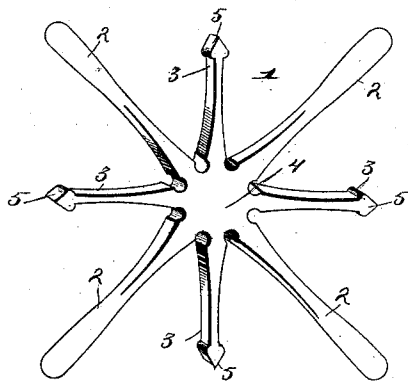
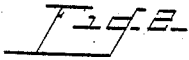
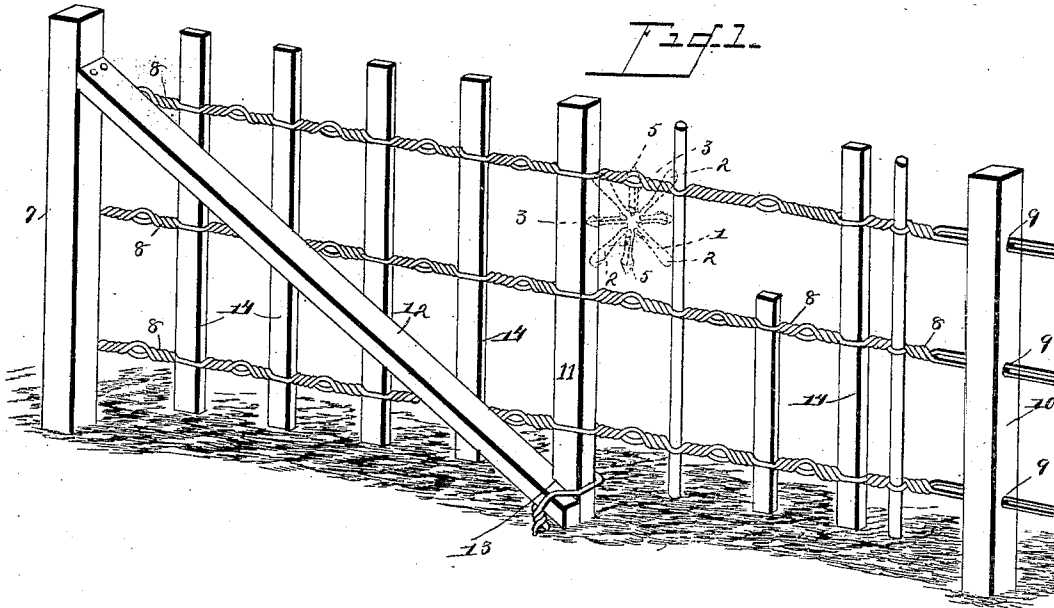


(No Model.)

A. T. CAMPBELL.
WRENCH FOR TWISTING FENCE WIRES.

No. 466,769.

Patented Jan. 12, 1892.



Witnesses

Geo. C. French.

H. F. Riley.

Inventor
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By *his* Attorneys,

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UNITED STATES PATENT OFFICE.

ANDREW T. CAMPBELL, OF ALAMO, INDIANA.

WRENCH FOR TWISTING FENCE-WIRES.

SPECIFICATION forming part of Letters Patent No. 466,769, dated January 12, 1892.

Application filed April 23, 1890. Serial No. 349,088. (No model.)

To all whom it may concern:

Be it known that I, ANDREW T. CAMPBELL, a citizen of the United States, residing at Alamo, in the county of Montgomery and State of Indiana, have invented a new and useful Wrench for Twisting Fence-Wires, of which the following is a specification.

This invention relates to improvements in wrenches for twisting wires.

The object of the present invention is to simplify and improve the construction of wrenches for twisting wires, and to enable them to be readily adjusted between and removed from the strands and to prevent injury to the wires.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

In the drawings, Figure 1 is a perspective view of a fence, the wrench being illustrated in dotted lines. Fig. 2 is a similar view of the wire twister or wrench.

Referring to the accompanying drawings, 1 designates a wrench for twisting fence-wires, constructed of suitable metal and composed of long arms or operating-handles 2 and short arms or points 3 to be inserted between the strands of wire. The long and short arms extend radially from the central portion 4, are formed integral therewith, are alternately arranged, and are preferably eight in number—four long arms and four short arms. The short arms 3, which are arranged between the long arms, gradually taper from near the central portion 4 toward their outer ends, which are pointed and are provided with heads 5, adapted to be readily inserted between the wires, and in use the wires are arranged back of the head and adjacent to the same.

In erecting a fence an end post 7 is planted, and the ends of strands 8 are secured at the desired points and the other ends of the strands are secured in perforations 9 of a tension-post 10, which is arranged at a suitable distance for operation. Between the end post and the tension-post is arranged a supporting-post 11, designed to form a portion of the fence when completed and connected by an inclined

brace 12, having its upper end secured to the end post and its lower end recessed at 13 and secured near the bottom of the supporting-post, the latter being arranged in the recess. Palings 14 are arranged at intervals, and a point or short arm 3 of the wrench or wire-twister is inserted between the strands, and the device is turned until the wire is at the proper tension. A point or short arm 3 may be used until it is worn out and then another may be used.

By arranging the wires back of the heads 5 of the short arms or points there is no danger of injuring the wire.

In twisting a strand of wire the arrow-head 5 of one of the short arms is inserted between the wires and the latter are arranged contiguous to the head, as illustrated in dotted lines in Fig. 1 of the accompanying drawings. It is therefore absolutely necessary to have the long handles in order to handle the device with ordinary ease. The wires are arranged at the arrow-head all the time during the operation of twisting, and they may be twisted to any tension and no difficulty will be experienced in removing the device, without moving the latter longitudinally on the wires to bring to the next place for twisting. By this construction the device cannot only be employed in constructing a fence, but also to twist and tighten the wires after a fence is built. When the twister is in a position, as illustrated in Fig. 1, the short arm, which is arranged at right angles to the upper vertical short arm and on the farther side of the fence, would be too low down and out of reach, and the device could not be twisted were it not for the handle between the small arms. The arrow-pointed head, besides serving as means whereby the arm may be easily inserted, provides shoulders against which the wires rest in turning the device.

In twisting, the wires are arranged adjacent to the shoulders formed by the arrow-heads 5, and as it is necessary that the wires should be substantially near the center of the wrench the long handles are employed. By twisting the wires at the ends of the short arms, the wrench may be readily removed after each twisting, instead of being advanced on the

wires as the fence is completed, and it may be advantageously employed to tighten the wires of a completed fence.

What I claim is—

- 5 A wrench for twisting fence-wires, comprising a central hub, the long arms or handles extending radially therefrom, and the short arms arranged between the long arms or handles and provided with arrow-pointed heads
10 arranged within the outer ends of the long arms or handles and forming shoulders

against which the wires to be twisted may be arranged, substantially as and for the purpose described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ANDREW T. CAMPBELL.

Witnesses:

HORACE C. GRIMES,
JONATHAN HAM.