





# UNITED STATES PATENT OFFICE.

STEPHEN WATERMAN AND CHARLES LEARNED, OF CHARLESTON, SOUTH CAROLINA.

## MACHINE FOR MOLDING AND PRESSING BRICKS.

Specification of Letters Patent No. 694, dated April 14, 1838.

*To all whom it may concern:*

Be it known that we, STEPHEN WATERMAN and CHARLES LEARNED, of the city of Charleston, in the State of South Carolina, have invented an Improved Machine for Molding and Pressing Brick; and we do hereby declare that the following is a full and exact description thereof.

We usually mount the works of our press in a quadrangular frame, A, A, A, Figure 1, in the center of which there is a vertical revolving shaft B, which is to be turned by horse power, by means of a sweep, or in any other way. Two arms C, C, extend horizontally from the revolving shaft, carrying at their outer ends pieces D, D, which are in the form of inclined planes on their under sides, for the purpose of depressing the pistons E, E, and the slides F, G, by means of which the brick is to be pressed, the piston raised, and the brick carried off, the piston and slides are furnished with friction rollers on their upper ends.

H is the pressing box, into which the clay passes from the mixing tub, which is formed by the body of the machine; the shaft B, having knives upon it which are fixed obliquely, so as not only to mix the clay, but at the same time to force it down and cause it to enter the pressing box H, through an opening for that purpose, a device well known in brick machines.

The pressing box is divided at bottom so as to supply molds for the pressing of four, or any other convenient number of bricks, at one operation, the follower, of course, being adapted in size to the number.

The divisions at the bottom of the box are triangular bars, with one angle uppermost for dividing the clay as it descends.

Under the pressing box there are ways I, I, made of stout timber, as they are to sustain the force of the pressure, the mold being laid upon them, immediately beneath the pressing box.

The piston E may be lengthened or shortened, by the aid of blocks which may be inserted between its two segments, at o, o, and the force of the pressure will be thus regulated. The inclined planes D, D, as they pass over the piston E, cause it to descend and to press the bricks, and immediately

after freeing itself from this it comes into contact with the top of the slide F, which slide has a tappet J upon it, which comes into contact with the lever K, forces it down and raises the piston E, the lower part of the slide F, Figs. 2 and 3, is connected by a jointed piece with an arm M, projecting from the horizontal shaft L, which it consequently turns in descending, drawing back the arm M, which is attached to a slide M' on the ways I, I, Fig. 1, which serves to bring the mold under the pressing box, and to carry it off again when the bricks are formed. The inclined planes come into contact with the slide G, immediately after its escape from the slide F, and this by its descent serves to raise the slide F and to operate the slide which carries the brick molds upon the ways. The manner of raising the slide F, by the intervention of the lever N, will be manifest upon inspection. As there is a considerable amount of upward pressure upon the shaft B, occasioned by the oblique position of the mixing knives, it is necessary that it should have stout shoulders on the under side of the collars within which its upper and lower ends work. The two sides of the frame opposite to those shown in the drawing contain a pressing box, piston, slides, and all the other devices described, for performing similar movements at the same time.

We claim—

The application of inclined planes to the forcing down the piston for pressing brick in the manner described.

We do not claim the mixing, or press boxes, or the oblique knives; these and other parts having been previously known and used; all that we claim as our invention being the inclined planes for forcing down the pistons, and slides, the particular combination and arrangement of the two vertical slides, with their connecting parts, for lifting the piston and causing the molds to traverse upon the ways.

STEPHEN WATERMAN.  
CHARLES LEARNED.

Witnesses:

HENRY GOLDSMITH,  
OLIVER M. SMITH.