

No. 809,096.

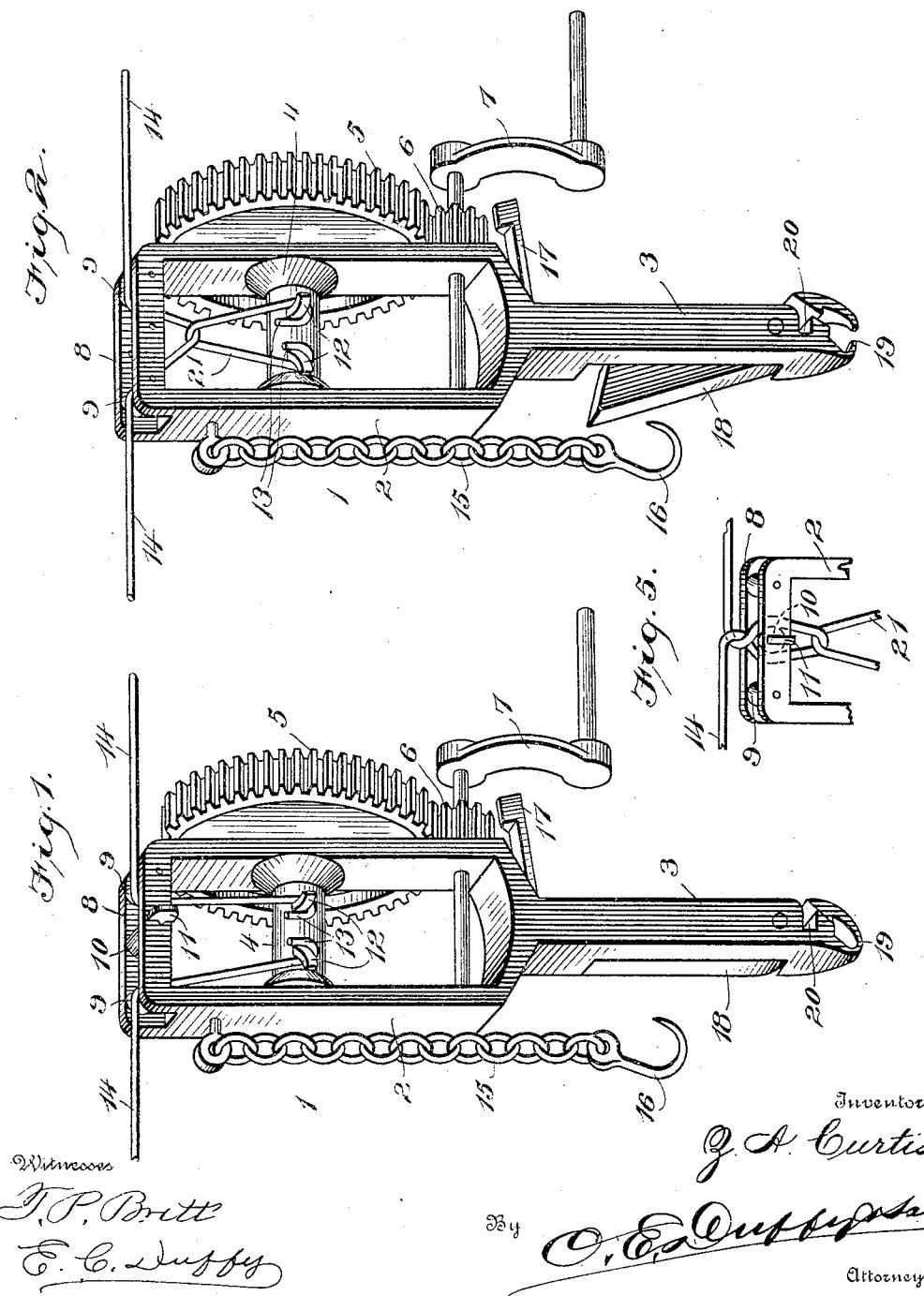
PATENTED JAN. 2, 1906.

Z. A. CURTIS,

### WIRE STRETCHER.

APPLICATION FILED MAY 19, 1905.

2 SHEETS—SHEET 1.



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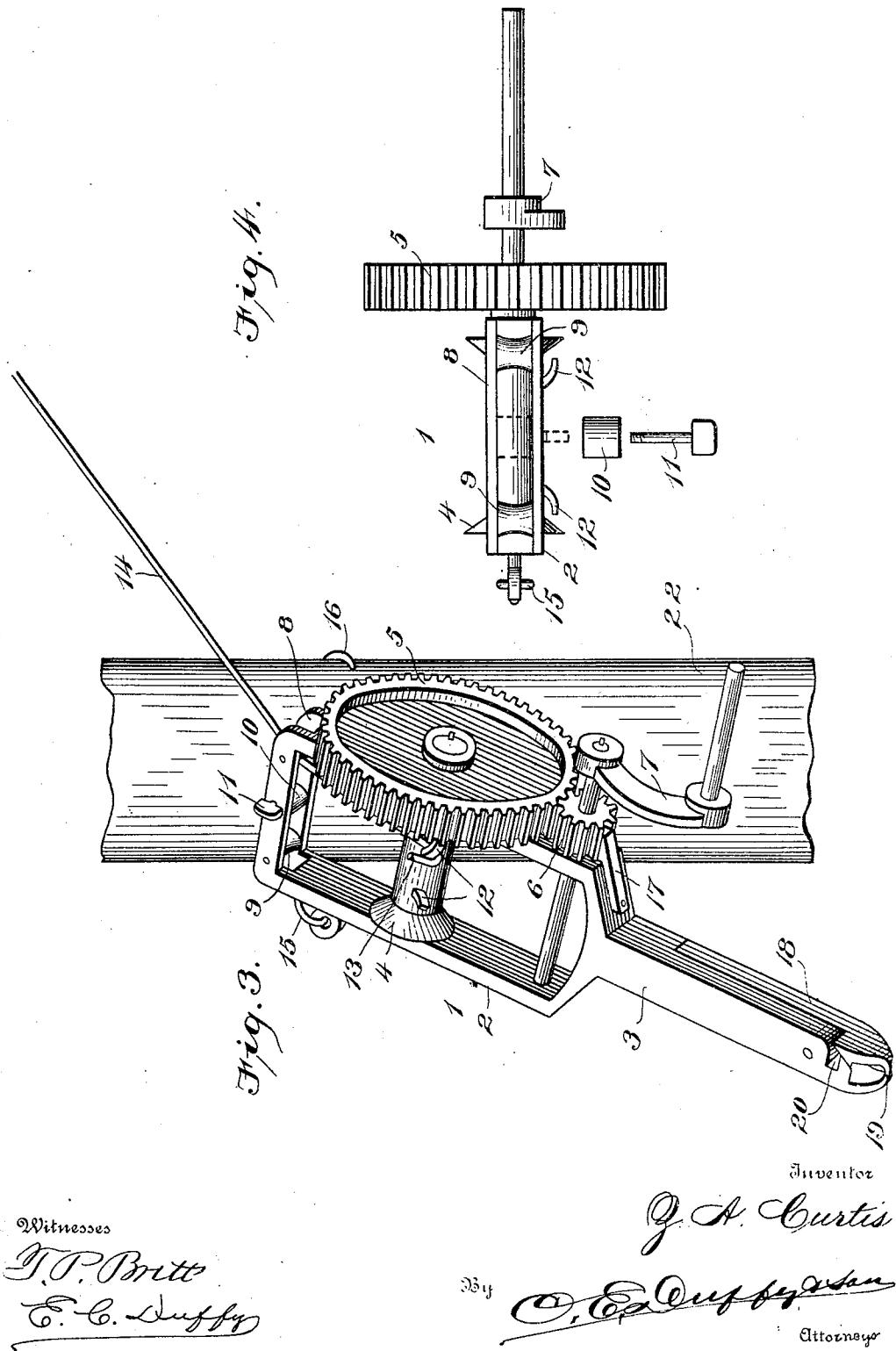
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# UNITED STATES PATENT OFFICE.

ZENAS ALBERT CURTIS, OF CHANNING, TEXAS.

## WIRE-STRETCHER.

No. 809,096.

Specification of Letters Patent.

Patented Jan. 2, 1906.

Application filed May 19, 1905. Serial No. 261,185.

*To all whom it may concern:*

Be it known that I, ZENAS ALBERT CURTIS, a citizen of the United States, residing at Channing, in the county of Hartley and State 5 of Texas, have invented certain new and useful Improvements in Wire-Stretchers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to 10 which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

15 My invention relates to a combined wire stretching, tying, and splicing machine, and has for its object to provide a device of this character which is simple in its construction, easy and cheap to manufacture, strong, durable, and efficient.

With this object in view my invention consists in the novel construction providing for stretching, tying, and splicing wires, as will be hereinafter fully described.

25 Referring to the accompanying drawings, Figure 1 is a perspective view showing machine in act of tying a broken wire. Fig. 2 is a similar view showing machine in act of taking slack out of a wire. Fig. 3 is a perspective view showing machine in position of stretching wire for stapling to posts, &c.; and Fig. 4 is a top plan view of frame. Fig. 5 is a fragmentary view showing upper end of machine and wire twisted outside of the frame.

35 Like numerals of reference indicate the same parts throughout the several figures, in which—

1 indicates the machine which comprises the frame 2, handle 3, reel 4, gear-wheel 5, 40 pinion 6, and operating-crank 7.

As shown, the top 8 of frame 2 is cut out and two rollers 9 are suitably secured therein, while a removable roller 10 is secured in the center of the top of the frame between the 45 two rollers 9 by means of a pin or thumbscrew 11.

12 indicates two hooks or lugs secured on the reel 4, to which the ends 13 of the wire 14 are secured.

50 15 indicates a chain secured to the side of the frame 2 and carrying a hook 16 at the end thereof, and 17 is a pawl carried on the frame 2, designed to engage the pinion 6 to lock the same against rotation.

Referring to the handle 3, it will be seen 55 that with the pivoted member 18 a staple-puller 19 and a wire-cutter 20 are formed.

Having thus described the several parts of my invention, its operation is as follows: In order to tie a broken wire and to take out 60 slack, the machine is placed as shown in Fig. 1. The two ends of the wire are then twisted around the small hooks or lugs 12, as shown, and the crank 7 is turned, which rotates the reel 4 and winds the two ends of the wire 65 thereon until the wire is as tight as desired and all slack has been taken out of same. The machine is then turned over from right to left one or more complete turns, which ties the wire by twisting the two pieces together 70 above the central roller 10. The crank is then reversed, unwinding the ends of the wire 75 and the ends of the wire are then wrapped around the wire on each side of the tie, which produces a strong and durable wire-knot. In order to take up slack in a wire which is not broken, the machine is placed as shown in Fig. 2, the small 80 removable roller 10 is removed, and a short piece of wire 21 is passed over the wire, and the ends are secured around the small hooks or lugs 12 on the reel 4. The crank 7 is turned, which rotates the reel 4 and winds the short wire 21 thereon, which draws the wire 14 down between the rollers 9. When the 85 wire has been tightened sufficiently and the slack taken therefrom, the removable roller 10 is replaced, as shown in Fig. 1, and the machine is turned over, as before described, which ties the wire above the roller 10 and 90 leaves a loop in the wire. The crank is then reversed, unwinding the small wire 21 from the reel 4. The removable roller 10 is again removed, which allows the loop in the wire to be disengaged from the machine, and the 95 said loop is then cut from the wire with the wire-cutter 20 in the handle 3. In order to stretch wire when stapling same to fence-posts, the machine is placed in position (shown in Fig. 3) against a post 22, the chain 100 is carried around the post and is engaged by the hook 16. The wire is passed through the frame, as shown, and is bent over one of the hooks 12 on the reel 4. The crank 7 is then turned, which revolves the reel 4 and winds 105 the wire thereon, stretching the same and taking out all slack. When the wire is sufficiently tight, the pawl 17 is pressed into en-

gagement with the pinion 6, which locks the reel against rotation, and the wire is stapled to the post.

Having thus fully described my invention, 5 I do not wish to be understood as limiting myself to the exact construction herein set forth, as various slight changes may be made therein which would fall within the limit and scope of my invention, and I consider myself 10 clearly entitled to all such changes and modifications.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

- 15 1. In a machine for the purposes described, the combination of a frame, a reel journaled therein, rollers at one end of said frame adapted to have the wire pass thereover, means on said reel adapted to have the ends of the wire secured thereto, and a removable roller located intermediate of said first-mentioned rollers, substantially as described.
- 20 2. In a machine for twisting wire for the

purposes described, the combination with a frame, of a reel carried therein and provided 25 with means adapted to have the wire secured thereto, said frame being constructed to allow the wire to lead to said reel at substantially right angles to said reel and an element in said frame for causing the twist in said 30 wire to occur outside of said frame.

3. In a machine for twisting wire for the purposes described, the combination with a frame, of means carried therein for stretching a wire, said frame being constructed to lead 35 said wire to said wire-stretching means at substantially a right angle to the line of said wire, and an element in said frame for causing the twist in said wire to occur outside of said frame, substantially as described. 40

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

ZENAS ALBERT CURTIS.

Witnesses:

R. L. QUEEN,  
F. E. NEELY.