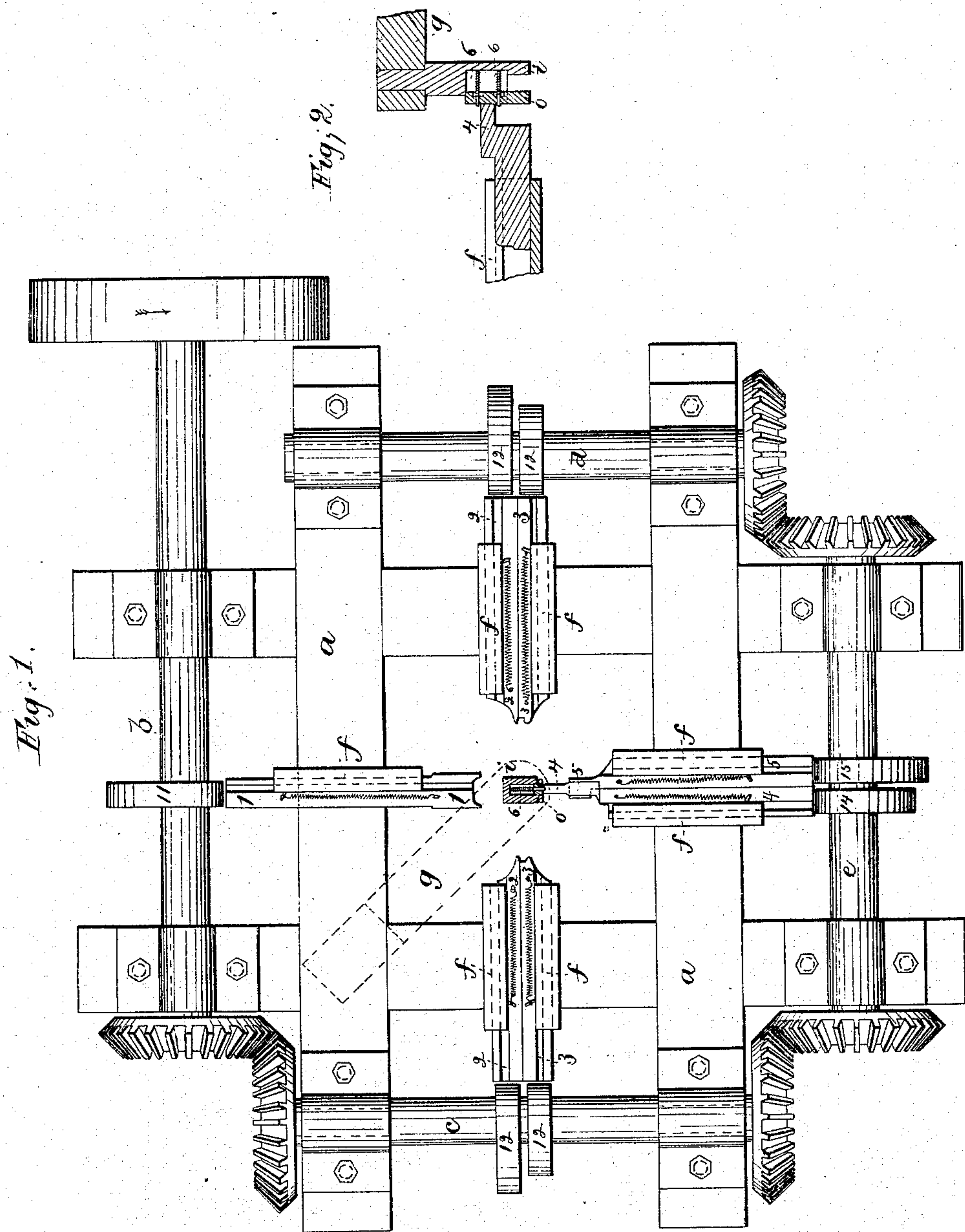


M. Fowler.

Making Clothes Buckles.

N^o 67,865.

Patented Aug. 20, 1867.



Witnesses;
Geo. A. Walker
Chas. H. Smith

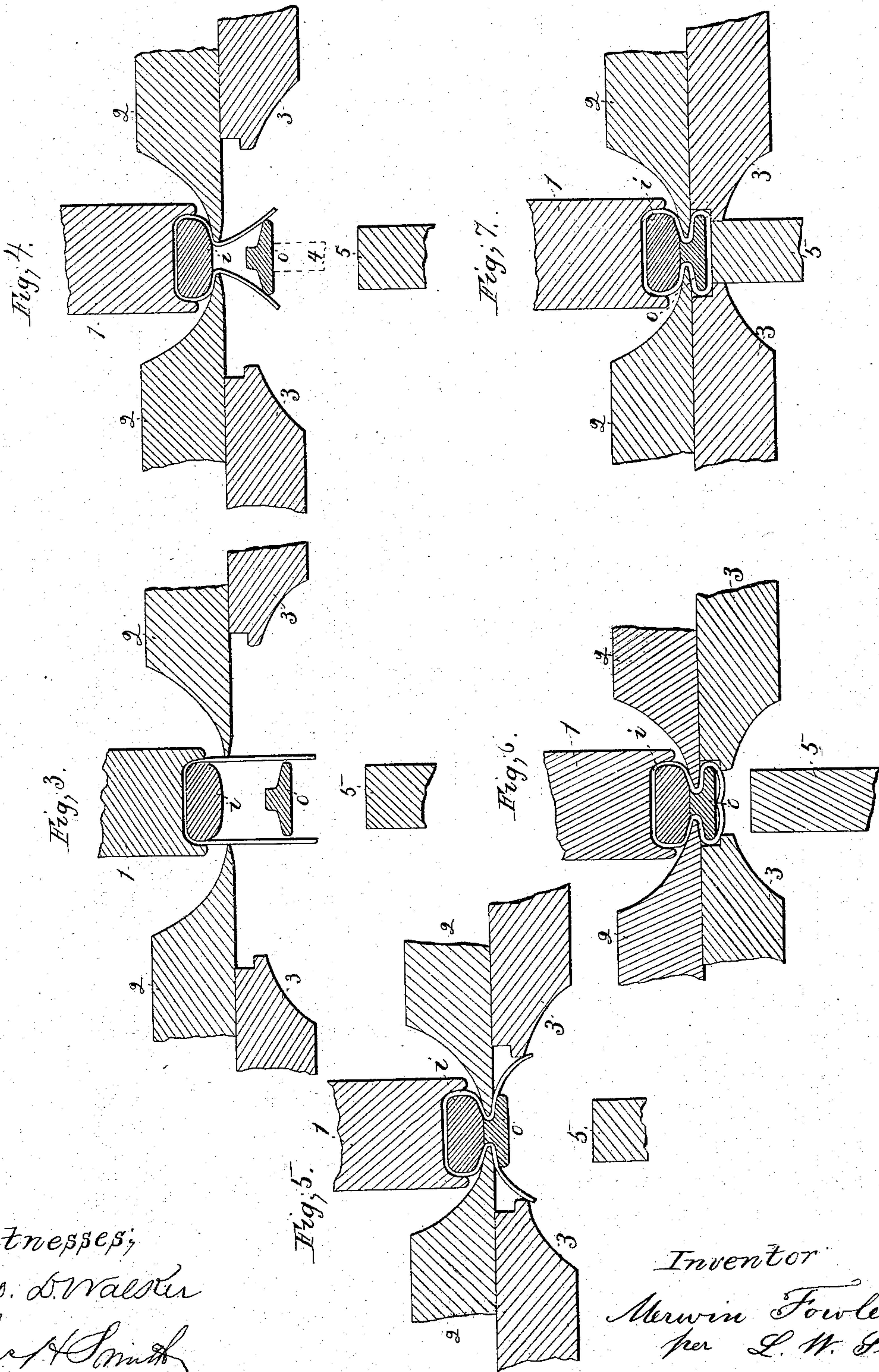
Inventor,
Merwin Fowler
per L. H. Perrell
Att.

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Merwin Fowler
per L. W. Perrell

United States Patent Office.

MERWIN FOWLER, OF WOLCOTTVILLE, CONNECTICUT, ASSIGNOR TO
TURNER, SEYMOUR & JUDDS, OF SAME PLACE.

Letters Patent No. 67,865, dated August 20, 1867.

IMPROVEMENT IN MACHINES FOR MAKING BUCKLES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, MERWIN FOWLER, of Wolcottville, in the county of Litchfield, and State of Connecticut, have invented, made, and applied to use a certain new and useful Machine for Forming Buckle-Bows or Frames; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1 is a general plan of the said machine, the central bending die or former being shown in section.

Figure 2 is a vertical section of the bending die or former; and

Figures 3 to 7 represent in nearly full size the parts of the dies employed for bending up the buckle-bow in the various positions they assume in the successive stages.

Similar marks of reference denote the same parts.

Difficulty has heretofore been experienced in bending up the buckle-bows to the required shape, particularly where the sides of such bows are curved or have an inward bend; because if the wire composing such frame is pressed bodily into a die the smoothness of its surface is marred, and sometimes the wire is injured by being strained.

The object of my present invention is to form successive bends in the wire until it is brought to the shape of the frame or bow without stretching, compressing, or injuring said wire.

My said invention consists in a series of dies standing radially around a central former or die, and acting progressively to bend the wire into the required shape; and to provide for the double bend in the sides of the buckle-frame, the said central die or former is divided and forced together to crimp or bend the wire.

In the drawing *a* is the bed of the machine, carrying in suitable boxes the shafts *b*, *c*, *d*, and *e*, connected together by mitre gears at the angles, so as all to revolve together by power applied to one of the shafts. These shafts have on them cams of the shape to give to the respective slides the motions required, as hereafter set forth, and at the proper time relatively to each other. 1, 2 2, 3 3, 4, and 5 are the respective dies to be moved. They are each formed to slide in suitable stocks *f* on the frame *a*, and drawn backwards so that the rear ends of the slides are kept in contact with their respective cams, and for this purpose suitable springs may be employed. The cams acting respectively on these slides and dies are marked 11, 12, 12, 13, 13, 14, and 15, and are set upon the respective shafts *b*, *c*, *d*, *e*. The central former or die *i* is of the shape of the interior of the buckle-bow. It is supported by a standard, *g*, from the frame *a*, (see fig. 2,) and dotted lines in fig. 1. This die or former is made with an auxiliary piece, *o*, attached by pins 6 6, and on these the piece *o* slides as pressed away from the die *i* by springs placed between them. The wire to form the bow is supplied to the machine in any suitable manner, and cut off to the proper length. The die 1 comes up, holds the wire against the die or former *i*, and bends it into a U shape, (see fig. 3.) The dies 2 2 then press in the sides of the buckle-frame, as in fig. 4. The auxiliary piece *o* then is closed up against the wire by the action of the slide 4, and cam 14 acting upon the said piece *o*, above the die 5, (see fig. 2,) bending the wire into the form of fig. 5. The dies 3 3 then make the last bend into the form shown in fig. 6, bringing the ends of the buckle-bow together; but as the wire is not always straight at this part, after having been bent as aforesaid, I employ the die 5 to press upon the same, as seen in fig. 7. It is generally necessary that the exterior of the die *o* should be slightly concave, and the end of the die 5 convex, to bend the wire sufficiently for it to remain straight when the pressure of the dies is removed. The respective dies withdraw, and the buckle-frame drops off or is forced off by any suitable means, and the former or dies *i* *o* separate, and the operation is repeated.

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

The series of dies constructed and arranged substantially as specified, and acting successively to bend up a piece of wire into a buckle-bow or frame, substantially as set forth.

In witness whereof I have hereunto set my signature this nineteenth day of March, 1867.

MERWIN FOWLER.

Witnesses:

FRED'K J. SEYMOUR,
H. S. BARBOUR.