C. Kenney

Making Hinges,

No. 3,682. Patented July 26, 1844.

Fig. 4.

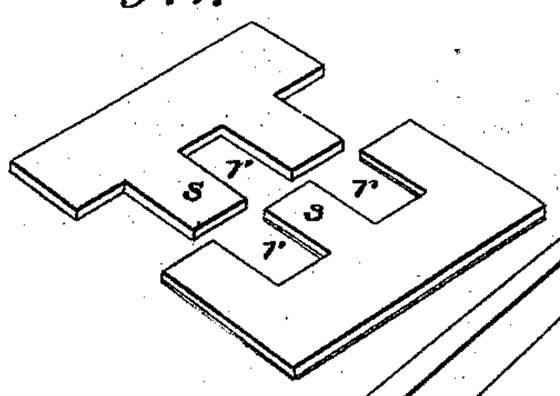


Fig. 1.

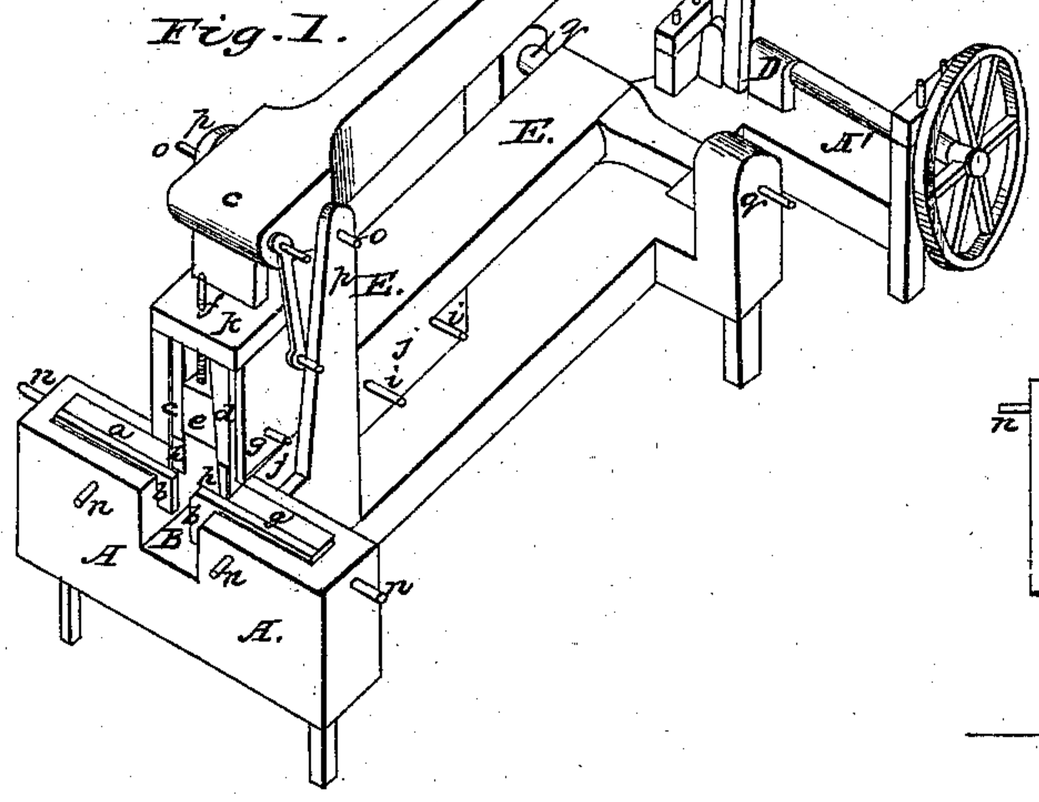


Fig. 2.

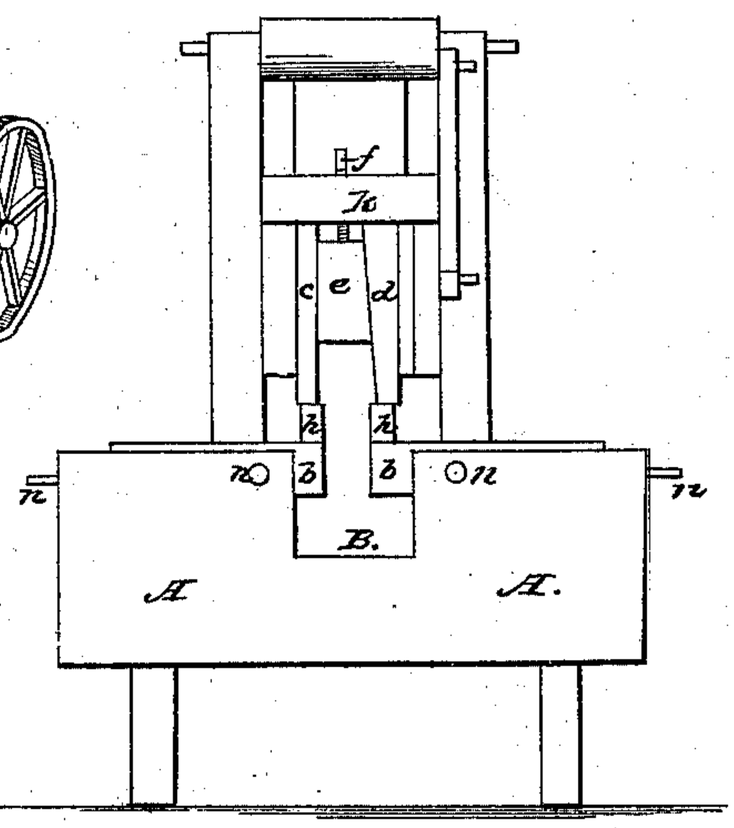
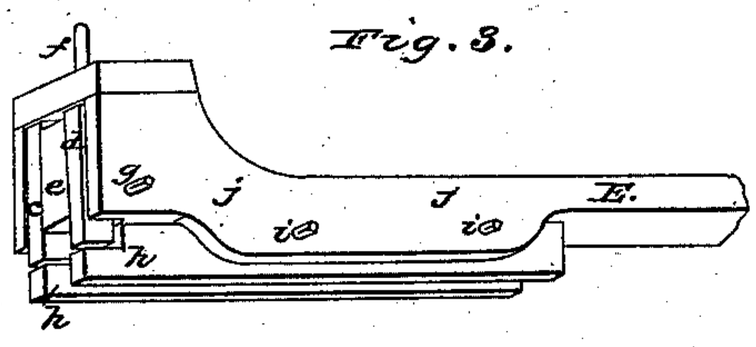


Fig. 3.



UNITED STATES PATENT OFFICE.

CYRUS KENNEY, OF TROY, NEW YORK.

MACHINERY FOR TRIMMING BUTT-BLANKS.

Specification of Letters Patent No. 3,682, dated July 26, 1844.

To all whom it may concern:

Be it known that I, CYRUS KENNEY, of the city of Troy, in the county of Rensselaer and State of New York, have invented a new and useful Manner of Constructing Machines to be Used in the Manufacture of Butt-Hinges of Wrought-Iron or other Metal; and I do hereby declare that the following is a full and exact description thereof.

The butt hinges that are to be manufactured by the aid of my machine, are such as are formed from wrought-iron, or other malleable metal. In the manufacture of such hinges, the flaps, or halves, of the hinge are first cut out of rolled, or sheet metal, with the pieces projecting from one side thereof which when bent are to form the knuckles of the hinge, this cutting being effected in a manner well known. In the process of bending the knuckles formed from the projecting pieces, these become elongated so that the two sides or halves, of the hinge will not come together until reduced to the width they had before being bent. My machine is intended to remove this difficulty by cutting, or trimming, off a small portion from the sides of the projecting pieces before they are bent and made into knuckles.

In the accompanying drawing, Figure 1 is a perspective view of the whole machine. Fig. 2 is an end elevation of the operating part thereof. Fig. 3 shows the upper dies and gage separate from most of the other parts of the machine. Fig. 4 shows two flaps or halves of a hinge as cut preparatory to bending, *s s* being the projecting pieces, and *r r* the spaces between them.

The main operating part of the machine is furnished with six dies, a gage and an adjusting wedge, all formed of tempered steel. Four of the dies are set in suitable recesses in the upper part of the bed piece A, A, of the machine. This bed piece, as well as the general frame work, is of cast-iron. The bed piece A, with the four dies that it contains, constitutes what I denominate the lower, or stationary, jaw. The fore part, A, A, of the bed piece, I have, in the actual machine, made one foot long, six inches high and five inches wide; but these and the other dimensions which I shall herein give are only meant as guides, as most of them may be varied according to the judgment of the builder, or the intended size of the machine. The bed piece, A, A′, extends back about two and a half feet.

B, is an opening through the front block, A, of the bed piece, which opening is three inches wide, and the same in depth. The upper surface of the bed piece is excavated on each side of the opening B, to receive the dies *a*, *a*, and *b*, *b*. The dies *a*, *a*, are, each, four inches long and an inch and a quarter square. The dies *b*, *b*, are four inches and a half long, one inch and a quarter deep, and a quarter of an inch thick. These dies are adjusted and held in place by means of set screws, *n*, *n*, passing through the front and ends of the bed piece.

The upper, or movable, jaw, is attached to a lever, E, E, having its fulcra at *q*, *q*; and this lever is moved up and down by the lever C, C′, which has its fulcrum at *o*, in the uprights *p*, *p*, and is moved by the crank D. The movable jaw contains two dies, *c*, and *d*, an adjusting wedge, *e*, and an adjustable or fixed gage, *h*, *h*. The gage *h*, *h*, is seen most distinctly in Fig. 3; it is attached at its upper side to the lever C, C′, but in such manner as that the distance apart of its adjustable segments may be regulated by means of the set screws *i*, *i*, passing through check pieces *j*, *j*, on the lever E, E. The gages *h*, *h*, I have made twelve inches long, each segment being one and a half inches wide, and half an inch thick, at its rear end. The front ends stand immediately under the dies, *c*, and *d*, at their front, or working end. I have there made them three fourths of an inch wide, one fourth of an inch thick at their upper, and one eighth of an inch at their lower, edges. The gage pieces are beveled off in this manner to facilitate the feeding in of the pieces that are to be trimmed. The dies, *c*, and *d*, are each five inches and a half long, and an inch and a quarter wide. The one marked *c*, is a fourth of an inch thick at top and one fourth of an inch at bottom.

Between the dies, *c*, and *d*, there is a wedge-formed piece of steel, *e*, which may be raised, or lowered, by a set screw, *f*, passing through the head, *k*, of the frame of the upper jaw. A set screw, *g*, serves to confine the dies against the wedge. By this arrangement, it will be seen that the distance of the dies, *c*, and *d*, from each other may be adjusted with the utmost precision.

Where it is thought best to adapt a ma-

chine to the trimming of hinges of one size only, this part of the arrangement may be altered so as to render the distance of the dies permanent, and the gage, in this case, may be made in one piece. The dies, *c*, and *d*, are to be so set as that in passing down between the dies *a*, *a*, of the lower jaw, they will cut off the thin shaving which is to be removed from each side of the opening, or openings, *r*, *r*, in the flaps, Fig. 4. The dies, *b*, *b*, are on the same plane with the dies, *a*, *a*, but they project beyond them in the opening, B, as seen in Fig. 1, for the purpose of cutting the end of the shaving clean off from the inner angles of the openings, *r*.

The operation of this machine will now be readily understood. The plates which constitute the flaps being cut in the usual form, and the upper jaw of the machine being raised so as to bring the bottom edges of the gage, *h*, near to the tops of the dies, *a*, *b*, the space on the flap is made to embrace the gage; and when the upper jaw is brought down, the gage passes down between the dies, *a*, *a*, and the dies, *c*, *d*, then perform their office.

Having thus, fully described the nature of my machine for trimming the flaps of hinges, what I claim therein as new, and desire to secure by Letters Patent, is—

The manner of arranging and combining the dies and gage, substantially as described and set forth in the foregoing specification, and represented in the accompanying drawings.

CYRUS KENNEY.

Witnesses:
THOS. P. JONES,
WM. BISHOP.