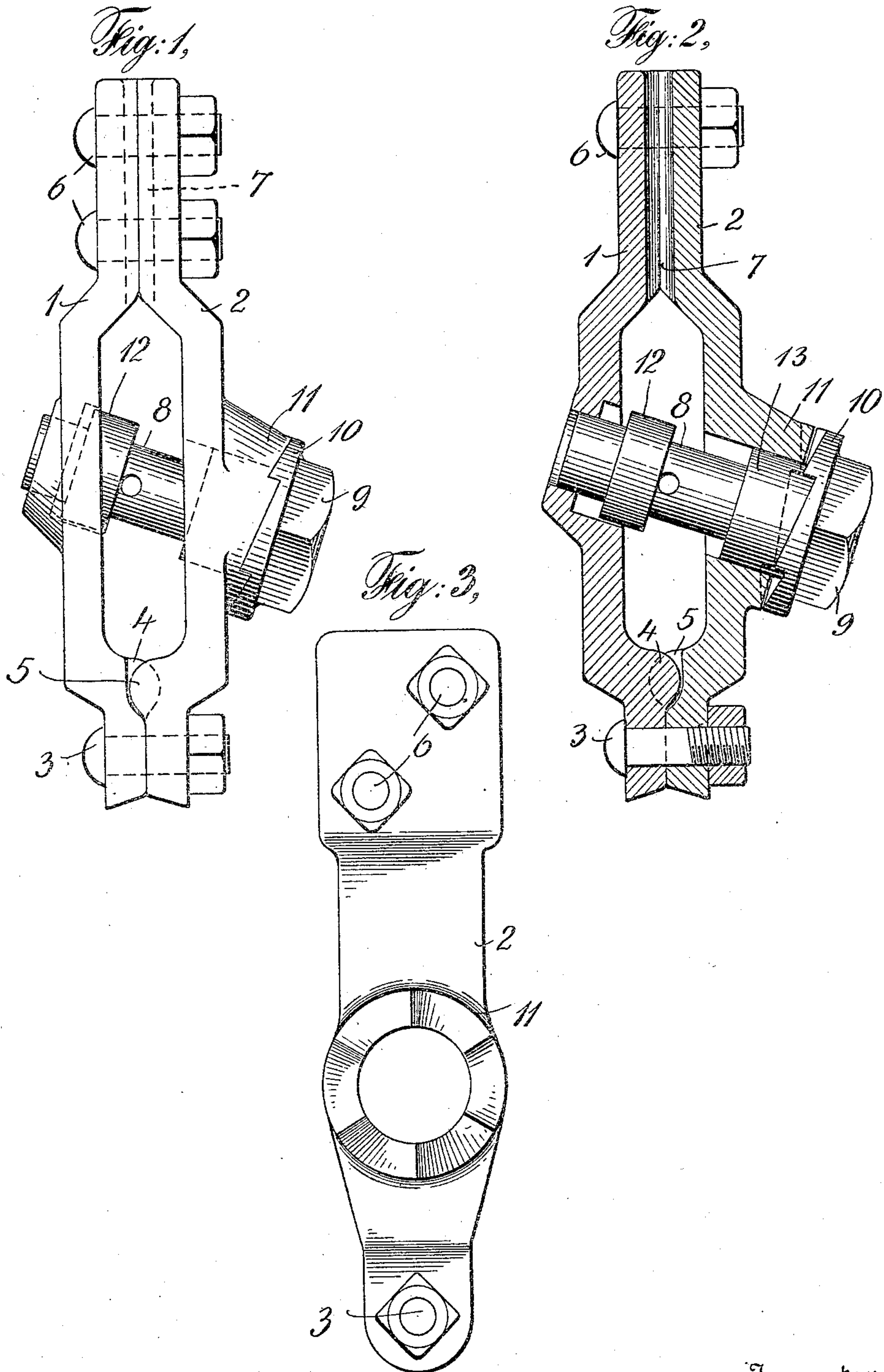


J. C. BARCLAY.
WIRE STRETCHER.
APPLICATION FILED JULY 16, 1909.

940,423.

Patented Nov. 16, 1909.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN C. BARCLAY, OF MONTCLAIR, NEW JERSEY.

WIRE-STRETCHER.

940,423.

Specification of Letters Patent.

Patented Nov. 16, 1909.

Application filed July 16, 1909. Serial No. 508,032.

To all whom it may concern:

Be it known that I, JOHN C. BARCLAY, a citizen of the United States, residing at Montclair, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Wire-Stretchers, of which the following is a specification.

My invention relates to wire stretchers, and particularly to that class thereof employed primarily or customarily, in connection with the guy-wires of telegraph poles and the like, for taking up slack.

My invention comprises a novel construction of such devices whereby the tension of the wire itself normally holds the spindle locked against backward rotation; forward rotation, *i. e.*, rotation in a direction to wind up more of the wire, being nevertheless permitted at all times.

The object of my invention is to provide a simple, compact and relatively inexpensive device of the character described, and to cause the spindle to be held locked automatically.

I will now proceed to describe my invention with reference to the accompanying drawings, in which one form of my improved wire tightening or stretching device is illustrated, and will then point out the novel features in claims.

In said drawings: Figure 1 shows a side view of one embodiment of my invention; Fig. 2 shows a longitudinal section of the frame thereof showing the spindle in position; and Fig. 3 shows a face view of the frame, with the spindle removed.

My improved wire stretcher comprises a frame, comprising side members 1 and 2, secured together at the lower end by a bolt 3 and also interlocked by means of a tongue 4 of one member fitting between tongues 5 of the other member, and secured together at the upper end by means of bolts 6; the two members, 1 and 2, having, between their upper faces so secured together, a channel 7 through which the wire to be acted upon may pass. The device also comprises a spindle, 8, passing through suitable bearings in members 1 and 2, having a squared head, 9, adapted to be engaged by a wrench, and having also a toothed disk 10, the teeth of which are adapted to be engaged by the teeth of a corresponding boss 11 formed on

frame member 2, so as to prevent backward rotation of the spindle. 55

In order that the pull of the wire being stretched shall in itself prevent backward rotation of the spindle, by holding its teeth in engagement with the teeth of the frame, I have set the axis of the spindle obliquely with respect to the main axis of the device and with respect to the direction of pull of the wire; the pull of the wire for this reason tending to draw the spindle in the direction of its length, so holding the teeth of the spindle and of the frame in engagement. Nevertheless, as will be seen, it is at all times possible to turn the spindle forward by means of a wrench, the spindle moving axially to permit this, the teeth of the spindle and frame acting as cams to push the spindle axially as it is rotated forward, while preventing material backward rotation of it. 60 65 70

In practice, and when using the device for taking up slack in telegraph guy-wires and the like, the anchor-cable or other anchor-connection is usually passed through the lower end of the frame, the guy-wire itself being drawn through the groove or channel 7 and its end passed through the hole 12 in the spindle, to fasten it. The spindle is then rotated, winding up the guy wire upon it, until sufficient tension has been reached. 75 80

Spindle 8 is provided with a collar 12 which prevents the wire wound upon said spindle from being pinched between the spindle and the side of the member 1. The opening in member 2, through which the spindle passes, is of sufficient size to permit the passage of this collar 12, and in order that the spindle may have a bearing in member 2, said spindle is provided with a shoulder 13 of about the diameter of the opening in member 2. In practice, the collar 12 is formed separately from spindle 8 (though it might be formed integrally therewith) and is pressed upon said spindle, so as to be tightly secured thereto and to be in effect integral therewith. 85 90 95

It will be observed that this device comprises no small loose parts which are likely to be lost; that all its parts are of simple form, and are strong and massive; and that the device is very easily operated. In a companion application, filed July 16, 1909, Sr. No. 508,033, I have illustrated an alternative 100 105

device for the same purpose and in that application have included claims generic to the form therein shown and to the form herein shown.

5 What I claim is:—

1. A stretching or tightening device, such as described, comprising a frame member having an open space within which the wire or the like may be wound, and means for
10 guiding such wire or the like thereto, and a rotatable member mounted in bearings in said frame on opposite sides of said open space and adapted to wind up upon itself the wire or the like, the axis of said rotatable
15 member being oblique with respect to the direction of pull upon it, said two members having interlocking means.

2. A stretching or tightening device, such as described, comprising a frame member
20 having an open space within which the wire or the like may be wound, and means for guiding such wire or the like thereto, and a rotatable member mounted in bearings in said frame on opposite sides of said open
25 space and adapted to wind up upon itself the wire or the like, the axis of said rotatable

member being oblique with respect to the direction of pull upon it, said two members having coacting ratchet teeth.

3. A stretching or tightening device, such
30 as described, comprising a frame member having an open space within which the wire or the like may be wound, and means for guiding such wire or the like thereto, and a rotatable member mounted in bearings in
35 said frame on opposite sides of said open space and adapted to wind up upon itself the wire or the like, said two members having coacting ratchet teeth, the axis of said
40 rotatable member being oblique with respect to the direction of pull upon it, the consequent longitudinal force-component to which said spindle is subjected, due to pull on the
45 wire, being in a direction to keep said ratchet teeth in contact.

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

JOHN C. BARCLAY.

Witnesses:

T. E. BARTON,
H. M. MARBLE.