

L. BEYER & R. HEUNSCH.
Machine for Bending Circular File-Blanks.

No. 164,710.

Patented June 22, 1875.

Fig. 1.

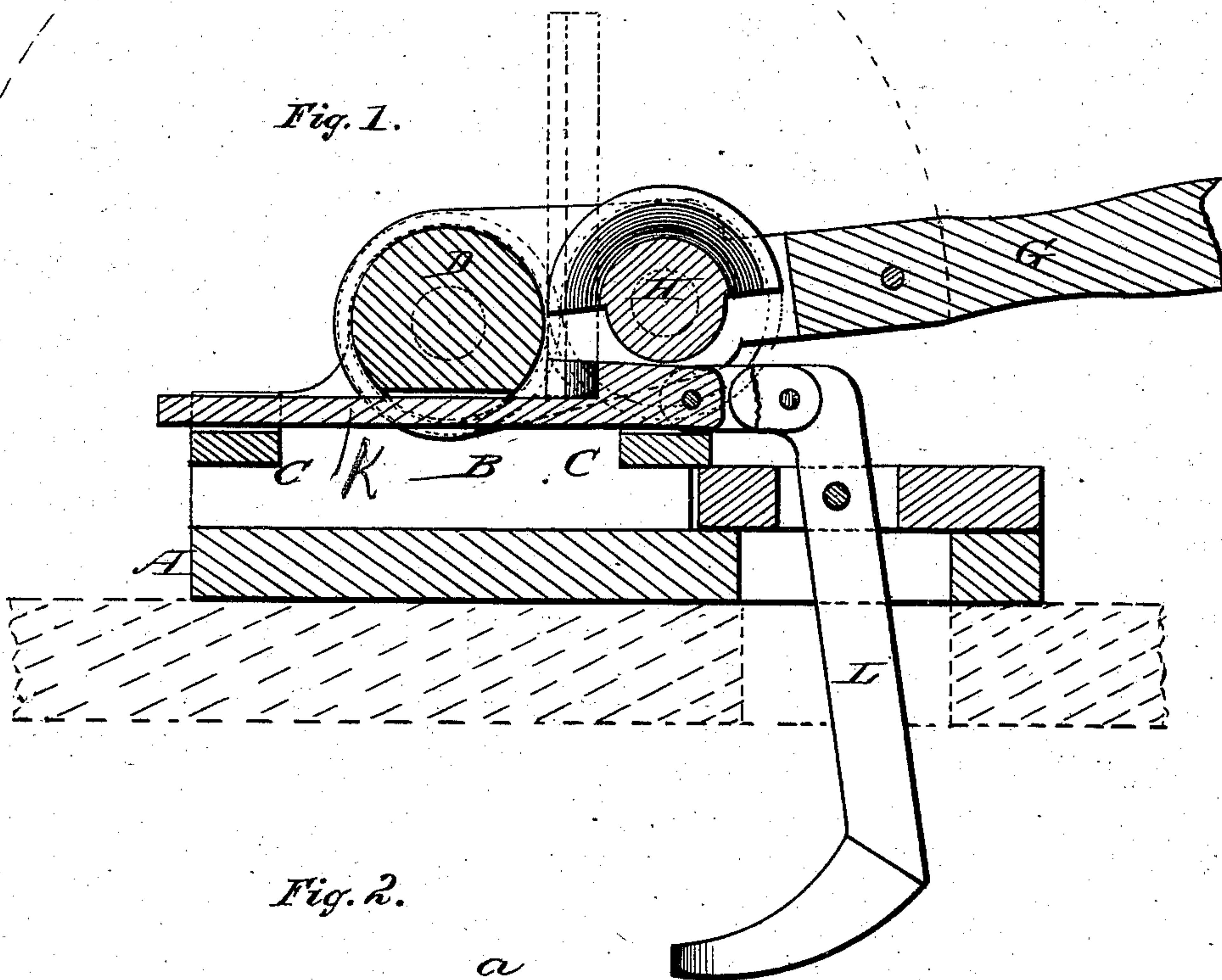


Fig. 2.

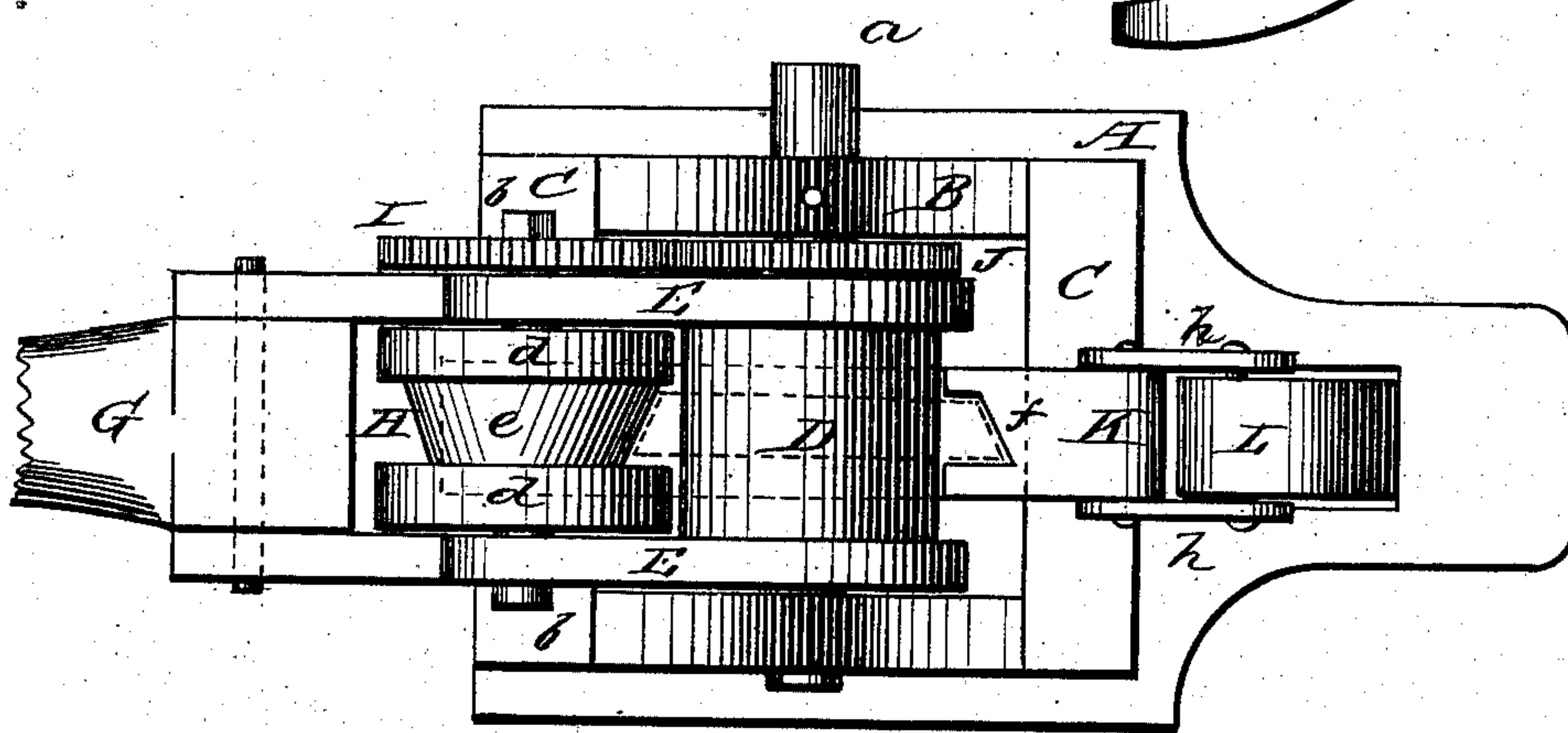


Fig. 3.

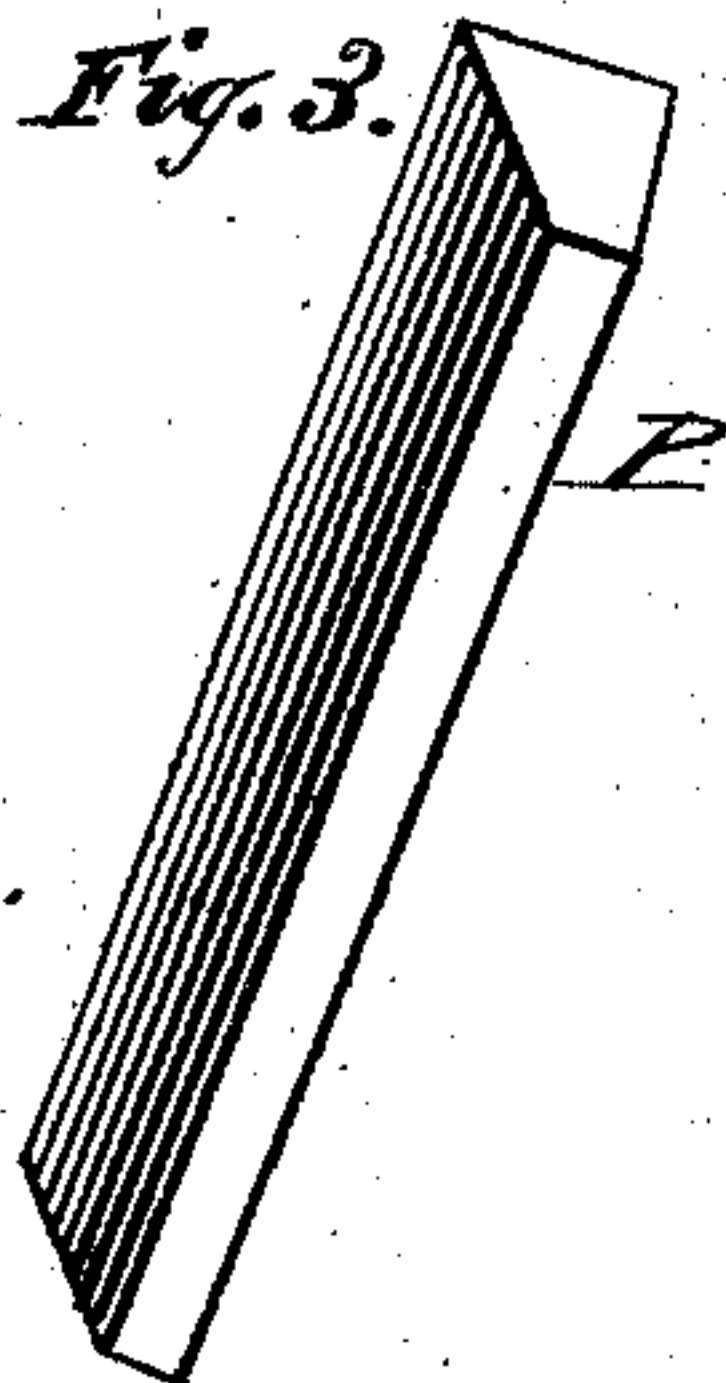
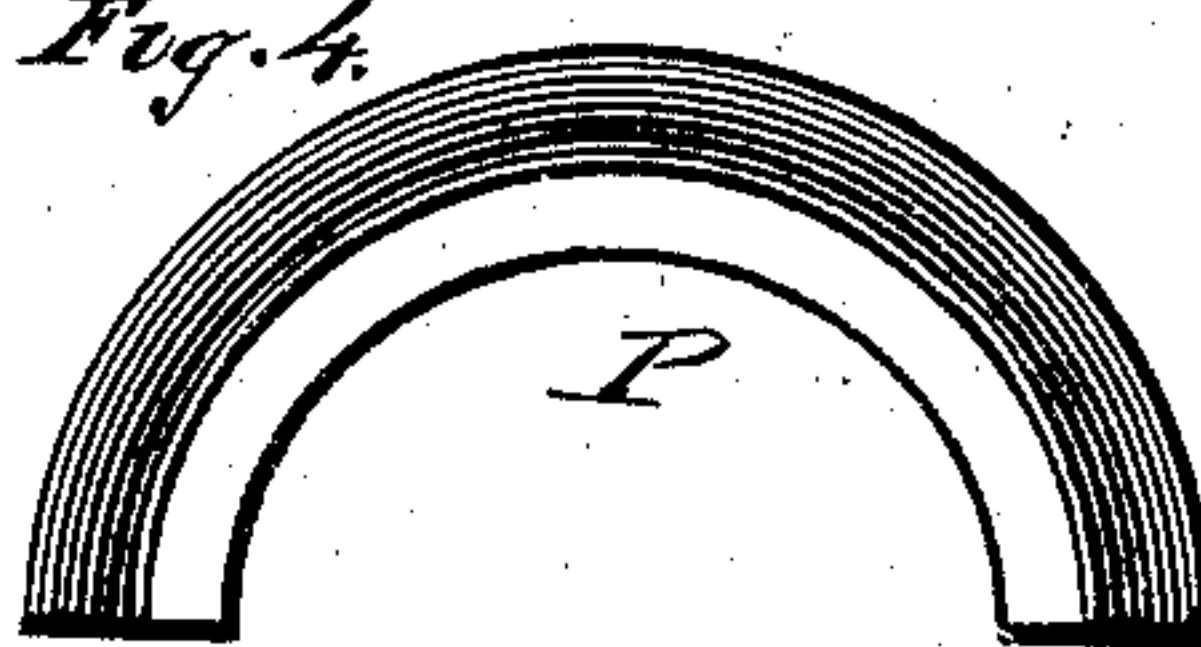


Fig. 4.



WITNESSES:

P. C. Dieterich.
H. B. McArthur.

INVENTORS.

Louis Beyer
Rudolph Heunsch
per C. H. Watson & Co.
ATTORNEYS

UNITED STATES PATENT OFFICE.

LOUIS BEYER AND RUDOLPH HEUNSCH, OF WASHINGTON, D. C.

IMPROVEMENT IN MACHINES FOR BENDING CIRCULAR FILE-BLANKS.

Specification forming part of Letters Patent No. **164,710**, dated June 22, 1875; application filed May 15, 1875.

To all whom it may concern:

Be it known that we, LOUIS BEYER and RUDOLPH HEUNSCH, of the city of Washington, in the District of Columbia, have invented certain new and useful Improvements in Circular-File-Bending Machines; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The nature of our invention consists in the construction and arrangement of a machine for bending circular files, as will be hereinafter more fully set forth.

In the annexed drawing, Figure 1 is a longitudinal vertical section of our machine. Fig. 2 is a plan view of the same. Fig. 3 is a perspective view of the file-blank, and Fig. 4 is a side view of the file after it is bent.

A represents the bed-plate of our machine, to be secured on any suitable bench or support. On this bed-plate are secured two parallel side pieces, B B, connected at their ends by means of cross-bars C C. In the upper ends of the side pieces B B are placed the journals *a a* of a stationary roll, D, having a smooth circular surface. On each side of this roll, on the journals *a a*, is placed a loose arm, E, and the outer ends of these arms are connected by means of a lever, G, the arms, as it were, forming a forked extension of the lever. Between the arms E E is placed a roll, H, the journals *b b* of which pass through the arms, and on one of said journals is secured a cog-wheel, I, which gears with a stationary cog-wheel, J, on one of the journals *a*. The roll H is for one-half of its circumference formed with an inclined or conical enlargement, *e*, and on the sides thereof are semicircular flanges *d d*. This enlargement and flanges extend, as stated, only one-half of the circumference, as the roll H will make only one-half revolution over the upper part of the roll D. The bottom of the roll D is grooved for the passage of a slide, K, which

is formed with a clamp or die at *f*, and its end connected by links *h h* with a lever, L, pivoted in a mortise in the bed-plate, and extending through the bench or support, and with a foot-piece on its lower end. P, Fig. 3, represents the file-blank rolled in proper shape and cut off the desired length.

This blank is to be heated to a cherry-red, and when the lever G is thrown over on top of the upper end of the lever L, the end of the blank is inserted between the rolls D and H in the die *f*. The operator then by his foot works the lever L, so as to move the slide K and clamp the end of the blank in the die *f*. The lever G is then thrown to the opposite side, the cog-wheel I working in the cog-wheel J revolving the roll H, so as to bend the blank around the roll D in semicircular shape. As soon as the pressure is removed from the foot-piece of the lever L, the completed file can be removed.

These files are used in a certain class of saw-filing machines patented by us, but may, of course, be used for any purpose to which they may be adapted.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of the stationary roll D and the roll H, formed with the conical enlargement *e* and flanges *d d*, and having a two-fold motion—viz., one around its own axis, and the other around the roll D—substantially as and for the purposes herein set forth.

2. The combination of the stationary roll D and stationary cog-wheel J with the lever G E, rotating roll H, and cog-wheel I, substantially as and for the purposes herein set forth.

3. The combination of the rolls D H, slide K, with die *f*, and lever L, as and for the purpose described.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

LOUIS BEYER.
RUDOLPH HEUNSCH.

Witnesses:

C. H. WATSON,
J. H. VAN ARNUM.