

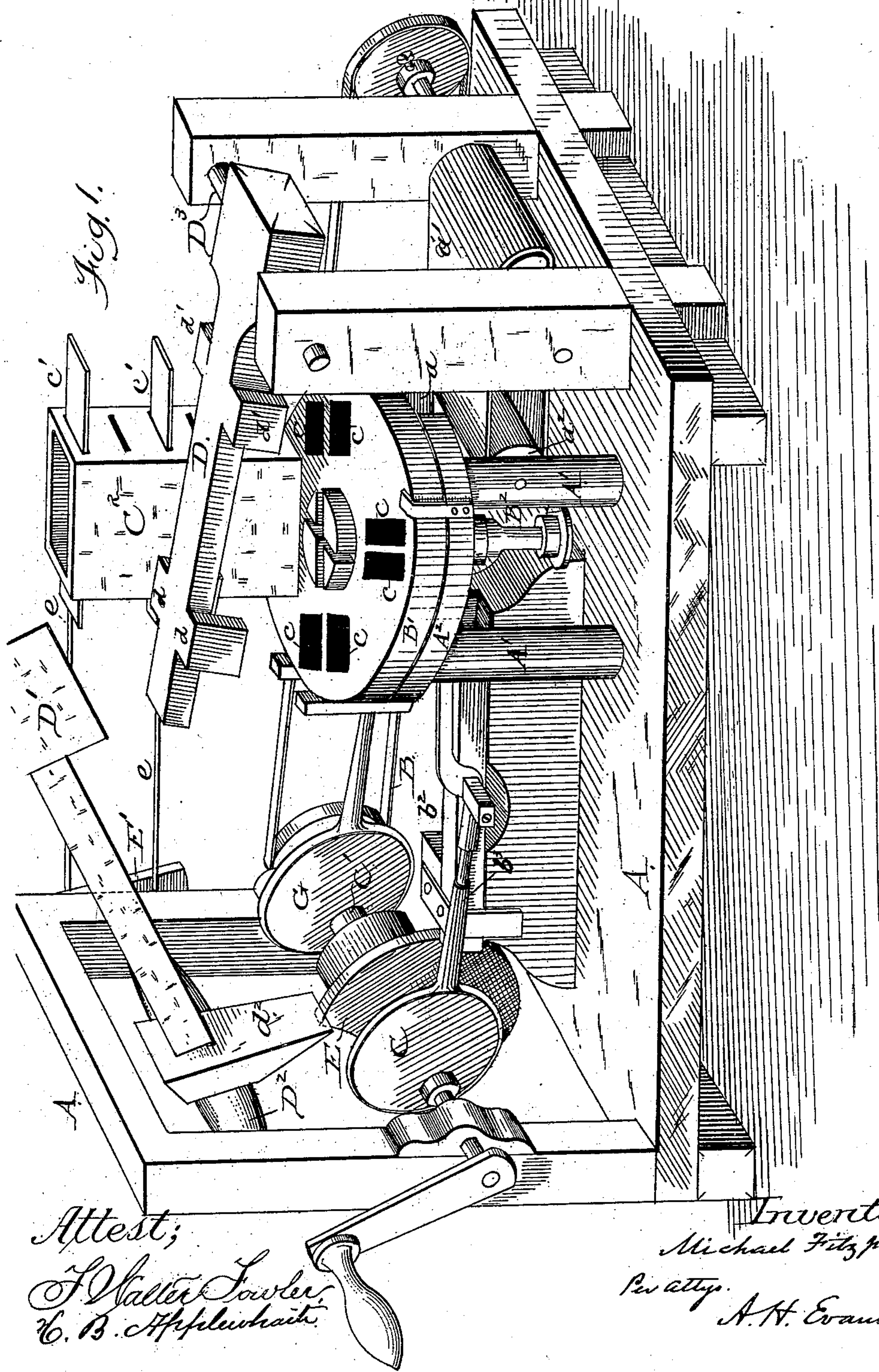
(No Model.)

3 Sheets—Sheet 1.

M. FITZPATRICK.
BRICK MAKING MACHINE.

No. 272,224.

Patented Feb. 13, 1883.



Attest;

J. Walter Fowler
H. B. Applewhite

Inventor;
Michael Fitzpatrick
Per atty. *A. H. Evans & Co*

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Fig. 2.

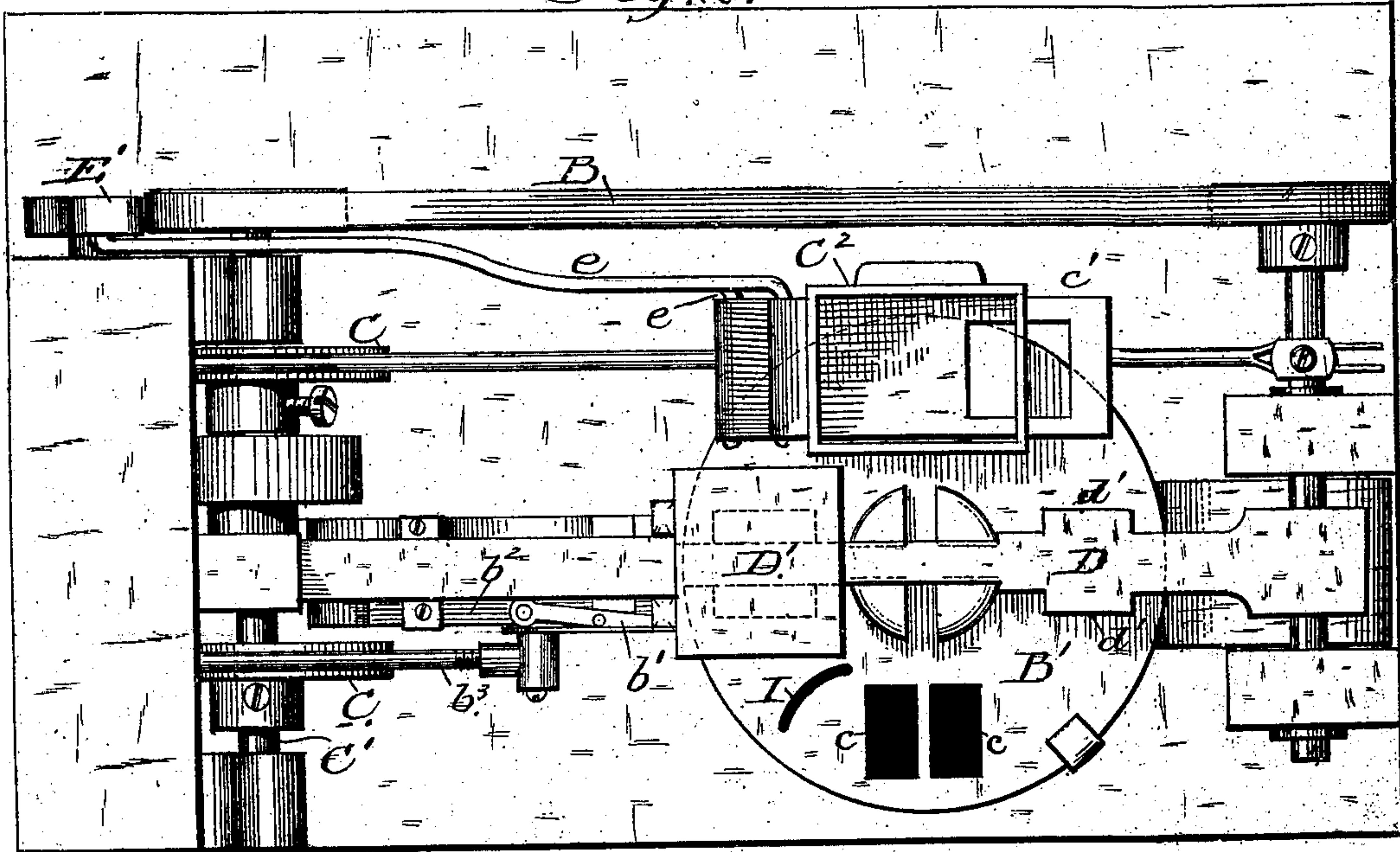
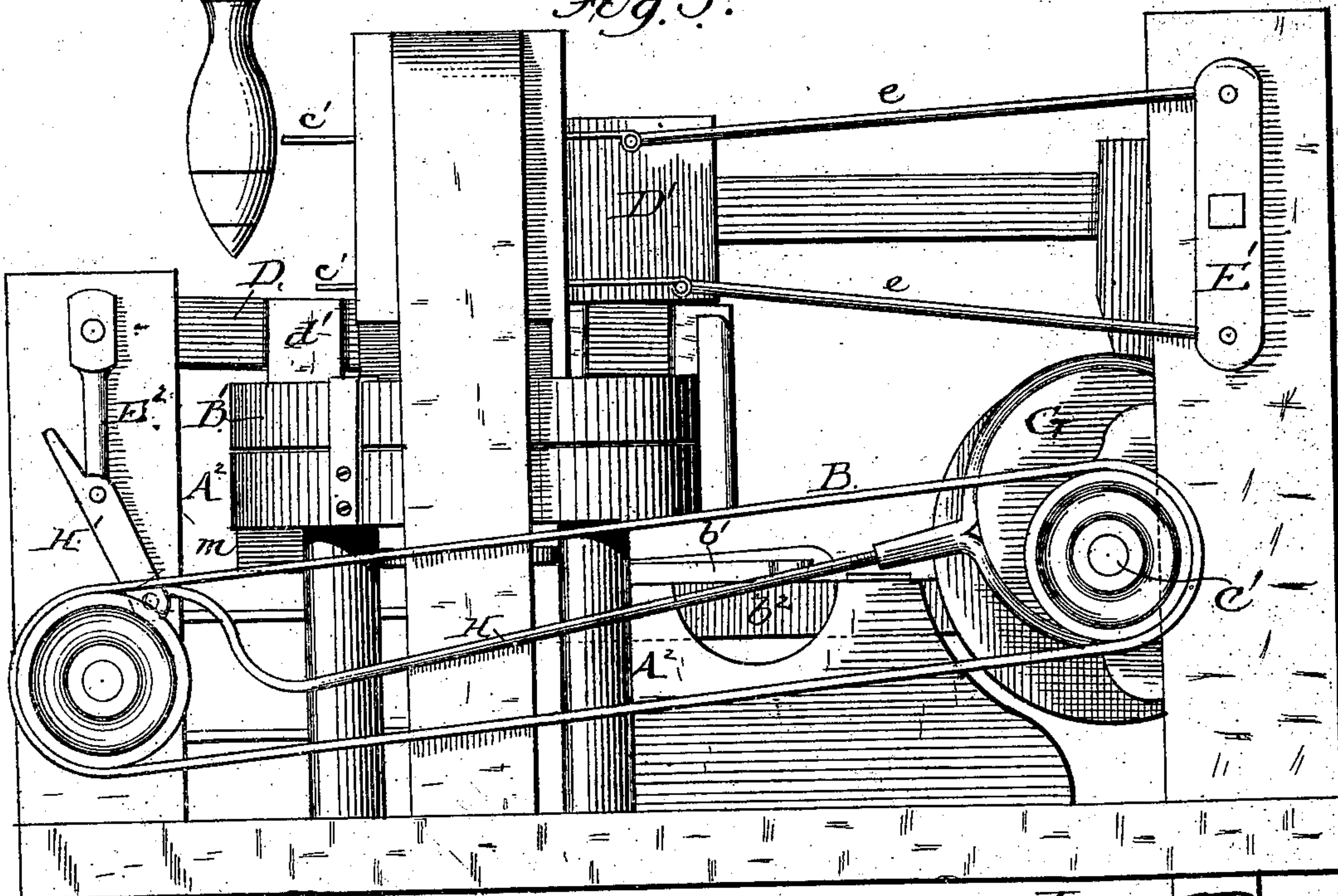


Fig. 3.



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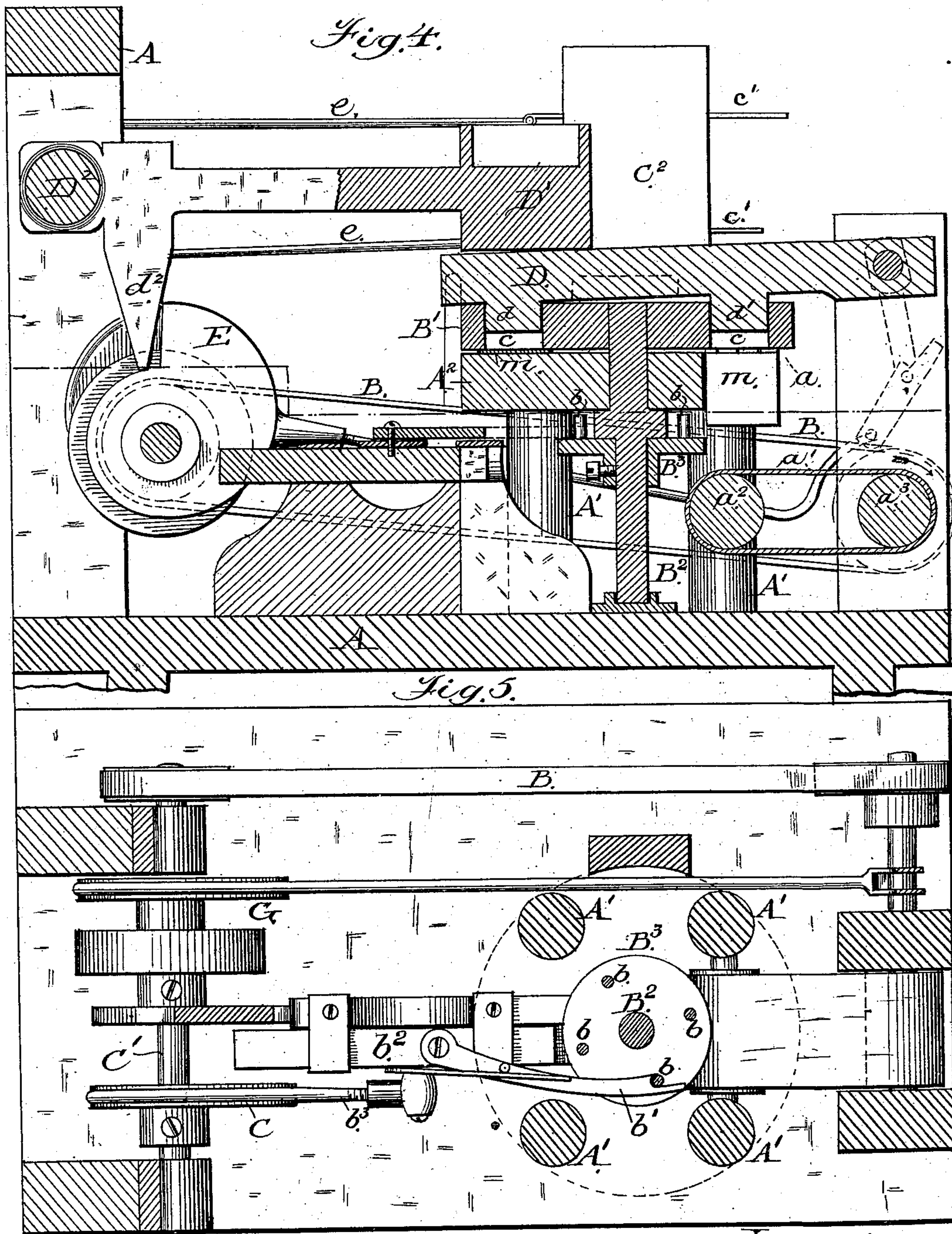
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UNITED STATES PATENT OFFICE.

MICHAEL FITZPATRICK, OF ST. LOUIS, MISSOURI, ASSIGNOR TO ANNIE M. FITZPATRICK, OF SAME PLACE.

BRICK-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 272,224, dated February 13, 1883.

Application filed August 5, 1882. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL FITZPATRICK, of St. Louis, Missouri, have invented a new and useful Improvement in Brick-Making Machines, of which the following is a clear, full, and exact description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of a brick-making machine with my improvements attached. Fig. 2 is a plan view of the same. Fig. 3 is a side elevation. Fig. 4 is a longitudinal section on line xx of Fig. 2. Fig. 5 is a horizontal section on line zz of Fig. 3. Fig. 6 is a horizontal section on line $x'x'$ of Fig. 3.

My invention relates to machines for pressing bricks from clay; and it consists of the several combinations of devices hereinafter explained and claimed.

To enable others skilled in the art to make and use my invention, I will proceed to describe the exact manner in which I have carried it out.

In the drawings, A A is the frame-work in which my machine is constructed. On four pillars, A', is supported a table, A², on which the bricks are formed. This table is provided with an opening, a , at its rear, through which the bricks, after being pressed into shape, fall on the endless belt a' , which carries the bricks out of the machine. The endless belt a' is operated by the drum a^2 , having its bearings between two of the pillars A', and the drum a^3 , having its bearings in the frame-work A. This drum is operated by means of the belt B, connecting the shaft of the drum with the main shaft of the machine. Over the table A², I place the revolving table B', secured on the vertical shaft B², which passes through the table A² and rests in a shoe at its lower end, secured to the frame-work A. On this same shaft, and below table A², is rigidly secured the metal plate B³. This plate is provided on its upper surface with four vertical pins, b . Against the said pins operates the notched pawl b' , which is connected by the shaft b^2 to a reciprocating arm, b^3 , operated by the eccentric C, attached to the driving-shaft C'. It is evident that the revolution of the driving-shaft and its eccentric will, through the connection named, operate the pawl b' , drawing it

back until the notch catches in a pin, b , and then forcing it forward, thereby causing a partial revolution of the vertical shaft B², and with it the revolving table B', which is rigidly secured to the upper end of the vertical shaft. Through this revolving table are formed openings or molds c , in which to press and form bricks. As the table revolves these openings are brought in turn under the hopper C², which is provided with slides c' for the purpose of regulating the amount of material entering the molds.

On the lower face of the revolving table B', and immediately under the molds, I attach hinged bottoms m , which drop and rise as they pass the openings in the lower table, where the bricks make their exit. The object of these hinged bottoms is to catch and hold the bricks while being pressed, and by remaining under the bricks until they reach the exit-opening in the lower table prevent any loose clay from getting between the tables. When the exit-opening is reached the movable bottom drops on its hinges and allows the brick to pass down, and as the revolving table continues to move it the bottom is again lifted up to its place, and is closed against the bottom of the mold. These bottoms may also be used for regulating the thickness of the brick by adding a plate of any desired thickness to the upper face of the hinged bottom, and which will fit snugly in the mold as the bottom is raised. The thickness of the brick may be in this way regulated at pleasure, and on the plate may be placed letters, figures, or other characters for the purpose of stamping them on the brick.

On the rear end of frame A is secured the lever D on rock-shaft D³, and provided with the plungers d d' , which enter the molds c simultaneously on the opposite sides of the revolving table. The plunger d enters the mold for the purpose of pressing the brick into shape, and the plunger d' descends into the mold to force the brick from the mold as the hinged bottom drops. After the plunger d has entered the mold c it is forced down by the trip-hammer D'. The handle of this hammer is rigidly secured to the rock-shaft D², having its bearings in the frame A. On the handle of the hammer is attached the vertical pin d^2 , which is brought into contact with the cam E,

which is rigidly secured on the driving-shaft C'. By the revolution of the cam acting upon the pin d^2 the hammer D' is caused to rise and at the proper moment to fall upon the plunger d , thus securing the fall of the hammer on the plunger d , pressing the brick in the mold c . The upper portion of the hammer D' is made hollow for the reception of additional weights for the purpose of adjusting the force of the hammer. These additional or extra weights may be held in position by a bolt passing through the hollow portion of the hammer. The rock-shaft D², by means of the cam E, causes the arm E' to vibrate, and this vibration, by means of the connecting-rods e , alternately operates the slide c' in the hopper and allows the necessary feed to the molds. One end of the rock-shaft, to which the lever D is rigidly secured, is provided with the arm E' for the purpose of operating the shaft and lifting the lever. This arm is controlled by the eccentric G, secured to the main driving-shaft C', operating through the connecting-rod H and supplementary pivoted rod H', as shown in Fig. 3.

Through the revolving table B' is formed a slot, I, through which I introduce a scraper for the purpose of scraping and cleaning the lower table, A², when necessary to remove any clay therefrom. A stop-brake may be applied to the revolving table, so as to bring the molds directly under the flanges.

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

1. In a brick-molding machine, the revolving table B', provided with openings or molds c , in combination with the table A², provided with the opening a , the plate B³, provided with the pin b , and notched pawl b' , all constructed to operate substantially as and for the purpose described.

2. The revolving table B', provided with the openings or molds c , in combination with the hinged bottoms m , substantially as and for the purpose set forth.

3. The revolving table B', provided with openings or molds c , in combination with the lever D, provided with the plungers d d' , substantially as and for the purpose set forth.

4. The lever D, carrying the plungers d d' , in combination with the trip-hammer D, substantially as and for the purpose set forth.

5. The lever D, carrying the plungers d d' , in combination with the trip-hammer D and shaft C', provided with the cam E, substantially as and for the purpose set forth.

6. The shaft C', carrying the eccentric G and the rods H H', in combination with the rock-shaft provided with the arm D³ and lever D, carrying the plungers d d' , whereby the lever and plungers are raised and lowered, substantially as herein described.

7. The rock-shaft D², carrying the arm E', in combination with the rods e and slides c , substantially as and for the purpose set forth.

MICHAEL FITZPATRICK.

Witnesses:

E. S. KING,

FRANCIS VALLE.