

# ZELORA PHILLIPS.

*Improvement in The Mode of Manufacturing Bricks.*

108511

PATENTED OCT 18 1870

fig. 2

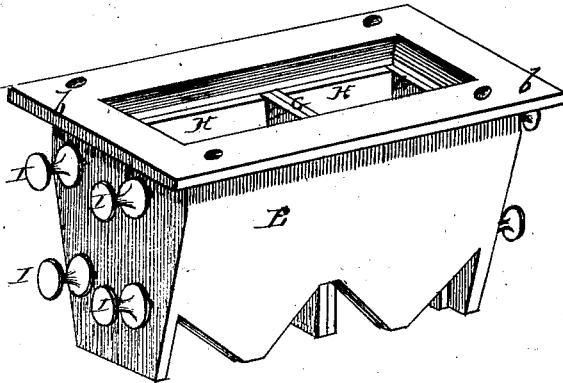


fig. 3

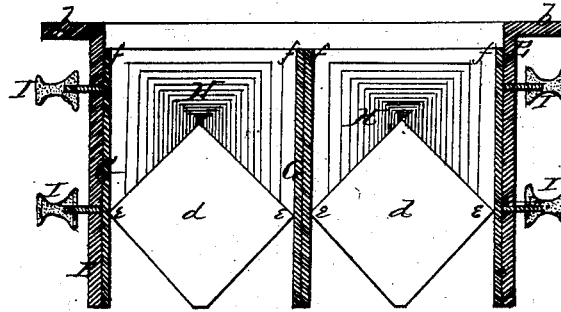


fig. 1

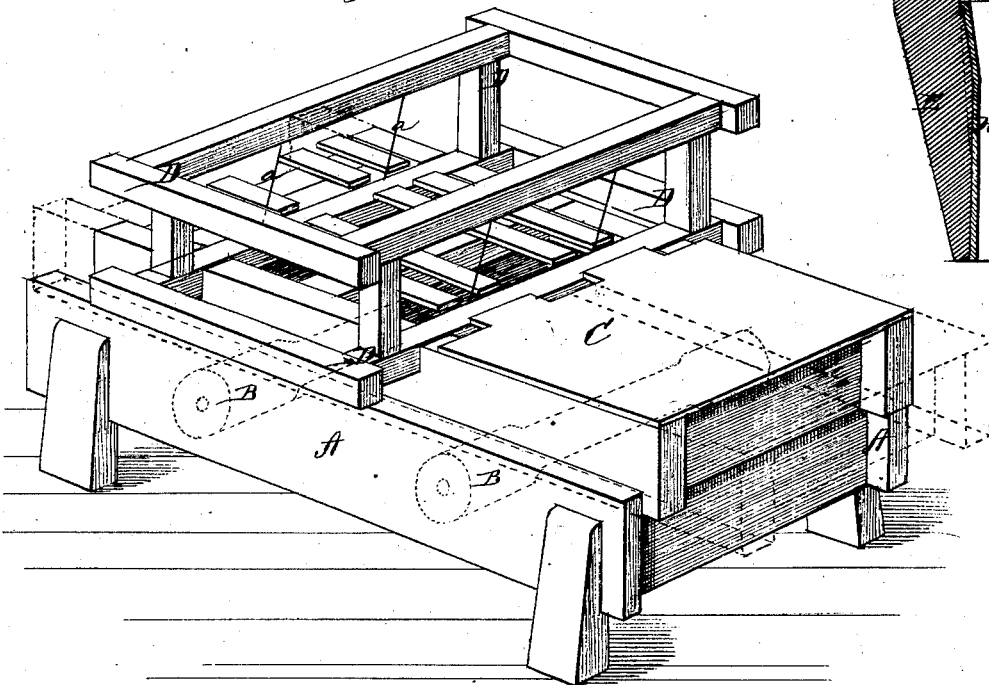


fig. 4

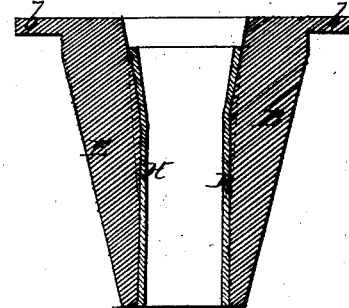


fig. 5



Witnesses:

*Ed. Covert,*  
*A. H. Marr*

Inventor:

*Zelora Phillips*  
*per Alexander Mason*  
*Atty.*

# UNITED STATES PATENT OFFICE.

ZELORA PHILLIPS, OF OSSEO, MICHIGAN.

## IMPROVEMENT IN BRICK-MACHINES.

Specification forming part of Letters Patent No. **108,511**, dated October 18, 1870.

*To all whom it may concern:*

Be it known that I, ZELORA PHILLIPS, of Osseo, in the county of Hillsdale, and in the State of Michigan, have invented certain new and useful Improvements in the Mode of Manufacturing Brick; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in improvements in the construction and arrangement of a brick-machine, as will be more fully hereinafter set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a perspective view of the stationary table, movable table, and gate or cut-off. Fig. 2 is a perspective view of the funnel through which the column of clay is passed out. Fig. 3 is a horizontal section of the funnel. Fig. 4 is a transverse vertical section, and Fig. 5 a longitudinal vertical section, of the same.

A represents a stationary table, of any suitable dimensions, provided with two rollers, B B, upon which rests the movable table C. In this movable table is cut or grooved in the gate or cut-off D, on a level with the face of the table, so that the column or columns of clay may pass over the lower part of said gate or frame. To the gate or frame D are attached wires *a a* in an inclined position, as shown in Fig. 1.

To the tub or grinder (which I have not deemed it necessary to represent in the drawing) is attached a cast-iron frame, E, of oblong shape, which frame is provided with a flange, *b*, through which screws pass to secure it to the tub or grinder.

This frame is placed so that the clay will be forced out horizontally in one or more solid columns, the upper and lower sides of said frame being inclined, so that the outer opening is narrower than the opening next to the grinder. In this frame E are placed one or

more sets of gibs, to form one or more columns of clay. Each set of gibs consists of two end pieces, G G, and a top and bottom piece, H, the set or sets being secured by means of set-screws I I through the ends of the frame.

The top and bottom gibs H H have a diamond-shaped face, *d*, as shown in Fig. 3, nearest the point of delivery, while nearest the point of entrance they are wider as seen in Fig. 4.

It will be observed that the form of the brick or column is complete at the right and left angles *e e* of the diamond face *d*, this point being about two inches in rear of the extreme point of delivery.

The corners from *f* to *e*, being the most open, allow the column to pass out evenly and together; but to still more retard the column, the gibs are extended beyond the point *e e* of its perfect formation, the corners being left entirely open, which completes the column and makes it perfect.

The narrow or end gibs G G are about half an inch wider at the rear opening, or point of receiving the clay from the grinder, than at the point of delivery, which is necessary in order to conform to the shape of the top and bottom gibs. All these gibs are made of steel or other suitable material.

The operation of my machine is as follows: The grinder, being in motion, forces the clay through the gibs in the frame E, making it come out horizontally in one or more solid columns in the exact shape of a brick—that is, of the same length and breadth.

The movable table C is held stationary until the column or columns of clay have passed beyond the wires *a a* of the gate D just so far as it is desired to make the thickness of the brick. Then the table is allowed to move with the columns, and the gate or frame D is moved sidewise, causing the wires *a a* to cut the column smooth and even, making perfectly square brick. The movable table C is then passed back for a new start.

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

1. The combination of the frame E, gibs G

H, and set-screws I, all constructed and arranged substantially as and for the purposes herein set forth.

2. In combination with the frame E and gibs G-H, the gate D, with wires *a a*, and the movable table C, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 23d day of August, 1870.

ZELORA PHILLIPS.

Witnesses:

W. H. GREEN, Jr.,

DORR PHILLIPS.