



# UNITED STATES PATENT OFFICE.

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TO SAID CLARK AND JOHN O'FERRALL & CO., OF SAME PLACE.

## IMPROVEMENT IN TILE-MACHINES.

Specification forming part of Letters Patent No. **191,313**, dated May 29, 1877; application filed  
March 12, 1877.

*To all whom it may concern:*

Be it known that we, GEORGE S. CLARK and WILLIAM M. PURSELL, of Piqua, in the county of Miami and State of Ohio, have invented a new and useful Improvement in Tile-Machines, of which the following is a specification:

Figure 1 is a side elevation, in part section, of a part of a tile-machine embodying our invention. Fig. 2 is a transverse section on line *y y* in Fig. 1. Fig. 3 is a transverse section on line *x x* in Fig. 1.

Similar letters of reference indicate corresponding parts.

Our invention relates to the shaft and journal boxes of the machines; and it consists, mainly, in the combination of a square or polygonal shaft with collars that form the journals of the same, and with journal-boxes and their supports.

In the drawing, A is the main shaft of a tile-machine, which is, preferably, square, but which may be of any other polygonal form. B B<sup>1</sup> B<sup>2</sup> are flanged collars, that are placed on the shaft, and secured by pins. The flanges of the collars B B<sup>1</sup> are uppermost, while the flange of the lower collar B<sup>2</sup> is reversed, being at the lower side of the collar. The upper collar B is journaled in a box, C, formed in the yoke E, that is attached to the upper side of the tempering box or cylinder of the tile-machine, and the collar B<sup>1</sup> is journaled in the bush-box C<sup>1</sup>, which is fitted to the upper

plate E<sup>1</sup>, and the collar B<sup>2</sup> is journaled in the bush-box C<sup>2</sup> in the bottom plate E<sup>2</sup>. The bush-boxes C<sup>1</sup> C<sup>2</sup> are fitted to hexagonal holes in the plates E<sup>1</sup> E<sup>2</sup>, to prevent them from turning. The flanges of the collars B B<sup>2</sup> sustain the weight of the shaft, and the collar B<sup>2</sup> takes the upward thrust of the shaft when it is raised by the tempering-blades. The socket D for the sweep, the tempering-blades, and the cams F between the plates E<sup>1</sup> E<sup>2</sup>, which move other parts of the machine, are fitted to the square or polygonal shaft. No keys are required to prevent the various parts from turning on the shaft.

By removing the pins that hold the collars, and other parts carried by the shaft, the shaft may be easily taken out.

It is obvious that the improvement is applicable to brick-machines, and other similar machines.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

A vertical sweep-shaft for tile and other machines, having between itself and its bearings C C<sup>1</sup> C<sup>2</sup> the flanged collars B B<sup>1</sup> B<sup>2</sup>, as and for the purpose specified.

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Witnesses:

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