

United States Patent Office.

JOHN J. ROSE, OF ELMWOOD, ILLINOIS.

Letters Patent No. 70,902, dated November 12, 1867.

COMPOUND TOOL FOR CUTTING, PUNCHING, AND UPSETTING IRON.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, J. J. ROSE, of Elmwood, in the county of Peoria, and State of Illinois, have invented a new and useful Improvement in Machine for Upsetting, Cutting, and Punching Iron; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of my improved machine.

Figure 2 is a top view of the same.

Figure 3 is a vertical cross-section of the same, taken through the line $x x$, fig. 2.

Similar letters of reference indicate corresponding parts.

My invention has for its object to improve the construction of my improved machine, patented August 1, 1865, and numbered 49,158; and it consists in operating the main lever by means of an eccentric formed upon the hand-lever; in attaching the shear-blade to the main lever; in forming a bevelled projection upon the slide, extending through the casting, so that the said slide may be moved back by the direct action of the main lever; and in operating the punch by means of an eccentric formed upon the side of the hand-lever, the whole being constructed and arranged as hereinafter more fully described.

A is the frame of the machine, between the rear ends of the side plates a^1 and a^2 of which is pivoted the rear end of the main lever B. C and D are the clamps, by which the iron is held while being upset. The clamp C is stationary, being securely attached to the frame A of the machine. The clamp D is attached to the slide E, that moves back to receive the iron, and is then forced forward to upset it. e' is a projection formed upon the inner side of the slide E, which passes in through an opening in the frame A, and which has its inner end bevelled, as shown in fig. 3, so that as the main lever B is raised, it may force the slide E back into the proper position to receive the iron to be upset. F is a curved lever, pivoted to the projections formed upon the frame A, in such a position that its upper end may rest against the outer end of the slide E, and its lower end may be in such a position that the main lever B, as it descends, will operate it to force the slide E inward, upsetting the iron held by the clamps C and D. G is the shear-blade, which is attached directly to the side of the lever B, so as to be operated to cut the iron by the movement of the said lever. H is the hand-lever, which is pivoted between the upper parts of the forward ends of the side plates a^1 and a^2 . The lower edge of the rear part of the lever H is made cam-shaped, as shown in fig. 1, so as to act upon the forward end of the main lever B, to force it down. The cam-shaped part of the lever H has a flange, h' , formed upon the side of the cam-shaped lower edge, which enters a groove formed in the upper part of the forward end of the lever B, or takes hold of a hooked-shaped projection or arm formed upon the said lever, so as to raise it as the free end of the lever H is raised. I is the punch, the holder J of which is securely attached to a block, K, which moves up and down in a cavity formed in the upper part of the forward end of the side plate a^1 for its reception, and which has a circular hole formed through it for the reception of the eccentric L, formed solidly upon the side of the hand-lever H, and through which the pivoting-pin of said lever passes, so that the punch I will be operated by the movement of the hand-lever H. By this construction, all the devices are operated by the same movements of the same lever H, which is so constructed as to combine the principles of the lever and inclined plane in the application of the power.

I claim as new, and desire to secure by Letters Patent—

1. The curved lever F, pivoted in the frame A, in combination with the slide E and lever B, whereby the latter in its downward movement presses upon the inner end of the lever F, whose outer end forces the slide inward to upset the iron held by the clamps C D.

2. The combination of the eccentric L upon the eccentric lever-head H, yoke K, and slotted side piece a^1 , with the plunger J and punch I, as herein described, for the purpose specified.

3. The construction and arrangement of the main lever B, pivoted between side plates a^1 a^2 at their rear ends, lever F, slide E, clamps C D, and hand-lever H, with flange h' , as herein shown, for the purpose specified.

JOHN J. ROSE.

Witnesses:

J. A. SUTHERLAND,
JAMES S. COE.