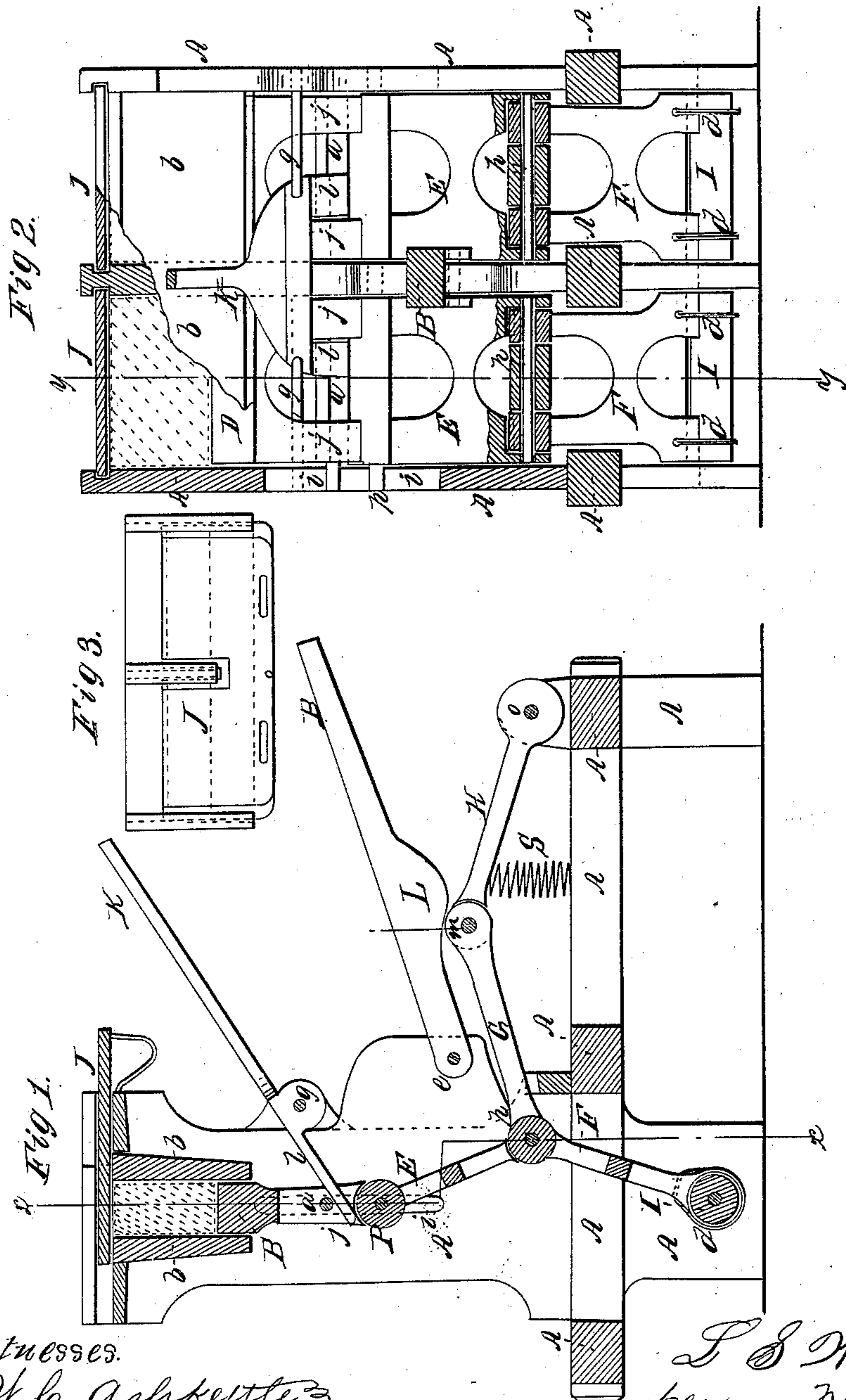


L. S. Warner,
Brick Machine.

N^o 77,854.

Patented May 12, 1868.



Witnesses.

W. C. Ashkett
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LAWSON S. WARNER, OF CHICAGO, ILLINOIS.

Letters Patent No. 77,854, dated May 12, 1868.

IMPROVED CONCRETE-BLOCK PRESS.

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, LAWSON S. WARNER, of Chicago, in the county of Cook, and State of Illinois, have invented a new and improved Press for Concrete Blocks; 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.

Figure 1 is a sectional view of my machine, the section being taken through the line *y y*, fig. 2.

Figure 2 is another sectional view of the same, the section being taken through the line *x x*, fig. 1.

Similar letters of reference indicate corresponding parts.

This invention relates to the pressing of concrete blocks, so called, which are used for building purposes, and which are lower than common brick, differing also therefrom in character.

It consists of moulds or boxes, which are filled with the concrete material, together with compound toggle or knee-joint levers, for actuating the follow-bottoms of the moulds upward, to press the concrete material in a dense parallelepipedon or building-block.

In the accompanying plate of drawings, the general frame of the machine is shown at A. The sides of the moulds are formed by the stout blocks *b b*. The ends of the moulds are formed by that portion of the frame enclosed between the blocks *b*, which latter are affixed to the said frame as shown, by bolts, nails, or other suitable means.

The follow-bottoms are shown at D, the extensions *j* of which rest upon the upper ends of the toggle-bars E. These extensions *j* are not attached to the said bars, but merely rest thereon, the bottom of the extension having a semicircular concavity, to fit upon the corresponding convexity of the bars, as shown, for the purpose of enabling the follow-bottoms to be raised after the block is pressed, and thus force the bottom of the pressed block even with the top of the moulds for removal.

The lifting of the follow-bottoms D to raise the blocks, as above mentioned, is accomplished by the lever K, which has for its fulcrum the rod *g*. The lower end of this lever bifurcates into two branches, *l l*, which pass under the rods *a* affixed between the extensions *j* of the follow-bottoms, and thus raise the latter when the long arm K is depressed.

The operation of the compound toggle-joint, consisting of the toggle-bars E, F, G, and H, pivoted or hinged together as shown at *h* and *m*, is obvious; and as the depression of the lever B brings the rounded projection L to bear upon the joint *m*, and thus bring the said joint in line with the joints *o* and *h*, great power is brought to bear upon the joint *h*, which latter, in being brought in line with the shaft I and follow-bottoms D, exerts a sufficient power to press the concrete-material into a dense and durable block.

The bar F is not affixed to the shaft I, but works around on it, the lower end of the said bar being concave, to fit on the said shaft. Straps *d* hold the bar in contact with the shaft. A spring, S, raises the toggle-bars G and H, and thereby lowers the follow-bottoms when the power is removed from the hand-lever B. The upper ends of the bars E are guided to move in a vertical line, by means of pins or projections *p* working in slots *i* in the frame A, as shown.

J is the sliding top, to close the moulds when the block is being compressed.

In practice, a shaft bearing an eccentric may be employed to act upon the joint, *m*, or a number of machines may be placed in a row, and a single shaft, bearing an eccentric for each joint, *m*, may be employed, thus accomplishing the manufacture of concrete-blocks with rapidity.

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

The spring S, in combination with the toggle-bars H, G, E, and F, and follow-bottoms D, substantially as shown and described, for the purpose of lowering the follow-bottoms to their first position, all arranged as set forth.

The above specification of my invention signed by me, this seventeenth day of January, 1868.

LAWSON S. WARNER.

Witnesses:

WM. H. STICKNEY,
JOHN J. GILMORE.