in the drawings, and the clamping member 1 caused to grip the wire. The crank 17 is then turned so as to take in the chain 10 and stretch the wire, and a new grip can be readily obtained upon the wire at any time by letting out the chain 10 and moving the clamping member forwardly upon the wire.

Having thus described the invention, what is claimed as new is—

1. In a wire-stretcher, the combination of a base having an outwardly-projecting shoulder formed in conjunction therewith and also having a pin projecting therefrom, an eccentric clamping member pivoted to the base and coöperating with the before-mentioned shoulder, the said eccentric clamping member being provided with a laterally-extending arm, and a bar having one end pivotally connected to the laterally-extending arm of the clamping member and provided with a longitudinal slot which engages with the before-mentioned pin projecting from the base, the said slot enabling the bar to have a sufficient movement for operating the clamp.

2. In a wire-stretcher, the combination of a base having a shoulder formed in conjunction therewith and also having a pin projecting therefrom, an eccentric clamping member pivoted to the base and coöperating with the shoulder, the said eccentric clamping member being provided with a flange which fits over the shoulder to confine a wire between the flange and the base, and also with a laterally-extending arm, and a bar having one end pivoted to the laterally-extending arm of the clamping member and provided with a longitudinal slot which engages with the before-mentioned pin projecting from the base, the said slot enabling the bar to have a longitudinal movement sufficient for operating the clamp.

3. In a wire-stretcher, the combination of a base having a shoulder formed in conjunction therewith and also having a pin projecting therefrom, an eccentric clamping member pivoted to the base and coöperating with the shoulder, the said clamping member being provided with a laterally-extending arm, a bar pivotally connected to the laterally-extending arm of the clamping member and having a sliding connection with the before-mentioned pin projecting from the base, the sliding movement thus obtained being sufficient to enable the bar to operate the clamping member, and a side piece fitting against the outer face of the eccentric clamping member and held in position by the pin upon which the clamping member is pivoted, and the before-mentioned pin projecting from the base.

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

RICHARD A. BRADSHAW. [L. S.]

Witnesses:
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