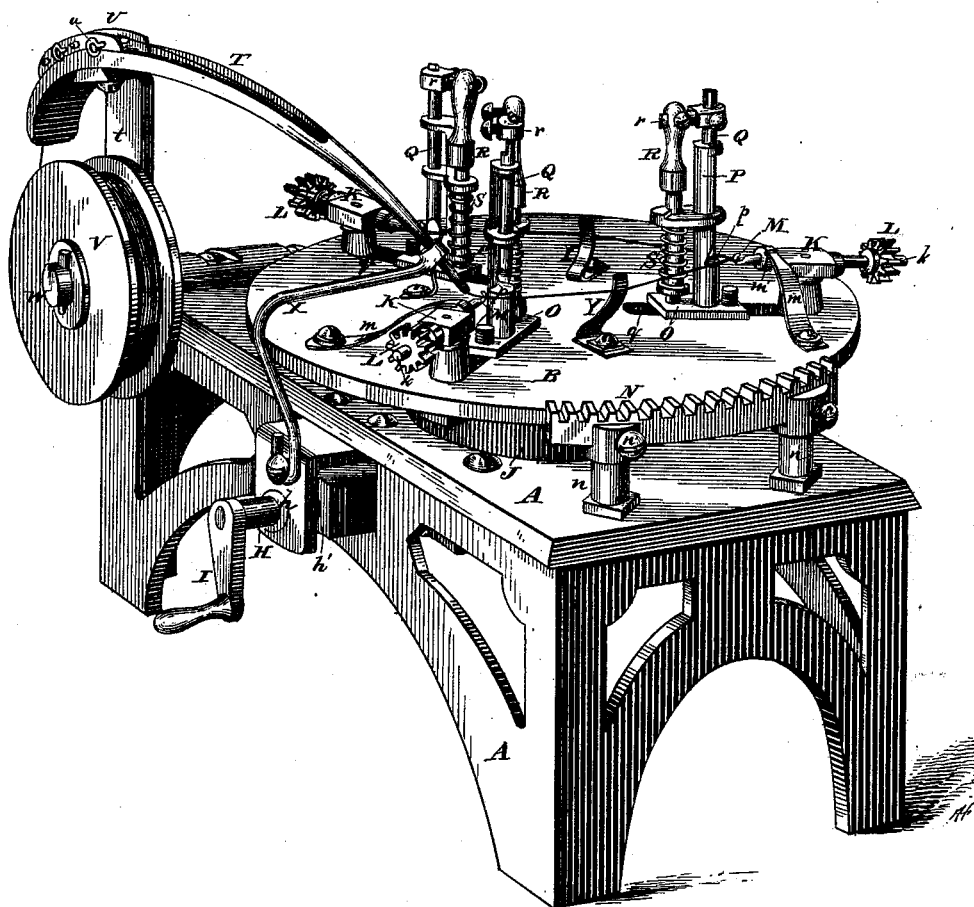


W. WILSON, Jr.
Machine for Looping and Cutting Wire.
No. 214,977. Patented April 29, 1879.

Fig. 1



Attests

R. S. Child Jr
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Inventor

William Wilson Jr
by his Attorney
George Harding

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Fig. 2

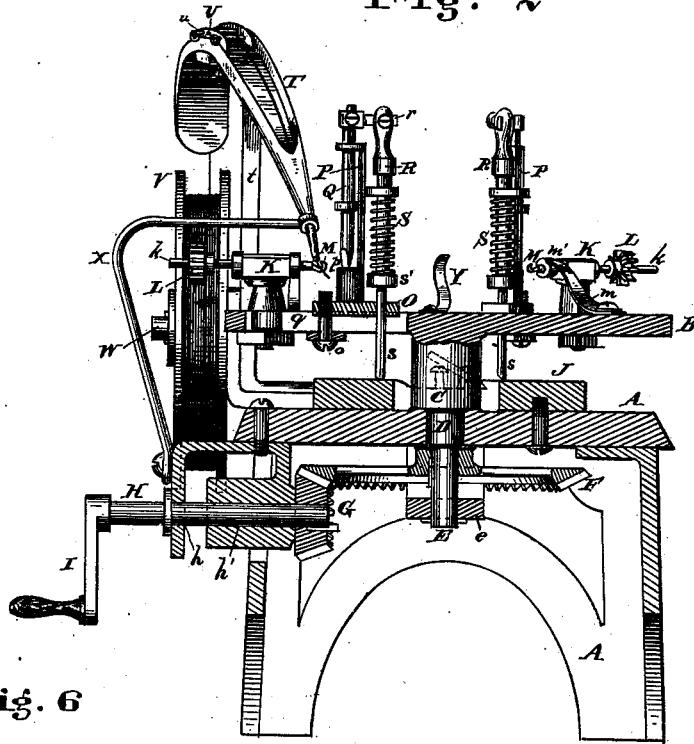


Fig. 6

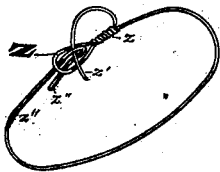


Fig. 3

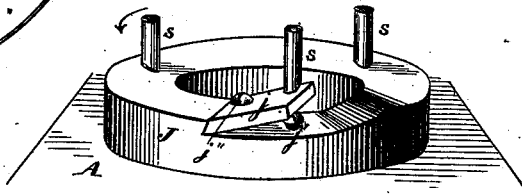
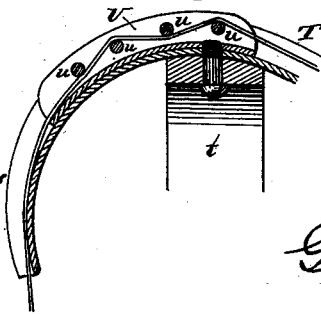


Fig. 5



Fig. 4



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George Harding

UNITED STATES PATENT OFFICE.

WILLIAM WILSON, JR., OF GREENVILLE, DELAWARE, ASSIGNOR OF ONE-HALF HIS RIGHT TO CHARLES GREEN, OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR LOOPING AND CUTTING WIRE.

Specification forming part of Letters Patent No. 214,977, dated April 29, 1879; application filed March 1, 1879.

To all whom it may concern:

Be it known that I, WILLIAM WILSON, JR., of Greenville, in the county of New Castle, State of Delaware, have invented a new and useful Machine for Looping and Cutting Wire, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

My invention relates to a class of mechanism which is used in twisting a loop upon a wire and cutting said wire into required lengths, and which wires may be used for various purposes, such as wires for opening tin cans, tying on tags, &c.

It consists of a frame, upon which revolves a circular table which carries a series of twisting-hooks, which are operated by pinions on them meshing into a rack which is supported from the frame, and corresponding series of cutting devices, which are used to cut the looped wire off at a certain length, and are operated by a cam which is situated under the revolving table and secured fast to the frame of the machine.

The object of my machine is to make a suitable wire to be used in the manufacture of tin cans, and also for any other desirable purpose—as, for instance, attaching tags to packages in a cheap and perfect manner, or for baling hay, cotton, &c., and at the same time to produce such a wire with celerity.

In the drawings, Figure 1 is a perspective view of the machine embodying my invention. Fig. 2 is a cross-section of the same. Fig. 3 is a perspective view of the camway which operates the cutting-knives. Fig. 4 is a section of the tension for the wire. Fig. 5 is a view of the wire when made; and Fig. 6 is a view of the wire when formed into a large loop, and used when attaching tags to articles, or for baling hay, cotton, &c.

Like letters of reference indicate like parts.

A A is the frame of the machine. B is the revolving circular table, and has a spindle, C D E, which decreases in diameter, and having bearings at D and in *e*. Upon the spindle E the bevel-gear wheel F is secured, and gears into a bevel-pinion, G, which is secured upon a shaft, H, having bearings *h h'*, and a crank or driving-wheel, I. Upon the

periphery of table B are standards K, which act as bearings for the spindles *k*, which are formed into hooks M at the inner extremity, and have collars *m'* and pinions L secured upon them. The pinions L mesh into the teeth of the stationary rack N, which is supported upon standards *n n*, and is held in said standards by set-screws *n' n''*. The collar *m'* has an offset in it, which prevents the spindle and hook from revolving backward by striking the spring *m*, and at the same time holds the hook in such a position that it will readily take the wire from feed T, and also that the wire when cut off shall be easily thrown from the hook. Upon the same radii with the standard K are the plates O, which are held at any position in slots *q* by bolts *o*. The plate O supports a standard, P, which has projections from it on either side, which projections act as guides to the cutting-knife Q and the spring-rod R, which are connected together at the tops by piece *r*. Secured upon the rod R is a collar, S'. Between this collar and guide at the top is a spring, S. The lower part of the rod is narrowed at *s*, passes through plate O, and presses upon the camway J. The lower part of standard P is enlarged to form a cutting-table, *p*, to knife Q. When the cam J raises the rod R *s* it also raises the knife Q; but the moment it falls over the leaf *j* of the camway J the spring S forces the knife Q down upon the table *p*, severing the wire which lies upon said table. Upon the table B are springs Y, against which the wire presses, and when said wire is severed it is thrown off in the form shown in Fig. 5. The camway J is of the same level, with the exception of a portion in which the leaf *j* is placed. This leaf is secured to the cam J by screws *j''*, and is set at any angle by screw *j'*. The camway is secured upon the frame A. At one end of the frame A the wire-carrier is held upon shaft W. The wire passes through the tension U, over and under the pins *n n n n* upon the feed T, which is supported by the upright *t*, and is kept in one position by the rod *x*.

When the looped wire is to be used for attaching tags, baling hay, &c., it may be formed into a ring, as in Fig. 6, or the lower part of the wire *z''* may be pushed through the loop

and twisted around the tongue Z, also making a strong way of fastening it.

In the operation, the table B is revolved by crank I, carrying the hooks M under the feed T, when they take the wire, and when the table B has revolved to such an extent that the pinions L mesh into rack N the hooks M revolve, twisting a loop upon the wire. The rack N is of such a length that the hook is left with its open side up, as in the first position, for taking wire. As the table moves around the cam, leaf j raises the knife Q, and cuts off one end of the wire, which lies upon the table p of the knife-standard P. This action makes a loop, Z, above twisted wire z, and leaves a long end, z'', and a short end, z', as in Fig. 5.

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

1. The combination of the table B, spindle k, hooks M, pinions L, rack N, and cutting-

knife Q, substantially as and for the purpose specified.

2. The combination of the spindle k, supplied with hook M, and pinion L with collar m' and spring m, substantially as and for the purpose specified.

3. The cutting-knife Q, in combination with the rods R s, connected at the top, spring S, and camway J, substantially as and for the purpose specified.

4. The cutting-knife Q, in combination with the hooks M and spring Y, substantially as and for the purpose set forth.

5. The table B, having slots q, and plate O, supporting the knife Q, in combination with the hook M, whereby the lengths of the ends z' and z'' of the wire may be regulated, substantially as shown.

WM. WILSON, JR.

Witnesses:

W. R. WRIGHT,

WILLIAM R. GREEN.