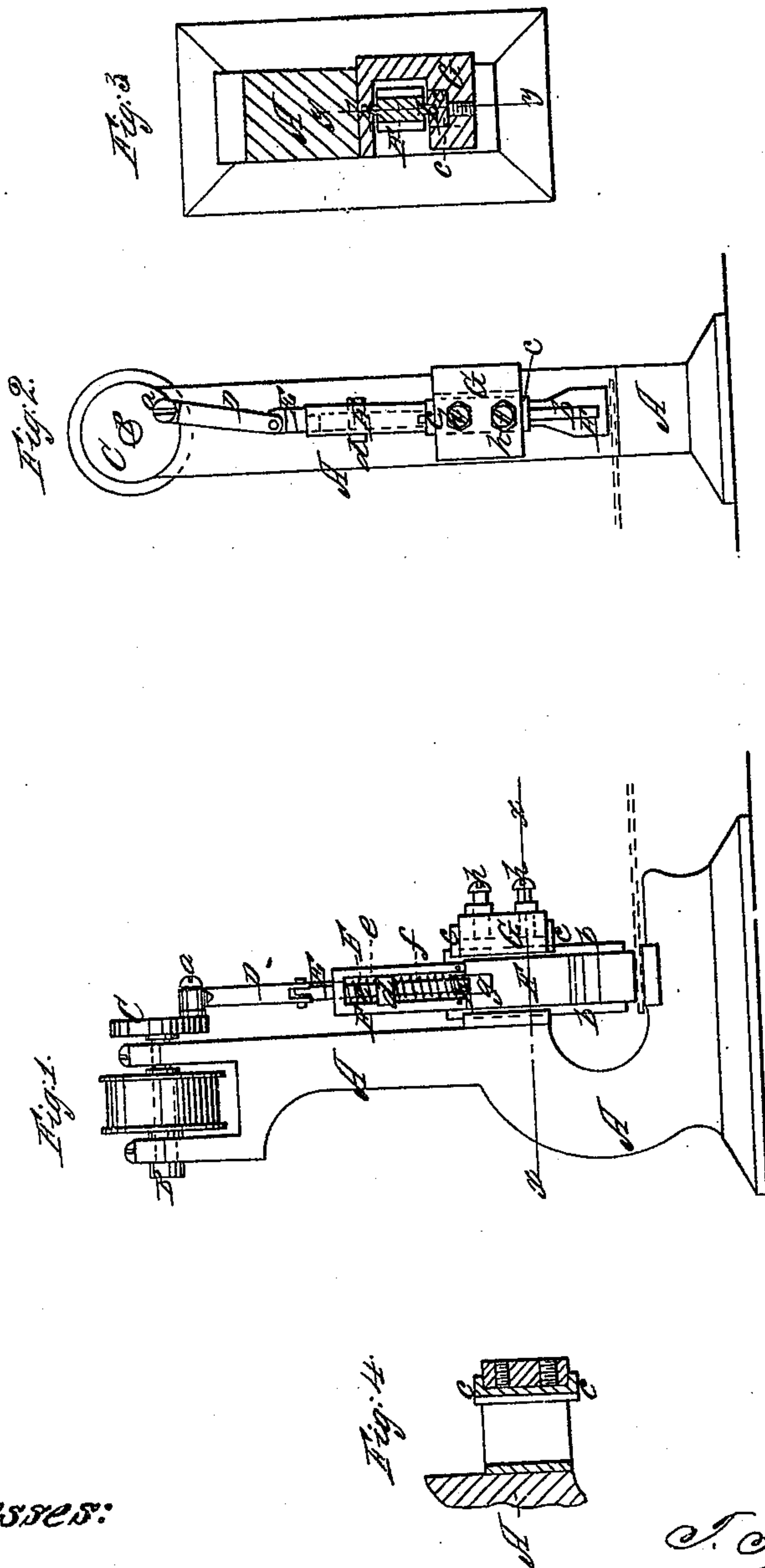


T. F. PRESTON.  
POWER HAMMER.

No. 64,567.

Patented May 7, 1867.



Witnesses:

Chas. Fische  
Wm. Truitt

Inventor:

T. F. Preston  
Per *[Signature]*  
Attorneys.

# United States Patent Office.

THOMAS F. PRESTON, OF PAWTUCKET, RHODE ISLAND.

*Letters Patent No. 64,567, dated May 7, 1867.*

## IMPROVEMENT IN POWER HAMMERS.

*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, THOMAS F. PRESTON, of Pawtucket, in the county of Providence, and State of Rhode Island, have invented a new and improved Power Hammer; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of my improved power hammer.

Figure 2 is a front elevation of the same.

Figure 3 is a horizontal sectional view of the same, the plane of section being indicated by the line *xx*, fig. 1.

Figure 4 is a detail sectional view taken on the line *yy*, fig. 3.

Similar letters of reference indicate corresponding parts.

The object of this invention is to construct a power hammer in such a manner that the hammer will not flap about loosely, but that its motion will be perfectly steady, and that no shock will be communicated to the working parts above. The invention is chiefly intended as an improvement on the hammer of Thomas Shaw, patented February 27, 1866.

The improvement consists, first, in the use of a rod for suspending the hammer, in place of the spring in Shaw's hammer. The rod is provided with a shoulder, above and below which spiral springs are arranged, which work between the said shoulder and the respective ends of a slot in the upper portion of the hammer. The lower one of these springs is compressed by the work, while the upper one prevents the violent shock of the hammer as it is brought down. The improvement consists also in making the guides, wherein the hammer slides up and down, in separate pieces, instead of casting them in one piece with the guide-brace, as in Shaw's hammer. Thereby the said guides may be set up or adjusted as they become worn, while otherwise no accuracy whatever could be obtained.

A is the standard or support, made of cast iron or other suitable material. The horizontal shaft B is mounted in suitable boxes arranged on the said standard, and is provided with a crank-wheel, C. By the crank-pin *a* the connecting-rod D is attached to the wheel C, its lower end being pivoted to a rod, E, which is attached to the upper end of the hammer F. The said hammer F is provided, as shown in fig. 1, with a slotted upper extension, the edges of which are provided with guide-rails, *b*, fitting into grooves in the adjustable guides *c*. The rod E is within the slot in F provided with a shoulder or projecting ring or pin *d*, whereby two spiral springs, *e* and *f*, are pressed respectively against the upper and lower enclosure of the slot during the movements of the hammer. During the downward stroke of the hammer, the lower end of the rod E is pressed into a hole in the hammer. The guides *c* are let into the guide-brace G, and are provided with a lip on each end to prevent their being moved up or down. Two (more or less) set-screws *h h* are used for the purpose of holding these guides in place, and at the proper distance from the hammer, so that thereby these guides can at all times be adjusted to the rails *b* on the hammer. In the drawing only one guide is represented, but in a working machine two have to be used, one on either side of the hammer.

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

1. The connecting-rods E and D, in combination with the springs *e* and *f*, shoulder *d*, and slotted hammer (or extension of the same) F, substantially as and for the purpose herein shown and described.
2. The construction and arrangement of the adjustable guide C, let into the guide-brace G, and provided with a lip upon each end fitting over the upper and lower sides of said guide-brace G, its centre grooved to receive the sliding guide-rail *b* in the hammer F, substantially as herein described and for the purpose specified.

THOMAS F. PRESTON.

Witnesses:

WILLIAM J. ARNOLD,  
FRANCIS FOSS.