(No Model.) 2 Sheets—Sheet 1.

C. M. KILER.

WIRE FASTENER AND TIGHTENER.

No. 445,330. Patented Jan. 27, 1891.

Fig. 1.

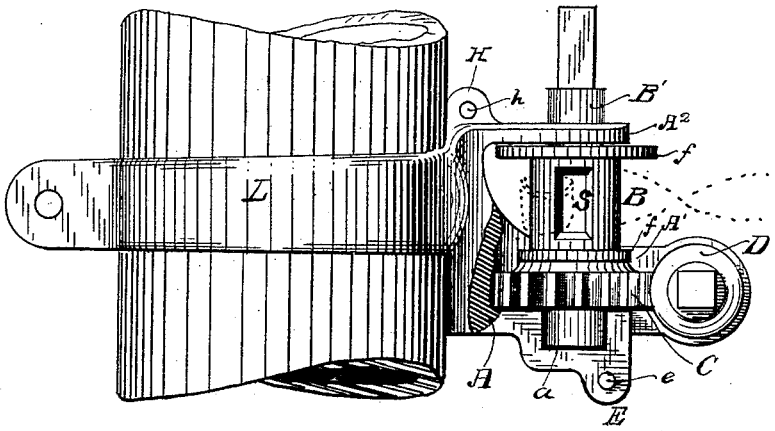


Fig. 2.

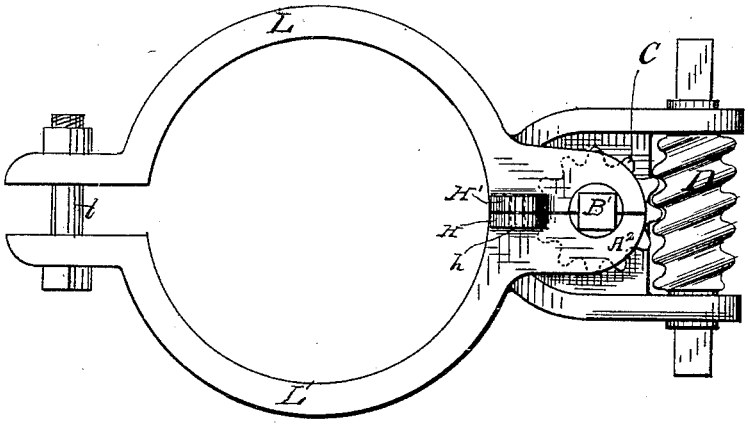
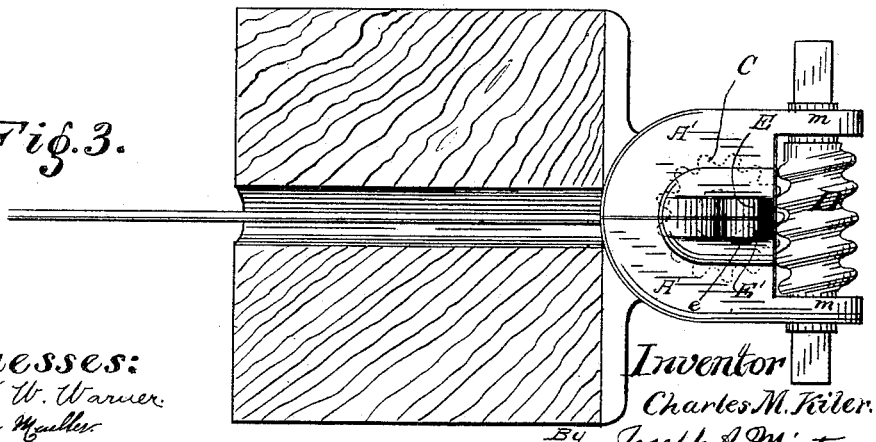


Fig. 3.



Witnesses:
Frank W. Warner.
William Mueller.

Inventor
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By Joseph A. Minturn,
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(No Model.) 2 Sheets—Sheet 2.

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No. 445,330. Patented Jan. 27, 1891.

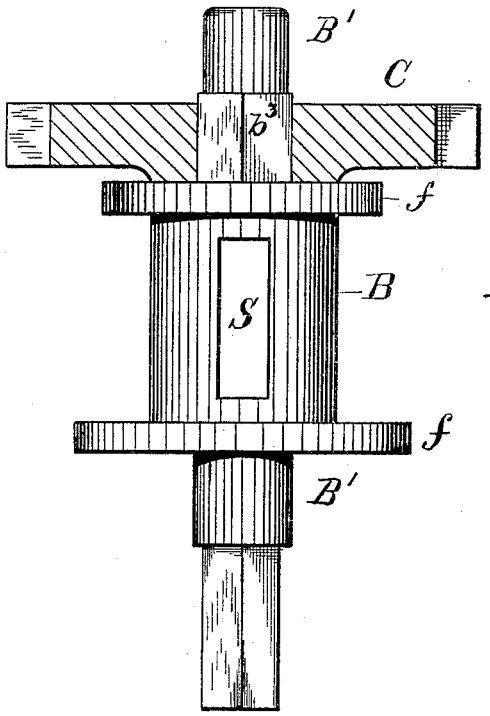

Fig. 4.

Witnesses:
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Frank W. Warner

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Charles M. Kiler
by Joseph A. Minturn
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UNITED STATES PATENT OFFICE.

CHARLES M. KILER, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-HALF TO ROBERT E. POINDEXTER, OF SAME PLACE.

WIRE FASTENER AND TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 445,330, dated January 27, 1891.

Application filed February 27, 1890. Serial No. 341,975. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. KILER, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in a Combined Wire Fastener and Tightener; and I do hereby 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.

This invention relates to improvements in the construction of wire fences, the object of the invention being, first, to afford a ready and secure attachment between the wires and the end post in the erection of the fence, and, second, to afford a simple and reliable mechanism for drawing the wires of the fence to any desired tension at the time of erecting the fence or at any subsequent time.

With these objects in view my invention consists in the special construction and in the combination and arrangement of the several parts, substantially as hereinafter described and claimed.

Figure 1 represents in side elevation a portion of a wire-fence post, with a wire-tightening device used in connection therewith embodying my improvements, a portion of the casing or frame-work of the tightener being broken away to show more clearly the construction and arrangement of the parts, the wire to be tightened being shown in dotted lines. Fig. 2 is a top or plan view of the tightening device, the fence-post not being shown. Fig. 3 is an under side view of a modified form of tightener as applied to a wooden post; Fig. 4, an enlarged sectional detail of the drum of the tightener, showing the manner of connecting the pinion.

Similar letters refer to like parts throughout the several views in the drawings.

A is a casing or frame within which the operative mechanism of the tightening device is located. It is preferably formed of malleable iron, and for cheapness and convenience is made in two parts, as illustrated in Figs. 2 and 3. The two parts of the casing are held together by the lugs E E′, located on the under side of the casing. The lug E is cast with a spur or rivet *e*, which is projected in the direction of and through a corresponding hole in the lug E′, where it is riveted, thereby fastening the two parts of the case together next to the screw, which is the point of greatest strain. A similar connection is formed on the upper side of the casing by the lugs H H′, also provided with a spur *h* of like form.

B is a spindle or drum around which the wire to be tightened is wound, said drum having the elongated slot *s*, through which the end of the wire is inserted.

B′ is a shaft, preferably integral with the drum, by which the drum is journaled between the forwardly-projected base A′ and the arm A^2 of the casing, said shaft having a square or angular portion b^3 near one end to receive and hold a toothed wheel or pinion C, as hereinafter set forth. A socket *a* in the base A′ receives the lower end of the shaft B′, and the opposite or upper end of the shaft is extended through an opening in the arm A^2 to a suitable distance above and beyond the arm. The flanges *f* act as guards to prevent the wire from choking between the drum and casing. A toothed wheel C is removably secured to the square portion b^3 of the shaft B′ of the drum B, said wheel C resting between the flange *f* of the drum and base A of the casing. If desired, the wheel C may be attached to said shaft by shrinking, keying, or any suitable means that will unite them, so that both wheel and drum will move together.

D is a worm journaled horizontally between the arms *m* of the bifurcated base A′ in such position that the threads will act between the teeth of the wheel C, causing the wheel and its attached drum to revolve with the rotation of the screw-worm. The arms M have openings through which the respective ends of the worm are projected to a suitable distance. The extended ends of the worm are square in cross-section and are adapted to enter corresponding openings in a key or crank or to engage a wrench by means of which the worm is rotated in tightening the wire. By extending the screw-shaft on both sides the wires may be tightened from either side of the fence.

The necessity of making the casing or frame-work in two sections is apparent, as otherwise the drum and worm with shafts cast integral therewith could not be placed in posi-

tion, and a two-part casing as described is more economical than any other construction. It is evident, however, that other constructions of casing may be made without departing from the spirit of this invention.

When the tightener is intended to be secured to an iron post, the two sections of the casing are projected backward, forming the arms L L′, which encircle the post, and by means of a bolt at *l* the arms are brought together, so as to tightly grasp the post.

The construction shown in Fig. 3 is adapted to wooden posts. When so applied, the wire is extended through a hole in the post and is wound around the drum, the strain being against the post, where, as in the application to a post of iron, the strain is in the opposite direction.

The tighteners illustrated in the several figures of the drawings are intended to remain attached to the fence-post as a permanent part of the fence, but are so constructed that they may be readily removed and replaced in case of breakage or may be adjusted to various positions upon the posts.

I claim—

In a fence, the combination, with a tubular post, of a two-part casing having arms to embrace said post, as shown, and having the slotted winding-drum B, the shaft B′ of which is journaled in said casing, a toothed wheel fixed to said shaft, and a worm D at right angles to the axis of the toothed wheel, meshing therewith, and having angular ends projected beyond the casing to be engaged by a wrench or key, all substantially as and for the purpose set forth.

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

CHARLES M. KILER.

Witnesses:
JOSEPH A. MINTURN,
FRANK W. WARNER.