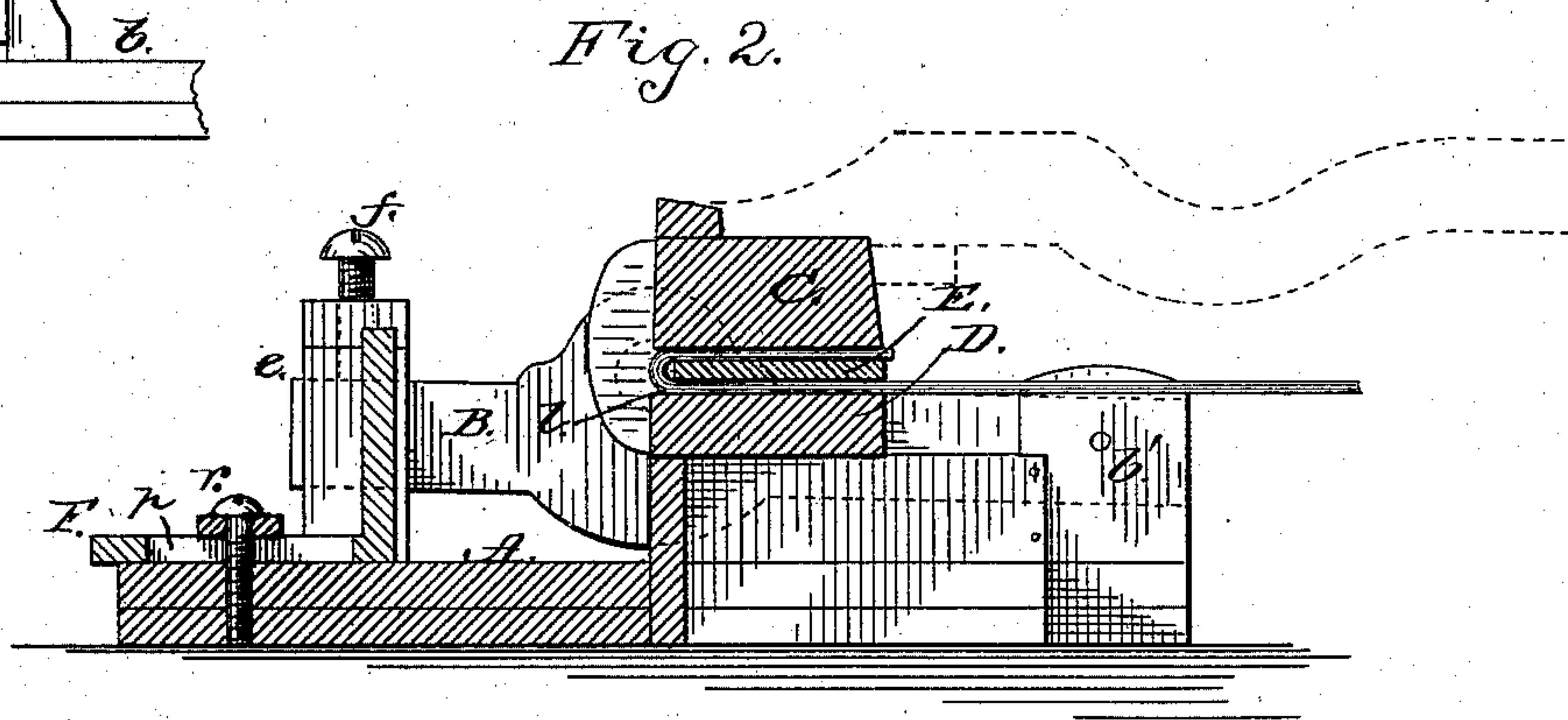
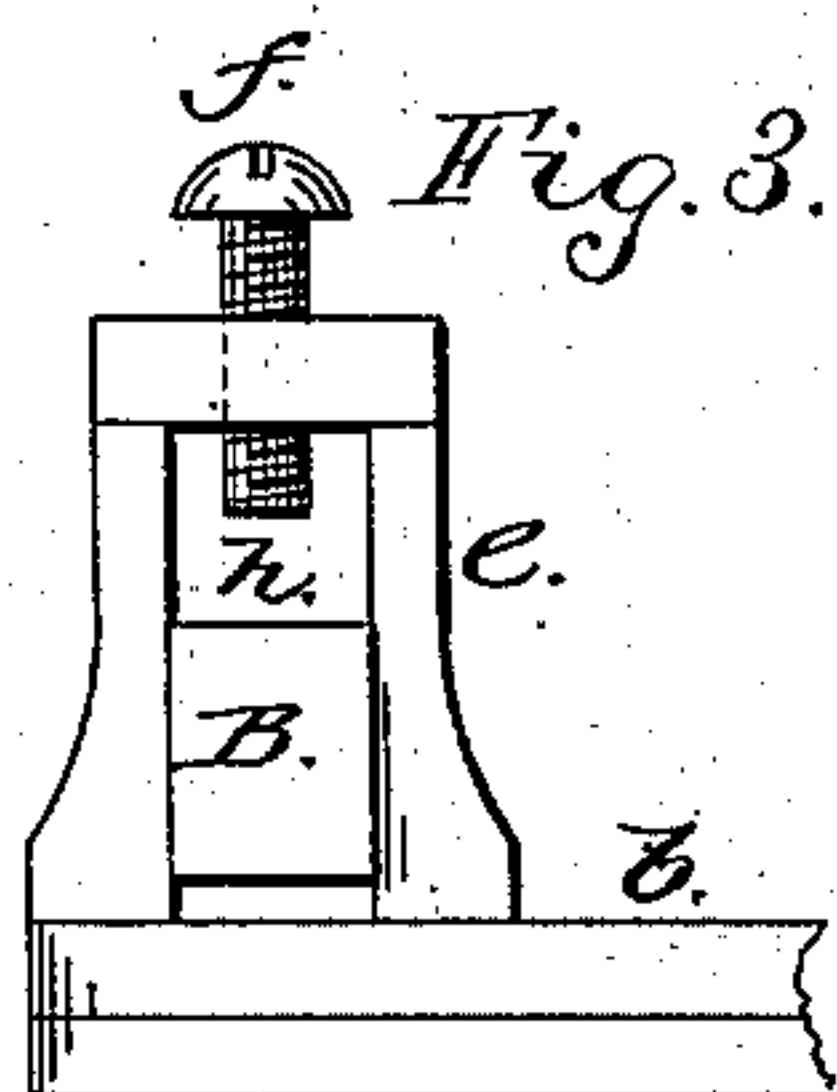
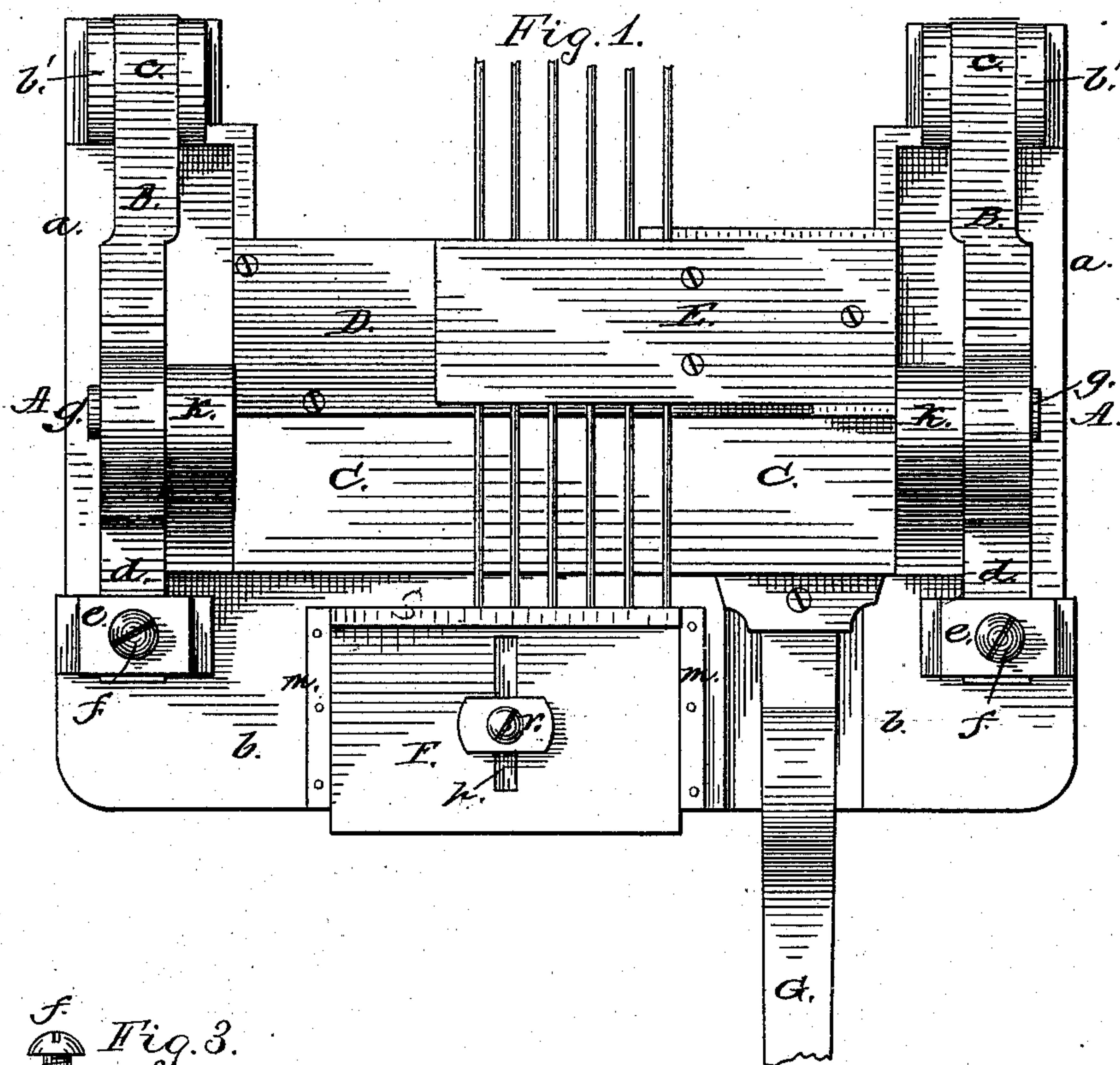


(No Model.)

I. A. KILMER.
Wire Bending Machine.

No. 235,781.

Patented Dec. 21, 1880.



WITNESSES

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John A. Ellis.

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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. 235,781, dated December 21, 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. Fig. 2 is a longitudinal section. Fig. 3 is a detail view.

This invention relates to devices for bending wire and forming loops therein.

It consists in the construction hereinafter specified.

In the annexed drawings, A represents a frame or bed-plate supported in any suitable manner and having arms *a a* and cross-piece *b*. At the ends of arms *a a* are located pairs of standards *b' b'*, in which are hinged swinging arms B B by their ends *c c*, their other ends, *d d*, passing through slotted standards *e e* and adapted to move up and down in said slotted standards, their range of motion being regulated by the set-screws *f f*, passing through the tops of said standards *e e* and down into their slots *h h*.

Journalled in arms B B by journal-arms *g g* is a plate, C, having lugs *k k*, which said plate extends above cross-piece *b* from one arm B to the other. Fastened from arm *a* to the other arm *a* of bed-plate A, parallel to plate C, is another plate, D, and fastened to one end of plate D, but with an intervening block, N, at one end, is a plate, E, the construction being such as to leave a space, *l*, between plates E and D, and plate E being shorter than plate D, entrance is had to said space at one end of plate E.

On bed-plate A, to the side of plate C opposite to plate D, and between guides *m m*, is the gage F, made adjustable by a slot, *p*, and set-screw *r*.

Attached to one side of plate C is a lever-handle, G.

In operating this device the arms B B have their range of motion regulated by the set-screws *f f* to suit the thickness of the wire to be bent. The plate C is turned down across bed-plate A, which brings its top below the level of plate D, and the gage F is adjusted to suit the length of loop. The wires are then placed side by side in space *l*, with their ends resting against flange *s* of gage F. By lifting up handle G the plate C is moved up, forward, and downward, carrying with it the wires, whereby the latter are bent over plate E and the loops formed. By throwing the handle back the plate C is lifted off the loops, when they are removed and the operation continued.

In this construction the plate D forms a bearing-plate, the plate E a mandrel, and the plate C a bender, the three together constituting a device whereby any number of wires can be readily and quickly bent into loops, the thickness of plate E preventing the loops from being mashed close, so as to weaken the metal, and the loose-movement of arms B B allowing plate or bender C to be lifted up and over, and not affecting the curve in the loop.

What I claim is—

1. The bending-plate journalled in arms which are hinged to the frame at one end and having their other ends passed through slotted posts in which they have an adjustable range of motion.

2. A device for bending wire loops, consisting in the combination of a bending-plate, a bearing-plate, and a mandrel-plate, the last one being connected to the bearing-plate at one end only, and being shorter than said bending-plate.

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.