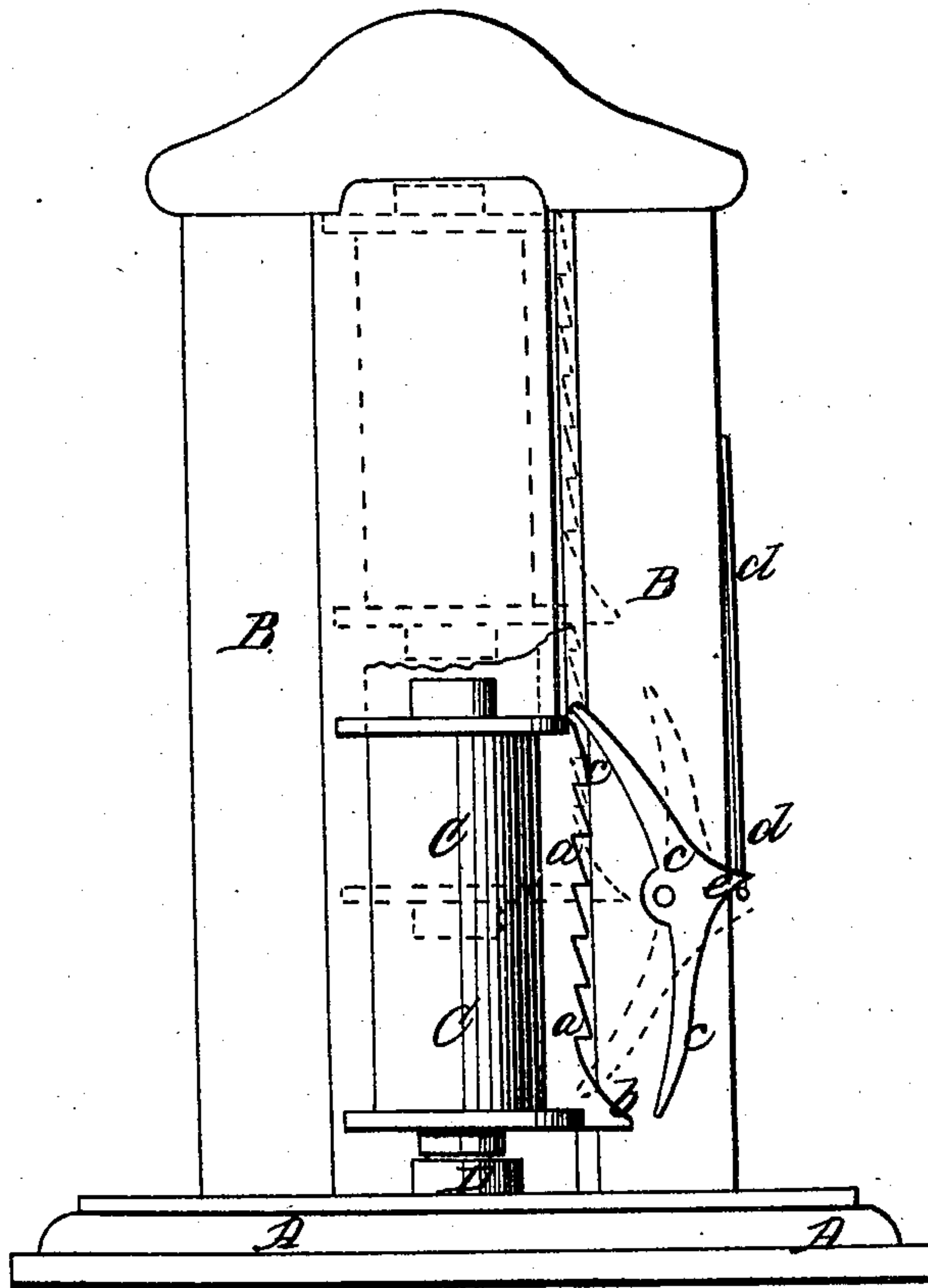


J. C. Rhodes.

Drop Hammer.

N^o 66,884.

Patented Jul. 16, 1867.



Witnesses:
Alex S. Roberts
Ther Tische

Inventor:
John C. Rhodes
per Munn & Co
Attorneys

United States Patent Office.

JOHN C. RHODES, OF SOUTH ABINGTON, MASSACHUSETTS.

Letters Patent No. 66,884, dated July 16, 1867.

IMPROVEMENT IN DROP-PRESSES.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN C. RHODES, of South Abington, in the county of Plymouth, and State of Massachusetts, have invented a new and improved Drop-Press; and I do hereby declare that the following is a full clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The drawing represents a front elevation of my improved drop-press.

This invention relates to a drop-press which is so arranged that the rebound of the drop will be caught, and that the drop must be raised a certain height before it can be dropped. In most presses there is a rebound of the drop after the same has fallen, and the same again falls upon the die unless prevented. The impression already obtained is generally injured by the rebound, as the pressed piece has sprung partly out of the die. In presses operated by foot, or by other manual power, the operator does not always, on account of carelessness, raise the drop to the height required and necessary to obtain a perfect impression. My invention is intended to overcome all these difficulties.

A represents a bed, on which a frame, B, of suitable construction and material, is erected, as shown in the drawing. A drop, C, slides up and down between the uprights B, and shapes the metal that may be placed upon the die D. To one side of the drop is secured a ratchet-bar, *a*, the lower tooth *b* of which projects beyond the other teeth, as shown. A pawl, *c*, having two arms, and a lip, *e*, on the outside, is pivoted to an upright, B, and one of its arms is pressed against the ratchet *a* by a spring, *d*. After the drop has come down the rebound will be caught, that is, the upper arm of the pawl *c* will engage the teeth of the ratchet, and will hold the drop up and prevent it from falling a second time upon the same piece of metal. The blue outline of the drop and the black pawl in the drawing show the position of them after the rebound. For a new stroke the drop must be raised until the lower projecting-tooth *b* throws the pawl out of the ratchet and brings its outer lip *e* below the end of the spring *d*. The pawl and drop will then be in the position that is indicated by red lines in the drawing. The drop is then free to fall, and as the tooth *b* comes against the lower end of the pawl it throws it back, and the end of the spring *d* is again brought below the lip *e*, and the pawl is then, as well as the drop, in the position shown by black lines in the drawing. The tooth *b*, it will be seen, acts both to throw the pawl in and out of the ratchet. By varying the length of the upper arm of the pawl the distance at which the drop will fall can be controlled so as to accurately obtain the desired blow. This can be done either by using different pawls, or by having end pieces to be screwed or otherwise fastened to the end of the upper arm.

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

The drop C, provided with a ratchet-bar, *a*, and with a projecting-stud, *b*, in combination with the double armed pawl, *c*, and spring, *d*, all made and operating substantially as herein shown and described.

JOHN C. RHODES.

Witnesses:

W. H. HOBART,
ISAAC W. GILES.