

(No Model.)

I. A. KILMER.
Wire Bending Machine.

No. 235,538.

Patented Dec. 14, 1880.

Fig. 1.

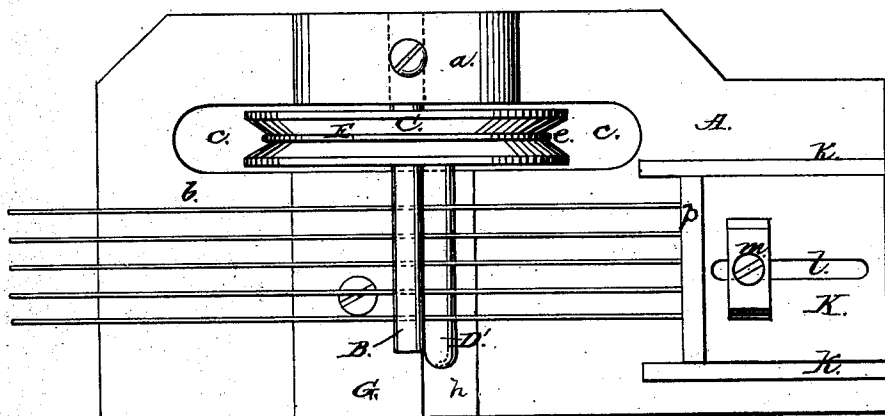


Fig. 2.

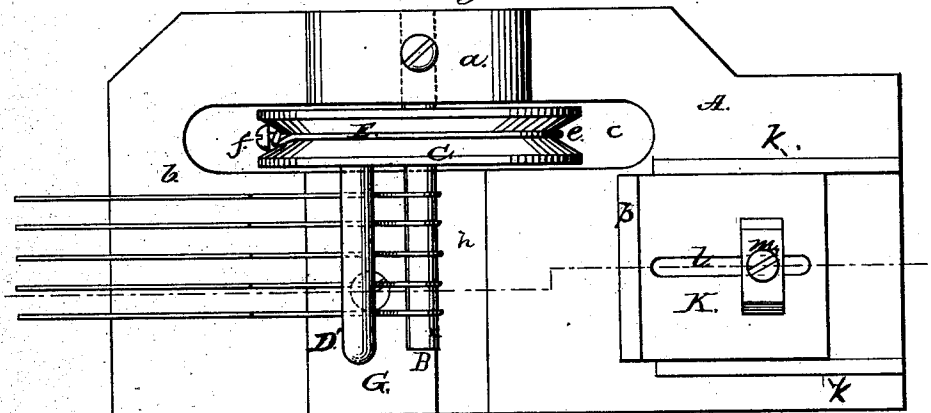


Fig. 3.

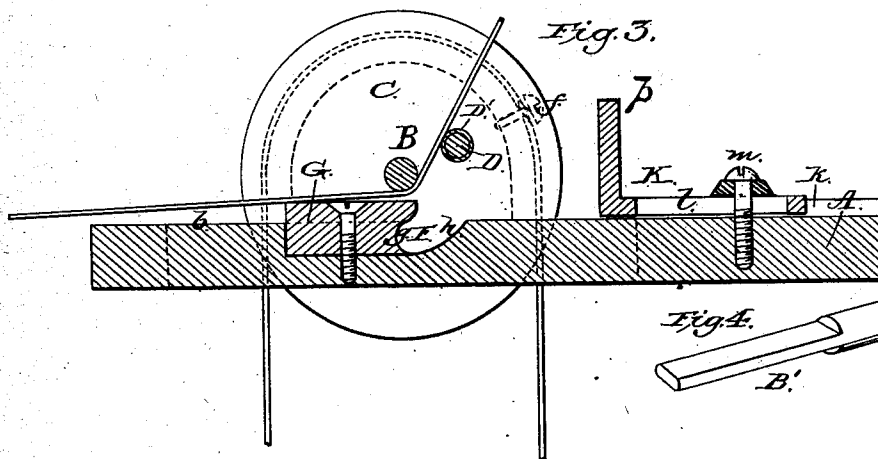
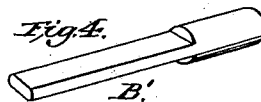


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

IRVING A. KILMER, OF NISKAYUNA, NEW YORK.

WIRE-BENDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 235,538, dated December 14, 1880.

Application filed October 30, 1880. (No model.)

To all whom it may concern:

Be it known that I, IRVING A. KILMER, of Niskayuna, in the county of Schenectady and State of New York, have invented a new and valuable Improvement in Wire-Bending Machines; 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 plan view with the wires straight. Fig. 2 is a plan view with the wires being bent. Fig. 3 is a longitudinal section. Fig. 4 is a modification.

This invention relates to devices for bending wire to form loops therein.

The invention consists in the construction hereinafter described.

In the drawings hereto annexed, A is a frame, supported at any suitable height. At one side is located a lug, *a*, from which there projects across frame A, at a short distance above its top *b*, a stud, B, upon which is loosely sleeved a pulley, C, extending through a slot, *c*, in frame A. Extending at right angles to said pulley and across the frame A in a direction parallel to stud B, and at a proper determined distance therefrom, is another stud, D, attached to pulley C, and preferably carrying a sleeve, D'.

In the groove *e* of pulley C is fastened, at *f*, a cord, E, which passes over said pulley and down through slot *c* on each side of said pulley, and is connected to a treadle at one end and a weight or spring at the other.

The top *b* of frame A is cut out, and in the said cut a block, G, is seated, having one end under the mandrel B, and said end grooved out at *g*. The cut in the top, away from block G, is curved, as shown at *h*, whereby a groove, F, is left at one end of block G, having the groove *g* for one side and the curve *h* for the other.

At the end of frame A, upon the side of groove F which is formed by the curved edge *h*, are guides *k k*, between which is located a gage, K, made longitudinally adjustable by slot *l* and set-screw *m*.

In operating this device the weight or spring is regulated to hold the stud D in groove F,

and therefore in a plane below that of block G. The gage is then adjusted to the desired length. The pieces of wire, to any desired number commensurate with the length of studs B and D, are then fed in under stud B, with their ends resting against flange *p* of gage K. Then by pressing upon the treadle and pulling cord E, and thereby turning said pulley C, the stud D, operating as a bender, lifts up the ends of the pieces of wire, the sleeve D' turning, thereby diminishing friction and preventing strain.

The body of the wires is held between stud B, acting as a mandrel, and the plate G, and as the stud D continues to be moved it comes up over mandrel B and down on the other side, forming a loop in said pieces of wire.

By releasing the foot the spring or weight returns the bender D to its groove, the loops are removed, and the operation renewed.

Instead of the pulley C, a sector or an arm might be sleeved upon stud B to carry bender D.

For forming loops with flattened sides the form of mandrel shown in Fig. 4, B', is to be employed.

The block G can be raised or lowered by putting sheets of varying thicknesses below.

What I claim is—

1. Frame A, in combination with mandrel B, extending across the frame at a distance above its top and rigidly secured in a lug upon one side of said top, a pulley, C, loosely sleeved upon said mandrel, and a bender, D, secured to pulley C and extending therefrom across the frame parallel to mandrel B, the whole arranged as and for the purposes described.

2. Frame A, having block G seated in its top, forming groove F, in combination with mandrel B, pulley C, and bender D, all arranged substantially as and for the purposes described.

3. Frame A, in combination with mandrel B, pulley C, having bender D, block G, and gage K.

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

IRVING A. KILMER. [L. S.]

Witnesses:

JOHN E. MYERS,
ELMER KILMER.