

J. WALKER.
SHEET METAL FOLDER.

No. 8,012.

Patented Apr. 1, 1851.

Fig. 2.

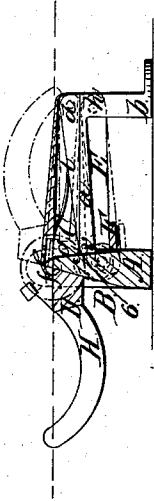


Fig. 3.

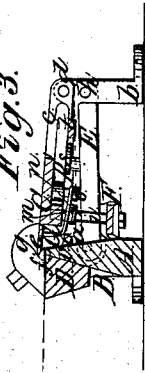


Fig. 4.

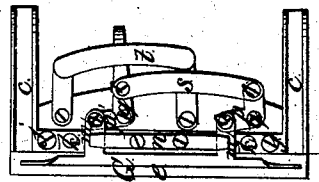
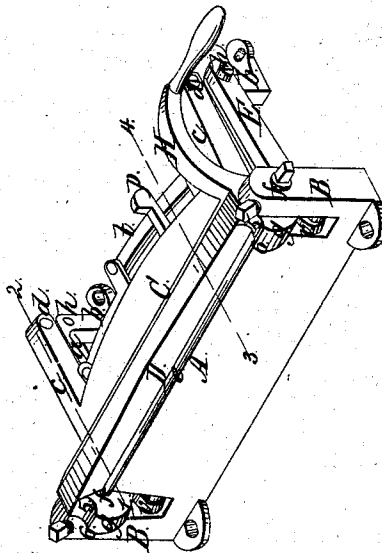


Fig. 1.



UNITED STATES PATENT OFFICE.

JABEZ WALKER, OF EAST BLOOMFIELD, NEW YORK.

IMPROVED MACHINE FOR FORMING A LOCK ON SHEET METAL.

Specification forming part of Letters Patent No. 8,012, dated April 1, 1851.

To all whom it may concern:

Be it known that I, JABEZ WALKER, of East Bloomfield, in the county of Ontario and State of New York, have invented certain new and useful Improvements in the Machine for Folding or Turning the Locks in Tin or other Sheet Metal; 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, forming part of this specification, in which—

Figure 1 is an isometrical view. Fig. 2 is a vertical section in the line 1 2 in Fig. 1. Fig. 3 is a vertical section in the line 3 4 in Fig. 1. Fig. 4 is an inverted plan of the upper or movable jaw detached from the machine.

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

The nature of my invention consists in the employment, in connection with the movable or clamping jaw and folding tumbler, of certain devices for holding down the jaw and securing the plate during the process of folding, and for throwing up the jaw and releasing the plate after the folding is performed.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents the bed, at the ends of which are standards B B. The bed and standards may be of cast-iron, and the face or top edge of the bed steeled, chilled, or otherwise hardened. Secured to the back of the bed, or cast with it, there are two bars, *a a*, whose back ends are supported by feet *b b*, the whole being secured by screws or bolts to a bench or table.

C is the movable swinging jaw, which is of cast-iron. It is supported by two arms, *c c*, the ends of which are jointed by pins *d d* to the back parts of the bars *a a*. The front part or lip, *e*, of the movable jaw is very thin, and is hardened or steeled. Its front edge stands flush with the front edge of the face of the bed, and is of the same length. There is a small spring, *l*, on each bar *a*, under the arm *c*, which has a tendency to raise the jaw when not otherwise depressed.

D is the tumbler, consisting of a strong bar having its faces hardened or chilled. It is provided at its ends with pivots *f f*, which fit in bearings in the standards B B. It is also pro-

vided at each end with a cam, *g*, part of whose face is part of a circle described around the axis, and part is recessed at 5. One end is provided with a lever or handle, H.

E E are levers or arms hung on pivots *h h*, secured in *b b*. Their front ends are provided with friction-rollers *v v*, which are always under the cams *g g*, between the ends of the bed and the standards B B.

F is a bar-spring, which is placed across below the arms E E. It is secured to the jaw C by screws *i*, (see Fig. 3,) and rests on the ends of screws or pins *j j*, (see Fig. 4,) where the holes *k k* for the screws *i* are also shown.

G, Figs. 3 and 4, is a gage consisting of a plate of metal capable of sliding under the lip *e*, and having its face turned toward the bed A. It has two lugs, *m m*, bent under the jaw C and held by a spring, *n*, between which and the jaw they slide. The two lugs are connected by pins *o o* to two crank-levers, *p p'*, having fixed fulcra *q q* secured in the jaw. These crank-levers are connected at *r r* at equal distances from their fulcra by a bar, *s*, and the lever *p'* is prolonged beyond a fixed bar, *t*, upon which may be an index for setting the gage. By moving the end of the lever *p'* the gage may be moved nearer to or farther from the edge of the lip *e*, always being kept parallel with it, the distance from the gage to the edge of the lip forming the depth of the lock.

The operation of the machine is as follows: The gage is first set and the handle H turned in front. One face of the tumbler-bar D is then level with the upper edge or face of the bed A, and is kept in that position by resting against the front of the bed. The recessed part 5 of the cams *g g* are then over the friction-rollers *v v*, and the levers E E, not being depressed, the jaw C is thrown up by the springs *l*, and the lip *e* is consequently open or raised. (See Figs. 2 and 3.) The plate or sheet of metal to be folded (represented by a blue line in Fig. 2) is then put in at the front, between the lip and the bed, and pushed up to the gage. The handle is then thrown back, and as soon as the projections 6 on the cams come in contact with the friction-rollers *v v* they press down the levers E E, which, by means of the bar-spring F and screws *i*, pull down the jaw C and compress the plate tightly between the lip *e* and the bed, preventing its

being drawn back while being folded. As the tumbler is thrown over, the circular parts of the cams continue to bear on the friction-rollers and keep the plate secure, the plate being bent backward until the tumbler reaches the position shown by red lines in Fig. 2, by which time the fold is completed. When the lever H is thrown back to its original position, as at first described, the jaw C will be raised by the springs *l*, and the plate may be removed, the fold or lock being perfectly formed.

Having thus fully described my invention, I will now proceed to state what I claim therein as new and desire to secure by Letters Patent.

I claim—

The employment of a cam or cams, *g g*, on the tumbler D, operating on levers E E, connected with the under side of the movable jaw C, in combination with a spring or springs, *l*, substantially in the manner described, for the purpose of closing the lip *e* and securing the plate while folding, and raising the lip and releasing the plate after the folding is complete.

JABEZ WALKER.

Witnesses:

JOSIAH PORTER,
MANSON F. GIBBS.