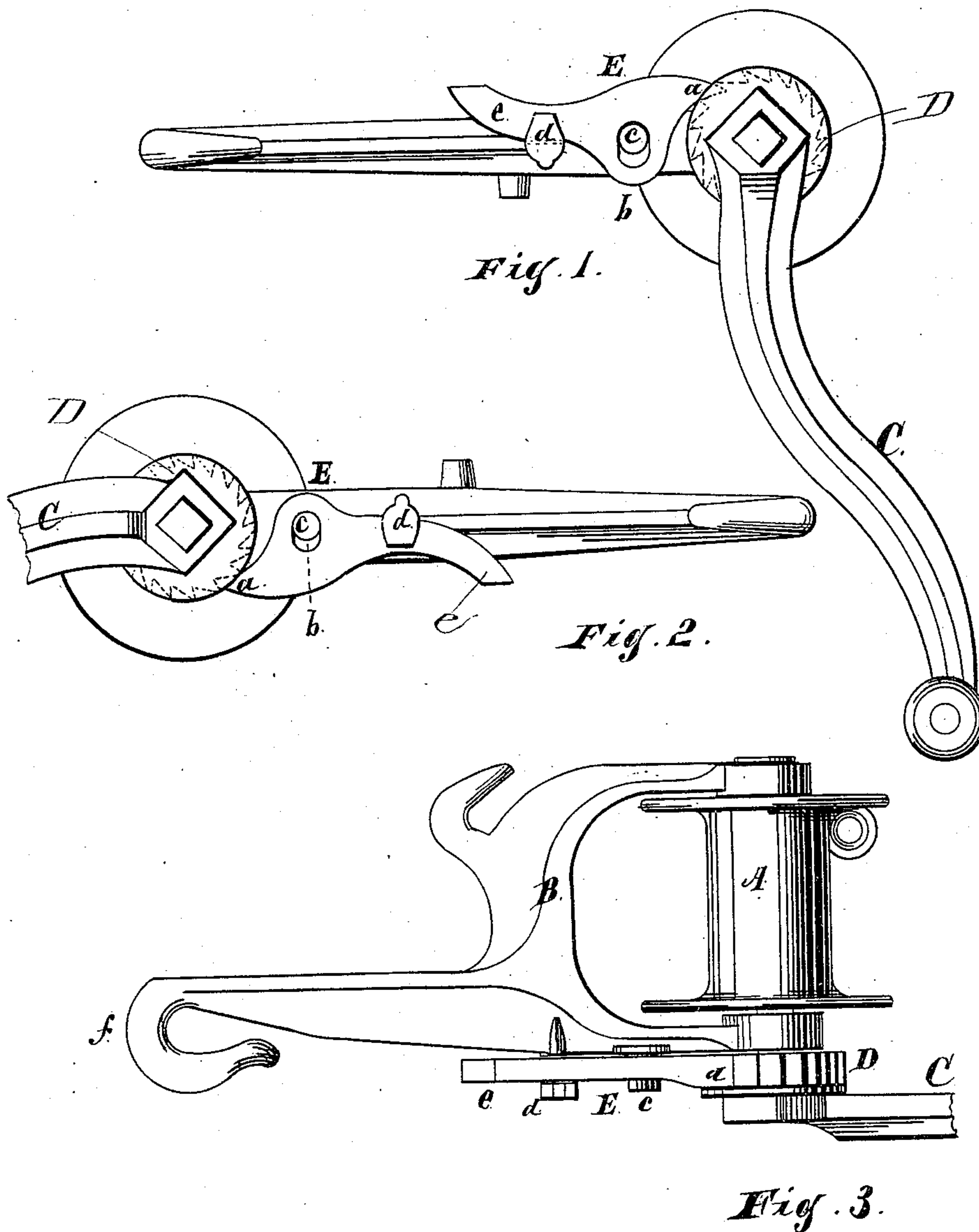


(No Model.)

R. ELLWOOD.  
Wire Tightener.

No. 229,983.

Patented July 13, 1880.



**Witnesses:**  
Henry J. Brown  
A. H. Adams.

**Inventor:**  
Reuben Ellwood  
By West & Boardman  
His Atty.

# UNITED STATES PATENT OFFICE.

REUBEN ELLWOOD, OF SYCAMORE, ILLINOIS.

## WIRE-TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 229,983, dated July 13, 1880.

Application filed May 12, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, REUBEN ELLWOOD, residing at Sycamore, in the county of De Kalb and State of Illinois, and a citizen of the United States, have invented a new and useful Improvement in Wire-Tighteners, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a side view. Fig. 2 is a side view of the same instrument turned over, that which is the upper side in Fig. 1 being the under side in Fig. 2. Fig. 3 is a plan, the parts being in substantially the same position as in Fig. 1.

My invention is primarily designed to be used in tightening the wires of wire fences, but is not limited to this use only; and it relates to that class of tighteners which can be reversed and used in drawing the wire either from the right or left.

The invention consists in providing the stretcher with a single weighted bar, so constructed and combined with the instrument that such bar serves the purpose of a pawl when the tightener is in the positions shown in Figs. 1 and 2, the bar or pawl being self-adjusting when the device is reversed, as hereinafter fully described.

In the drawings, A represents a windlass supported in a suitable frame, B. C is the crank. D is a ratchet-wheel connected with the windlass on the outside of the frame. E is a piece of metal, which serves the purpose of a pawl, the point *a* of which engages with the ratchet D. *b* is a slot in E. *c* is a pin or pivot projecting from the side of the frame into the slot *b*. *d* is a hook or a rest and guard for the rear end, *e*, of the part E. This hook *d* also projects from the side of the frame.

The bar E may be called a "double pawl." When the stretcher is in the position shown in Fig. 1 this pawl E is, in effect, pivoted upon the hook *d*, and the slot *b* permits the forward end or point, *a*, to rise and fall as the windlass and ratchet thereon are rotated. At the same time the point *a* will be held in contact with the ratchet by the weight of the pawl, as is customary.

If the tightener were always to be used in the position shown in Fig. 1, the pivot *d* and slot *b* could be omitted, and the common single pawl might be used.

When the instrument is reversed, as shown in Fig. 2, and the crank is rotated to tighten the wire, the pawl will be pivoted upon the pivot *c*, the rear end or bail, *e*, acting as a weight to hold the point *a* in contact with the ratchet. The hook *d* then serves the purpose of a guard and prevents the pawl from slipping off from the pivot *c*.

When the wire has been tightened and the crank is released the strain of the wire on the windlass will cause the pawl to come into the position shown.

The pin *c* prevents the pawl from being pushed out of place by the strain of the wire on the windlass when the wire has been tightened and the crank is at rest.

The instrument, when complete, is to be provided with a short chain attached at *f*, for the purpose of securing the tightener to a post. One or more suitable devices are also to be used for the purpose of grasping the wire which is to be tightened, as is usual.

I am aware that wire-tighteners have been used which could be reversed, stretching the wire either from the right or left; but the instruments used have either been provided with two pawls, or with a pawl and hook, and in both cases when the tightener is reversed it is necessary to adjust the pawls or pawl and hook by hand.

My double pawl E is self-adjusting, having two points of support—one at *d* when the tightener is in the position shown in Fig. 1, and then the weight of the forward part of the pawl keeps it in contact with the ratchet. The pin *c* is the other point of support when the device is reversed, as shown in Fig. 2, and then the rear end or bail of the pawl or bar E keeps the point *a* up in contact with the ratchet.

I do not limit myself to the exact means shown for connecting the pawl with the frame. The bail of the pawl might be made a little wider at the proper point and there be provided with a slot, and then a pin and nut might be used for the rear connection in place of the rest *d*, so a suitable lug could be cast on the pawl, which might rest on the frame; but I prefer the means shown in the drawings.

The device is useful when tightening a wire from one direction only. Then the instrument frequently turns over by accident, which, with



my self-adjustable double-acting pawl, makes no difference.

What I claim as new, and desire to secure by Letters Patent, is as follows:

- 5 1. A pawl, E, having two points of support, and formed substantially as described, for the purpose of making the pawl self-adjusting when used in different positions, substantially as specified.
- 10 2. In a wire-stretcher or other similar instru-

ment, a pawl, E, supported upon two different points, and formed substantially as described, and provided with a slot, *b*, for the purpose of making the pawl self-adjusting in different positions, substantially as specified.

REUBEN ELLWOOD.

Witnesses:

J. J. FLANNERY,  
J. D. ELLWOOD.