

(No Model.)

L. BICKEL.
DETACHABLE WIRE TIGHTENER.

No. 547,760.

Patented Oct. 15, 1895.

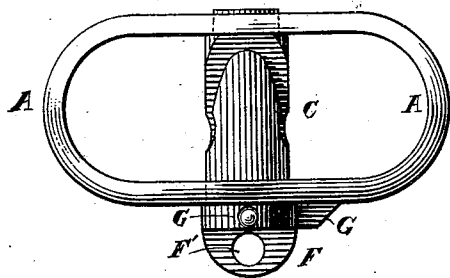


Fig 1.

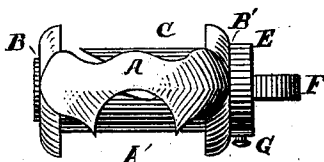


Fig 2.

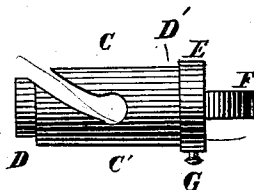


Fig. 3.

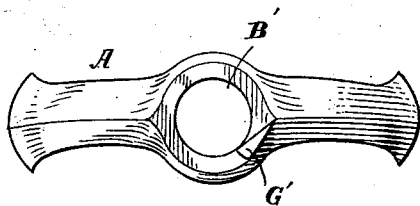


Fig 4.

WITNESSES:

John C. Peterson
Julia Hanna.

INVENTOR

Louis Bickel:

BY

C. P. Humphrey
ATTORNEY.

UNITED STATES PATENT OFFICE.

LOUIS BICKEL, OF AKRON, OHIO.

DETACHABLE WIRE-TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 547,760, dated October 15, 1895.

Application filed July 11, 1895. Serial No. 555,820. (No model.)

To all whom it may concern:

Be it known that I, LOUIS BICKEL, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have
5 invented a certain new and useful Improvement in Detachable Wire-Tighteners, of which the following is a specification.

My invention has relation to improvements in fence-wire tighteners; and it has for its
10 object the production of a simple and effective device that may be applied to the line at any desired point when the wire is in position, and successfully draw and retain it taut until it is desired to remove it.

15 My invention consists in the peculiar and novel construction, arrangement, and combination of parts hereinafter described, and then specifically pointed out in the claim, reference being had to the accompanying drawings, forming a part of this specification.

20 In the accompanying drawings, in which similar reference-letters indicate like parts in the different views, Figure 1 is a plan; Fig. 2, an end view; Fig. 3 the windlass removed, and Fig. 4, a side view with the windlass removed.

Referring to the drawings, A is the frame, consisting of an elongated link having at the center of each side orifices B B', constituting
30 bearings for the windlass C, the orifice B being smaller than B'. The windlass C is made tapering, its smaller end D being reduced at an abrupt angle, leaving a journal to fit the smaller orifice B. The larger part of the
35 windlass D' fits the larger opening B', and beyond is an enlarged shoulder E, the extreme end being cut away on each side, leaving a flattened end F, through which is a perforation F'. In the shoulder E is a transverse hole in which freely slides a rivet G,
40 longer than the diameter of the shoulder and "headed" at each end to retain it from escaping. This rivet slides by gravitation, and its end engages a lug G' on the frame A, which
45 lug has a sloping face, on which the end of the rivet G slides as the windlass is revolved

in the direction of the arrow until it passes its abrupt end, when it falls, and engaging the end acts as a pawl. Through the windlass C is a hole C', which extends outward
50 until it opens near the smaller journal D. In the lower faces of the link A are semicircular notches A', which serve as guides for the wire to be strained.

In operation, the windlass being removed, 55 the frame is placed on the wire, the latter resting in the notches A'. The windlass is then inserted, the wire entering the opening C' until it rests in its inner end. The windlass is then turned in the direction of the
60 arrow until the wire is once wrapped about it, which at once serves to retain it in place, and it is then turned up by a pin or wrench until the wire is taut, the pin or rivet G following at each half-revolution over the end
65 of the lug G', thus preventing its return. The wire is released by releasing the pin from the lug, when the windlass is readily withdrawn and the frame removed without the change of any other part.

70 These tighteners can be manufactured so cheaply that they are designed to be permanently attached to the wire until it is desired to remove or renew the fence.

I claim as my invention—

75 In a wire-tightener, the combination with a loop-frame having end guides, and a lug catch; and oppositely-disposed windlass bearings of different diameters; of a windlass adapted to fit said bearings; cut diagonally
80 between said bearings, and lengthwise from its face to its approximate center; and a sliding pin resting in a transverse orifice in said windlass, longer than the diameter thereof, and arranged to fall by gravitation and engage said lug catch, substantially as shown.

85 In testimony that I claim the above I hereunto set my hand.

LOUIS BICKEL.

In presence of—

LOUISA BICKEL,
C. P. HUMPHREY.