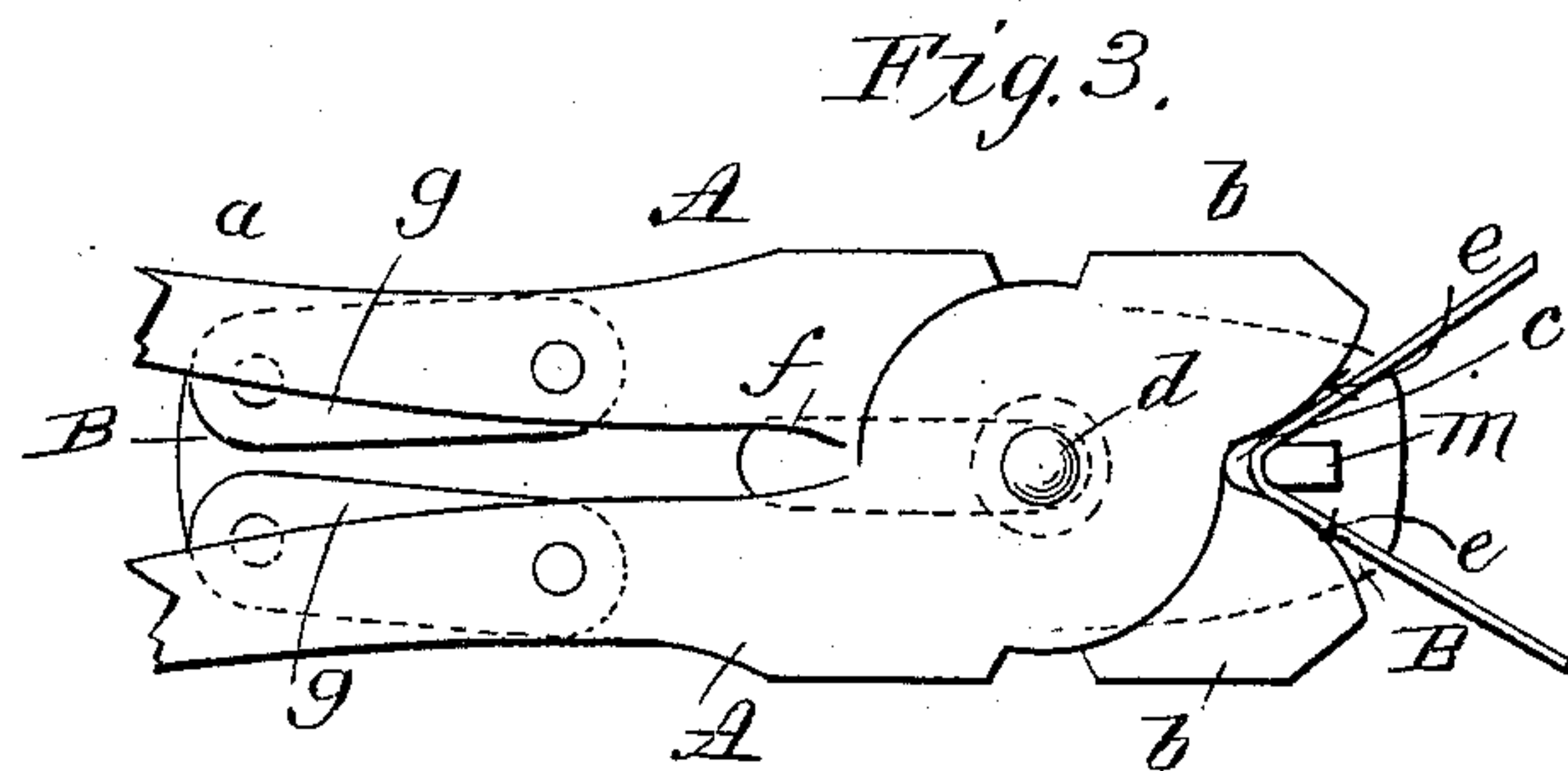
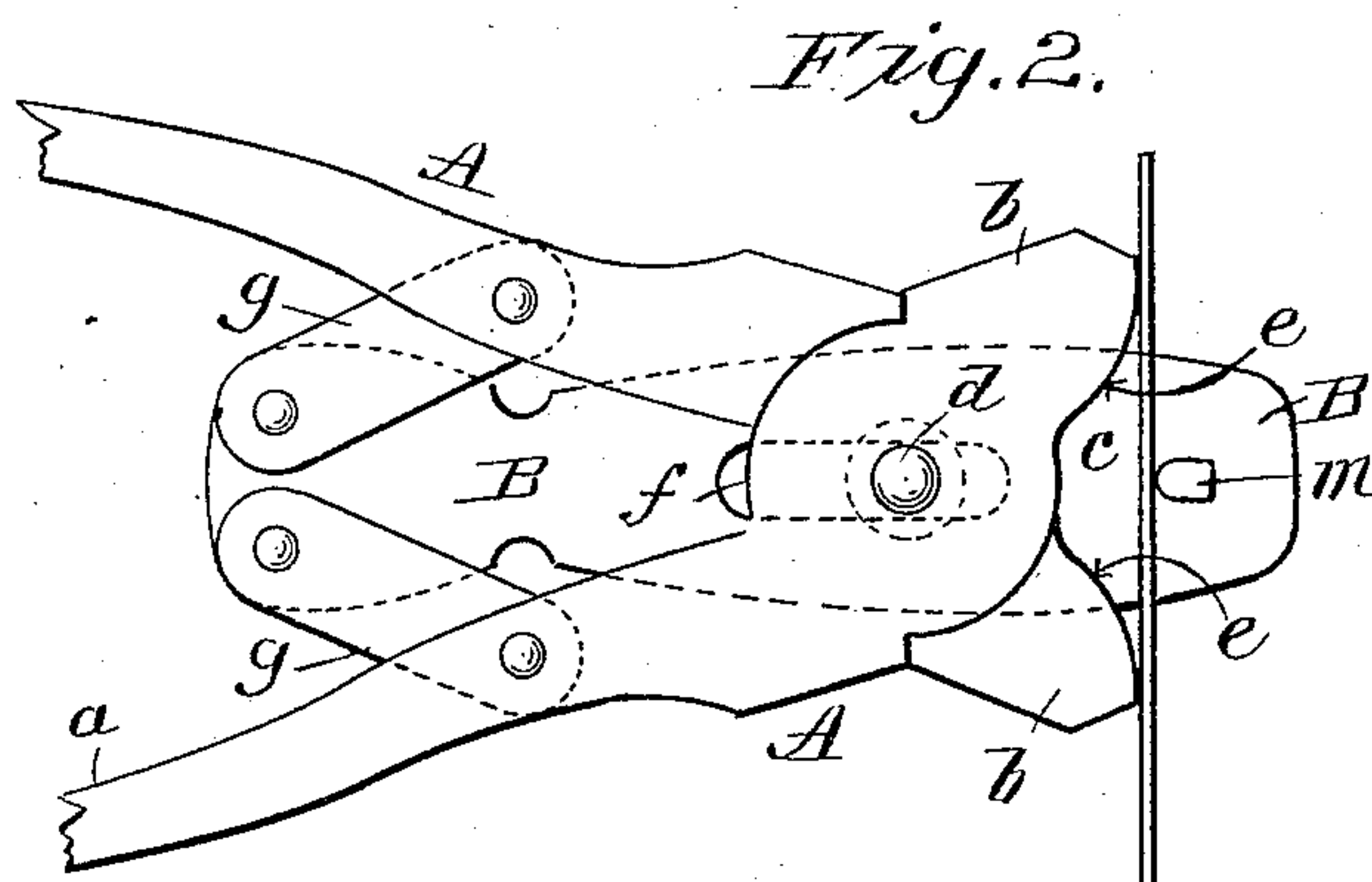
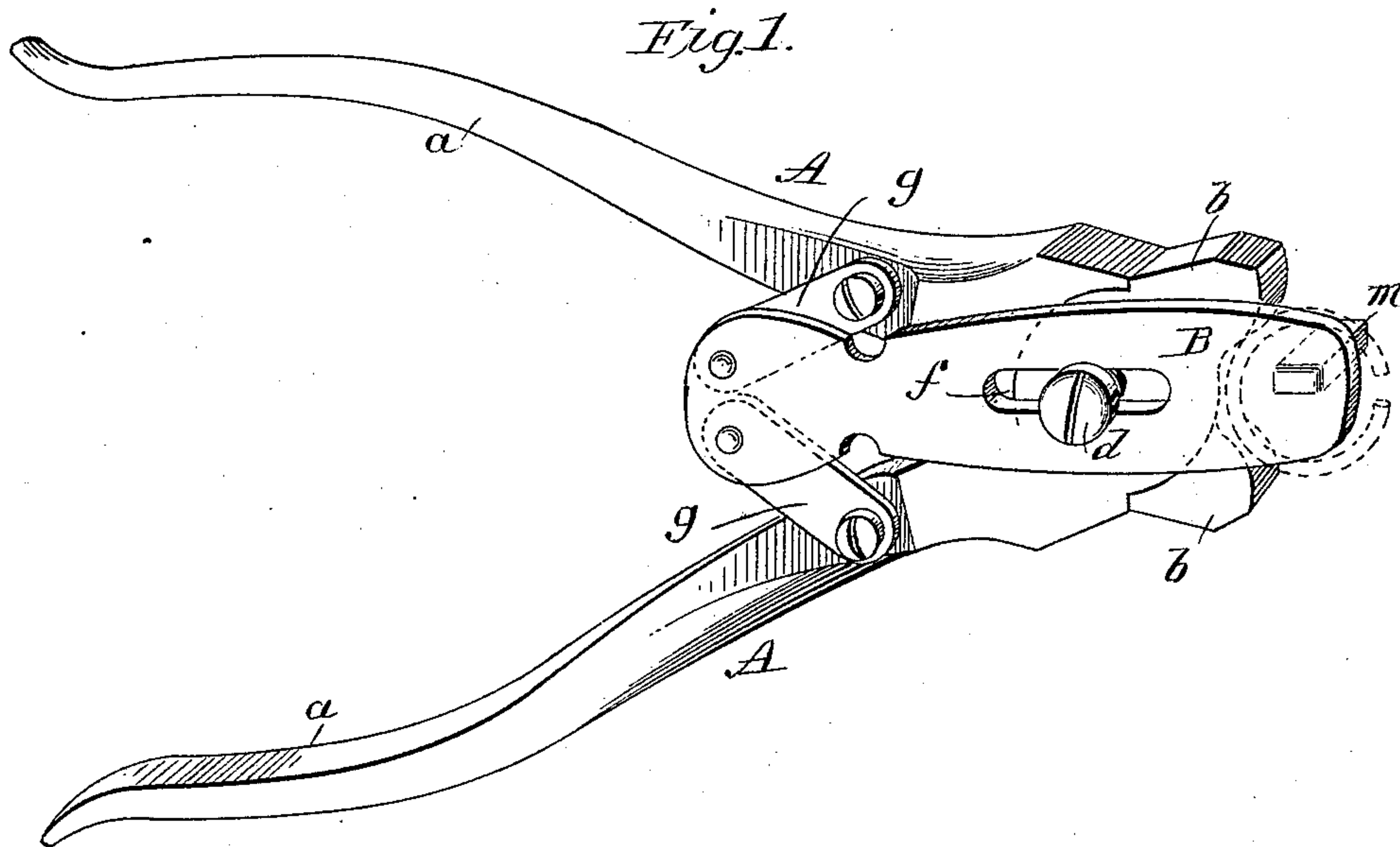


(No Model.)

J. A. ROBBINS.  
WIRE BENDING TOOL.

No. 429,961.

Patented June 10, 1890.



Witnesses:

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# UNITED STATES PATENT OFFICE.

JOHN AUGUSTUS ROBBINS, OF SPRINGFIELD, MASSACHUSETTS.

## WIRE-BENDING TOOL.

SPECIFICATION forming part of Letters Patent No. 429,961, dated June 10, 1890.

Application filed August 9, 1889. Serial No. 320,309. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN AUGUSTUS ROBBINS, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Wire-Bending Tools, of which the following is a specification.

This invention relates to an improved implement for the use of jewelers and other mechanics for contracting watch-bows or other rings and for bending strips of metal or other material into bow or U form; and it consists in the construction and combination of parts, all substantially as will hereinafter more fully appear, and be set forth in the claim.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view of the improved implement, and Figs. 2 and 3 are side views of the same with the end portions of the handle-arms broken off. In one of said views the implement is shown as opened, while in the other the same is shown as closed.

The implement comprises two levers A A, intermediately pivoted, the longer arms *a a* forming handles and the shorter arms *b b* constituting jaws operating in the same manner as ordinary pinchers—that is, on forcing the handles together the jaws will also be brought together, and there is provided a spring to force the jaws apart when pressure is released from the handles, the same not being shown in the drawings, being disposed in a recess in the jaws about the pivot-stud *d*, as is common in spring-pinchers. The faces of the jaws which lie toward each other conduce to form a recess, as at *c*, the side walls *e* of which may be contracted and widened as the implement is operated, but are not intended to come quite to contact. On one side of the levers is a carrier plate or block B, adapted to have a movement in the intermediate longitudinal median line of the levers, being provided with a slot *f* at its intermediate portion, through which projects the extended pivotal pin *d* of the levers, and between and pivotally connected to the inner end of said

plate and the handle-arms are links *g g*, whereby on the movement of said arms together the said carrier-plate will be moved inward, while on the opening of the arms the said carrier-block will be forced to move in the reverse direction, being always constrained in its rectilinear movement by the engagement of the slot *f* and pin *d*. A pin or stud *m*, constituting in effect a third operating-jaw, is formed on or attached to the face of said carrier-plate and adapted to extend across the plane comprising both of the jaws *b b*, and is preferably disposed so that when the jaws are opened it will stand outside a line drawn between the ends of both jaws, as seen in Fig. 2, and so that when the jaws are closed it will be brought nearly, but not quite, to a contact with the base of the recess within the jaws.

In the use of the implement the handle-arms are normally by the spring thrown apart, separating the jaws and moving the stud outwardly, when the strip of metal, or whatever material is to be bent, is placed across the end of the jaws and between them and the stud, when by closing the jaws through pressure on the handle-arms the stud is drawn inwardly into the recess between the jaws and the strip is bent into the bow or U form desired, or a watch-bow or other broken ring placed in the tool in the position indicated by dotted lines in Fig. 1 will be contracted by forcing the stud *m* thereagainst.

What I claim as my invention is—

In an improved implement for bending metal, the combination, with the levers A A, intermediately pivoted and constituting handle-arms and operating-jaws, of a carrier plate or block guided for a longitudinal movement on the side of said jaws, provided near one end with the stud, and the links pivotally connected to the other end of said carrier-plate and the handle-arms, substantially as and for the purpose specified.

J. AUGUSTUS ROBBINS.

Witnesses:

H. A. CHAPIN,  
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