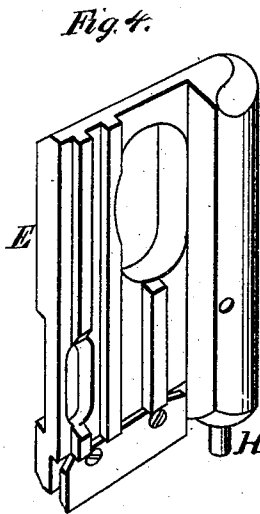
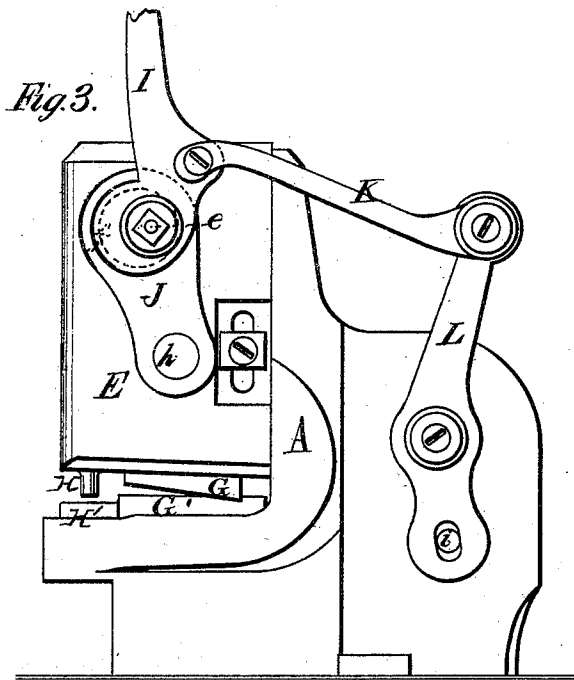
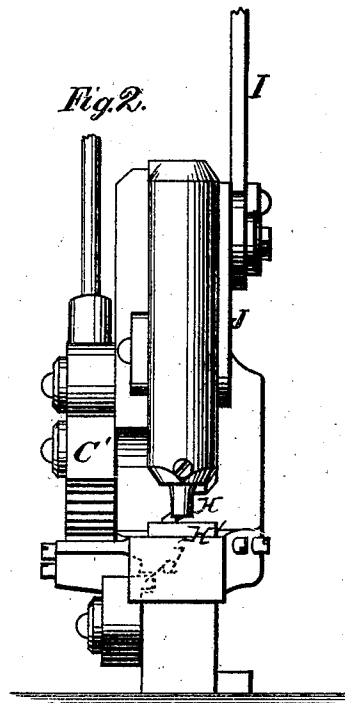
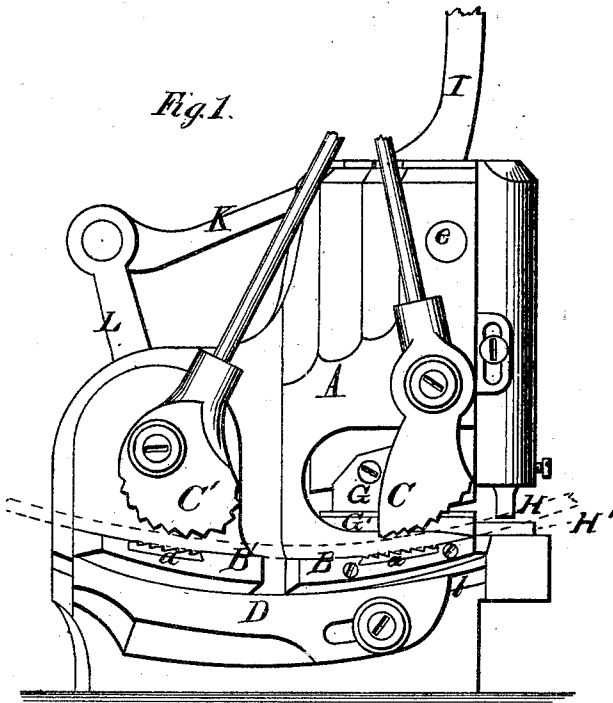


H. W. MOORE.

COMPOUND METAL-WORKING MACHINE.

No. 176,030.

Patented April 11, 1876.



WITNESSES

Robert Everett,
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UNITED STATES PATENT OFFICE.

HOLLIS W. MOORE, OF OLEAN, NEW YORK.

IMPROVEMENT IN COMPOUND METAL-WORKING MACHINES.

Specification forming part of Letters Patent No. **176,030**, dated April 11, 1876; application filed February 26, 1876.

To all whom it may concern:

Be it known that I, HOLLIS W. MOORE, of Olean, in the county of Cattaraugus and State of New York, have invented a new and valuable Improvement in Tire-Upsetter, Shear, and Punch; and I do 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 a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side elevation of my tire-upsetter, and Fig. 2 is an end view thereof. Fig. 3 is a side view of the same, and Fig. 4 a detail view.

The nature of my invention consists in the construction and arrangement of a combined tire-upsetter, shears, and punch, as will be hereinafter more fully set forth.

In the annexed drawing, A represents the standard of my combined machine, constructed substantially in the form shown. On one side of the standard A is a stationary curved ledge, B, upon which the tire to be upset is laid and held by means of the eccentric C. This eccentric is toothed or corrugated, and in the ledge B is inserted a toothed or corrugated plate, *a*, which, together with the eccentric, holds the tire perfectly secure. The other end of the tire is held by a similar eccentric, C', and ledge B', on a slide, D. This slide is provided with a curved tongue or bead, *d*, on its inner face, which enters a curved groove, *b*, in the face of the standard A, so as to guide the slide in its movement in the arc of a circle, the slide being held to the standard by a bolt passing through a curved slot in the slide into the standard. The slide is thus moved in a curve to upset the tire, which is better than to move in a straight line. To the upper part of the standard is connected a vertically-moving slide, E, also guided by tongues and grooves, as shown. To this slide is secured a shear-blade, G, which operates in connection with a stationary blade, G', secured to the

standard A. A punch, H, is also secured in the slide E, which operates in connection with a die, H', on the standard. The shear-blade G and punch H are fastened in the slide by means of suitable set-screws.

The various moving parts of my machine are operated by means of a lever, I, pivoted upon a stud, *e*, that projects from the standard A through an elongated slot in the slide E. On the inner end of the lever I is an eccentric, *f*, which fits in a stirrup, J, placed upon a pin, *h*, on the side of the slide E, and by which means said slide is operated up and down.

The lever I is by a bar, K, connected with the upper end of a lever, L, which is placed upon a pin projecting from the slide D through a slot in the standard A, and said lever L has its fulcrum on a pin, *i*, projecting from the standard into a slot in the lower end of the lever. By these means the tire-upsetting, cutting, and punching mechanisms are all operated from one lever, and all three operations may be carried on at one time, if desired.

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

1. The combination of the standard A, provided with the curved ledge B, pivoted eccentric C, and curved groove *b*, and the slide D, provided with ledge B', eccentric C', and curved tongue *d*, the latter fitting in the groove *b*, all substantially as and for the purposes herein set forth.

2. The slide E, carrying the shear-blade G, and punch H, lever I, with eccentric *f*, stirrup J, connecting-bar K, and lever L, with the tire-upsetting devices, in combination with the standard A, having shear-blade G' and die H', the whole arranged, constructed, and operated in the manner and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

HOLLIS W. MOORE.

Witnesses:

J. T. JOHNSON,
J. G. PETTON.