D. W. LYON.

Machine for Making Hinges.

No. 6,704. Patented Sept. 11, 1849.

Fig. 1.

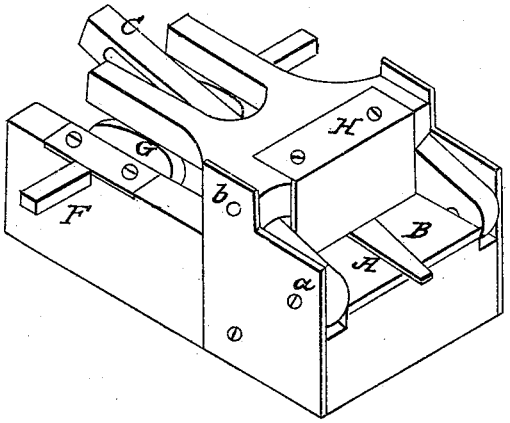


Fig. 2

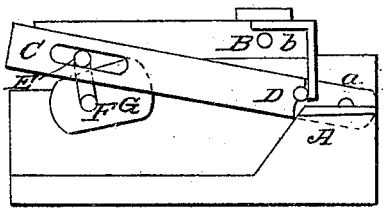


Fig. 3

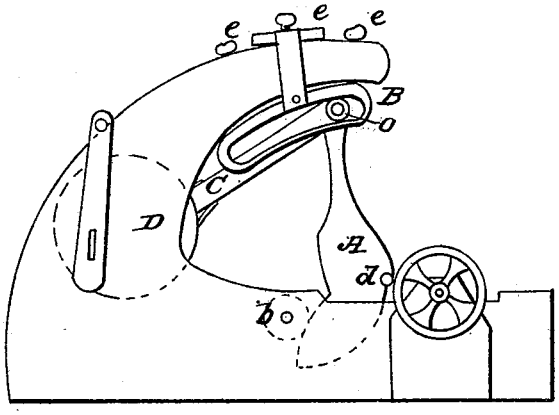
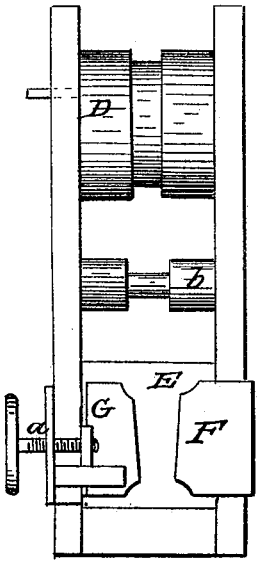


Fig. 4



UNITED STATES PATENT OFFICE.

D. W. LYON, OF WEST TROY, NEW YORK.

MACHINE FOR FORMING THE EYES AND HINGES.

Specification of Letters Patent No. 6,704, dated September 11, 1849.

To all whom it may concern:

Be it known that I, DAVID W. LYON, of West Troy, in the county of Albany and State of New York, have made new and useful Improvements in the Method of Manufacturing Strap, T, and other Things Made of Wrought Iron or other Malleable Metal; and I do declare the following is a full and exact description of the same.

The nature of my invention consists in certain presses and levers by which to bind the blanks (the strap or side of the hinge, before the eye is formed, is called a "blank") and form the eyes of the hinges.

But to enable others skilled in the art to make and use my said invention, I now proceed to give a more particular description of the machine and its operation; the annexed drawings making a part of the specification.

No. 1 is an isometrical drawing of the machine for giving an angular turn to the blank, or end of the hinge, and No. 2 is a section of No. 1, the machine being divided lengthwise through the center to show more distinctly the several parts, and, references by letters are made to both drawings. A, a blank, with the end touching the lever, under the roller D, which extends across the front of the lever C. E, the moving shaft which passes across the machine, in the center of which is the crank E, which moves the lever C. G, the cams, placed under the two handles of the lever H, so constructed as to hold down the blank, while the end is bent by the lever C. *a*, the center on which the lever C, swings. *b*, the center on which the lever H, swings. Operation—The machine being arranged as above specified and the shaft E, in motion—when the handles of the lever H, are at their lowest point on the cams, and the handle of the lever C, is raised by the crank E, the end of the blank, is slipped by hand, across the bed A, and under the roller D, the crank brings down the lever C, by which the end of the blank is bent to an angle of about 45 degrees—the blank being held down to the bed by the lever H, the handles are resting, at the sime time, on the highest plane of the cams.

No. 3, a side view of the machinery for finishing the eye of the hinge after being bent as above described. No. 4, the bottom section of No. 3, as seen from above. A, a perpendicular lever, resting on the back side near the bottom against the roller *b*. It is attached at top (as also the pitman C,) to the roller O, and is moved back and forth by the revolutions of the eccentric wheel, or cam, D, being guided by the segment of a circle B. E, a slide (see No. 4) (kept up to the lever A by a spiral or other spring under the bottom) on which the blank is confined in its place by the jaws F and G. F, a stationary jaw confined to the slide E. G, a movable jaw, confined by the screw *a;* between which and the jaw F, the blank is confined, up to the side of the lever A, by the pressure of which, the eye is formed at the end of the blank. *a*, a screw to press the jaw G, against the blank. *b*, the roller against which the lever A acts. *c*, rollers which turn in the segment, through which a pin passes connecting the pitman and lever A at the top. *d*, a steel roller, extending through and turning in the lever A, about one fourth of its surface being naked, to take off the friction, when brought in contact with the end of the blank in forming the eye of the hinge. *e*, *e*, *e*, set screws by which the segment is so adjusted as to give the desired diameter to the eye.

Operation: The machinery being adjusted as above and when the top of the lever A, is at the lowest point in the segment B, I slip the bent point, of the blank, against the lever A, just under the roller *d*, confining the body of the blank into the slide E, between the jaws, by the screw *a*, and as the lever is pressed forward, by the pitman, toward the upper end of the segment B, the lever rises and by its form pressing against the rollers *b*, is brought forward against the end of the blank, which is rolled up until the end touches the body of the hinge, forming a perfect eye. The hinge is then taken out, while the lever is receding, and another blank inserted as before.

Having described the machinery by which I manufacture hinges, I now proceed to state my claims as follows—

What I claim as my invention and desire to secure by Letters Patent, is—

The lever A, formed and made to move in a compound direction, essentially in the manner herein described, in combination with the spring slide E, by the joint action of which, the eye of the hinge may be turned.

D. W. LYON.

Witneses:
JOB S. OLIN,
JOHN HASTINGS.