(No Model.)

L. ACHESON.

MACHINE FOR BENDING LINKS.

No. 251,397. Patented Dec. 27, 1881.

Fig. 1.

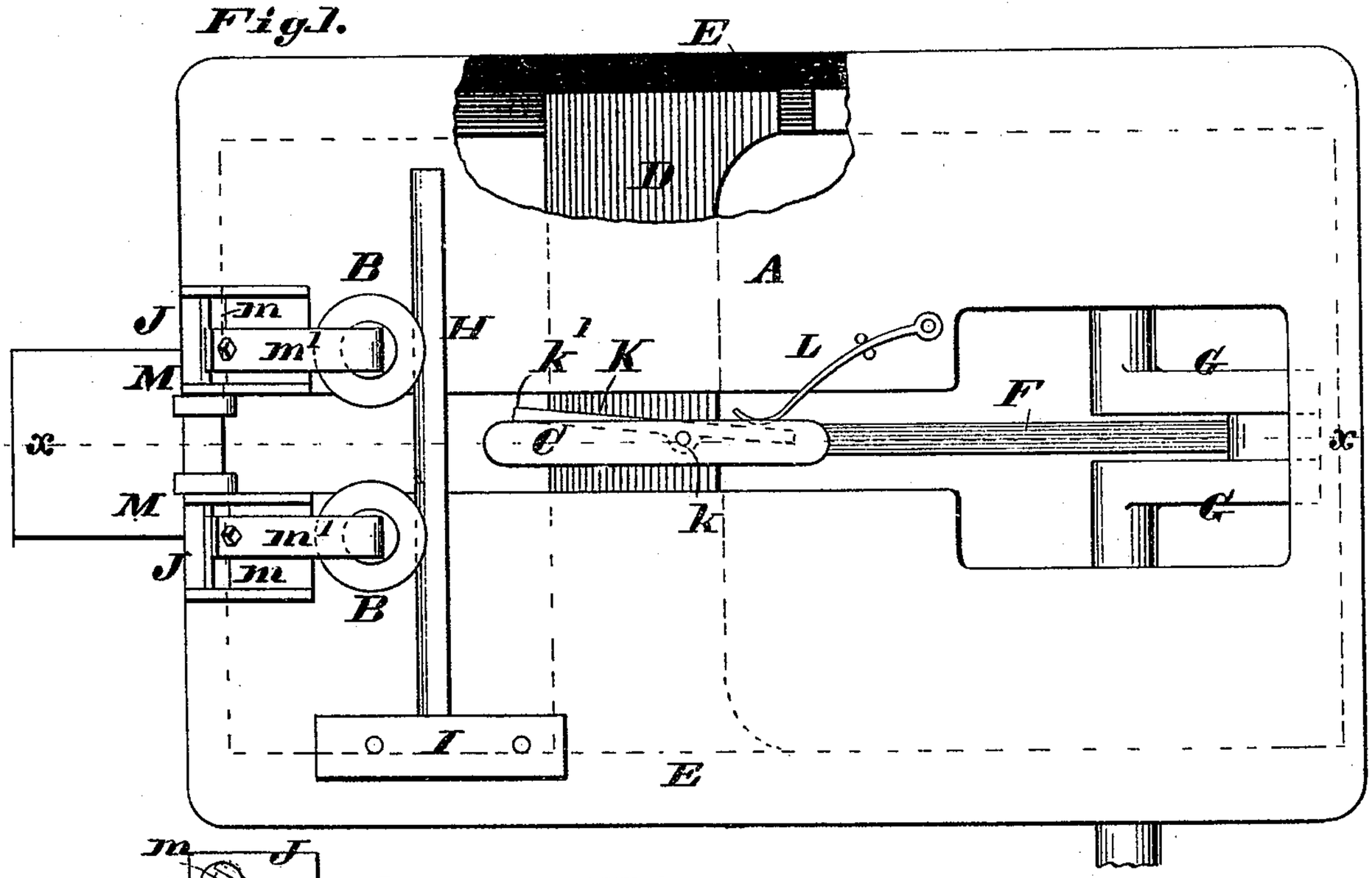


Fig. 2.

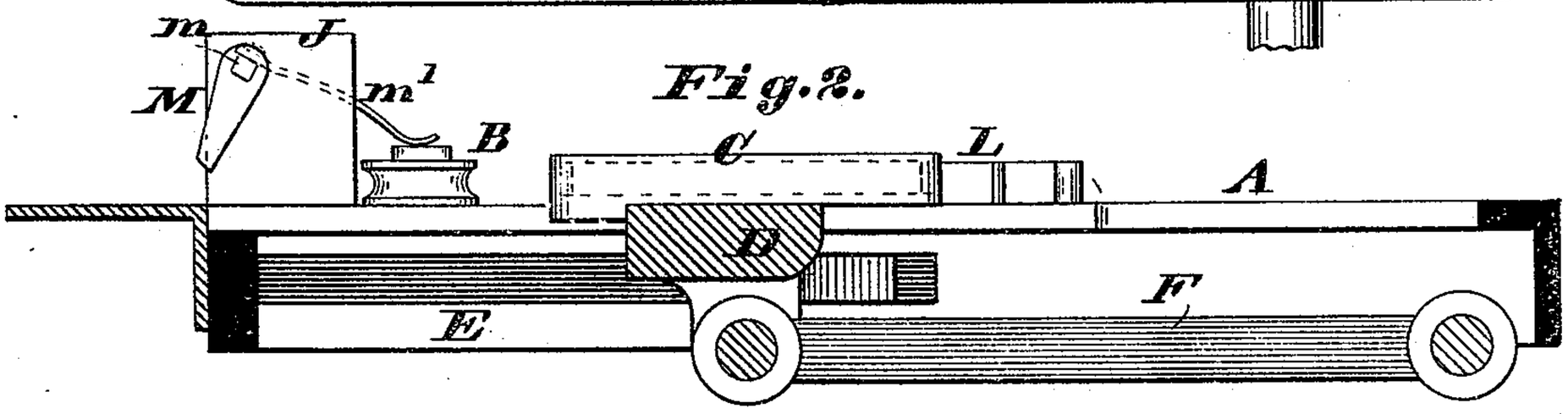


Fig. 3.

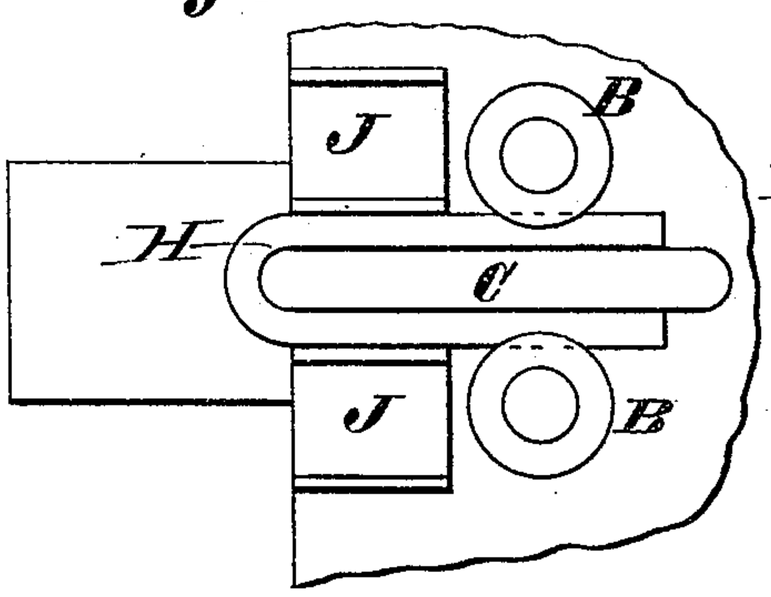
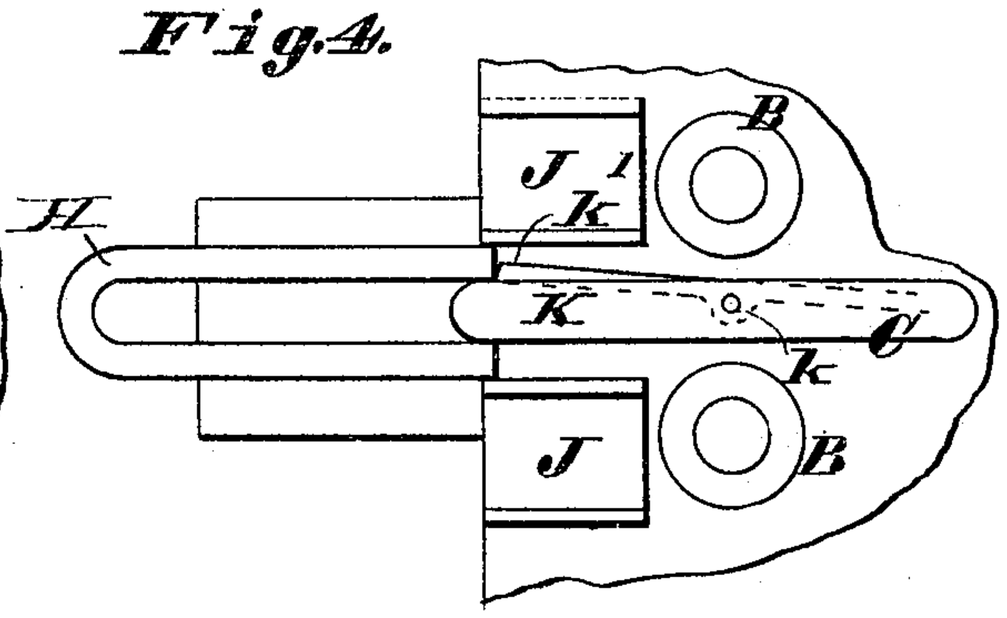


Fig. 4.



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UNITED STATES PATENT OFFICE.

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MACHINE FOR BENDING LINKS.

SPECIFICATION forming part of Letters Patent No. 251,397, dated December 27, 1881.

Application filed October 19, 1881. (No model.)

To all whom it may concern:

Be it known that I, LEONARD ACHESON, of St. Louis, Missouri, have made a new and useful Improvement in Machines for Bending Links, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a plan of the improved machine, a portion of the top being broken away; Fig. 2, a vertical longitudinal section taken on the line *x x* of Fig. 1; Fig. 3, a detail, being a plan of that portion of the machine where the bar is bent, the view showing the link bent, but still in the bending-rolls; and Fig. 4, another detail, showing the link pushed from between the bending-rolls and in position to be discharged from the machine.

The same letters denote the same parts.

The present invention is an improvement in that class of machines for bending links wherein the bar from which the link is to be made is bent into a U shape only, the link being closed and welded in a subsequent operation.

Referring to the drawings, A represents the top or table of the machine.

B B represent the rolls used in bending the bar.

C represents the former used in forcing the bar between the rolls, having a reciprocating movement to and fro between the rolls, being actuated by suitable mechanism, in this case being attached to the cross-head D, which moves upon the guides E by means of the pitman F and crank G.

The bar H, from which the link is to be formed, is laid on the table A against the rolls B B, its position endwise being determined by the stop I. The forward movement of the former C causes the bar to be bent and forced between the rolls, bringing the parts into the position shown in Fig. 3, the bar now having the desired U shape, but still being confined between the rolls B B and the guides J J. The former is now, however, at the forward limit of its stroke, and to expel the link from between the rolls a second stroke of the former and the following mechanism are employed: An arm, K, is pivoted at *k* in the side of the former, the latter being suitably chambered to receive the arm. A spring, L, acts to turn the arm on its pivot, so as to throw its forward end, *k'*, out from the side of the former, as shown in Fig. 1. As the former makes its first stroke the bar, closing around it, causes the arm to be folded within the former, as in Fig. 3; but when the second stroke is made, the spring L having acted on the arm as the former C was withdrawn, the end *k'* of the arm encounters the end of the link, pushing the latter from between the rolls and bringing it into the position shown in Fig. 4. The link is now ready to be discharged from the machine, which is effected by means of the next link formed, which, as it comes through the rolls, encounters the previously-formed link and pushes it from between the guides J J and from the machine. In this way with every two strokes of the former a bar is bent into the desired shape and discharged from the machine.

M M represent dogs arranged between the guides J J, so as to prevent the link, after being formed, from being carried back again between the rolls by reason of the friction of the former. The dogs are attached to shafts *m m*, turning in bearings in the uprights or guides J J. Springs *m' m'* act to incline the points of the dogs toward the discharge end of the machine. The link then can pass freely out; but if drawn backward by the former, as described, the dogs bind upon the link and arrest it.

An especial advantage derived from the present improvement is that the entire machine can be made in a compact form, and a short stroke can be used in bending the link.

I claim—

1. The combination of the rolls B B, the former C, arm K, and spring L, substantially as described.

2. A former, C, having a movable arm, K, for the purpose described.

3. The combination of the rolls B B, the guides J J, the former C, the arm K, and spring L, substantially as described.

4. The combination of the rolls B B, the guides J J, the former C, the arm K, the spring L, and the dogs M M, substantially as described.

5. The combination of the rolls B B, the former C, and the guides J J, substantially as described.

LEONARD ACHESON.

Witnesses:
CHAS. D. MOODY,
FREDK. LEAR.