C. W. MILLER.

Tool for Cutting and Bending Wire.

No. 214,943. Patented April 29, 1879.

Fig. 1.

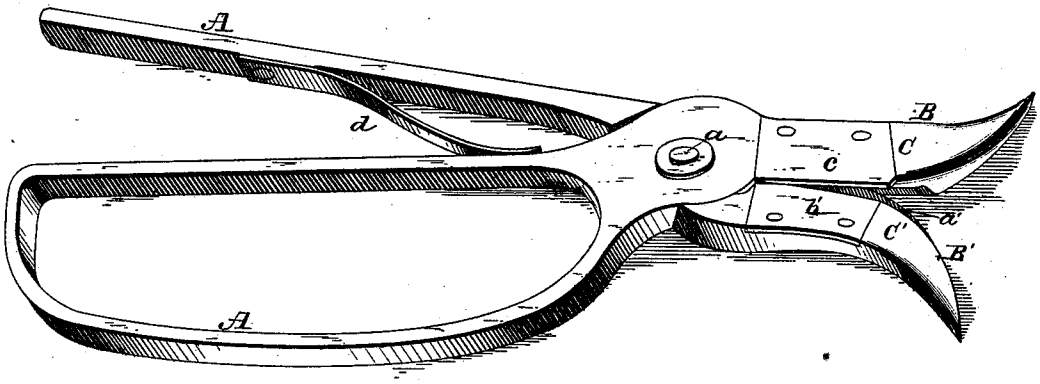
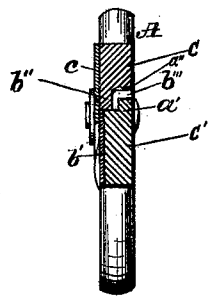


Fig. 2.



Attest:

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UNITED STATES PATENT OFFICE.

CHARLES W. MILLER, OF SYCAMORE, ILLINOIS.

IMPROVEMENT IN TOOLS FOR CUTTING AND BENDING WIRE.

Specification forming part of Letters Patent No. **214,943**, dated April 29, 1879; application filed September 28, 1878.

To all whom it may concern:

Be it known that I, CHARLES W. MILLER, of Sycamore, in the county of De Kalb and State of Illinois, have invented certain Improvements in Tools for Cutting, Holding, and Bending or Kinking Wire, of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

The invention relates to means for simultaneously cutting and retaining the wire within the jaws of the instrument, to facilitate the withdrawal of the wire when cut from the object to which it may be applied, and whereby, further, the wire may be bent or kinked between the said jaws, all as hereinafter described.

The object of the invention, more particularly, is to cut and withdraw the binding-wires of sheaves as bound by wire-binders; but it may be used for other purposes—as, for instance, for twisting wire.

Figure 1 is a perspective view of the instrument. Fig. 2 is a cross-section of the operative portions of the instrument, showing the shape of the cutting, holding, and bending surfaces and edges.

A A designate the arms of the pinchers, which are pivoted together at *a*. The extremities B B′ of said arms taper to points diverging from each other, which serve as guides to conduct the wire between the upper and lower jaws. (Marked, respectively, C and C′.) The lower jaw, C′, is provided with an offset, *a′*, and a recess, into which is fitted a steel cutter, *b′*. The upper jaw, C, is provided with an offset, *b″*. The offset *a′* of the lower jaw, C′, and the surface *a″* of the upper jaw, C, do not meet when the instrument is closed, but work so as to leave a space, *b‴*, between them and the faces of the offsets. The upper jaw, C, is provided with a steel cutter, *c*, having a slightly beveled surface, which works over the cutter *b′* of the lower jaw, C′, giving a shearing cut. The cutters are connected to the pinchers by screws or rivets. The lower arm, A, is formed into a hand-loop, for convenience in handling. A spring, *d*, placed between the upper and lower arms, and secured to the former, serves to keep the cutter slightly open when the pressure of the hand is removed from the instrument.

In cutting the wire ties of sheaves, either of the diverging points, B or B′, is pushed under the tie, which is thereby guided between the cutters. The cutters are pressed together and the wire is severed, the end being caught under the offset *b″*. The wire is then drawn from the sheave, when the hold is relinquished. When wire is cut by ordinary pinchers the end is lost and is difficult to find, and when not found often injures the thrashing-machine into which the grain is placed.

When the instrument is used for kinking wire, the wire is placed laterally between the jaws until it strikes the cutters, and the arms are pressed together, the wire being pressed and kinked over the top of the projection *a′* and under the surface *a″*, and passing out through the space *b‴*.

The same means can be employed for holding the wire; or it can be placed longitudinally of the instrument under the offset *b″*, and pressed thereunder upon the surface of the lower jaw, C′, upon which it seats. When held in either way, it can be twisted in any manner, as if held in a vise.

When it is desired to cut the wire and not kink, twist, or hold it, the wire is placed on the other side between the cutters only.

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

The upper jaw, C, having the cutter *c* and offset *b″*, combined with the lower jaw, C′, provided with the cutter *b′* and offset *a′*, the cutter *c* being constructed to lap the cutter *b′*, and the offset *a′* to stand off from the surface *a″* of the upper jaw when the jaws are brought together, leaving the space *b‴*, substantially as and for the purposes specified.

In testimony whereof I hereunto subscribe my name this 19th day of August, 1878.

CHARLES W. MILLER.

Witnesses:

GEORGE BROWN,

C. H. CROSBY.