

J. W. EISENHART.
WIRE TWISTING MACHINE.

No. 399,856.

Patented Mar. 19, 1889.

Fig. 1.

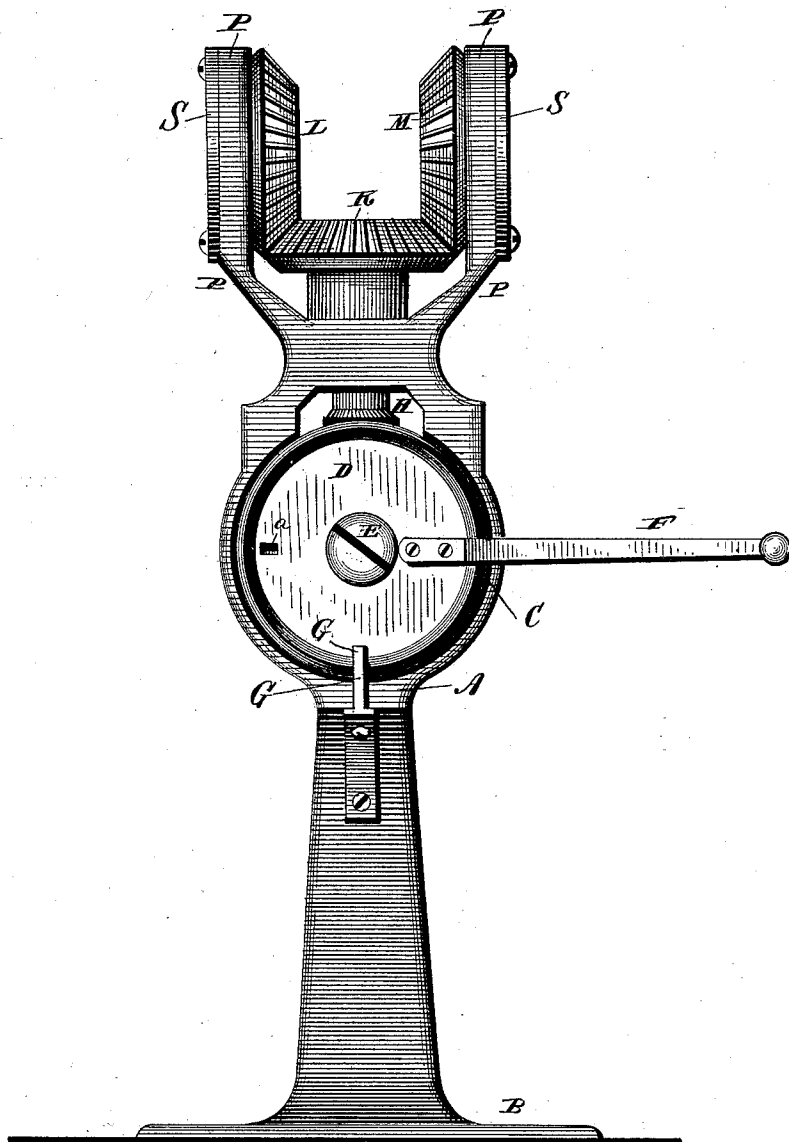


Fig. 9.

Fig. 10.

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Fig. 2.

Fig. 3.

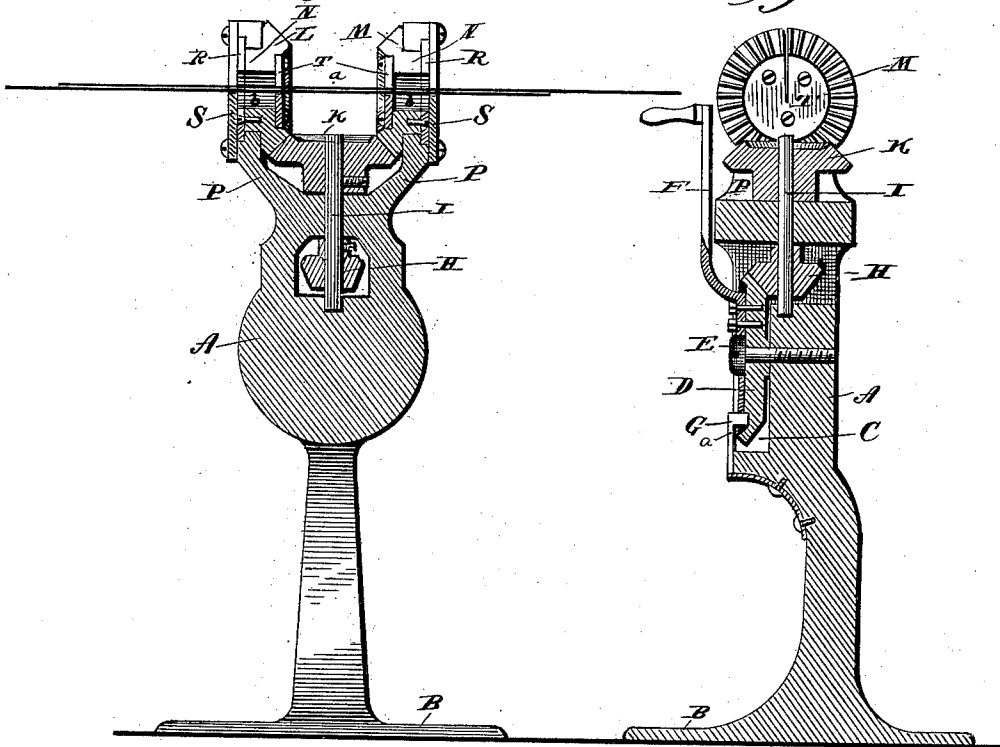
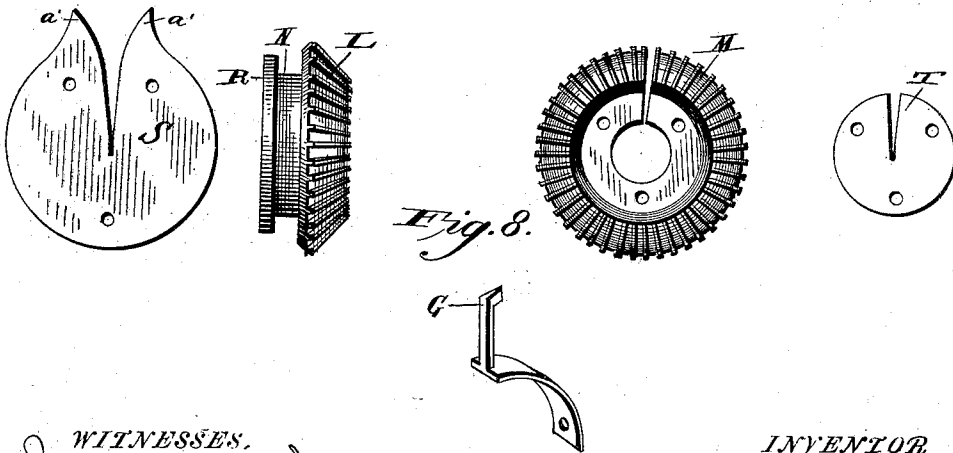


Fig. 4. Fig. 6.

Fig. 7. Fig. 5.



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JOHN W. EISENHART, OF YORK, PENNSYLVANIA.

WIRE-TWISTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 399,856, dated March 19, 1889.

Application filed January 17, 1889. Serial No. 296,589. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. EISENHART, a citizen of the United States, residing at York, in the county of York and State of Pennsylvania, have invented certain new and useful Improvements in Wire-Twisting Tools or Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention has for its objects to provide a machine by means of which the adjoining ends of two wires may be rapidly and securely twisted, so as to firmly and neatly join the same, as more fully hereinafter specified.

15 The above-mentioned objects I attain by the means illustrated in the accompanying drawings, in which—

20 Figure 1 represents a front elevation of my improved machine complete. Fig. 2 represents a vertical sectional view thereof. Fig. 3 represents a similar view taken in a plane at right angles to Fig. 1. Fig. 4 represents a detached view of a guide and bending-plate employed in connection with the machine and forming part thereof. Fig. 5 represents a detached view of a bending-plate, one of which is attached to each of the twisting-wheels. Fig. 6 represents a detached elevation of one of the twisting-wheels and its attached disk. Fig. 7 represents a front elevation of one of the twisting-wheels detached. Fig. 8 represents a detached perspective view of a detent-spring for holding the gearing of the machine, as more fully hereinafter set forth. Fig. 9 represents a view of the wires, showing their adjoining ends twisted; and Fig. 10, a similar view of the wires, showing the ends completely twisted, trimmed, and finished.

40 Referring to the drawings, the letter A indicates the frame of the machine, which is formed with a suitable base, B, upon which it stands. The front of said frame is provided with a circular recess, C, in which is located a beveled cog-wheel, D, which turns upon a screw-threaded bolt, E, by means of which it is fastened to the frame. The said wheel is provided with a suitable crank, F, by means of which it may be turned by hand. Diametrically opposite the said crank the front face 50 of the wheel near its edge is provided with a

recess, *a*, into which a spring-detent, G, is adapted to project and arrest the motion of the wheel and hold the gearing of the machine, as more fully hereinafter explained. 55 The wheel D gears with a beveled cog-pinion, H, which is secured to the lower portion of a vertical spindle, I, journaled in suitable bearings in the frame. The upper end of said spindle projects above its upper bearing and 60 has secured to it a horizontal miter or beveled cog-wheel, K, which intergears with two vertical miter or beveled cog-wheels, L M, at diametrically-opposite sides of the said wheel K. The twisting cog-wheels L M have open 65 centers and on their plain faces are provided with short central bosses N, which fit and are adapted to rotate in bearings in the vertical standards P, rising from the top of the frame at opposite sides thereof, as shown in Figs. 70 1, 2, and 3 of the drawings. The said wheels L M have fastened to their bosses the confining-disks R, by which they are held in their bearings, but permitted to rotate freely therein. The adjacent faces of the said wheels L 75 M in the space between the annular row of cogs have secured to them the rotating wire-twisting disks T by means of screws or otherwise, and to the outer portions of the standards P opposite the bearings therein are secured by means of screws or otherwise stationary wire-twisting plates S, which serve 80 also as guides to the wires.

The stationary twisting-plates S, the twisting-wheels L M, the twisting-disks T, and 85 the confining-plates R, above mentioned, are divided from their peripheries to their centers, as indicated, so that the wires with their ends placed together, as shown in Fig. 2 of the drawings, may be centered in the angle 90 of the division-slots of the stationary twisting-plates and held thereby while being twisted.

The operation of my invention will be fully understood in connection with the foregoing description, and is as follows: 95

The wires are placed together at their ends and inserted into the division-slots of the respective twisting disks and plates and centered therein, the division-slots being of such width that the wires are compelled to assume 100 a position one above the other as they pass into the same. The gearing is then set in mo-

tion by turning the crank, rotating the twisting wheels and disks in opposite directions. These twist the wires at three points—that is, at *a* between the two twisting-disks and at *b* 5 *b* at each side of the same between said disks and the stationary twisting-plates *S*, secured to the standards of the frame. The stationary twisting-plates *S* for convenience may be provided with guiding-ears *a'*, as shown in 10 Fig. 4 of the drawings.

It is evident that the confining-disks *R* may be made integral with the cog-wheels and that the disks *S* may be made integral with the frame without departing from the spirit of 15 my invention.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a machine for joining the ends of 20 wires, the combination of two outer stationary twisting-plates radially slotted for the reception of the wires, two intermediate twisting-wheels carrying twisting-disks, and means for rotating the said intermediate twisting-wheels 25 in opposite directions, as and for the purpose set forth.

2. In a machine for twisting the ends of

wires and joining them together, the combination of two outer stationary twisting-plates, two intermediate twisting-wheels, and an intermediate bevel cog-wheel engaging the said twisting-wheels and adapted to rotate them in opposite directions, substantially as and for the purpose specified. 30

3. The combination of a frame, outer stationary slotted plates, *SS*, carried by the frame, intermediate twisting-wheels, *L M*, provided with bosses *N*, these wheels being journaled in the frame, rotating twisting slotted disks *T* upon the adjacent faces of the said twisting-wheels, a bevel cog-wheel, *K*, engaging the said twisting-wheels and adapted to rotate them in opposite directions, a bevel-pinion, *H*, secured upon the shaft of the said wheel *K*, and a driving bevel gear-wheel, *D*, engaging this latter wheel, all arranged substantially as described. 35 40 45

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

JNO. W. EISENHART.

Witnesses:

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