(No Model.)

C. H. DICKINSON.

WIRE TIGHTENER.

No. 523,032. Patented July 17, 1894.

Fig. 1.

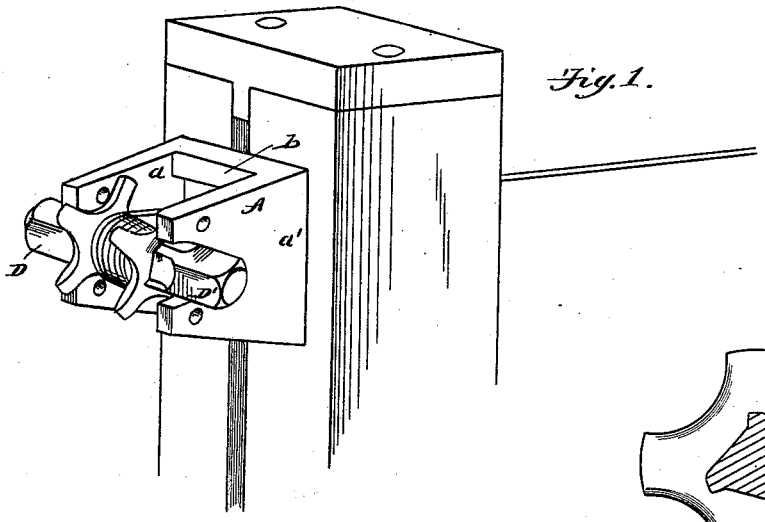


Fig. 4.

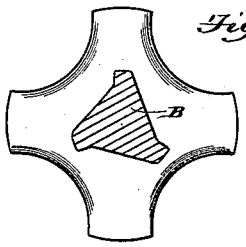


Fig. 2.

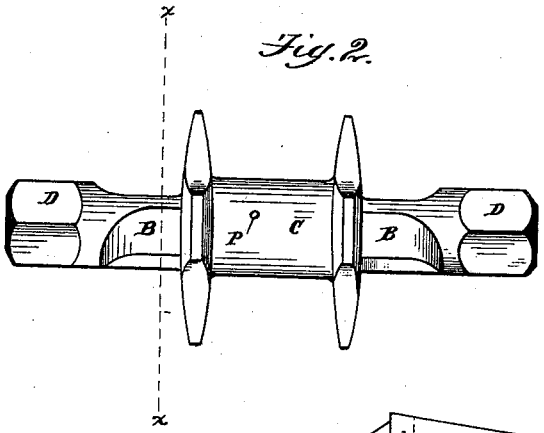


Fig. 3.

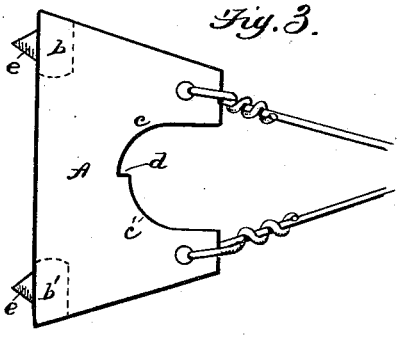
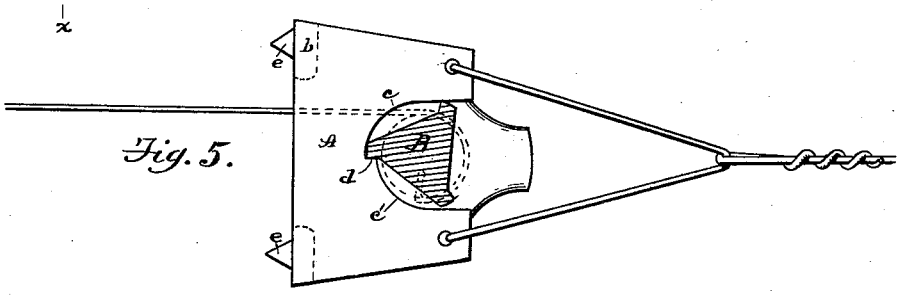


Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES H. DICKINSON, OF COLDWATER, MICHIGAN.

WIRE-TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 523,032, dated July 17, 1894.

Application filed February 19, 1894. Serial No. 500,669. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. DICKINSON, a citizen of the United States, residing at Coldwater, county of Branch, State of Michigan, have invented a certain new and useful Improvement in Wire-Tighteners; and I 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to wire tighteners, and has for its object an improvement in that class of wire tighteners employed for straining and keeping tight the separate wires of wire fences.

The device is simple, easily made, contains few parts, and no parts that can be got out of place and lost, thus rendering the device useless.

It consists essentially of a frame and a journaled spool upon which the slack of the wire is wound when the wire is drawn tight.

In the drawings, Figure 1 shows the tightener in position. Fig. 2 is an elevation of the spool. Fig. 3 is an end elevation of the frame, showing the means by which the spool is held from reverse rotation after it has been wound once in straining the wire. Fig. 4 is a section at the line *x*—*x* of Fig. 2, and shows the shape of the spindle or shaft of the spool which co-acts with the seat on the frame, Fig. 3, in holding the spool from reverse motion. Fig. 5 indicates the method of employing the tightener at points along the line between posts.

A indicates the main frame-work or support for the spool, made in the form of two standards or Y's, *a*, *a'*, connected by cross bars *b b'*, and provided with shaft seats of peculiar shape, shown in Fig. 3. The shaft seat has a bearing surface in the form of two quadrants *c c'*, whose centers are not the same. The approaching ends of the quadrants *c c'* are connected by a line *d*, which is in the radius common to both the quadrants *c c'*, or approximately in that radius. The portion of the shaft B of the spool C that rests in this bearing formed by the two quadrants, has three or more angular notches, one side of each notch being along a radius of the shaft and another side being along a chord of the circle bounding the shaft; between each two notches is a portion of the cylindrical outer surface of the shaft, which bears against either the surface *c* or the surface *c'*; the action of this shaft in its bearing is easy, and a reverse action impossible. Between the bearing parts B and B' of the shaft is the spool C, and on each end of the shaft outside of the bearings B and B' are parts D and D', finished to receive the eye of a crank.

At the back of the frame A are several lugs *e*, *e*, which take into the wood of the fence post and aid in holding the framework in its place, preventing it from slipping up or down. The post employed with this fixture is preferably made in two parts, with a slot between them; but the fixture will work equally well if, in place of the two part slotted post, any other form of post with a hole through it is used. The fence wire is drawn through the post or through the slot between the two parts of the post, and passed through the opening between the bars *b* and *b'*, and made fast to the spool, passing its end through the opening *p* in the body of the spool. The shaft of the spool is then placed in the bearings formed by the surfaces *c c'*, and is turned by a crank until the wire is tightened sufficiently. The strain of the wire holds the corner of the triangular part B of the shaft firmly against the curved bearing *c* and the radial part *d*, which now forms a stop to prevent the return movement or unwinding movement of the spool. The weight of the wire will hold the spool firmly in its place for a considerable time before the wire has been wound up and strained as much as will be desirable in ordinary fence building work, and any stretching of the wire or expansion of the wire will simply cause the middle of it to sag, while still keeping a strain on the wire sufficient to hold the spool in its bearings.

This tightener can be used at points along the line between the fence posts. In order so to use it, a short loop of wire is made fast to the frame, and *w*, *w*, indicate holes in the frame through which the ends of a loop of wire can be threaded; one end of the line wire *s* is fastened to the loop *t* and the end of another wire *r* is made fast to the spool in the

usual way; the wire is tightened by turning the spool.

What I claim is—

In a wire tightener, the combination of a spool holding bracket having the broken contour *c*, *d*, *c'*, comprising two eccentric quadrants joined by a surface on a line passing through the centers of both quadrants, and a spool having alternate notches and cylindrical bearing surfaces, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

CHARLES H. DICKINSON.

Witnesses:
R. A. PARKER,
CHARLES F. BURTON.