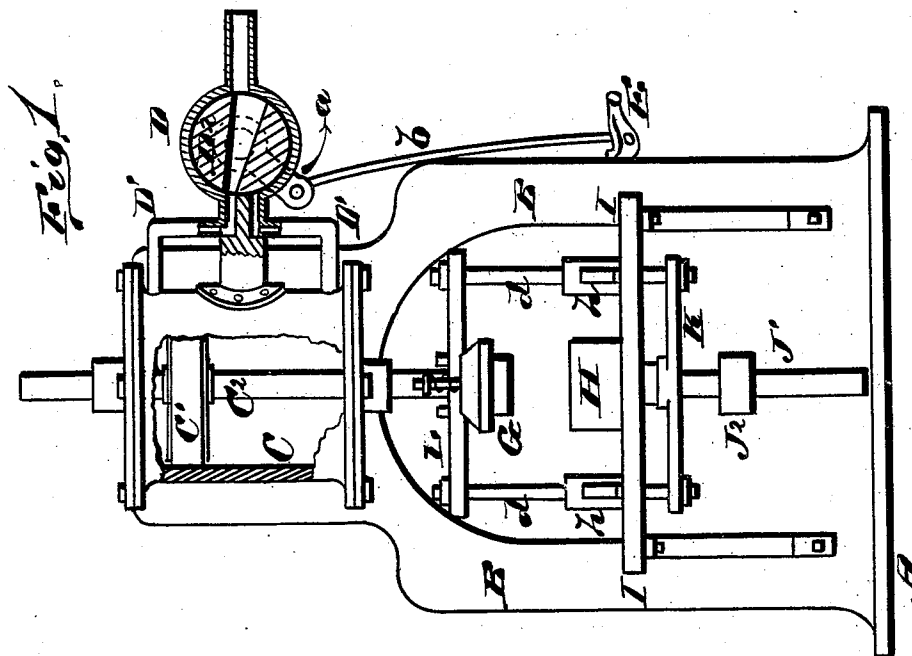
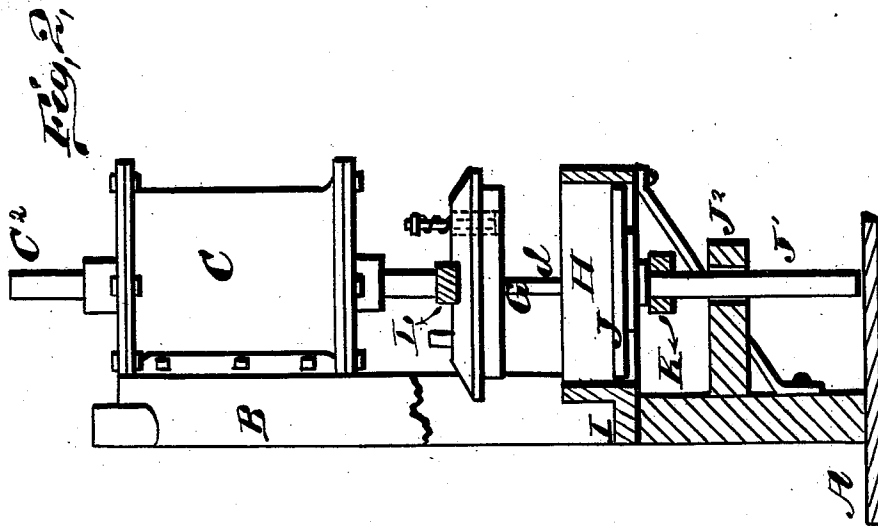


J. L. HAWS.  
BRICK-MACHINE.

No. 193,245.

Patented July 17, 1877.



WITNESSES  
*W. Bates*  
*George C. Upman*

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# UNITED STATES PATENT OFFICE.

JOHN L. HAWS, OF JOHNSTOWN, PENNSYLVANIA.

## IMPROVEMENT IN BRICK-MACHINES.

Specification forming part of Letters Patent No. 193,245, dated July 17, 1877; application filed May 19, 1877.

*To all whom it may concern:*

Be it known that I, JOHN L. HAWS, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and valuable Improvement in Brick-Presses; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a front view, part sectional, of my brick-press; and Fig. 2 is a part-sectional side elevation of the same.

The nature of my invention consists in the construction and arrangement of a press for pressing brick by steam, as will be herein-after more fully set forth.

The annexed drawing, to which reference is made, fully illustrates my invention.

A represents the bed-plate, from which rises a frame, B, of any suitable construction. On the front of this frame, at the top, is secured a vertical steam-cylinder, C, into the ends of which steam is admitted from a valve-chest, D, through pipes D<sup>1</sup> D<sup>1</sup>. The valve D<sup>2</sup> within the chest D has an arm, *a*, on one of its journals, (the valve being an ordinary rocking valve,) and said arm is, by a rod, *b*, connected with a lever, E, pivoted to the frame B, for the operator to work the valve as required.

Within the cylinder C is a piston, C<sup>1</sup>, with piston-rod C<sup>2</sup>, passing through both heads of the cylinder. On the lower end of the piston-rod C<sup>2</sup> is secured the presser-block G, to fit in the die H, secured on the table I, which is permanently fastened to the frame. This die, as well as the presser-block G, may be of any desired size and shape, according to the size and shape of the brick to be pressed.

J is the bottom of the die H, acting as a follower, and provided with a downwardly-projecting rod, J<sup>1</sup>, passing through a stationary arm, J<sup>2</sup>, projecting from the frame below the table.

On the rod J<sup>1</sup> is a cross-bar, K, connected with a cross-bar, L, attached to the presser-block G by means of rods *d d*. These rods

pass loosely through the ends of the cross-bar K, but are made fast in the cross-bar L, and pass through vertical tubular guides *h h*, attached to the table I. These tubular guides prevent the presser-block from turning, and insure its proper descent into the die H.

The piston C<sup>1</sup> being at the top of the cylinder C, the follower J is, by the rods *d* and cross-bars K L, raised to the top of the die H. The brick to be pressed is placed on the follower and the valve D<sup>2</sup> reversed, so as to admit steam in the top of the cylinder C to force the piston downward. As the presser-block G then descends on top of the brick the follower J is forced downward till the rod J<sup>1</sup> rests on the bed A, when the still further descent of the presser-block finishes the pressing of the brick. The valve D<sup>2</sup> then being reversed to admit steam under the piston, the presser-block is raised, and also the follower, so as to raise the pressed brick out of the die, when it can be easily removed and a new brick put on to be pressed.

On the lower end of the rod J<sup>1</sup>, I may attach an adjustable plunger or foot, for the purpose of regulating the stroke of the bottom J to suit different thicknesses of brick in the same die.

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

1. The rocking valve D<sup>2</sup>, provided with the arm *a* and rod *b*, in combination with the lever E, bent steam-pipes D<sup>1</sup>, leading into the single steam-cylinder C near its upper and lower ends, piston C<sup>1</sup>, rod C<sup>2</sup>, carrying the presser-block G, die H, and follower J, substantially as described, and for the purpose set forth.

2. The combination of the presser-block G with cross-bar L, the connecting-rods *d d*, cross-bar K, rod J<sup>1</sup>, and follower J, substantially as and for the purposes herein set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN L. HAWS.

Witnesses:

CHARLIE WILSON,  
DAVID M. SINGER.