

UNITED STATES PATENT OFFICE.

J. L. RANSOM, OF CHARLESTON, SOUTH CAROLINA.

BRICK-MACHINE.

Specification of Letters Patent No. 19,792, dated March 30, 1858.

To all whom it may concern:

Be it known that I, J. L. RANSOM, of Charleston, in the district of Charleston, and State of South Carolina, have invented a new and Improved Machine for Molding Bricks; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a side sectional elevation of my improvement. Fig. 2, is a plan or top view of ditto, the mold or grating being bisected as indicated by the line *x, x*, Fig. 1. Similar letters of reference indicate corresponding parts in the two figures.

This invention relates to an improved machine for molding bricks and is designed chiefly for manual operation.

The object of the invention is to obtain a simple device, that cannot readily get out of repair, and one that may be easily manipulated with but a moderate expenditure of power.

To enable those skilled in the art to make and use my invention I will proceed to describe its construction and operation.

A, represents a framing in the upper part of which a box B, is placed, containing a follower or plunger C. This follower or plunger works horizontally within the box B, and is operated by having segments *a*, gear into racks *b*, which are attached to the under sides of horizontal arms *c*, which project from the back part of the follower.

The segments *a*, are attached to a shaft D which is fitted transversely in the framing A, and has a lever E, attached to one end. Two segments *a*, and two racks *b*, are employed, but one only is shown, see Fig. 1. The face *d* of the follower has an inclined position, its upper end being rather further back than its lower end, and the latter has a projection *e*, attached which serves the office of a scraper as hereinafter shown.

At the front end of the box B, a metal grating F, is placed, and at the upper part of the grating a scraper G, is placed. This scraper has its ends fitted in grooves at the ends of the grating, and arms *f*, which are attached to a shaft H, in the framing fit in the slide so that by turning said shaft H, the scraper may be raised or lowered. The

scraper may be constructed of wood, metal or other proper material.

Directly in front of the box B, a frame I, is placed, in which frame three horizontal rollers *g, h, i*, are placed. The frame I, is in an inclined position and parallel with the grating F, as shown clearly in Fig. 1. The two lower rollers *g, h*, have their journals placed in permanent bearings, but the journals of the upper rollers pass through oblong slots in the side pieces of the frame and are fitted in sliding plates *j, j*, placed one at each side of the frame.

To the upper end of the frame I, two projections *k, k*, are attached one at each side, and these projections form bearings for a shaft J, on each end of which a cam *l*, is placed, said cams being directly behind the plates *j, j*, as shown clearly in Fig. 2. To the shaft J, a lever K, is attached.

Between the frame I, and the framing A, a horizontal bar L, is placed, the ends of which are fitted in rack bars M, M. These rack bars gear into segments N, N, one at each side of the framing, said segments being fitted one at each end of a shaft O, said shaft having a lever P, at one end.

The operation is as follows: The clay may be ground and tempered by any proper means, and is placed within the box B. This box may be placed under any proper mud mill and regularly supplied with tempered clay. The empty molds are placed by the operator one at a time on the bar L. When the box B, is supplied with tempered clay and a mold Q, placed on the bar L, said bar is elevated by turning down the upper end of lever P, and the mold Q is forced upward directly in front of the grating F. The operator then actuates the lever E, and forces forward the follower C, and the clay is forced through the grating F, into the mold Q. The inclined face *d*, of the follower C, has a tendency to force the clay upward into the mold and causes the angles of the same to be well filled and the scraper *e*, prevents the clay from working between the bottom of the box B, and the follower. The follower therefore as arranged works with but little friction, and in a perfect manner. The mold Q, is filled by one movement of the lever F, and follower C, and when filled the operator actu-

ates the lever K, and presses the upper roller *i*, in the frame I, against mold Q, so as to retain said mold while the bar L, is depressed to receive an empty mold which when the bar L, is raised forces upward the filled mold Q, and discharges it upon the upper part of the frame I, the scraper G smoothing off the face sides of the molds, removing all superfluous clay.

0 This machine may be operated with great facility, and in case clay containing stones is used the molds as they are forced out from the machine may be eased so as to allow them to pass out freely by moving back the roller *i*. The machine may be cheaply constructed, and there are no parts liable to get out of repair.

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

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1. The box B, provided with the follower C, in combination with the roller frame I, feeding bar L, and scraper G, when the whole are arranged relatively with each other, so as to operate substantially as and for the purpose set forth.

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2. I also claim the adjustable roller *i*, arranged as shown, and operated by means of the cams *l*, on shaft J, substantially as and for the purpose set forth.

J. L. RANSOM.

Witnesses:

D. H. KINNER,
H. N. RANSOM.