R. PORTER.

Metal Punch.

No. 14,166. Patented Jan. 29, 1856.

Fig. 2

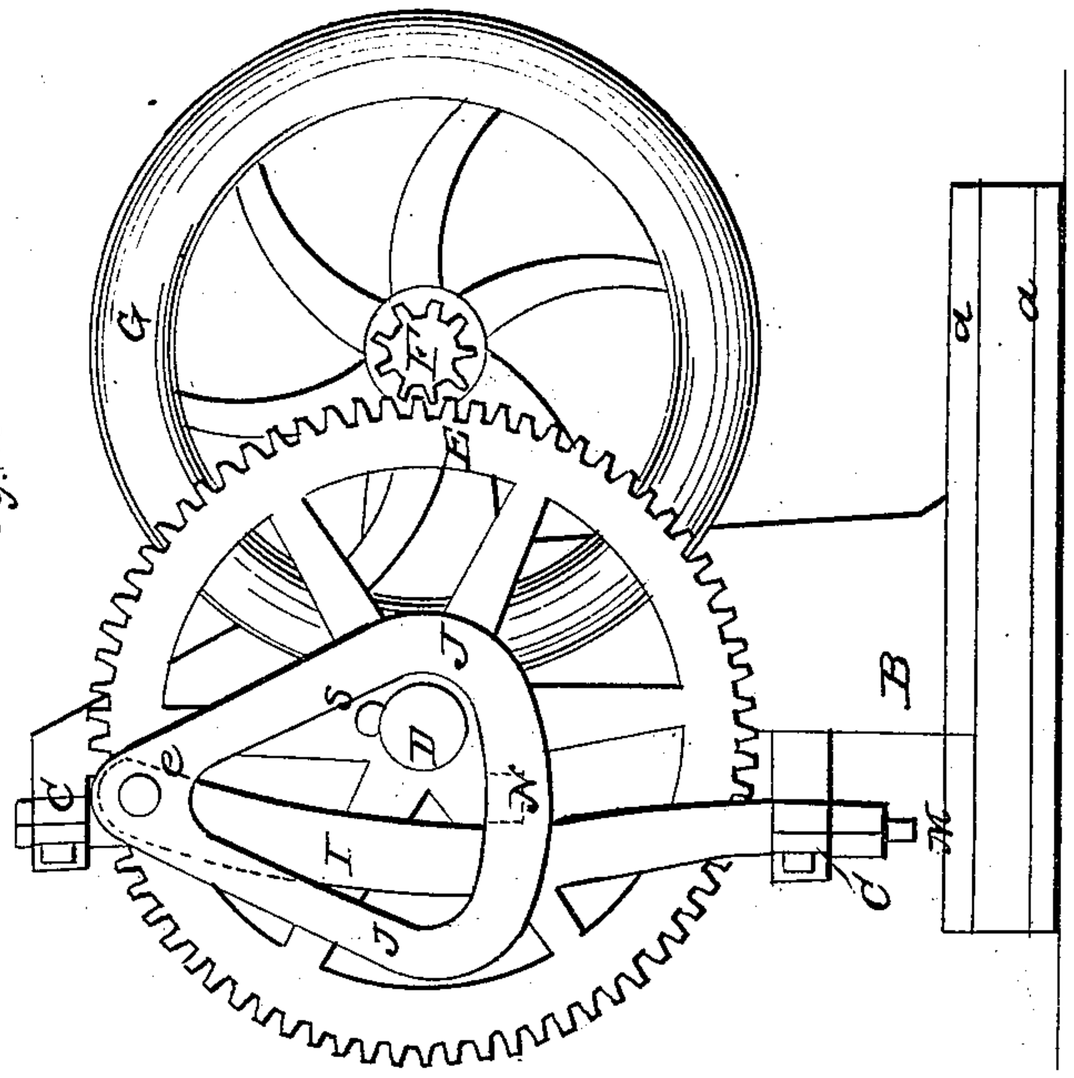
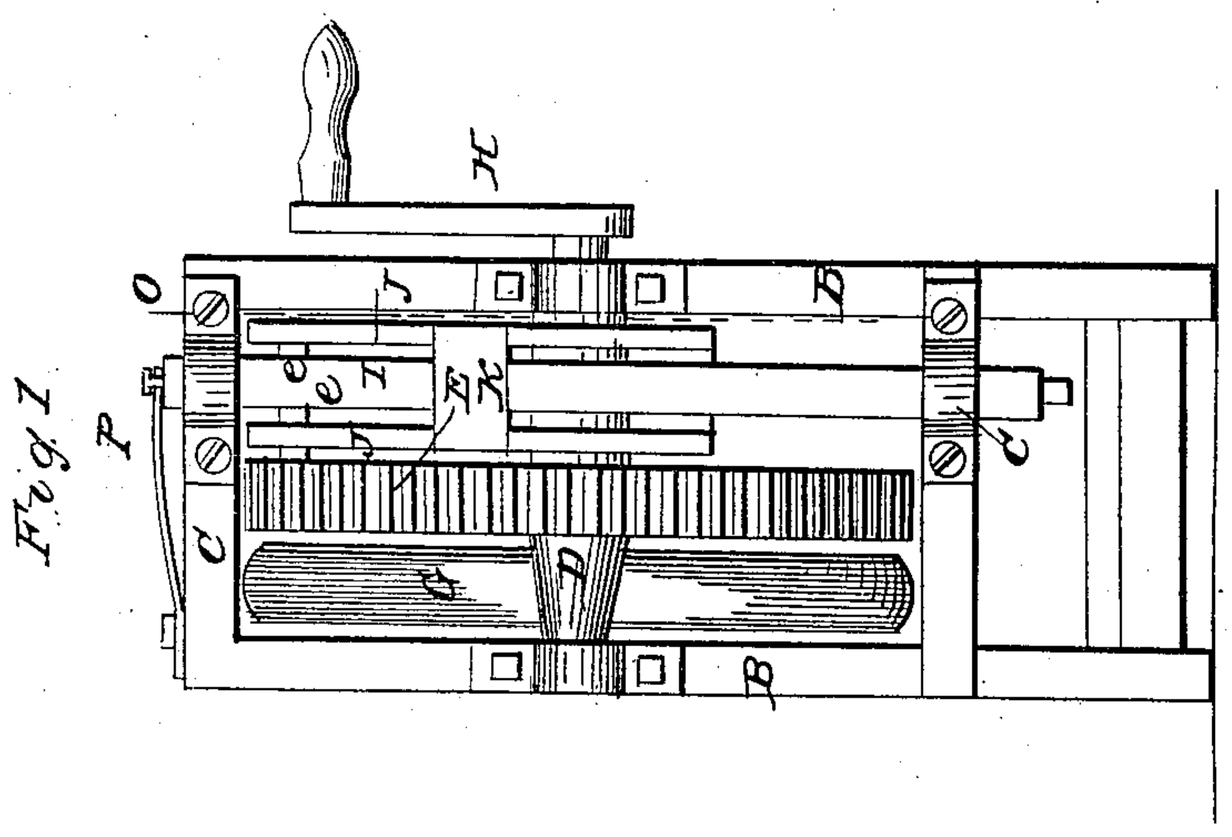


Fig. 1



UNITED STATES PATENT OFFICE.

RUFUS PORTER, OF WASHINGTON, DISTRICT OF COLUMBIA.

PUNCHING-MACHINE.

Specification of Letters Patent No. 14,166, dated January 29, 1856.

To all whom it may concern:

Be it known that I, RUFUS PORTER, of the city of Washington, District of Columbia, have invented a new and useful Improvement in Momentum-Presses; and I do hereby declare that the following is a full and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a front view, and Fig. 2 is a vertical longitudinal section on the line O—O of Fig. 1.

The nature of this invention consists in a cheap, compact and portable arrangement of machinery, in which may be readily accumulated a sufficient quantity of momentum power to punch holes with facility through cold iron or other metals.

A bed-plate A fourteen inches long, seven inches wide and one inch thick is strengthened by longitudinal flanches *a a* on the sides thereof, and at the distance of four inches from the front end thereof are two parallel posts B B, seventeen inches high, and connected by two guide-bars C C, the one at the top, and the other near the bottom of the posts. The fronts of the posts, at the height of ten inches above the bed plate, support a horizontal shaft D, upon the left end of which is mounted a gear-wheel E, which meshes to a pinion F upon another parallel shaft in rear of the first, and upon which is mounted a fly-wheel G. To one end of the shaft D is attached a crank H (or pulley) whereby the wheels are put in motion. The two guide-bars C C, being furnished with caps in front, serve as guides to a vertical sliding shaft I, the bottom of which is hollow and adapted to hold a punch or stamp *b;* and under it is a die-plate M. Two parallel and equal quadrants J J are hung upon two opposite pivots *e e* which project from the sides of the sliding shaft I, and these quadrants are connected by a front plate K, and by a short cross-bar (represented by dotted lines in Fig. 2) at N. The shaft D passes through the quadrants, and at a point between the two a tappet *s* projects half an inch from the shaft. When the wheels are in motion, the tappet *s* does not ordinarily come in contact with the cross-bar N; but when the momentum power of the wheels is required to force down the punch *b*, the quadrants are pressed rearward, by the hand or otherwise, so that the tappet *s* in its rotation, may impinge upon the cross-bar thus concentrating all the accumulated power of the momentum of both wheels to depress the sliding shaft and the punch. The sliding shaft is elevated and ordinarily supported by a spring P, attached to the upper guide bar.

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

The use of the double quadrant J, J, in combination with the tappet *s*, the sliding shaft I, when these several parts are arranged and operated in connection with the fly wheel G, substantially in the manner herein set forth.

RUFUS PORTER.

Witnesses:

SAMUEL D. BORNSON,
GEO. W. ROGERS.