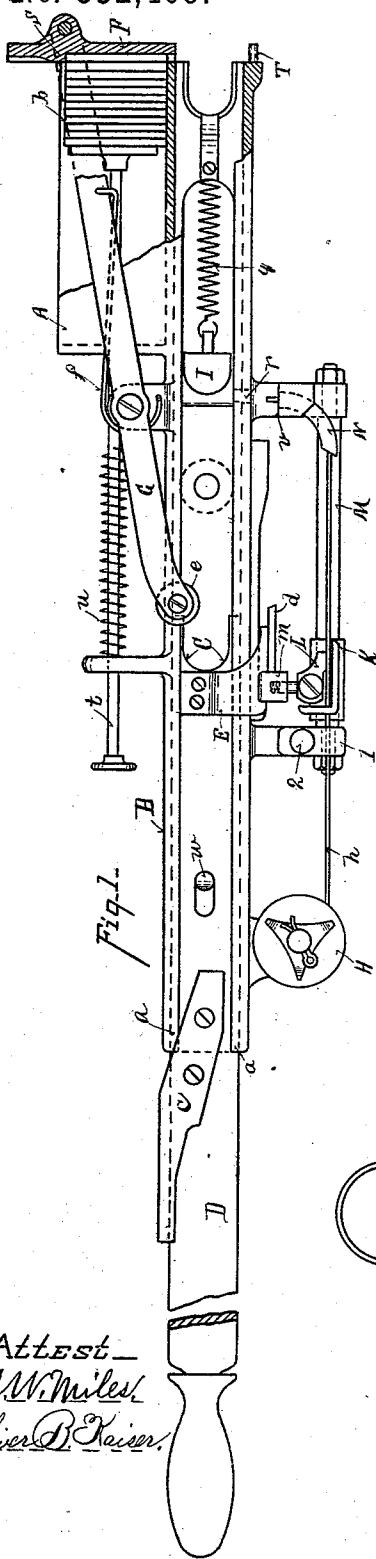


(No Model.)

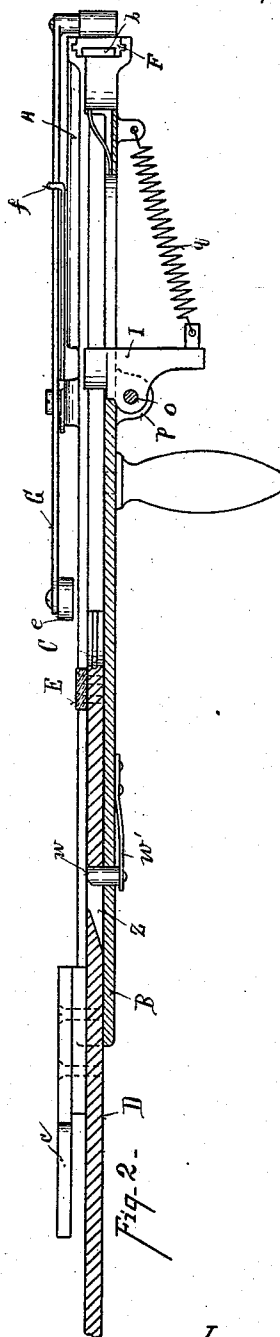
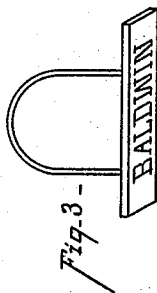
W. YOUNG.  
INSTRUMENT FOR WIRING TAGS TO ARTICLES.

No. 532,409.

Patented Jan. 8, 1895.



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# UNITED STATES PATENT OFFICE.

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## INSTRUMENT FOR WIRING TAGS TO ARTICLES.

SPECIFICATION forming part of Letters Patent No. 532,409, dated January 8, 1895.

Application filed April 6, 1894. Serial No. 506,555. (No model.)

*To all whom it may concern:*

Be it known that I, WESLEY YOUNG, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Instruments for Wiring Tags to Articles, of which the following is a specification.

My invention relates to an instrument for attaching tags to articles. It is shown as adapted to attach a wooden tag to a tree or limb thereof by a wire bow.

It consists in the arrangement on one instrument of apparatus for drawing the wire through to form the bow, then means for placing the bow in the jaws cutting off the same, and then forcing the wire bow through a wooden-tag, forming a tag yoked around the tree.

The details of the construction of my apparatus are fully set forth in the description of the accompanying drawings, making a part of this specification, in which—

Figure 1 is plan view of the instrument. Fig. 2 is a central vertical section longitudinally through Fig. 1. Fig. 3 is a perspective view of a tag and bow combined.

The instrument shown in the drawings consists of the following parts, namely: a movable anvil carrying the tag to which the bow is to be attached; the bow driving jaws which force the bow through the tag to form a yoke; the wire threading apparatus which feeds the wire through into the bow forming jaws and cuts off the same; mechanism for reciprocating the anvil under the bow forming jaws at the appropriate time, and a magazine for holding the tags.

The parts are preferably constructed as follows: The frame of the machine is formed of the housing A in which the tags *b* are supported, and of the stock B and arms or brackets projecting therefrom, which will be hereinafter described. The stock B is provided with gibs *a* in which slides the bar D which is the prime moving device to operate the instrument. On the bottom of said bar are formed U-shaped jaws C, the inner faces of which are provided with grooves in which the wire bow is laid.

E represents a bracket attached to the stock B upon which is carried a knife *d* for cutting

off the wire after it has been fed to form the bow.

F represents the anvil jaw which is pivotally secured to the oscillating arm G.

*e* represents a friction roller on the upper end of arm G.

*c* represents an inclined plane affixed to bar D against which the roller *e* strikes to oscillate arm G when the bar D is moved downward.

*f* represents a spring for returning the arm G to the position shown in Fig. 1, when the bar D is retracted.

H represents a wire spool; *h* the wire coiled thereon which passes through a tension device consisting of a friction plate 1, pressing on wire *h*, operated by screw 2 to regulate the tension on the wire so as to hold it in place as it is fed off of the spool.

K represents a feeding grip, one side of which is formed by a finger L held in position by the set screw *n* so as to adjust the tension of the grip.

M represents a guide rod upon which the grip K is supported and slides.

Finger L is pivoted to the gripper K and is so constructed that it pinches the wire against the gripper in its forward movement and slips over it on the backward movement. It is connected to the slide bar by means of the tripping keeper *m* which is released from contact with the bracket E of the slide bar by the incline 4, after the knife *d* has severed the wire. This keeper *m* is held in position on the incline 4 while the slide bar D is moving forward, but when the slide bar is retracted it again engages with the tripping keeper and carries it back into position to grip the wire on the forward movement.

N represents a curved guide pierced with a hole sufficiently large for the wire *h* to pass through, so as to support and guide the wire across the path of the jaws C.

I represents a form pivotally supported across the path of the jaws C and below the path of the wire *h*, and over which the bow is formed by the jaws C which place the wire in the grooves of said jaws. Said form is pivoted by center *o* to the ear *p*, so that it may be pushed down out of the way of the movement of the driving bar when the bow is being forced through the tag.

*q* represents a retractile spring for bringing the form back into position across the path of the wire and jaws C.

*r* represents an eye formed through the gib *a* for passing the wire across the form.

*s* represents a shoulder formed in the face of the anvil F just the depth of one tag. In order to prevent the grip L from striking against the guide N, I provide an incline 4 which strikes against the inner edge of the keeper, and it moves up the spring bolt and passes out of the slot in the bracket E, which holds it in position. When the bar D is retracted the bracket E strikes the inner face 15 of the keeper and draws it up on its spring until it comes opposite the notch when it seats itself in the notch of said bracket E.

The mode of operation is as follows: A series of tags *b* is placed in the housing A. *t* represents a follower rod around which is a coil-spring *u* for holding the tags *b* forcibly against the traveling anvil F, so as to insure one tag being fed forward at each forward movement of the arm G. The wire is threaded 25 into the position shown in Fig. 1. When the bar D is moved downward the gripper L forces the wire through the guide N and across the form I, and in the path of the jaws C. The jaws C grasp the wire and as they come against the form I the wire is laid in the groove formed in the jaws. The knife *d* cuts the wire as it passes the stationary shear jaw *v*. Hence, the wire is cut and formed into a bow automatically. As the bar D is driven downward the form I turns on its pivot out of the way, and the bar G is oscillated by the incline *c* carrying the anvil and tag forward against the stop pin T. As the bar D is driven down it forces the points of the wire through 40 the tag thus held across the path of it, when the bar is retracted leaving the bow attached to the tag as shown in Fig. 3.

*w* represents a stop pin held in position by the spring *w'* projecting up into a slot *z* pierced through the bar D for limiting the upward movement of said bar.

Thus my instrument automatically feeds a wire from a spool, threads it to the bow forming device, cuts it off, and carries the tag in position for receiving the wire bow held by the duplex jaws C, which thus straddles and loops the bow around an article.

The several parts of this device are all operated by mechanism attached to the bar D.

55 The frame B is portable and the operator can grasp the handle upon the end side of the frame with one hand and manipulate the frame for placing the tag in any desired position and with the other hand reciprocate the bar D, which bar automatically operates the device for moving the wire and the threading and severing mechanisms. The bow forming devices which are detached by the forward movement of said bar D allow the tag to be 65 placed in position and the bow clinched to the tag and on the return of the slide bar the parts

are automatically re-engaged for another operation. In order that these parts may occupy a small compass and be readily handled around among trees a reel supporting a wire 70 is mounted upon the short bracket at the side of the frame and the gripping and wire feeding devices are operated by the side bar and move parallel therewith. The curved wire guide N allows the wire to be turned across 75 the path of the jaws C at right angles to the plane of the travel of the parts. In order that sufficient wire may be fed to form the bow the shear *v* and the knife *d* are set outside of the frame B. The wire is held across 80 the path of the jaws by the orifice *r* pierced through one of the gibs of the frame so that it will engage with the grooves of the jaws and be drawn through and shaped around the form, which form will automatically recede 85 out of the path of the jaws so as to allow the wire to be forced into a tag at the end of the stroke of the slide bar.

Having described my invention, what I claim is—

1. In a tagging device, the sliding-bar D 90 mounted on a suitable frame and armed with duplex jaws, in combination with the wire-threading mechanism, the bow form I, and the tag holding anvil, all connected with and 95 operated by the reciprocation of said bar, substantially as specified.

2. In a wire tagging device the sliding bar D mounted upon a suitable frame with the U shaped, grooved jaws C, in combination with 100 wire-feeding grip K, L, reciprocating upon the guide M, the said finger L being automatically engaged and disengaged with the slide bar by tripping devices *m*, 4, as the slide bar moves forward and backward, substan- 105 tially as specified.

3. In a wire tagging device employing the slide bar D armed with the grooved U shaped jaws C in combination with the wire-feeding grip K, L, reciprocating upon the guide M, 110 the tripping devices *m*, 4, the curved guide M, the shear *v* and the knife *d* mounted upon said slide bar D, substantially as specified.

4. In a wire tagging machine having suitable frame B, with a reciprocating bar D supported in said slides on said frame, a wire tension reel supported upon said frame, the wire feeding and gripping mechanisms K, L, supported on the guide rod M and moving parallel with said bar D, the curved guide N 115 supported upon a bracket of said frame, the tripping devices *m*, 4, for automatically engaging and disengaging its connection with said bar and the knife *d* attached to bracket E outside of said frame and the shear *v* at the 120 end of the guide M, substantially as specified.

5. In a wire tagging device the combination of a portable frame B upon which is mounted and supported the bow forming mechanism composed of the slide bar D armed with the U 130 shaped arm grooved jaws C the feeding gripping mechanisms K, L, tripping devices *m*, 4,

curved guide N, the knife *d* and shear *v*, the tripping bow form I said parts being operated automatically by the reciprocating of said slide bar to form a wire bow, and placing it in the groove of the jaws C, substantially as specified.

6. In a wire tagging device the combination with the portable frame of a reciprocating slide bar armed with U shaped grooved jaws C, the tag housing A, the notched anvil F and mechanism for reciprocating said anvil, the wire gripping and feeding mechanism, the wire severing mechanism, and the bow forming mechanism, all supported upon said frame and operated by the reciprocation of said slide D, whereby a wire bow is formed and inserted through the tag and the parts automatically set for another operation by the reciprocation of said slide bar, substantially as specified.

7. In combination with the wire bow tagging device, having duplex jaws C, the traveling anvil F adapted to support a tag *b*, with

mechanism for moving the same across the path of the jaws, substantially as described.

8. In a wire tagging device, in combination with the wire bow form, a driving device, the housing A, the traveling anvil F, provided with means for supporting and feeding a tag with the forward movement of said anvil, substantially as described.

9. In a wire tagging device the combination of duplex bow driving jaws C, the anvil F pivoted to the arm G, the driving-bar D, means connected therewith for reciprocating the arm G whereby the tag is fed in position to receive the thrust of the jaws, substantially as specified.

In testimony whereof I have hereunto set my hand.

WESLEY YOUNG.

Witnesses:

W. R. WOOD,  
C. W. MILES.