

*J. Waite,
Brick Press,*

No 3,942,

Patented Mar. 12, 1845.

Fig. 5.

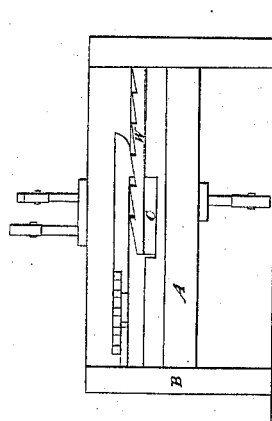


Fig. 4.

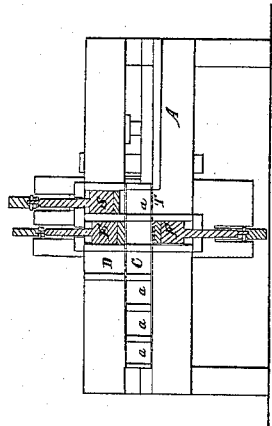


Fig. 2.

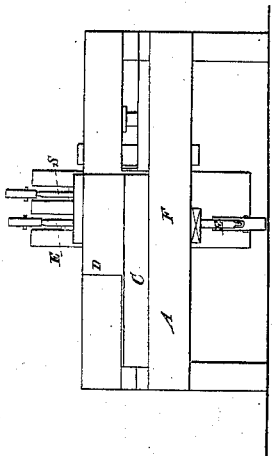


Fig. 6.



Fig. 3.

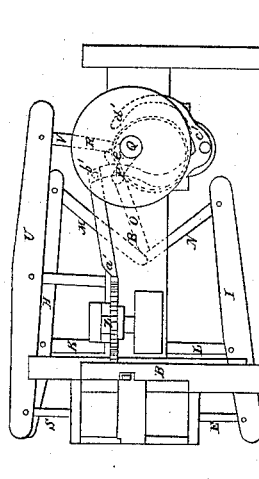
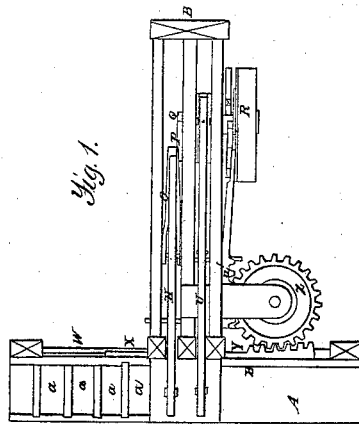


Fig. 1.



UNITED STATES PATENT OFFICE.

JOHN WAITE, OF LEICESTER, MASSACHUSETTS.

BRICK-PRESS.

Specification of Letters Patent No. 3,942, dated March 12, 1845.

To all whom it may concern:

Be it known that I, JOHN WAITE, of Leicester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Machinery for Pressing or Forming Bricks, and that the following description and accompanying drawings, taken in connection, constitute a full and exact specification of the construction and operation of the same.

Figure 1 of the drawings above mentioned represents a top view of my improved brick machine. Fig. 2 is a front elevation thereof. Fig. 3 is a side elevation and Fig. 4 is a vertical transverse section taken through the compressing and discharging pistons, etc.

A long bench or platform A Figs. 1, 2, 3, 4, projecting from a frame B serves to support the brick mold C, which is placed on one end of it and moved toward the other end thereof as will be hereinafter explained.

A hopper or clay conductor D is placed over the bench and on one side of the upper of two compressing pistons E E the bottom of the said hopper being at such a distance from the top of the bench, as to permit the brick mold to just pass freely between them. The brick mold consists of a rectangular frame C having a series of rectangular compartments *a, a, a*, &c., arranged side by side and through it as seen in the drawing, each of the said compartments corresponding in its horizontal section with that of a brick to be made while in its depth it is sufficient to receive the quantity of clay required for the formation of a brick.

The two compressing pistons E F are arranged the one directly over the other, the lower one playing through the bench A, and when depressed to its lowest position its upper surface is in the plane of the top of the bench. Each of these pistons is jointed to the end of one of two levers H I which play upon fulcra, at the ends of arms K L as seen in the drawings, the lower ends of the said arms being jointed to the frame, so that they, the arms, may move a little when the pistons approach or recede from each other, the same being for the purpose of allowing the pistons to move in a vertical direction.

The pistons are operated by toggle joints M N which are moved by a connecting rod O and a crank P placed on one end of a

driving shaft Q, which is put in motion by steam or other proper power applied to a driving pulley R, situated upon the other end of the shaft.

A discharging piston S is placed by the side of, or little in the advance of the compressing pistons as seen in the drawings, and so that when the compressing pistons approach each other and enter one of the compartments of the mold, the said discharge piston shall enter the succeeding compartment thereof or the one beneath it and force out the brick previously formed, the said brick dropping through a suitable passage orifice T cut vertically through the bench immediately below the discharging piston. The discharging piston is worked like the other pistons by a lever V, the said lever being moved by an eccentric upon the driving shaft and a connecting rod, V, extending between them, the same being represented in Fig. 3 by blue lines.

Fig. 5 represents a view of the rear side of one of the molds, there being fixed upon the said rear side a tortled rack, W, having its teeth arranged and formed as seen in the drawings. Into the said rack a catch X (a view of which as detached from the machine is given in Fig. 6) upon the end of a horizontal sliding rack bar Y, plays and so operates therewith at regular and proper intervals of time as to draw the mold forward or cause it to advance between the pistons (immediately after the compressing pistons have receded from each other so far as to pass out of the mold) so as to bring the preceding compartment of the mold into the position required for the pistons to press the next brick.

The rack bar Y, has a reciprocating rectilinear or proper movement given to it by a pinion Z, which operates in it and which is operated by another rack bar *a'* whose teeth engage with the pinion and whose end nearest the driving pulley is jointed to the end of a curved lever *b', c', d'*, which moves on a fulcrum at *c'*, placed beneath the driving shaft and represented in Fig. 3 by dotted lines.

A cam or projection *e'*, extending from the driving shaft, strikes (when the said shaft revolves) first against the arm *b', c'*, of the curved lever so as to force it forward and next against the arm *c', d'*, so as to

force it backward, thus causing the lever to have a reciprocating motion on its fulcrum and thereby move the mold as required.

I claim—

5 The above described manner in which I arrange the parts of my brick machine, which form or compress the brick and afterward discharge it from the mold; that is to say, the arranging and operating them so
10 that while one brick is being compressed in one compartment of the mold by the compressing pistons the discharging piston shall be performing its office of expelling from the mold the brick which had next pre-
15 viously been formed, the mold being pro-

gressively moved forward at regular intervals of time so as to present that compartment of it in which the brick has been compressed to the action of the discharging piston, when the compressing pistons next 20 enter the preceding apartment to effect the formation of a brick therein.

In testimony that the above is a correct specification I have hereto set my signature this twenty-sixth day of October A. D. 1844. 25

JOHN WAITE.

Witnesses:

HORACE PATTERSON,
JAMES M. STODDARD.