

C. A. Lent,
Making Buckles,
N^o 6,074. Patented Jan. 30, 1849.

Fig. 1.

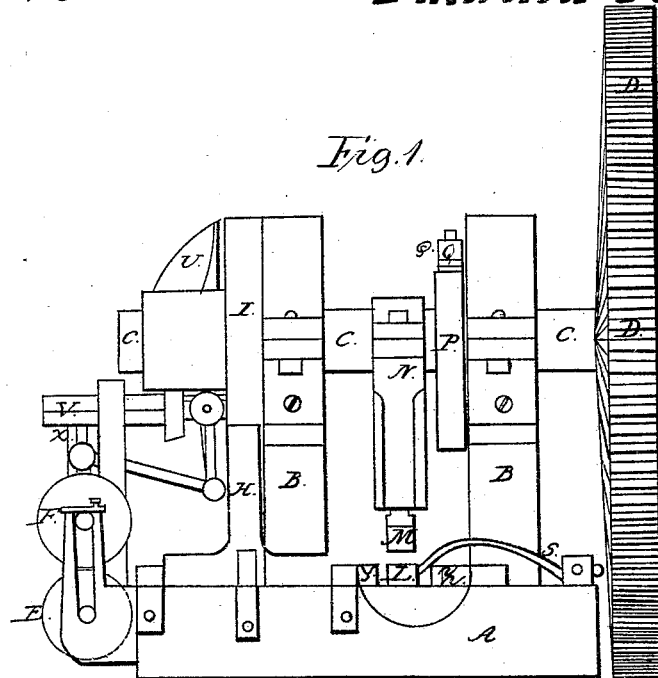
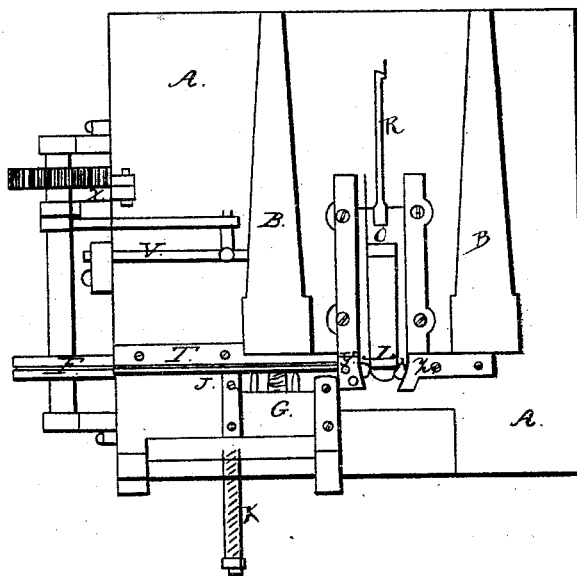


Fig. 2.



UNITED STATES PATENT OFFICE.

CHARLES A. LENT, OF NEWARK, NEW JERSEY.

MACHINE FOR MAKING SUSPENDER-BUCKLES.

Specification of Letters Patent No. 6,074, dated January 30, 1849.

To all whom it may concern:

Be it known that I, CHARLES A. LENT, of the city of Newark, in the county of Essex and State of New Jersey, have invented a new and useful Machine for Making Buckles for Vests, Pantaloons, Stocks, Suspenders, &c.; and I hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a front elevation; Fig. 2, a plan of the principal working parts; Fig. 3, an end view; Fig. 4, a plan of the lower die and cross head or slide for flattening and bending the wire; and Fig. 5 is a longitudinal section of the dies and cross head or slide, the last two figures being drawn to half the size of those parts of the machine and the other three to one sixth part of the size.

The machine is made chiefly of cast iron, and consists of a heavy bed piece A, about four inches thick, with two upright pieces B, B, the main shaft C, is supported by the two uprights, and on one end of the shaft the large tooth wheel D, is placed, by the revolving of which all the moving parts of the machine are put in motion, the wheel is driven by a pulley and pinion, which may be placed above or below the wheel, or in any position which may be most convenient. The cross head or slide O, intended to cut and bend the wire, has a circular head jointed on each of the two forward ends; the joints being intended to permit the heads to follow the curve of the guides Y, and Z, so as to carry the wire a little beyond a right angle, in order that the reaction of the wire may be overcome. The left hand cross head, as it moves forward, cuts off the wire, having a sharp corner on its left side, intended for that purpose. A groove is also made in the heads to correspond with the hole through which the wire passes, in order to confine the wire as it is bent by the heads.

The wire of which the buckles are made, passes into the machine between the wheels E and F, each of which has a small groove turned in its face, and the wheels being pressed together by a spring, so as to pinch the wire, as they revolve the wire is carried into the machine. The wire passes through a channel between the two plates of steel

J and T, till it comes in front of the two punches attached to the slider G; the lever H, which is attached to a short axis fitted on the bed piece, is then pressed down by the cam I, which forces the slider up, and the small spiral spring between the slider and the plate J, is pressed against the plate with sufficient force to hold the wire firmly; the punches which pass through the holes in the plate, are then forced up and make the perforations in the wire, which are to receive the tongue of the buckle. The lever and slide are then drawn back by the spring K, and the wire passes on through a hole in the guide Y, to the dies L and M, the upper die is then pressed down by the piece N, which gives the wire the proper mash in the center. The journal on the main shaft, which works the piece N, being a little eccentric to the journals of the shaft, gives the piece N a perpendicular motion of about half an inch. While the wire is held firmly between the dies, the cross head or slide O, is brought forward, the left hand head cuts off the wire, and the heads still continuing to move forward, presses on the wire, and gives it the proper shape for the bow of the buckle. Motion is given to the cross head O, by the cam P, by raising the end of the crooked lever Q, the lower end of which is connected with the cross head by the connecting rod R, the cross head after performing its work is carried back by a spring, and for safety, a piece may be put on the end of the crooked lever, to extend out to the wheel D, to be pressed down by a projection on the side of the wheel as it revolves. The small lever S, when struck on the under side by a projection on the large wheel, gives a quick downward motion to the other end of the lever, which striking the ends of the buckle, throws it out of the machine.

The feeding wheels E and F, are put in motion by the cam U, on the main shaft; which striking against a projecting piece on the sliding rod V, moves it outward, which motion is communicated through a system of levers and connecting rods to the piece X, which is fitted to the axis of the wheel F, so as to turn freely on it; when the rod V, is carried outward, the top of the piece X, is also carried outward; and the tooth wheel which is fast on the same axis, is moved by a click attached to the piece X, the click dropping into the teeth of the wheel

and pushing it forward. When the rod V, is carried back, which is done by a spring, the click slides over the teeth of the wheel without moving it. A slot in the piece X, 5 serves the purpose of regulating the feed, to suit the size of the buckle to be made.

This machine is designed also, to be used for punching holes entirely through the wire, for buckle tongues, when made of 10 wire; the punches for this purpose, being attached to the slider G, and brought to bear upon the wire in the same manner as in making the perforations in the wire for the bow, as above described; for receiving the 15 tongue, holes being made through the piece T, to admit the piece punched out, to pass off.

The same parts are designated by the same letters in all the several figures.

What I claim as my invention and desire to secure by Letters Patent, is— 20

The combination of the cross head with the die L, for forming the buckle, when such cross head is jointed and acted upon by guides, as above described, by means of which I am enabled to bend the wire to an 25 angle a little less than a right angle, for the purpose herein described.

CHAS. A. LENT.

Witnesses:

H. D. HEDDEN,
SAMUEL C. DEEMS.