

Franklin Nelson Punching Machine.

No 75.782.

Patented Mar 24. 1868.

Fig. 1.

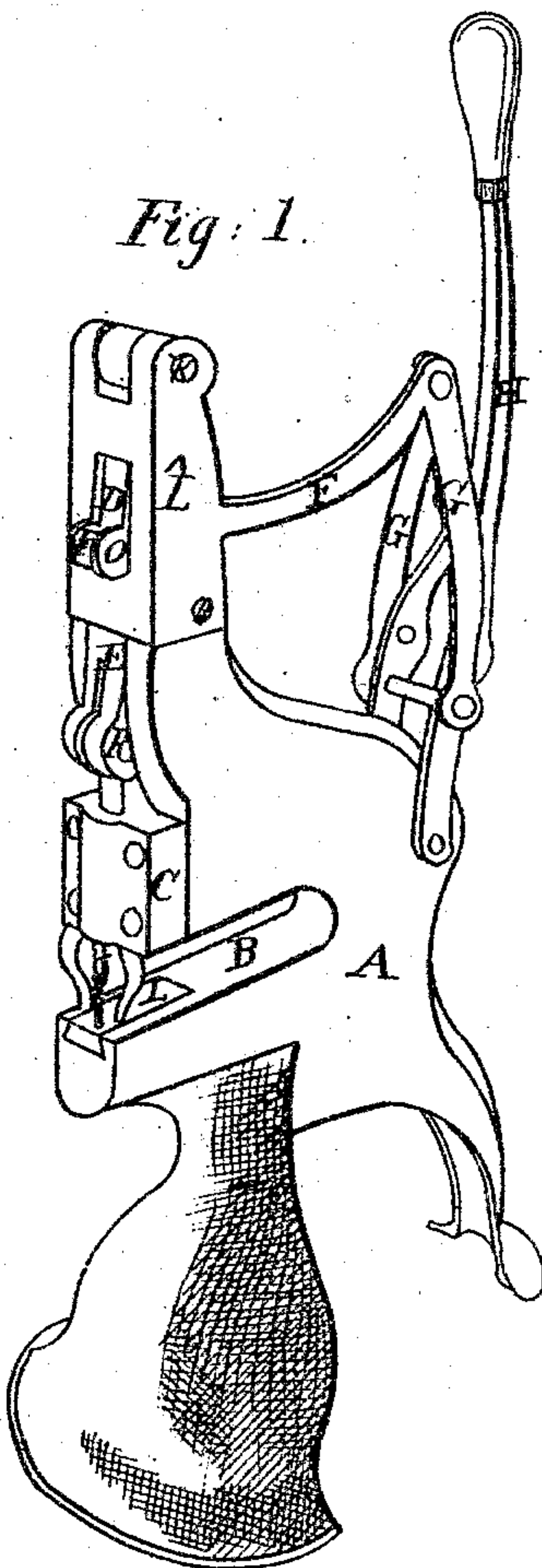


Fig. 2.

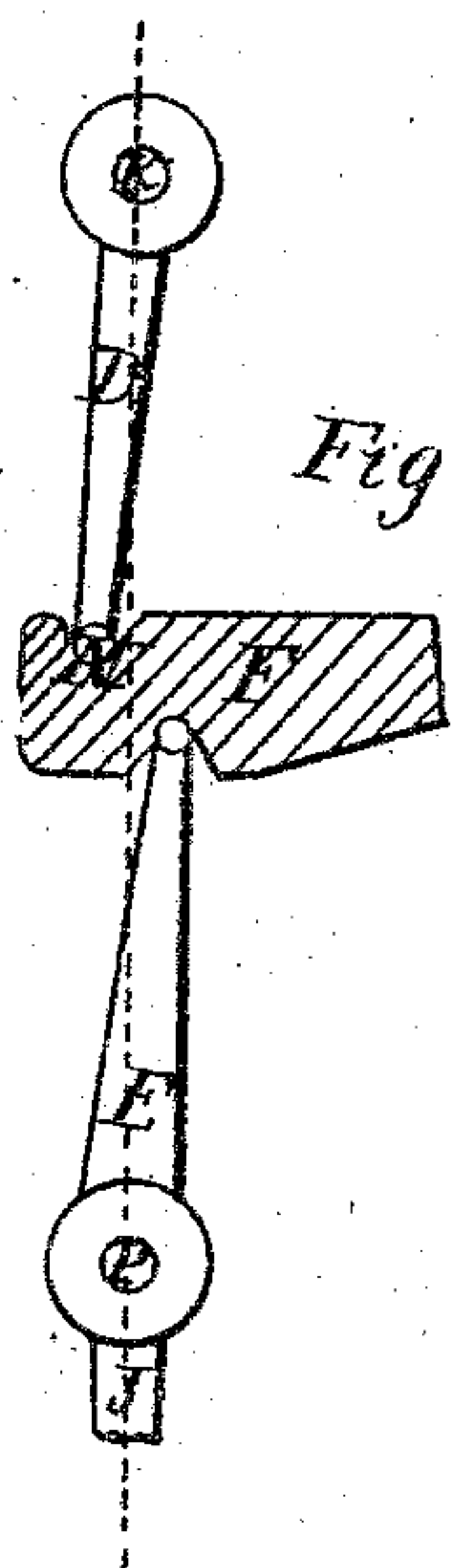


Fig. 3.

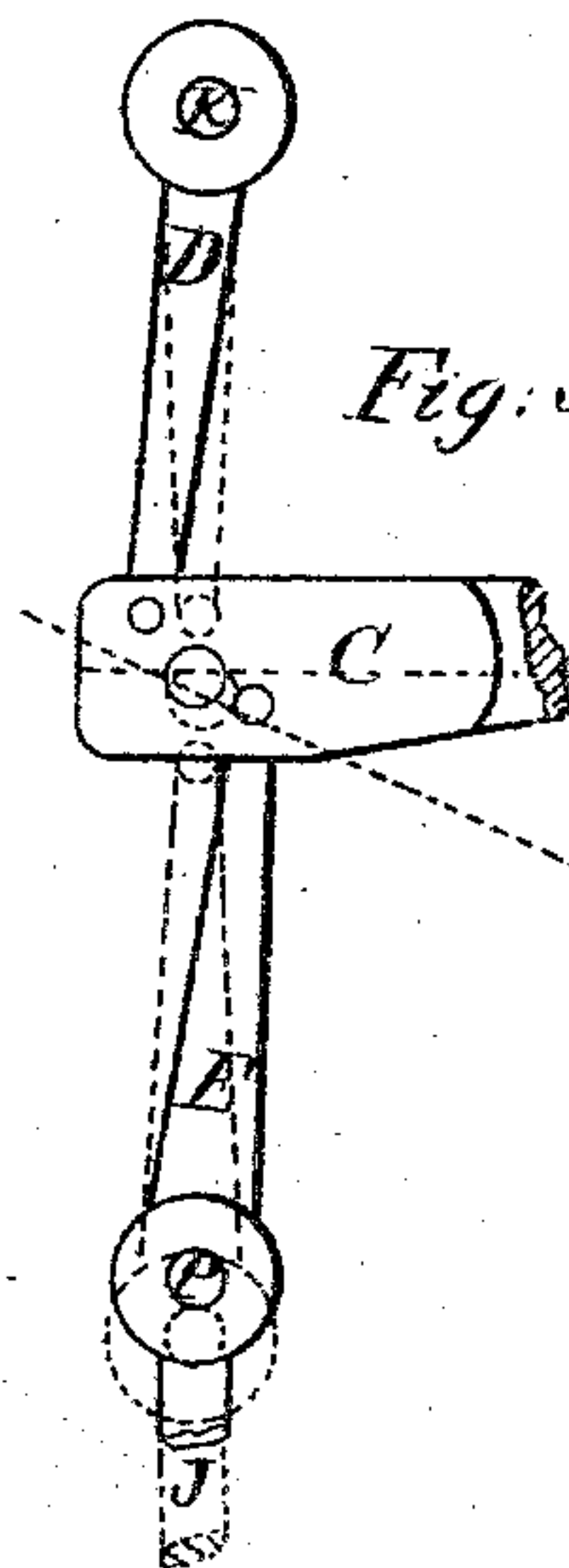
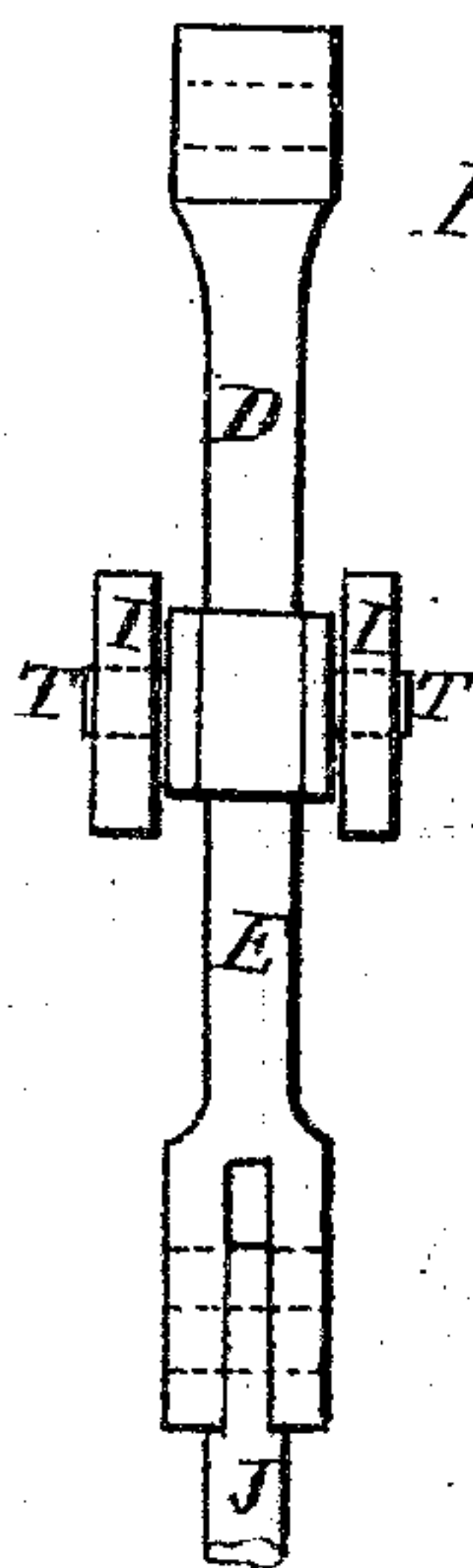


Fig. 4.



Attest.

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United States Patent Office.

FRANKLIN NELSON, OF WYANDOTTE, MICHIGAN.

Letters Patent No. 75,782, dated March 24, 1868.

IMPROVED PUNCHING-MACHINE.

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

TO WHOM IT MAY CONCERN:

Know all men that I, FRANKLIN NELSON, of Wyandotte, county of Wayne, and State of Michigan, have invented a new and useful Improvement in a Punching-Machine; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and being a part of this specification.

The object of this invention is to obtain a machine of great power for punching or perforating metals.

Figure 1 is a perspective view of the apparatus complete, same letters of reference applying to same parts in the different views of the machine; and

Figures 2, 3, and 4 are sectional views of the operating parts of my machine.

In this construction of my apparatus, the levers D and E are placed in the frame A, the upper end of lever D being fastened in said frame by hinge-joint K, its lower end being connected to similar fastening to the lever F and side-plates O. The lever E is also secured to the lever F and side-plates O in the same manner; the two levers D and E operate upon the trunnions N. The lower end of the lever E is hinged to the punch-head J, which is secured in its position by the guide C, through which it runs to the die-plate L. The levers D and E, punch-head J, and lever F are kept in their proper places by the sliding blocks I, which work in proper slots in the jaws of the frame A, and covered by the cap-plate L. The trunnions or pins T are rigidly attached to said lever F, and pass through and oscillate in proper openings in the sliding blocks I, which, perhaps, may be termed a cross-head, working in appropriate ways, as heretofore described.

The vibrating ends of the levers D and E are secured to the lever F by trunnions or pins N, oscillating in plate O, and all the levers, D, E, and F, being supported or suspended from the hinge-joint K. G are levers, connecting the levers F and H, as shown in the drawing, and making a very powerful combination of leverage. The slot B is an opening in the frame A, to admit of room to manipulate the material being operated upon.

Fig. 3 shows a side view of the levers in a contracted position, with punch elevated. To force the punch through the material being operated upon, the levers D and E are thrown into a vertical position, (as shown by red lines,) perpendicular to each other, by depressing the lever F.

My machine may be operated with or without the additional levers G and H, by a treadle attached to the long arm of the lever F, or by any other device or power that may be desirable.

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

1. The pendulum-levers D and E, working upon fulera K and P, operated by lever F, when secured to sliding blocks I by the trunnions T, in combination with the plates O, trunnions N, and operating substantially as herein set forth.

2. The combination of all the above-described parts, when used in connection with the punch J and die L, and any proper frame A and any suitable levers F, G, and H, arranged and operating substantially as and for the purposes herein described.

FRANKLIN NELSON.

Witnesses:

J. W. HOUGHTLIN,

H. S. SPRAGUE.