

UNITED STATES PATENT OFFICE.

ZENAS ALBERT CURTIS, OF CHANNING, TEXAS.

WIRE-STRETCHER.

No. 842,866.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed March 3, 1906. Serial No. 304,013.

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 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 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.

My invention relates to wire-stretchers, and has for its object to provide a device of this class which is particularly simple in its construction, strong, durable, and efficient, and which embodies improvements over my United States Patent No. 809,096, dated January 2, 1906.

A further object of my invention is to provide a simple and strong construction for the wire-winding reel and gear-wheel.

My invention consists in the novel construction for journaling the reel and gear-wheel.

Referring to the accompanying drawings, Figure 1 is a perspective view of machine. Fig. 2 is a vertical transverse section taken through Fig. 3. Fig. 3 is a vertical longitudinal section taken through the winding-reel and gear-wheel.

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, 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 two rollers 9 by means of a pin or thumb-screw 11.

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

15 indicates a chain which may be secured to either 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 that the same comprises a pivoted member 18 and a staple-puller 19.

Referring to Figs. 2 and 3, it will be seen that the reel 4 is carried on a polygonal-faced hub 21, the bore 22 of said reel being also polygonal faced, as shown in Fig. 2. The said hub 21 is provided with an annular flange 23 and an enlarged polygonal-faced portion 24, while the portions 25 and 26 are annular, as shown, in order to be rotatable in the frame 2. A bolt 27, passing through said hub 21, with washers 28 and 29 thereon, holds said hub, reel, and gear-wheel in operative position, as shown.

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 slack, the two ends of the wire are passed between rollers 9 and 10 and 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 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 above the central roller 10. The crank is then reversed, unwinding the ends of the wire from the reel 4, 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 assemble the parts shown in Fig. 3, the reel 4 is placed in position in the frame 2, and the hub 21 is inserted in the frame, the flange 23 acting as a stop for the said hub, the hub passing through the reel 4. The gear-wheel 5 is then passed on the polygonal-faced portion 24, and the bolt 27, with washers 28 and 29, is then placed in position.

Having thus fully described my invention, what I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. In a device of the character described, the combination with the frame of a reel provided with a polygonal-faced bore, a hub for said reel having a polygonal-faced portion to

correspond with the bore of said reel, a polygonal-faced portion on said hub, a gear-wheel carried thereon, a flange on said hub between said polygonal-faced portions and means
5 passing through said hub for securing the same in position in said frame, substantially as described.

2. In a device of the character described, a hub comprising a polygonal-faced portion, a
10 flange on said hub and a polygonal-faced portion on said hub, substantially as described.

3. In a device of the character described, a hub comprising two annular portions, a polygonal-faced portion between said annular

portions, and a polygonal-faced portion at
one end of said hub, substantially as described. 15

4. In a device of the character described, a hub comprising an annular portion and two polygonal-faced portions, said annular portion being between said polygonal-faced portions, substantially as described. 20

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

ZENAS ALBERT CURTIS.

Witnesses:

E. S. COLLINS,
CHAS. L. WARE.