# E. Manley,

## Edging Sheet-Metal.

No. 37,629. Patented Feb. 10, 1863.

Fig: 1.

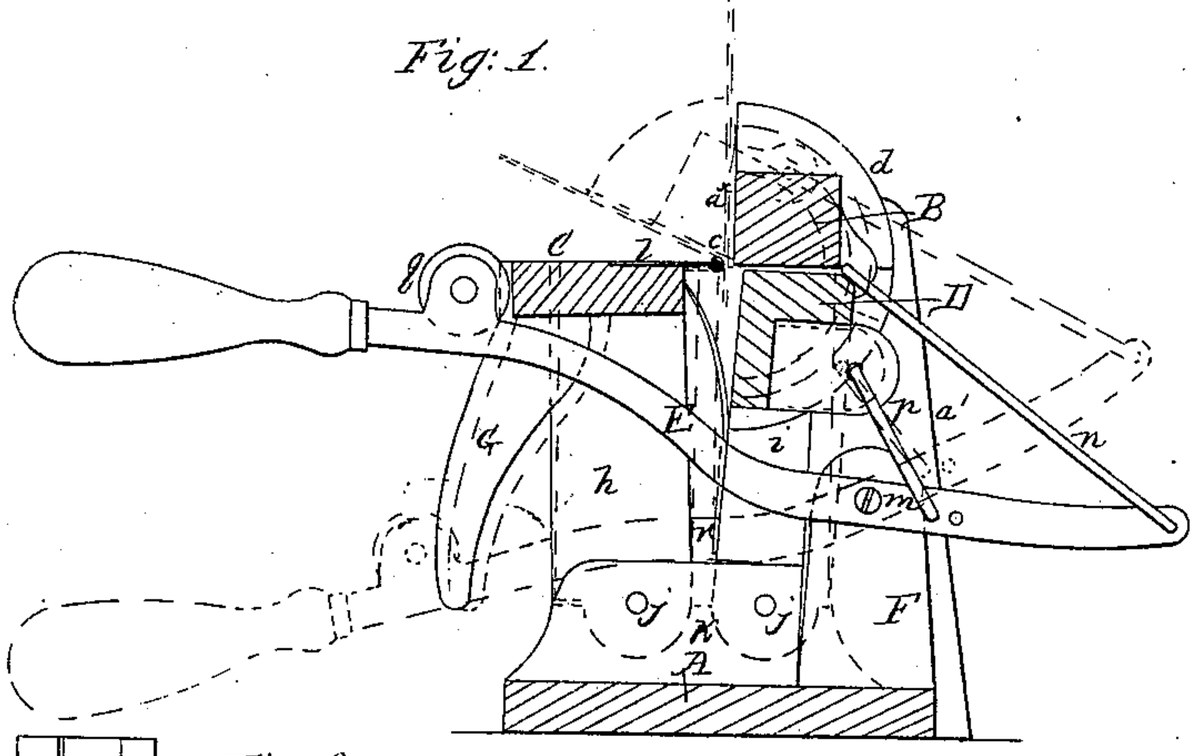


Fig: 3.

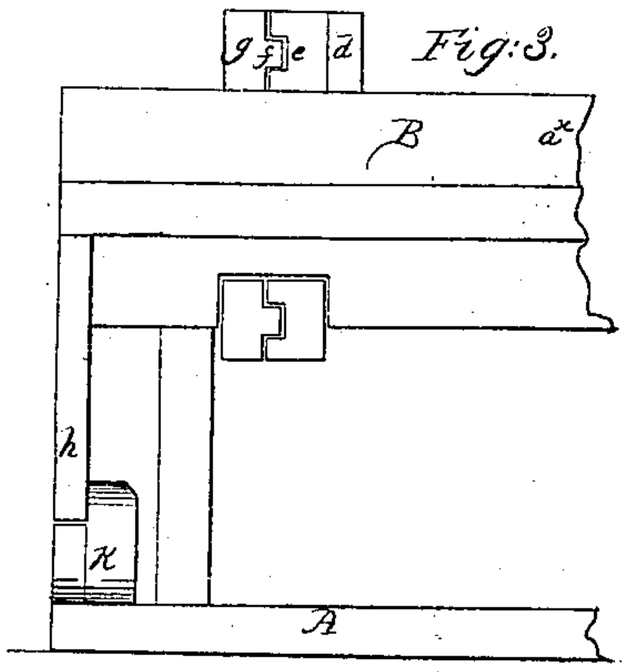


Fig: 2.

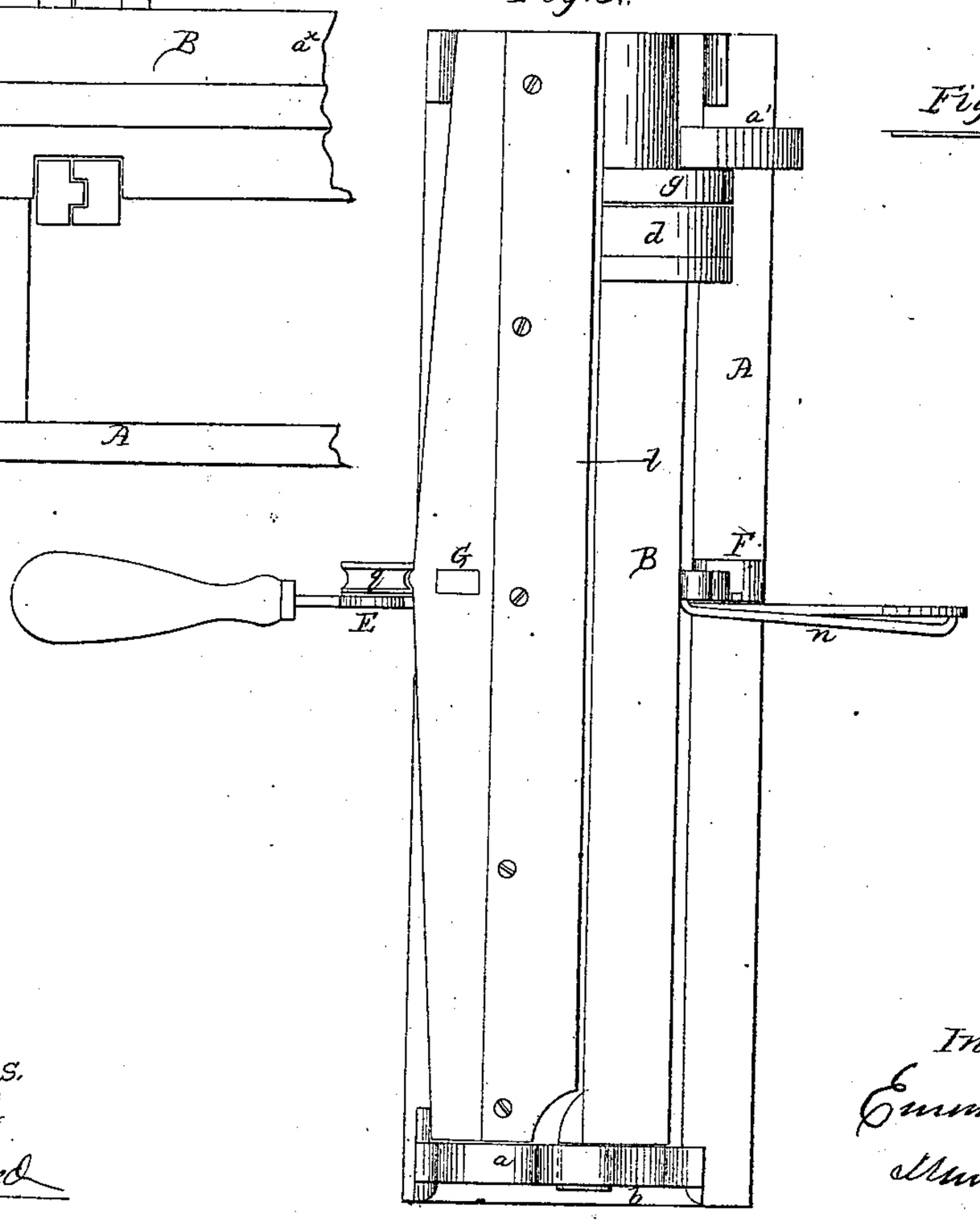


Fig: 4.

Witnesses.
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# UNITED STATES PATENT OFFICE.

EMMONS MANLEY, OF MARION, NEW YORK.

## IMPROVEMENT IN FORMING LOCKS ON TIN PLATES.

Specification forming part of Letters Patent No. **37,629**, dated February 10, 1863.

*To all whom it may concern:*

Be it known that I, EMMONS MANLEY, of Marion, in the county of Wayne and State of New York, have invented a new and Improved Machine for Folding or Forming Locks on Tinned Plates; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a transverse vertical section of my invention taken in the line *x x*, Fig. 2; Fig. 2, a plan or top view of the same; Fig. 3, a front view of the same; Fig. 4, a view of a lock formed on the end of a plate.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to a new and improved machine for the use of tinners and other workers in sheet metal, and is designed to supersede the ordinary machine for the same purpose, to wit, the bending or forming of the locks at the ends of tinned or sheet-metal plates in order to secure them together.

The invention consists in having the folding-bar of the machine near one of its ends arranged in such a manner as to work on a concentric guide or bearing, and admit of the plates to be operated upon being inserted laterally into the machine, thereby avoiding considerable difficulty and embarrassment, which attend the working of the ordinary machines in use.

The invention also consists in using, in connection with the folding-bar alluded to, two movable jaws connected with a lever, and arranged in such a manner and with the folding-bar as to operate in a far more advantageous manner than usual to accomplish the desired result.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a base-plate, which has two uprights, *a a'*, attached to it—one near each end—and B is a bar, which is of square or rectangular form the greater portion of its length. One end of this bar B has a journal, *b*, which is fitted in the upper part of the upright *a*, the center of said journal being in line with an angle or corner, *c*, of the bar B. The bar B, near its opposite end, has a semicircular hub, *d*, attached circumferentially to it, and in such a position as to be concentric with the journal *b*. The outer side of the hub *d* has a groove, *e*, made in it, and this groove receives a curved or semicircular bearing, *f*, which is at the side of a semicircular plate, *g*, the latter being attached to the upright *a'*. By this arrangement it will be seen that a bearing is obtained for the bar B at one end, which leaves said end entirely unobstructed or open for the lateral insertion or adjustment of metal plates in front of it, as will be understood by referring to Fig. 2.

C D represent two horizontal bars, the ends of which are attached, respectively, to upright bars *h h i i*, the lower ends of the latter being attached by pivot-bolts or screws *j* to ledges or cleats *k* on the base-plate A, a ledge or cleat being at each end of the base-plate. To the upper surface of the bar C there is attached a plate, *l*, which, when the bars C D are moved toward each other, laps over the bar D. This movement of the bars C D toward and from each other is allowed in consequence of the uprights *h i* being allowed to work on the bolts or screws *j*.

E is a lever, which is attached by a fulcrum-pin, *m*, to a small upright, F, on the base-plate A. The back end of this lever is connected by a rod, *n*, to the back part of the bar B, and said lever is also connected at a short distance from its fulcrum *m* with the bar D by a rod, *p*.

To the front side of the bar D, at about its center, there is attached a pendant, G, the outer edge of which is curved longitudinally, and against which a roller, *g*, on the lever E, bears or works.

Between the uprights *h i*, at one or both ends of the machine, there is a spring, *r*.

The operation is as follows: When the front end of the lever E is fully elevated, the face side $a^{\times}$ of the bar B is in an elevated position, and the bars C D are distended or separated to their fullest extent, or as far as they are allowed to move, the spring or springs *r* distending or throwing the bar D outward as the front end of the lever is raised, and the rod *p* at the same time drawing outward the bar C. The several parts when in this position are ready to receive the metal plate to be bent, the latter being inserted down between the two bars C D, between the plate *l* and the bar C, as indicated by the blue outline in Fig. 1. The front end

of the lever E is then forced down, and the bar B, which I term the "folding-bar," has its face side $a^{\times}$ turned down, while the bars C D, which I term "jaws," are pressed toward each other, the bar or jaw C being moved by the rods *p*, the folding-bar B being moved by the rod *n*, and the jaw D being moved by the action of the roller *g* against the pendant G. The folding-bar B bends over the plate, as indicated by the blue dotted line, while the jaws C D cause the lower edge of the plate to be sent underneath the plate *l* on jaw D, thereby forming the lock or hook edge on the plate, as shown clearly in Fig. 4. By this arrangement of the jaws C D and folding-bar B the desired work is accomplished by turning the bar B one-quarter of a revolution only, and by having the folding-bar B arranged, as shown, near one end with a semicircular bearing, *f*, an open space is allowed between the angle *e* or lower edge of the face $a^{\times}$ of B to admit of the lateral insertion of the plate to be bent, and the jaws C D also being arranged to move, as described, will admit of sheet or narrow locks being removed directly from the machine, as the lock can be slipped backward off from the plate *l*, and then drawn forward and out from the machine, instead of being shoved out from it laterally.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. Providing the folding-bar B with a semicircular hub, *d*, grooved to receive a semicircular bearing, *f*, and all arranged, substantially as shown, to admit of an open space at one end of the bar B, to allow the plate to be adjusted laterally between it and the jaw D, as herein set forth.

2. The movable or adjustable jaws C D, arranged, in connection with the lever E, as shown, to operate, as and for the purpose specified.

3. The combination of the folding-bar B, jaws C D, and lever E, all arranged for joint operation, as and for the purpose herein set forth.

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Witnesses:
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