No. 758,829. PATENTED MAY 3, 1904.

J. W. DODD.

WIRE WORKING TOOL.

APPLICATION FILED JUNE 24, 1901.

NO MODEL.

Fig. 3.

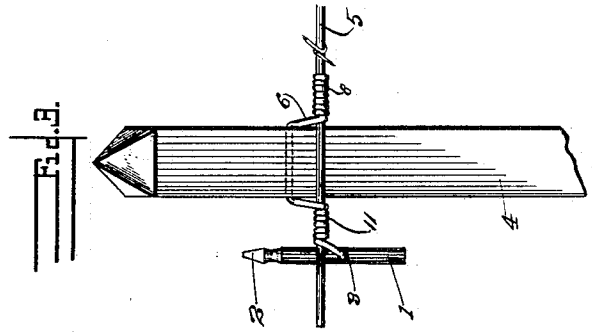

Fig. 2.

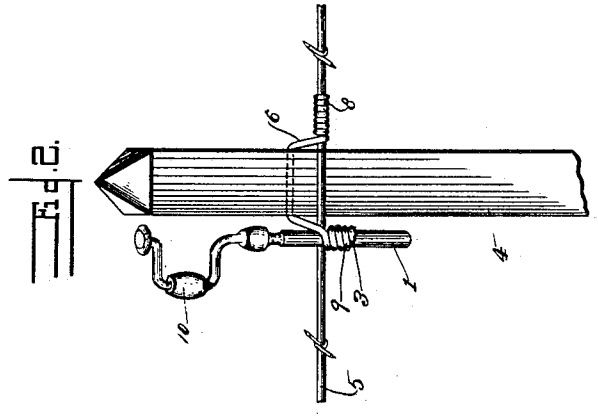

Fig. 1.

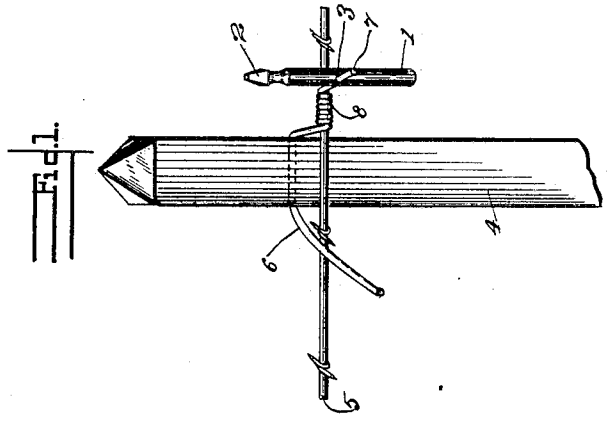

Fig. 4.

Witnesses
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 758,829. Patented May 3, 1904.

UNITED STATES PATENT OFFICE.

JOSEPH W. DODD, OF CISCO, TEXAS.

WIRE-WORKING TOOL.

SPECIFICATION forming part of Letters Patent No. 758,829, dated May 3, 1904.

Application filed June 24, 1901. Serial No. 65,848. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. DODD, a citizen of the United States, residing at Cisco, in the county of Eastland and State of Texas, have invented a new and useful Wire-Working Tool, of which the following is a specification.

The invention relates to wire-working tools, and particularly to a tie-wire-applying tool designed for use in applying a tie-wire to a fence to secure a runner to a transverse element, such as a post, stake, picket, or the like.

In carrying out the invention it has been my object to provide a device of the utmost simplicity, adapted to be constructed at the minimum cost, and yet capable of permitting the efficient and rapid stretching of the tie to draw the runner and upright of the fence tightly together and without releasing the tension thus secured to coil the loose end of the tie around the runner.

While the device embodying the invention is specially adapted, as shown in the accompanying drawings, for fastening a runner to a post, it is essentially designed and adapted for the manipulation of a tie-wire for securing together against accidental relative movement the intersecting or crossing elements of a fence by coiling the extremities of the tie-wire around one of the elements on opposite sides of the plane of the intersecting element and forming a loop or bight which bears against said intersecting element, and thus maintains the necessary frictional contact.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims, it being understood that changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

In the drawings, Figure 1 is a view of the tool embodying the invention as shown at the completion of the first step in applying a tie-wire. Fig. 2 is a view of the tool as shown at the completion of the second step in the operation of applying the tie-wire. Fig. 3 is a view of the tool as shown at the completion of the final step in applying the tie-wire. Fig. 4 is a detail view of the tool.

Similar reference characters indicate corresponding parts in all the figures of the drawings.

The tool embodying my invention consists, essentially, of a bar, preferably straight, provided at its opposite extremities with grips or handle portions and provided at an intermediate point with tie-wire-engaging means for receiving and holding the extremity of the tie-wire during the coiling of the adjacent portion of the tie-wire on the intermediate portion of the bar, as a drum, said intermediate portion of the bar forming a bearing for lateral contact with an element of the fence, as the runner, to form a fulcrum.

In the illustrated embodiment of the invention the tool is formed from a rod of uniform diameter throughout and is reduced slightly at one end to form a wrench or key seat, to which may be fitted the chuck of a brace 10 to impart with the necessary force a coiling or axial rotation of the tool in the act of coiling a portion of the tie-wire on the center of the bar. The opposite extremities 1 and 2 of the bar form grips or handles, and the extremity 2 is preferably squared and tapered, as shown, to form the wrench or key seat above mentioned. Also in order to make a more convenient grip at that end a neck or reduced portion 20 may be provided. Adjacent to its center the bar is provided with a simple transverse perforation 3.

In operation one extremity 7 of the tie-wire 6 is fitted in the perforation, and the adjacent portion of the tie-wire is coiled around one element, such as the runner 5 of the fence, as shown at 8. This may be done by holding the body of the tie-wire in one hand, bearing an intermediate portion of the bar against the runner, and then turning the bar as a lever around the runner as a center, the bar being fulcrumed on the runner, as shown in Fig. 1. When this step in the operation has been completed, the tool is disengaged from the extremity 7 of the tie-wire and engaged with the other extremity, as shown at Fig. 2. The brace may then be applied to the seat 2. The

side of the bar, which is rounded at this point to form a suitable bearing, is arranged in contact with the side of the runner opposite to the point of contact of the runner with the intersecting element of the fence, consisting of the post 4. The bar is then turned axially while being held from pivotal movement to coil the adjacent portion of the tie-wire on the bar as a drum. As this coiling operation proceeds the coils bear against the runner, and thus crowd the bar longitudinally and while insuring a tight coiling of the tie-wire at the same time increases the tension of the portion of the tie-wire between the last-applied coil and the portion of the tie-wire which is coiled, as at 8, on the runner. When the coiling operation has progressed sufficiently to insure the desired frictional contact between the elements of the fence, as shown in Fig. 2, the portion of the tire-wire adjacent to the last-applied coil 9 being in contact with the runner, the bar is moved pivotally around the runner as a center to coil the tie on the runner, as indicated at 11 in Fig. 3. As this pivotal movement of the bar progresses the wire necessary to form the coil 11 is supplied from the coil 9, previously formed on the bar, and when the coil 11 has been completed the opening 3 of the bar may be readily stripped from the extremity of the tie-wire, thus leaving the latter coiled at both ends on the runner without in any way releasing the tension of the portion of the tie-wire which forms the loop or bight 6, embracing the element 4 of the fence. In this operation of pivotally moving the bar in the formation of the coil 11 the extremities of the bar are grasped in the hands of the operator, the portions 1 and 2 forming grips.

Having described the invention, what is claimed is—

A tie-wire-applying tool consisting of a bar having intermediate of its ends tie-wire-engaging means and having one of its extremities reduced to form a seat for a wrench whereby said bar may be rotated about its own axis to wind a tie-wire thereon and draw it tight upon a fence-post, said bar having its extremities adapted to serve as handholds whereby the bar may be moved bodily about the line-wire of a fence to fasten a tie-wire thereon.

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

JOSEPH W. DODD.

Witnesses:
N. R. WILSON,
J. S. PERRY.