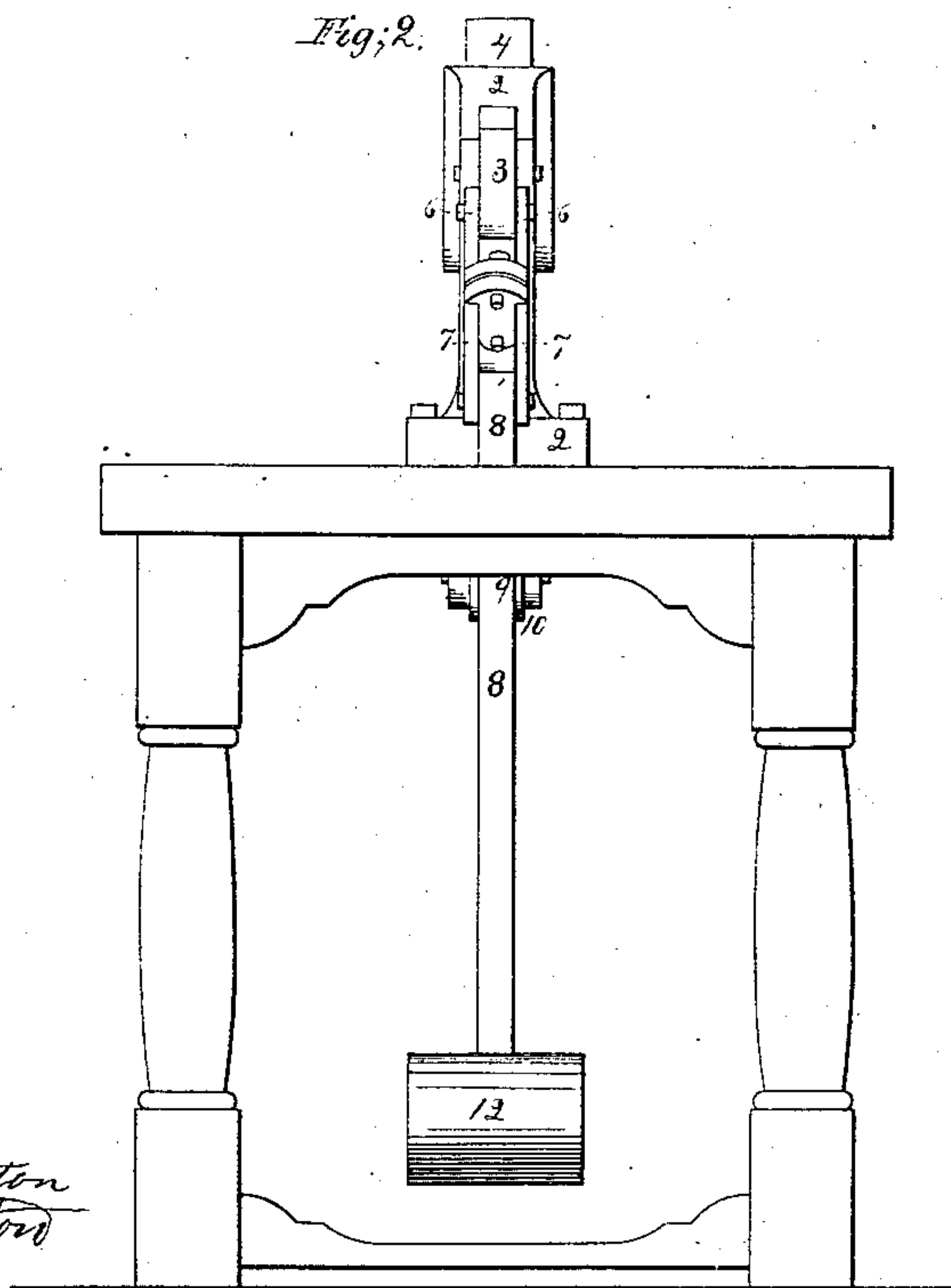
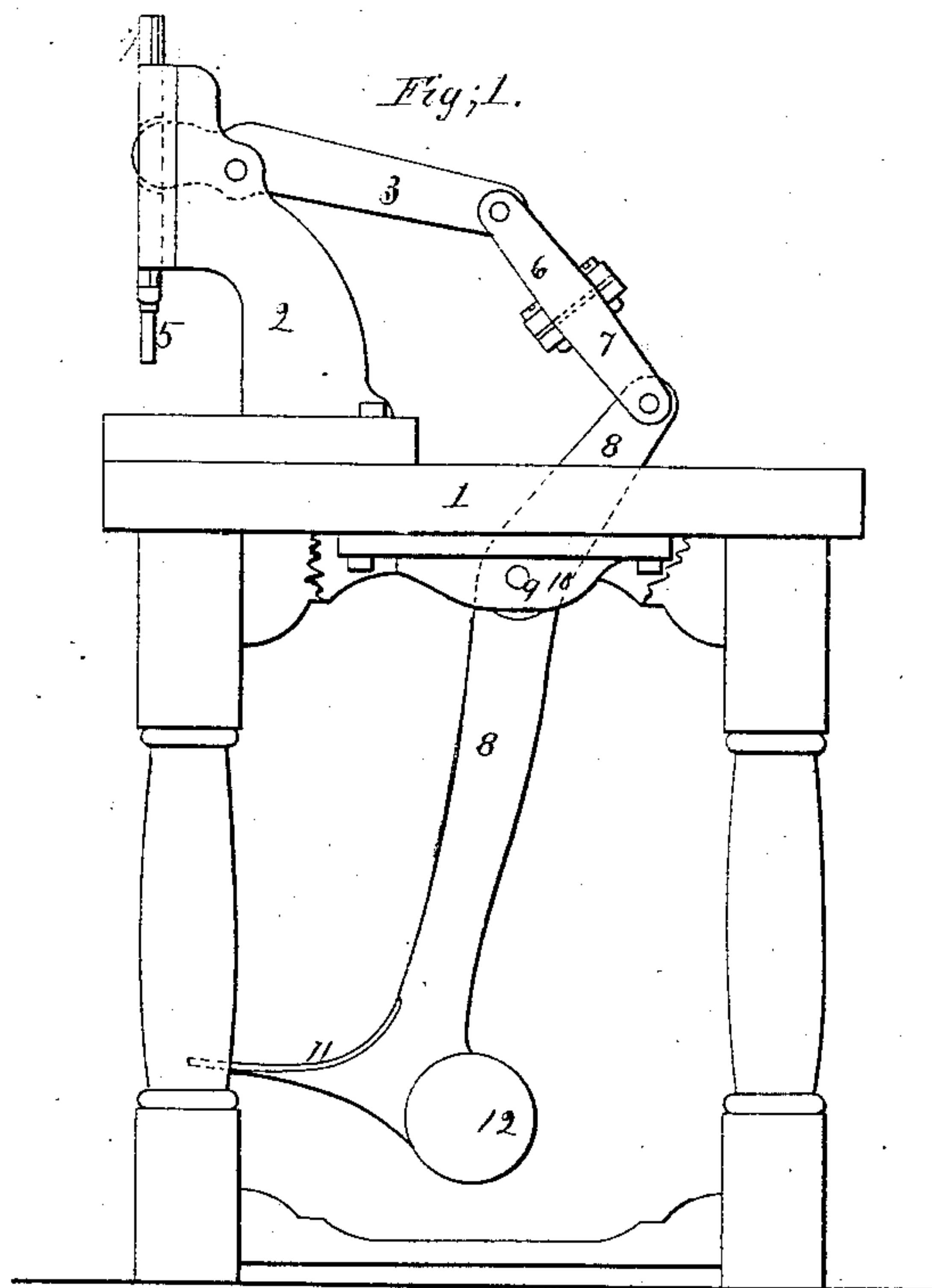


W. M. WARREN.
FOOT PRESS.

No. 36,491.

Patented Sept. 16, 1862.



Witnesses;
H. A. Baltherson
H. James M. exton

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attys

UNITED STATES PATENT OFFICE.

WILLIAM M. WARREN, OF WATERTOWN, CONNECTICUT.

IMPROVED FOOT-PRESS.

Specification forming part of Letters Patent No. 36,491, dated September 16, 1862.

To all whom it may concern:

Be it known that I, WILLIAM M. WARREN, of Watertown, in the county of Litchfield and State of Connecticut, have invented an Improvement in Foot-Presses, of which the following is a specification.

My invention consists of a combination of a weighted pendulous foot-lever, toggle-joint, and die or punch, as hereinafter set forth.

In the drawings, Figure 1 is a side elevation of my improved foot-press. Fig. 2 is a back elevation of the same.

1 is the bed or table on which the apparatus rests or to which it is attached.

2 is a hanger or pedestal in which the die or punch slides. The upper lever, 3, is hung in the rear edge of the hanger 2, one end of it being rounded and working in a mortise in the slide 4, which carries the die or punch 5, and the other being attached to the adjustable connection 6 7. This connection 6 7 is formed of two pieces of equal length and similar in shape, being united at the middle of 6 7 by means of a flange or lug on each and bolts passing through them. It is constructed in this manner for the purpose of adjusting the distance through which the slide 4 moves, which it would be desirable to vary to suit different kinds of work. This it accomplishes by allowing the pieces 6 and 7 to be moved apart by loosening the bolts which hold them, and then, a sufficient thickness of some solid material being inserted between the pieces 6 and 7, the bolts are screwed down tight again. By thus lengthening the connection 6 7 the

upward-and-downward motion of the slide 4 is increased, and by shortening it the said motion would be diminished. The lower or rear end of this connection is joined to the upper end of the weighted pendulous lever 8. This lever 8 is hung at 9 to a bearing or hanger, 10, attached to the table 1. It would perhaps be better to make the hanger 2 and the hanger 10 both in one piece. The foot-lever 8 has at its lower end a pedal, 11, for the foot of the operator to act on when working the press, and a weight, 12, to give greater force by its inertia to the downward pressure of the slide 4 just as it comes in contact with the material to be acted upon. By the peculiar combination of levers with the connection 6 7, forming a toggle-joint, it will be seen that the beginning of the downward motion of the slide 4 is very rapid, but gradually diminishing in rapidity as it approaches the working-point until at the moment of contact it moves very slowly and with an immense force, which is still further increased by the inertia of the weight 12. Thus the expenditure of power is very small, and at the same time it is applied in the most advantageous manner.

I claim—

The combination of a weighted pendulous foot-lever, toggle-joint, and slide or die, as hereinbefore set forth.

WILLIAM M. WARREN.

Witnesses:

LEMAN W. CUTLER,
MARY E. CUTLER.