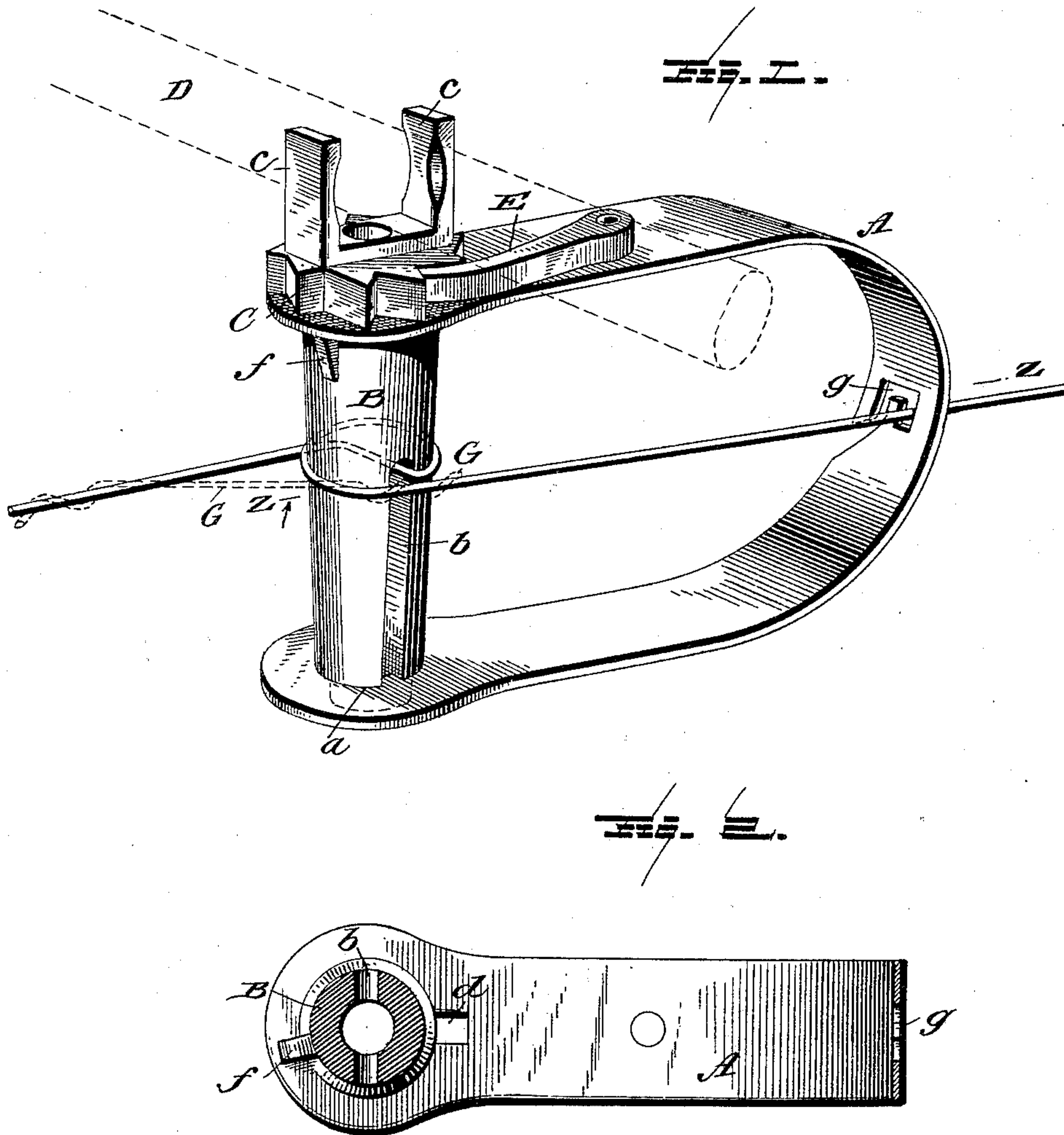


(No Model.)

J. L. BUCKINGHAM.  
WIRE TIGHTENER.

No. 453,106.

Patented May 26, 1891.



Witnesses  
*L. C. Hills.*  
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# UNITED STATES PATENT OFFICE.

JOHN L. BUCKINGHAM, OF HERMOSA, SOUTH DAKOTA.

## WIRE-TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 453,106, dated May 26, 1891.

Application filed November 20, 1890. Serial No. 372,007. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN L. BUCKINGHAM, a citizen of the United States, residing at Hermosa, in the county of Custer, State of South Dakota, have invented certain new and useful Improvements in Wire-Tighteners, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in wire-tighteners designed more particularly for taking up the slack in wire fences; and it has for its objects, among others, to provide a simple, cheap, and  
15 efficient device of this character readily applied to the wire and easily operated. I provide a removable tapered shaft, which is slotted to admit the wire, the upper end of the shaft being provided with lugs to receive a  
20 suitable instrument whereby it is revolved. A ratchet-and-pawl mechanism is provided to prevent retrograde movement. The support or arm which carries the said shaft is provided with a guide to hold the wire while the  
25 slack is being taken in. The device can be readily applied to the wire at any desired place. It can be readily removed after the slack is taken up and secured.

30 Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claim.

35 The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

40 Figure 1 is a perspective view illustrating the application of my device to the wire. Fig. 2 is a section through the line  $z z$  of Fig. 1 with the wire removed.

Like letters of reference indicate like parts in both views.

Referring now to the details of the drawings by letter, A designates an arm or support substantially in the form of the letter U, or bow-shaped, the free parallel ends of which are formed with openings to receive the operating-shaft B, which is tapered from its upper end downward, as shown clearly in Fig. 1. The  
45 shaft B, as above stated, is tapered, being provided at its smaller end with a shoulder or step  $a$  to limit the movement of the shaft into

the smaller opening in the arm or support A, as will be seen from Fig. 1. This shaft is split for about one-half of its length to form  
55 a slot or passage  $b$  to receive the wire, as shown in Fig. 1. The larger end of the shaft B is provided with a ratchet-wheel C, which is larger in diameter than the opening in the arm of the support A, through which the upper end of the shaft passes, and above this  
60 ratchet-wheel the shaft is formed with the parallel lugs  $c$ , adapted to receive a bar D, as shown by dotted lines in Fig. 1.

E is a ratchet-pawl pivoted to the support A and designed to engage the ratchet-wheel to prevent retrograde movement of the shaft while it is being turned.

The opening in the upper arm of the support A is provided with a side opening or slot  
70  $d$ , as seen best in Fig. 2, through which is adapted to pass the projection or lug  $f$  on the side of the shaft B near its upper end, the said lug or projection being designed to pass through the said side slot when the shaft is  
75 to be removed or inserted, and then the shaft is turned so as to bring the upper square shoulder of the lug against the under side of the support A at a point not coincident with the said side slot, as will be readily understood.  
80 The curved portion of the arm or support A is formed with a guide-slot  $g$  for the wire, as seen best in Fig. 1. This slot is formed with an entrance at the side of the arm, thence upward, and then horizontally, and thence downward,  
85 as seen in Fig. 1, so that while the wire may be readily entered in the said slot it cannot be accidentally displaced during the operation of the machine.

The operation will be readily understood  
90 from the above description, when taken in connection with the accompanying drawings. The shaft B is turned so that its lug  $f$  will be coincident with the side slot  $d$  in the upper arm of the support A and the shaft then raised  
95 sufficient to allow the split end thereof to be placed astraddle of the wire. The shaft is then lowered, the lug  $f$  placed in the side opening, and then the shaft is turned so that the said lug will come beneath the upper arm  
100 of the support. The shaft is then turned by any suitable means. It may be a hammer-handle placed between the lugs  $c$ , and the wire is coiled around the shaft B at a point near

its center, so as not to compress the split portions thereof. Retrograde movement of the shaft is prevented by the ratchet and pawl. When the wire has been sufficiently tightened, 5 the slack or coil is held by any suitable means—as, for instance, as shown by dotted lines in Fig. 1, where I have shown the slack secured by a short wire G, twisted around the portions of the fence-wire upon opposite sides 10 of the coil or coils therein. The shaft is then removed, so that the machine may be taken from the wire and removed to another place. The taper of the shaft allows of ready removal thereof, when necessary, after the slack of 15 the wire has been taken up, and is deemed important for that purpose.

What I claim as new is—

The combination, with the substantially U-shaped support A, having parallel portions provided with openings for the shaft, and at 20 its bend provided with a guide-slot for the wire, and at the upper opening provided with side slot, of the tapered shaft having split smaller end, lug f, ratchet-wheel, and parallel lugs c at its upper end, substantially as and 25 for the purpose specified.

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

JOHN L. BUCKINGHAM.

Witnesses:

FREDERICK JONES,  
CHARLES J. PATTON.