H. HAMMOND.

Drop-Hammer.

No. 161,954. Patented April 13, 1875.

Fig. 1.

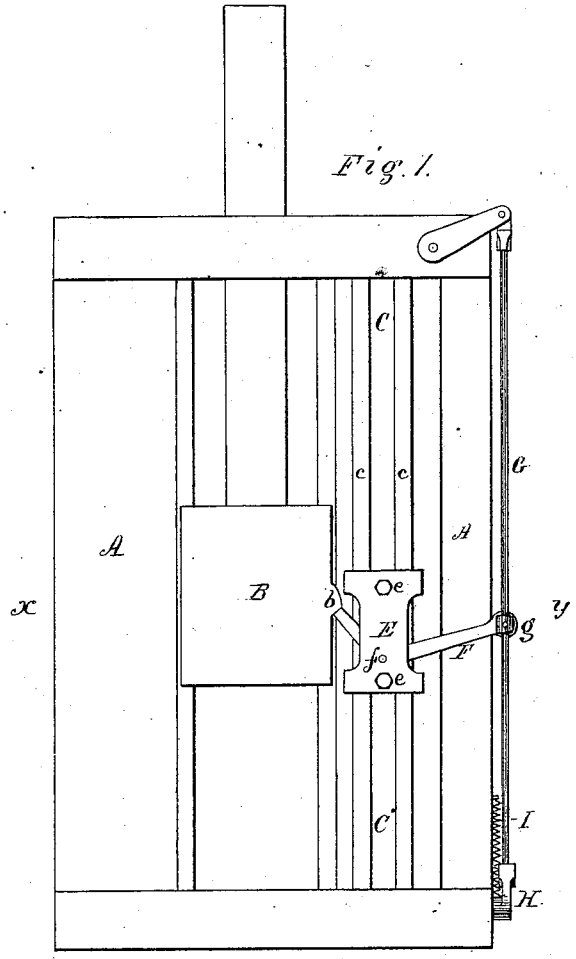
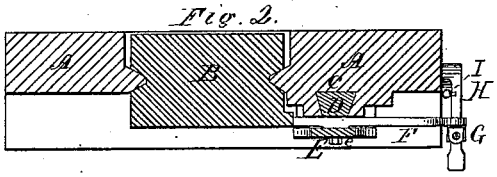


Fig. 2.



Witnesses.

Ch. L. Burdett.

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UNITED STATES PATENT OFFICE.

HENRY HAMMOND, OF HARTFORD, CONNECTICUT.

IMPROVEMENT IN DROP-HAMMERS.

Specification forming part of Letters Patent No. **161,954**, dated April 13, 1875; application filed October 26, 1874.

To all whom it may concern:

Be it known that I, HENRY HAMMOND, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Drop-Presses; and I do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

My invention relates to drop-presses in which the weight or drop is raised by power and then released, so as to fall freely and operate by its impact upon an anvil-block to perform some mechanical work or effect.

My invention consists in a device for releasing the weight or drop, which can be set at any desired height, so that the effect of the fall can be varied, as required, for different work.

In the accompanying drawing, Figure 1 is a front view of a drop-press having my invention attached. Fig. 2 is a cross-section on the line *x y* of Fig. 1.

A is the frame of the machine. B is the drop or weight. C is a groove or slide in the frame of the machine, shown of a dovetailed form in the section, Fig. 2. D is a block moving freely in the groove C, and having the same form of cross-section. This may be dovetailed, as shown in the drawing, or of any other ordinary form of groove that will admit of the block D being clamped or held in place by being pressed outward or against the sides. E is a plate or cover, secured to the block D by the bolts *e e*, and moving up and down with it, close to the faces *c c* on each side of the groove C. F is a bent lever, forming the dog which sustains the drop B by means of the projection *b*. This lever is attached to the block D, so as to move with it up and down by means of the fulcrum-pin *f*, which passes through the plate E and into the block D. G is a vertical bar or rod passing through a swiveled socket at the outer end of the lever F, in which it is held by a set-screw, *g*, at any desired height. Motion is communicated to this rod for the purpose of releasing the drop-weight by means of the treadle H. The parts are drawn back into position after the treadle has been depressed by means of the spring I.

The operation of my invention is as follows: When it is desired to have a greater or less fall to the drop than the machine is set for, the screws *e e* and *g* are loosened, and the block moved up or down to the desired position so that the short end of the lever F shall just engage the projection *b* at the height to which it is wished to raise and hold the weight. The screws *e e g* are then tightened to hold the parts in place; then each time the drop-weight is raised it is caught by the lever F, and held until the treadle H is depressed, which turns the lever F and releases it.

As shown in the drawing, the block D is clamped and held in position by being drawn forward toward the plate E by the screws *e*, which also draws the plate against the faces *c*, and holds the whole in place. The plate E can, however, be dispensed with, and the screws *e* pass through the block D, and press upon the bottom of the groove C. This will have the same effect of clamping the block. The pin *f* in this case will be attached only to D.

What I claim as my invention is—

The dovetailed block D and groove C, in combination with the lever F, the connecting-rod G, and the lever-treadle H, the whole forming an adjustable device for releasing the drop B at any desired height, substantially as herein described.

HENRY HAMMOND.

Witnesses:

THEO. G. ELLIS,

THOS. T. WELLES.