

No. 877,808.

PATENTED JAN. 28, 1908.

J. W. TOWER.

MACHINE FOR CONNECTING WIRE ENDS.

APPLICATION FILED SEPT. 30, 1907.

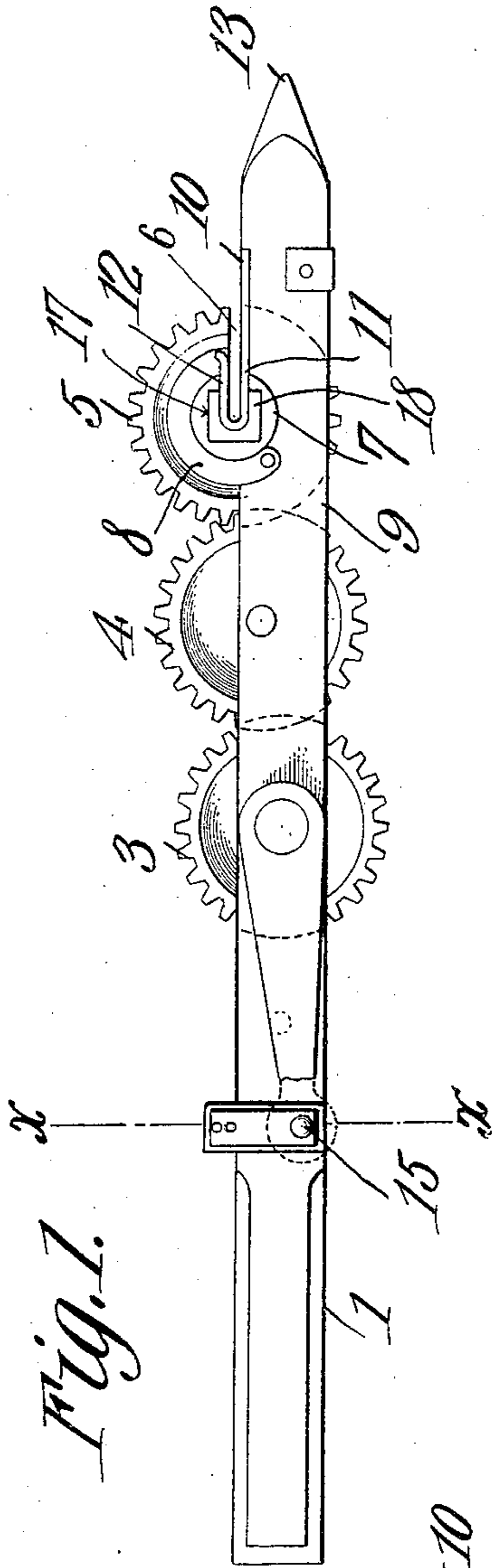


Fig. 1.

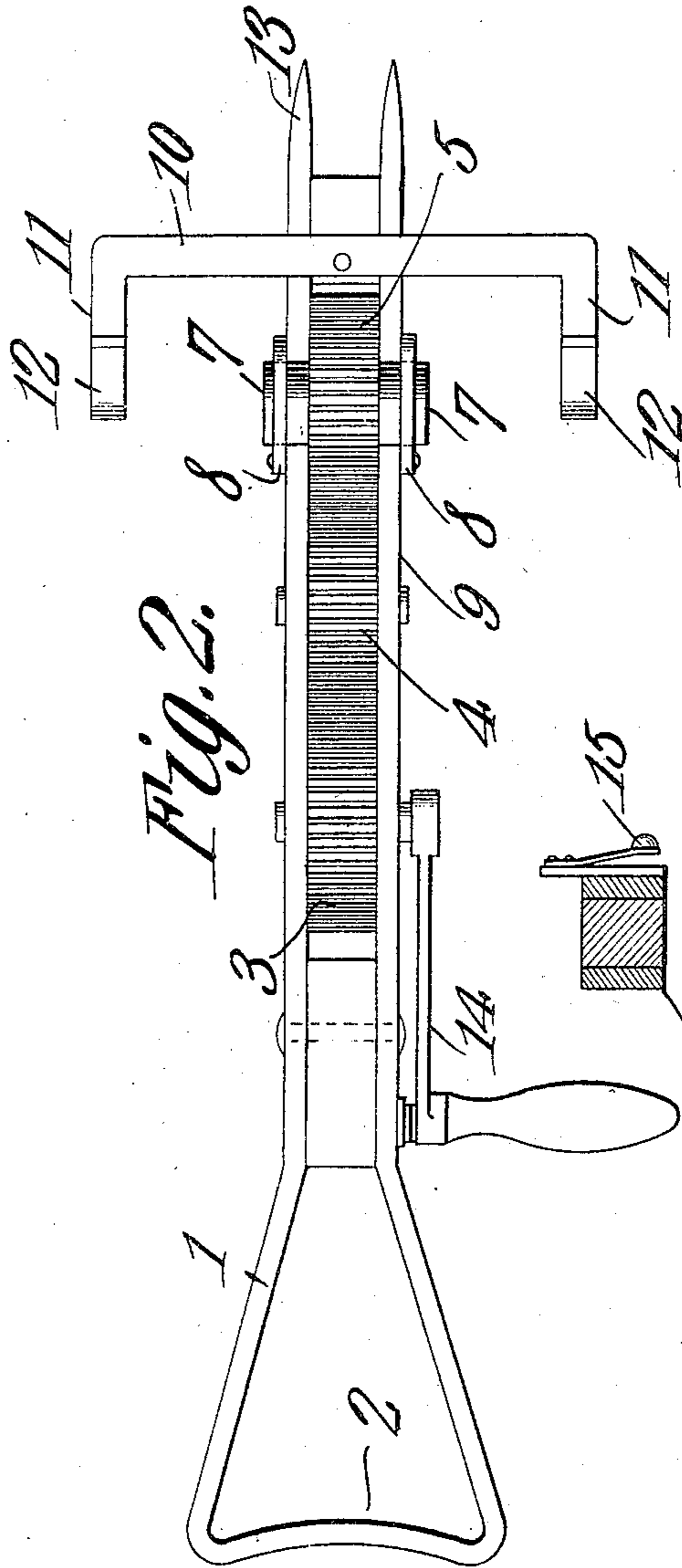


Fig. 2.

Fig. 3.

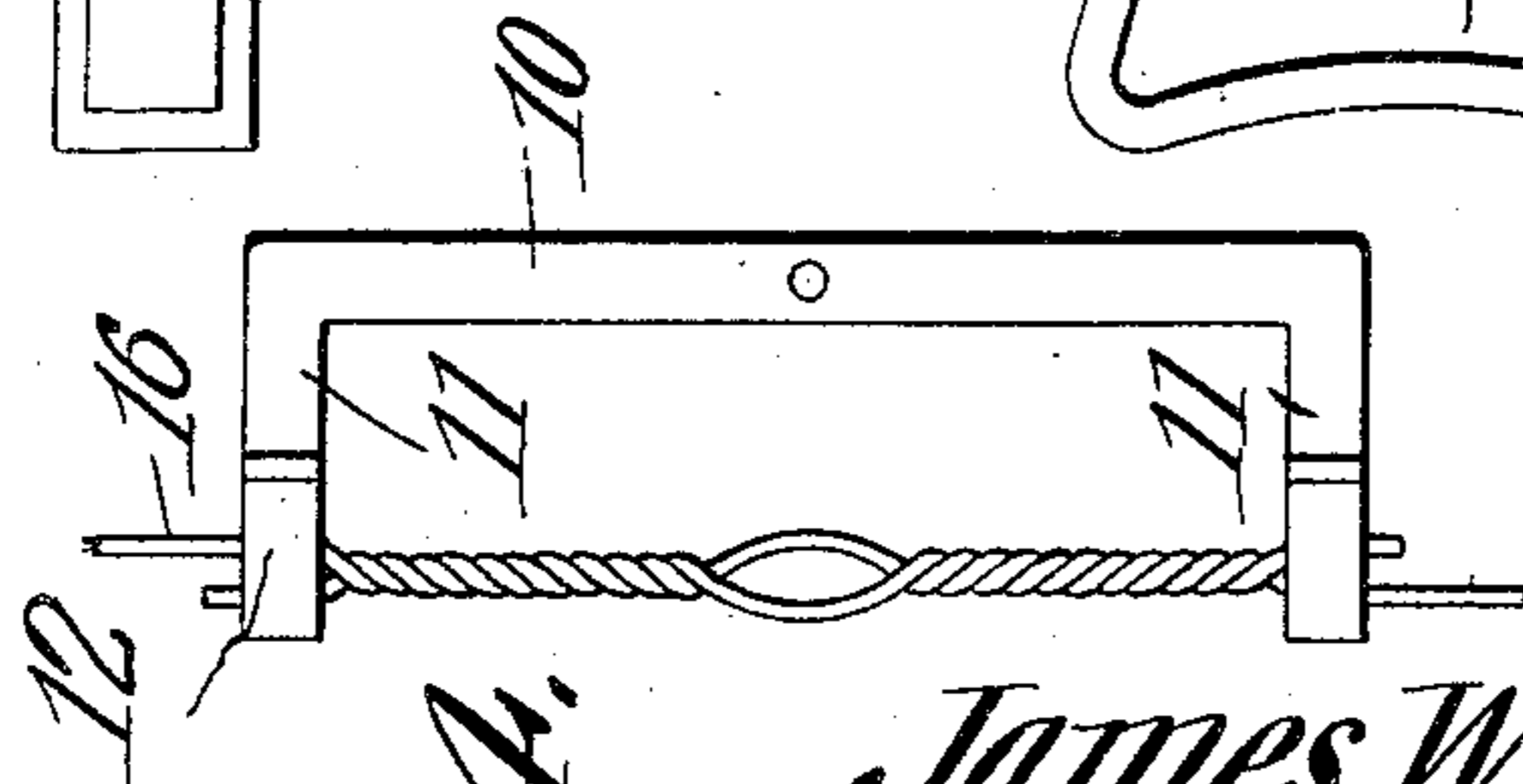


Fig. 4.

Witnesses

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JAMES W. TOWER, OF CROOKED LAKE, MICHIGAN.

MACHINE FOR CONNECTING WIRE ENDS.

No. 877,808.

Specification of Letters Patent.

Patented Jan. 28, 1908.

Application filed September 30, 1907. Serial No. 395,275.

To all whom it may concern:

Be it known that I, JAMES W. TOWER, a citizen of the United States, residing at Crooked Lake, in the county of Clare and State of Michigan, have invented a new and useful Machine for Connecting Wire Ends, of which the following is a specification.

This invention relates to machines for connecting wire ends and is particularly designed for fastening together the ends of wire bale ties, telephone and telegraph wires, etc.

Another object is to provide a machine of this character which can be readily manipulated and placed in or removed from position upon the wires.

With these and other objects in view the invention consists of certain novel features of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings: Figure 1 is a side elevation of the device. Fig. 2 is plan view of the device. Fig. 3 is a section on line $x-x$, Fig. 1. Fig. 4 is a plan view of the wire holder and showing twisted wires therein.

Referring to the figures by characters of reference, 1 designates a metal strap bent to form a handle 2, one end portion of which is preferably concaved as shown in Fig. 2 so as to form a comfortable rest against which the body of the operator can press so as to hold the device firmly in position during the twisting operation. Arranged in front of the handle portion of the device is a drive gear 3 meshing with an intermediate gear 4 which in turn drives a gear 5 having a radial slot 6 extending from the center to the periphery thereof. Gear 5 has a hub 7 extending beyond the sides thereof and designed to be held in its bearing by means of curved retaining strips 8 which are pivoted to the body 9 of the device and are designed to swing into position upon the hub as shown in Fig. 1. Secured upon the body 9 and in front of the gear 5 is a cross strip 10 having parallel arms 11 at its ends which extend across the ends of the hub 7 and terminate in spring clips 12 which are designed to aline with slot 6. The front end of the body 9 is preferably pointed as indicated at 13. A crank 14 or other suitable means is provided for rotating the gear 3 and arranged in the path of this crank is a spring pressed pin 15 designed to click once during each rotation of the

crank, this clicking being produced by the depression and subsequent release of the pin 15 during each rotation of the crank. When, for example, it is desired to twist the ends of a bale tie the wire 16 constituting the tie is placed around the bale so that its end portions will lap. The pointed end of the body 9 is then inserted between the wire and the bale until the lapping ends of the wire are brought into position within the clips 12 and the slot 6. The clips are of sufficient strength to firmly hold the wires and by rotating the crank 14 gear 5 will be caused to revolve and to twist the wire ends together as indicated in Fig. 4. Upon the completion of the twisting operation the crank 14 is turned until it strikes the pin 15 which will indicate to the operator that the slot 6 is in alinement with the clips 12 and the device can be withdrawn from engagement with the wires.

It will be seen that this device is very simple, durable and efficient, can be readily manipulated, and will quickly tie together the ends of wires used for various purposes.

Although the radial slot has been described as extending from the center of gear 5 said gear may be, if desired, provided with an angular passage 17 extending through the hub 7 and designed to receive a core constituting a grip and provided with a slot designed to register with and form a continuation of the slot 6. This construction is advantageous because it permits the grip to be changed so as to properly engage wires of different gage.

What is claimed is:

1. The combination with a supporting structure and wire engaging devices carried thereby; of a revoluble radially-slotted wire-engaging element disposed between said devices, means for rotating said element, and an angular wire gripping device insertible longitudinally into said element and having a wire receiving slot registering with the slot in said element.

2. The combination with a supporting structure having a pointed end; of a radially-slotted revoluble member, a hub extending beyond the sides thereof and bearing upon the supporting structure, said hub having an angular passage extending longitudinally therethrough, retaining devices pivotally connected to the supporting structure and embracing the hub; a longitudinally movable wire gripping device angular in cross section and insertible into said passage,

said device having a wire receiving slot alin-
ing with the slot in the revoluble element,
means for rotating said element, and wire
engaging devices carried by the structure at
5 opposite sides of the revoluble element.

3. The combination with a supporting
structure having a pointed end, a cross strip
secured upon said structure and having
parallel arms at the ends thereof, and wire
10 engaging clips upon the arms; of a revoluble
radially-slotted wire-engaging element, a
hub extending from the faces thereof and
bearing upon the supporting structure, said
hub having an angular passage therethrough,
15 a wire gripping device insertible longitudi-
nally into said passage and having a wire-
receiving groove registering with the radial
groove in the wire-engaging element and
with the clips, movable retaining devices
20 connected to the supporting structure and

embracing the hub, and revoluble means
upon the supporting structure for actuating
the wire-engaging device.

4. The combination with a supporting
structure, a revoluble radially slotted wire 25
engaging element carried thereby, and
means for rotating said element; of a wire
engaging device extending at opposite sides
of the revoluble element, and wire engaging
clips carried by said device and disposed to 30
aline with the slot in the revoluble member,
said clips being spaced from said member.

In testimony that I claim the foregoing
as my own, I have hereto affixed my signa-
ture in the presence of two witnesses.

JAMES W. TOWER.

Witnesses:

S. F. FRYE,
OWEN CONLEY