

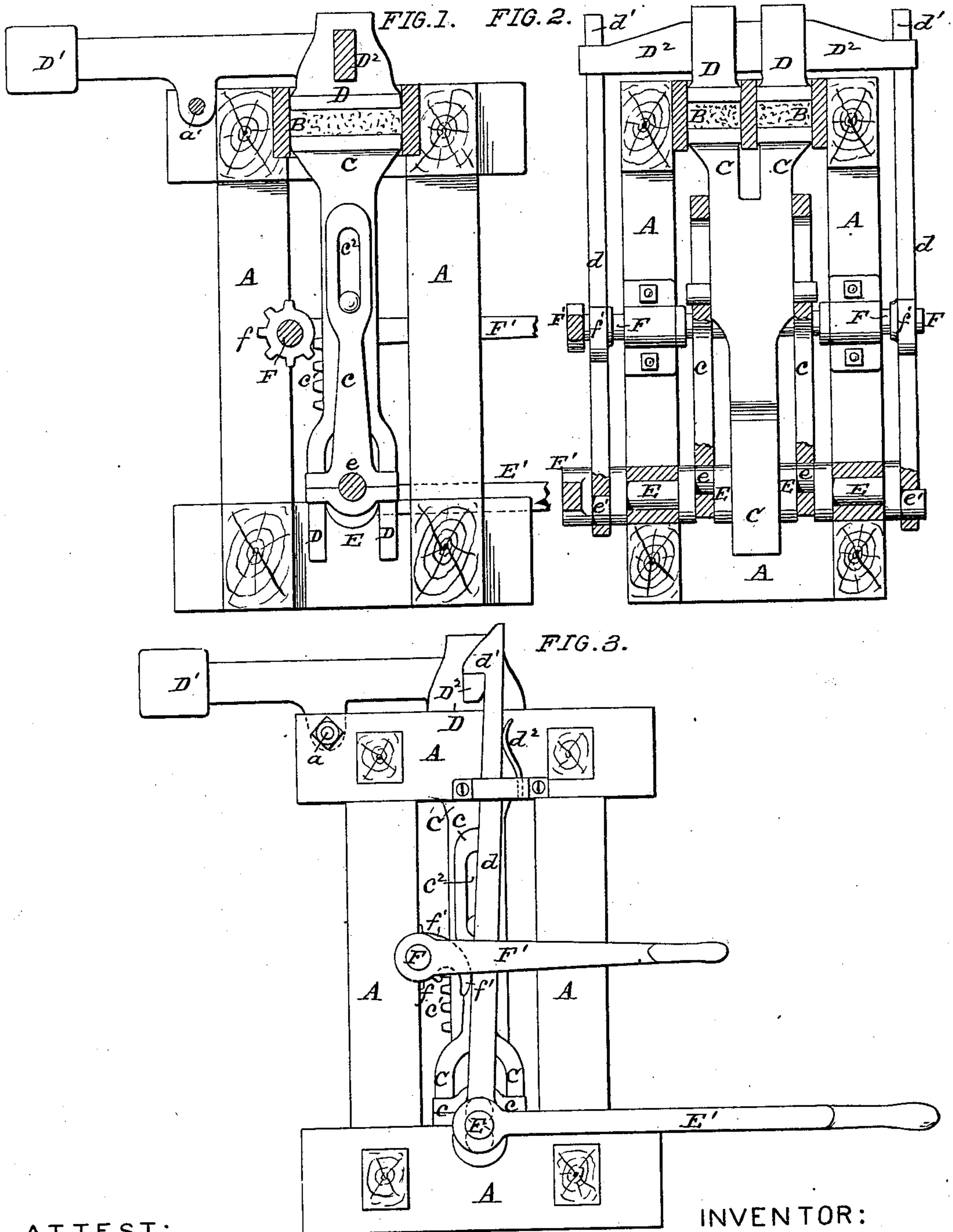
(No Model.)

J. S. THOMAS.

BRICK PRESS.

No. 246,838.

Patented Sept. 6, 1881.



ATTEST:

*William St. Gemme*  
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# UNITED STATES PATENT OFFICE.

JOHN S. THOMAS, OF FORT WORTH, TEXAS.

## BRICK-PRESS.

SPECIFICATION forming part of Letters Patent No. 246,838, dated September 6, 1881.

Application filed January 31, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN S. THOMAS, a citizen of the United States, residing at Fort Worth, in the State of Texas, have invented a new and useful Improved Brick-Press; and I do hereby declare that the following is a full, clear, and exact description of the invention, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to certain improvements in that class of brick-presses in which the clay is molded into shape by hand-power; and the object of my improvement is to form a cheap, durable, and effective machine for accomplishing the work. I attain this object by mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal section. Fig. 2 is a transverse section; and Fig. 3 is a side elevation.

Similar letters of reference refer to like parts throughout the several views.

The frame A is formed of wood or metal, and has provision at top for the attachment of the fixed bottomless mold B, having one or more brick-openings, as desired. In use I find a double mold the most practical and convenient.

The plungers C D form the bottom and top of the mold, and they are drawn together in the following manner to compress the clay into the required size and shape for a brick: The lower plunger, C, is connected by push-rods *c* to operating crank-pins *e* on the main operating crank-shaft E, having a hand-lever, E', by which it is operated; and the upper plunger, D, is connected by pull-rods *d* to the crank-pins *e'* on the shaft E, so that a quarter-rotation of said shaft in one direction will draw the plungers together to form the brick, and a similar movement in the opposite direction will force them apart.

In order to allow for placing the clay in the mold I have pivoted the upper plunger, D, to the main frame at *a*, and provided it with a counterbalance-weight, D', and the connection between it and the pull-rods *d* is as follows: The pull-rods *d* are provided with hooks *d'* at their upper ends, which engage over the top of a cross-head or bar, D<sup>2</sup>, to which the plungers D are attached, and the said rods are held in a position to engage the said bar by means of a spring, *d*<sup>2</sup>, or its equivalent device. The

lower plunger is forked at its lower end, so as to embrace the crank-shaft and be guided by the same, as shown.

In order to remove the bricks already formed I make use of the following arrangement:

F is a rock-shaft, carrying a gear or sector wheel, *f*, which engages a rack, *c'*, on the side of the plunger C, so that operating the rock-shaft by its hand-lever F' the said plunger will be raised to the top of the mold and carry with it the bricks already formed, the push-rods *c* being slotted or open-ended at *c*<sup>2</sup> to allow this movement to take place.

The rock-shaft F carries cams *f'*, which are so positioned that they will (before the lower plunger begins its second rise) force the pull-rods *d* out of engagement with the cross-head of the upper plunger, D, so as to release the same and allow it to be pushed out of the way as the bricks are being raised out of the molds.

Any other well-known equivalent device may be used instead of the rack and sector above described without departing from the spirit of my invention.

In the drawings I have illustrated the lever E' as moving downward when pressing the bricks and the lever F' as moving upward in removing the bricks from the mold; yet it is evident that the parts can be arranged so that the levers will move in an opposite direction to that above described and accomplish the same purpose.

The operation of my improvements is as follows: Clay being first placed in the molds, the upper plunger, D, is pushed into engagement with the pull-rods *d* by hand. The operator then gives the crank-shaft E a quarter-turn, which draws the two plungers C D together to form the brick; then by turning the rock-shaft F by its hand-lever F' the pull-rods *d* are first disengaged from the upper plunger, D, by the cams *f'*, and then the lower plunger, C, is raised by the rack and sector *c' f*, so as to force the bricks out of the molds so that they can be readily removed by hand. By returning the levers E' F' to their original positions the press is again ready for operation.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a hand brick-press, the combination of the fixed bottomless mold B, moving plun-



gers C D, operating crank-shaft E, and connecting-rods *c d*, constructed and arranged as herein described, and for the purpose set forth.

2. In a hand brick-press, the combination  
5 of the fixed bottomless mold B, moving plungers C D, operating crank-shaft E, and connecting-rods *c d* with the rock-shaft F and rack and sector *c' f*, all constructed and arranged as herein described, and for the purpose set forth.

10 3. In a hand brick-press, the combination of the fixed bottomless mold B, moving plungers C D, operating crank-shaft E, and connecting-rods *c d* with the rock-shaft F, rack *c'*, sector *f*, and cam *f'*, all constructed and  
15 arranged as herein described, and for the purpose set forth.

4. In a hand brick-press, the combination of the fixed bottomless mold B, moving plun-

gers C D, operating crank-shaft E, pull rods *d*, and push-rods *c*, provided with an elongated  
20 slot or open end *c'*, all constructed and arranged as herein described, and for the purpose set forth.

5. In a hand brick-press, the combination of the fixed bottomless mold B, moving plun-  
25 gers C D, and connecting-rods *c d*, the upper plunger, D, being pivoted to the main frame and provided with a counter-balance, D', all constructed and arranged as herein described,  
and for the purpose set forth. 30

Signed at St. Louis, in the State of Missouri,  
this 19th day of January, 1881.

JOHN S. THOMAS.

In presence of—

ROBERT BURNS,  
E. F. STONE.