2 Sheets—Sheet 1.

J. JOHNSON.

WIRE-CUTTER.

No. 191,153. Patented May 22, 1877.

Fig. 1.

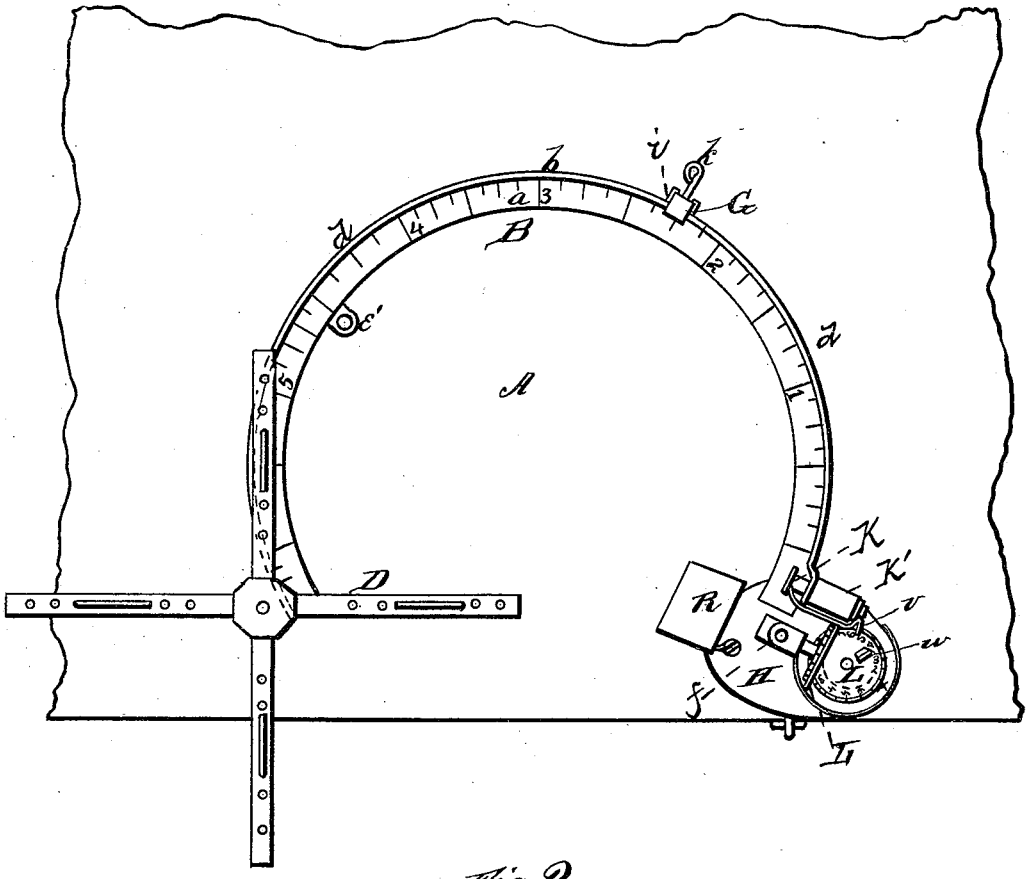
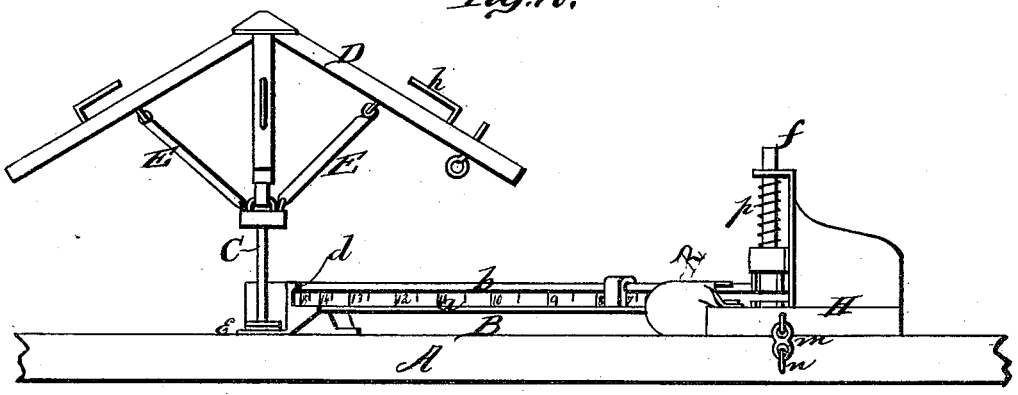


Fig. 2.



WITNESSES

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2 Sheets—Sheet 2.

J. JOHNSON.

WIRE-CUTTER.

No. 191,153. Patented May 22, 1877.

Fig. 3.

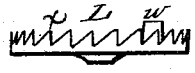

Fig. 4.

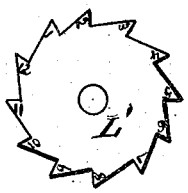

Fig. 5.

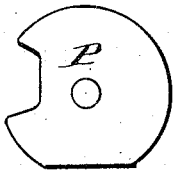

Fig. 6.

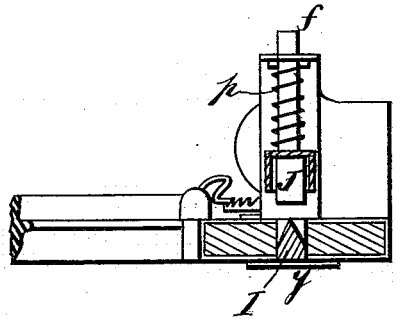

Fig. 7.

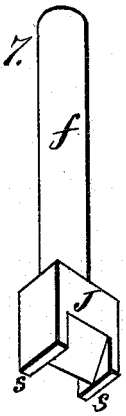

Fig. 8.

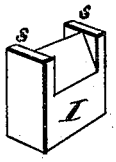

Fig. 9.

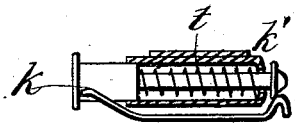

Fig. 10.

WITNESSES

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UNITED STATES PATENT OFFICE.

JOSEPH JOHNSON, OF MARSHALLTOWN, IOWA.

IMPROVEMENT IN WIRE-CUTTERS.

Specification forming part of Letters Patent No. **191,153**, dated May 22, 1877; application filed April 21, 1877.

To all whom it may concern:

Be it known that I, JOSEPH JOHNSON, of Marshalltown, in the county of Marshall and State of Iowa, have invented a new and valuable Improvement in Wire-Cutters; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of my wire-cutter. Fig. 2 is a side elevation of the same; and Figs. 3, 4, 5, 6, 7, 8, 9, and 10 are details.

The nature of my invention consists in the construction and arrangement of a machine for cutting and counting wire, as will be hereinafter more fully set forth.

In the annexed drawings, which fully illustrate my invention, A represents the work bench or table, on which my machine is placed and fastened. B is the frame of the machine, made in the form of a segment of a circle, with a horizontal face, *a*, and vertical face *b*, both of which are graduated, one to measure the diameter and the other the circumference of a circle made by the wire to be cut, such graduations or measurements commencing at the cutting-points of the two chisels. At the top of the vertical face *b* of the frame is an overhanging bead or flange, *d*, to prevent the wire from springing upward. At one end of the frame B is a lug, *e*, through which is passed the staff C of the reel, on which the roll of wire is placed, said staff passing downward through a hole in the bench A, and thus holding the end of the frame firmly to the bench, the staff resting on a collar secured to it. D D are the reel-arms, with braces E E arranged and adjusted in the form of an umbrella-frame, the roll of wire being held by means of L-shaped pins *h* passed through the arms. When the roll is to be taken off it is only necessary to turn said pins upward, and lower the arms of the reel.

On the vertical part of the frame B is an adjustable gage, G, which is to be placed at any point on the frame according to the length of the wire desired, and held there by means of a set-screw, *k*. In the face of this gage is made a notch or recess, *i*, for the insertion of the end of the wire, to prevent the same from swinging inward.

At the opposite end from the reel of the frame B is a head, H, attached to said frame, which head is held down to the bench by means of a link, *m*, and hook *n*, as shown in Fig. 2, whereby this end also of the frame is held down firmly to the bench. If necessary to fasten the frame still more firmly screws may be passed through ears *e'* projecting from the base of the frame between the ends.

In the head H is the bottom or stationary chisel I, and immediately above the same, in a suitable standard, is the movable chisel J, which has an upwardly-projecting stem, *f*, with spiral spring *p* surrounding the same, for keeping said chisel J elevated above the bottom chisel I. Both the chisels I and J are at the sides provided with square shoulders *s s*, which, when the upper chisel is brought down, come together, and prevent any injury to the cutting-edges of the chisels, while at the same time they do not impair the cutting qualities of the chisels.

Immediately in front of the chisels I J is a bolt, K, with a head on its end, said bolt being inclosed within a case, K', and actuated by a spring, *t*, within said case. To this bolt is attached a spring-pawl, *v*, which operates a horizontal disk, L, by means of upwardly-projecting ratchet-teeth *x*, formed around the periphery of said disk The disk L is numbered from 1 to 24, corresponding with the number of the ratchet-teeth on the disk. On the upper surface of the disk L is a lug, *w*, which, once during each revolution of said disk operates or turns a vertical disk, L', the distance of one of its teeth, it being formed with teeth around its periphery. This disk L' is also numbered to correspond with the number of its teeth, and such numbers are successively shown through an aperture in a covering-plate, P.

The lower chisel I is held on the head H by a plate, *y*, upon which it rests, said plate being fastened to the under side of the head. On the top of the upper chisel-stem *f*, is intended to be a knob or head of convex form, on which the mallet will be struck when cutting the wire, so as not to injure the mallet.

Inward from the chisels to the head H is attached an open box or case, R, as shown.

The operation of this machine is substantially as follows:

The wire roll being placed on the reel D E the end of the wire is passed between the chisels I J around the inside of the frame B until the end reaches, and is inserted in, the notch or recess *i* in the gage G, said gage having been previously set and fastened at the desired point. The wire is now pressed so as to lie close against the angle of the frame, whereby the headed bolt K is forced back, causing the spring-pawl *v* to register one on the disk L. A blow by a mallet is then struck on the head of the stem *f*, bringing the chisel J down forcibly and cutting the wire. As soon as the wire is cut the spring-bolt K throws this end of the wire out of the chisels. The box or case R receives the end of the wire, preventing it from coiling, which it is sometimes liable to do.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a wire-cutter, the combination of the graduated frame B with head H and the adjustable reel D E, the whole fastened to a bench or table by the reel-staff C at one end, and the link *m* and hook *n* at the upper end, substantially as set forth.

2. The headed spring-bolt K, arranged to operate in combination with the cutting-chisel I J, substantially as and for the purpose described.

3. The combination, with the wire-cutter herein described, of the registering-disks L L′, arranged as shown, and operated by the spring-pawl *l* attached to and actuated by the spring-bolt K, substantially as and for the purpose described.

4. The open box or case R arranged in combination with the head H, chisels I J, and spring-bolt K, as and for the purpose described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOSEPH JOHNSON.

Witnesses:

JNO. KROYER, Jr.,

EDWIN H. HIBBEN.