

BRICK-MACHINE.

Patented Aug. 8, 1876.



WITNESSES:-

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UNITED STATES PATENT OFFICE.

JOSEPH O. SEYMOUR AND SAMUEL G. DAVIS, OF BALTIMORE, MARYLAND,
ASSIGNORS OF ONE-THIRD OF THEIR RIGHT TO JOHN W. LANCASTER,
JR., OF SAME PLACE.

IMPROVEMENT IN BRICK-MACHINES.

Specification forming part of Letters Patent No. **180,941**, dated August 8, 1876; application filed
June 16, 1876.

To all whom it may concern:

Be it known that we, JOSEPH O. SEYMOUR and SAMUEL G. DAVIS, both of the city of Baltimore, and State of Maryland, have invented certain new and useful Improvements in Brick-Machines, of which the following is a specification; and we do hereby declare that in the same is contained a full, clear, and exact description of our said invention, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

The machine incorporating our improvements, as hereinafter set forth, consists, broadly, in one in which tempered clay, placed in a cylindrical chamber, is disintegrated and mixed by revolving cutters, and forced, by means of spiral revolving wings, through apertures in the bottom of the cylinder, and into suitable molds, which molds, when filled, are carried mechanically under rolls, and the clay subjected to a heavy pressure, for the purpose of increasing its density.

In the description of the above machine which follows, due reference must be had to the accompanying drawing, forming a part of this specification, and in which—

Figure 1 is a longitudinal section of our improved machine, and Fig. 2 an end view of the same.

Similar letters of reference indicate similar parts of the invention in both views.

A is the clay cylinder, and B a shaft, adapted to rotate centrally thereof, in a vertical position. C C are cutters, secured to the shaft B in such manner as to admit of their being placed at any desired angle, the means of attachment being cylindrical extensions of the cutters which pass through the shaft, and are secured by nuts. The shaft B is revolved through the medium of the gear-wheels *a*, from a shaft, *b*, driven, preferably, by a belt and pulley. The clay-cylinder A rests upon a bed-plate, D, elevated upon columns *c*, which bed-plate, in addition to its other uses, forms the step for the revoluble shaft B. The upper end of the shaft B passes through a plate, E, which supports the bearings for the shaft *b*. F F are endless bands, running over pulleys *d*, and provided with the

cross-bars *e*, placed at such distances apart as to correspond with the length of the molds *f*, which rest upon the belts and between the said bars. Of the two pulleys *d*, carrying each endless band, one thereof is constructed to revolve in the frame in which one of the rolls G, before alluded to as adapted to subject the clay in the molds to a heavy pressure, rotates, while the other one is merely a stand fitted to hold the boxes *g*, in which the pulley-spindle rests. The desired tension of the endless bands is obtained by the adjustment of the set-screws *h*, which bear against the spindle-boxes *g*. A portion of the endless bands below the bed-plate D is supported in a straight line by a system of rollers, *g'*, in a frame secured to the foundation of the machine. The molds, when receiving the clay, are thus held to the under side of the bed-plate without placing an undue strain upon the belts. The endless bands are operated separately, by means of the belts H and pulleys I, or by chains, in combination with chain-wheels, as may be found most satisfactory in operation.

Parts of the invention not yet alluded to will be fully described, and their uses and offices set forth, in the description of the operation of our improved brick-machine, which follows: The machine having been placed in motion, one of the molds *f*, consisting of a box divided into compartments corresponding in size to that of the bricks to be made, and furnished with a loose bottom board, *f'*, to which it is connected by hooks and staples, or other equivalent device, is placed upon the exposed end of each of the endless bands F. During this operation, tempered clay is thrown into the clay-cylinder A, where it is disintegrated and mixed by the cutters C, and forced through the feed-apertures K in the bed-plate D, to the molds *f*, by the revolving spiral wings L, secured to the shaft B, near to the bottom of the cylinder. The filled molds are finally conducted to the rolls G, under which they pass, the clay being thereby compressed and increased in density. As the molds issue from beneath the rolls, the superfluous clay projecting above the said molds is planed off by the

hinged knives M. The knives M are provided with weighted levers N, to give them the necessary stability in the planing operation.

In the manufacture of bricks by means of our improved machine, clay may be used of a consistency about the same as that usually employed in making bricks by hand, as the bricks are removed from the machine to the drying-floor, in the molds, and are not subjected to direct handling. This advantage will be readily understood by practical brick-makers. The bricks may also be made with sanded sides, which tend to heighten their color and enhance their value.

Having thus described our invention, what we claim as new, and wish to secure by Letters Patent of the United States, is—

1. The clay-cylinder A, shaft B, cutters C, and spiral wings L, combined with the perfo-

rated bed-plate D, endless bands F, molds *f*, and rolls G, substantially as herein specified.

2. The combination of the endless bands F, pulleys *d*, system of supporting-rollers *g'*, and adjusting set-screws *h*, substantially as herein described.

3. In combination, with the endless bands F and molds *f*, the rolls G, and the stands supporting the same, knives M, and weighted levers N, substantially as described.

In testimony whereof we have hereto subscribed our names this 29th day of May, in the year of our Lord 1876.

JOSEPH O. SEYMOUR.
SAMUEL G. DAVIS.

Witnesses:

J. M. MYERS,
W. W. WHARTON.