J. B. Curtis,

Brick Machine.

No. 65,351. Patented June 4, 1867.

Fig. 1.

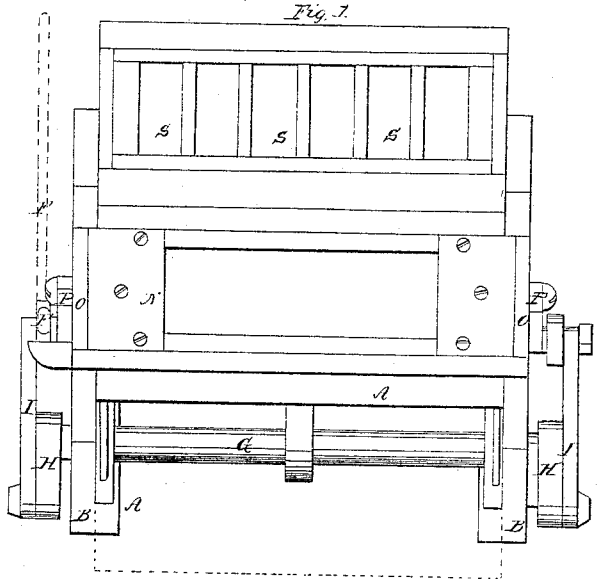


Fig. 2.

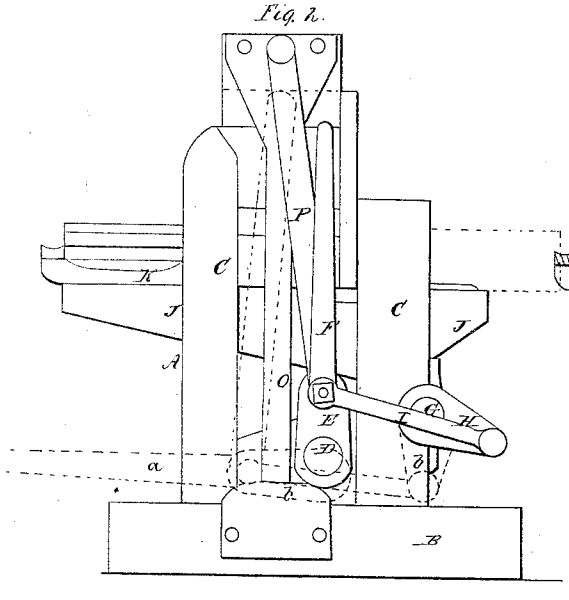
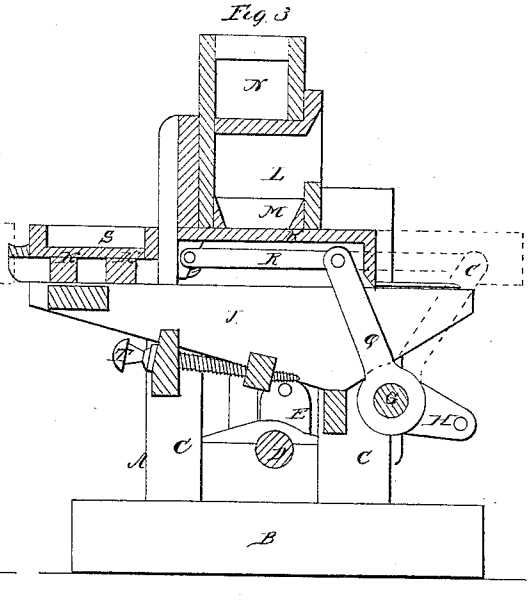


Fig. 3



Witnesses,
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United States Patent Office.

J. B. CURTIS, OF HILLSDALE, MICHIGAN.

Letters Patent No. 65,351, *dated June* 4, 1867.

IMPROVED BRICK MACHINE.

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, J. B. CURTIS, of Hillsdale, in the county of Hillsdale, and State of Michigan, have invented certain new and useful improvements in Brick Machines; and I do hereby declare that the following is a full and complete description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a top view of the machine.

Figure 2 is an end view.

Figure 3 is a vertical transverse section.

Like letters of reference refer to like parts in the different views.

In a strong frame, A, of which B B are ground-sills, C the posts, and which is properly braced and supported by girts and stays, is arranged the machinery, which consists of a central shaft, D, the ends of which project beyond the ends of the frame. Upon these projecting ends are keyed cranks E, fig. 2, one of which is provided with a long lever-arm or lever, F. At the rear of the machine is arranged a similar shaft, G, to which are keyed the cranks H. These cranks E and G are connected to each other by a link, I, and are operated conjointly by the lever F. J J are a pair of inclined planes, the upper edge of which serves as a guide or ways upon which the carriage K slides backward and forward, for a purpose hereafter shown. Immediately above this carriage is a clay-box, L, fig. 3, the bottom of which is a grate or jack-mould, M, which opens directly upon the carriage, and against the bottom of which the top of the carriage rubs as it is made to slide under it. The lower side of the openings of the grate or jack-mould are of the shape and size of a brick, and in number according to the size and capacity of the machine. The upper side of the openings is larger, for the reason that the sides of the divisions are bevelled or flaring, and thus affording greater facility for the tempered clay to pass through. At the top of this clay-box, and closely fitted to the inside of the same, is a follower, N, which is guided and kept in position by the dependent arms O, working in slots or grooves cut in the top and bottom of the sides of the frame. This follower is connected to the crank E by links P, as and for a purpose hereafter described. Q is an arm, keyed to the shaft G, and to which the carriage is attached and operated by the link R, fig. 3.

Having indicated the several parts of the machine and their arrangement, the operation of the same is as follows, viz: The tempered clay is introduced into the box directly from the mill, which is so arranged as to be close to the side opening of the box. The moulding-box S, which conforms in size and number of moulds to the size and number of openings in the jack-mould referred to, is then placed upon the carriage on the front side of the machine. The lever F is drawn forward, and down in the direction indicated by the dotted lines *a*, which, as a consequence, brings the cranks E and H to the position indicated by the dotted lines *b*, and the arm Q and link R to that indicated by the dotted lines *c*, fig. 3. The carriage being connected to the shaft G, as above described, will be drawn under the clay-box, at the same time carrying with it the mould-box S. By the time the lever F has reached an angle of about forty-five degrees, the mould-box S will have been brought under the jack-mould. At this time the follower will begin to descend, and press the clay into the moulds through the openings of the jack-mould, at the same time closing the side opening, and thus shutting off a further ingress of clay. By continuing the descent of the lever, it will bring the follower down upon the top of the jack, and will thus press the clay strongly into the mould-box below, the degree of pressure being more or less, as the difference that the lever is made to descend. On reversing the action of the lever, the follower is raised up and the carriage moved from under the box. The moulding-box is then removed, and an empty one placed upon the carriage, and the operation of filling and pressing again repeated.

It will be seen that as the filled moulds are drawn from under the clay-box, all the surplus clay is scraped off by the edge of the clay-box, and thus the moulded bricks come free and clean from under the machine.

As the edge of the box may wear away by constant use, it is kept in close contact by raising the carriage up by means of the screw T, fig. 3. The effect of this screw is such as to draw the inclined planes forward toward the front end. This will raise the carriage up more or less, as the nature of the case may be; hence at all times the moulds will come clean and free from under the box.

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

The inclined planes J, carriage K, and moulding-boxes S, as arranged in combination with the clay-box L, jack-mould M, and follower N, when operating conjointly for the purpose and in the manner set forth.

The arrangements of the shafts D G, cranks E H, arm and link Q R, in combination with the carriage K, for the purpose and in the manner substantially as described.

J. B. CURTIS.

Witnesses:

H. B. ROWLSON,

MACE TISDALE.