

No. 689,651.

Patented Dec. 24, 1901.

S. McADOO.
BRICK CUTTER.

(Application filed Feb. 14, 1901.)

(No Model.)

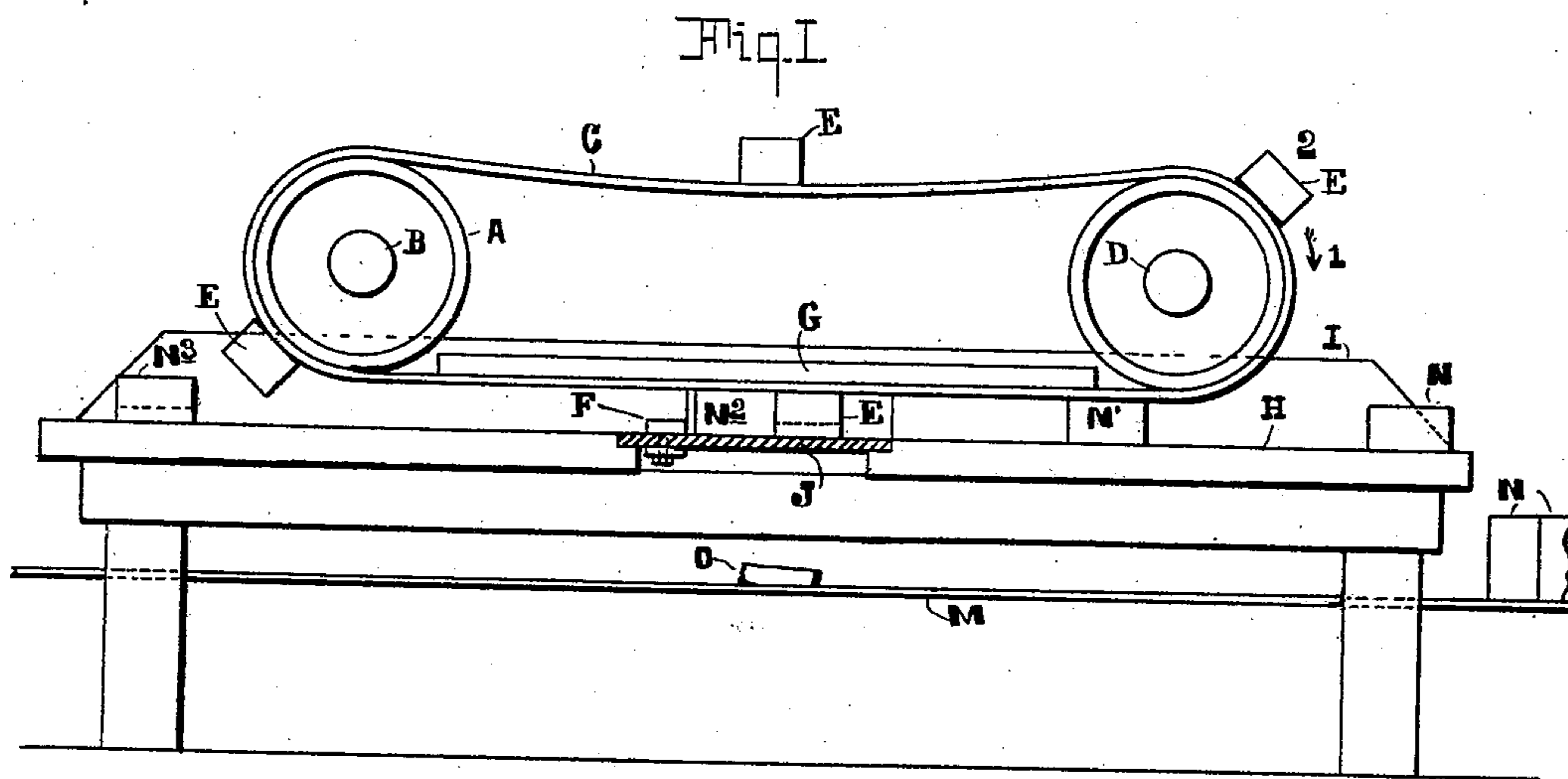


Fig. IV.



Fig. V.

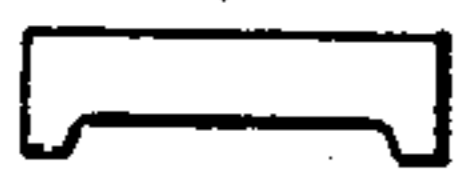


Fig. II.

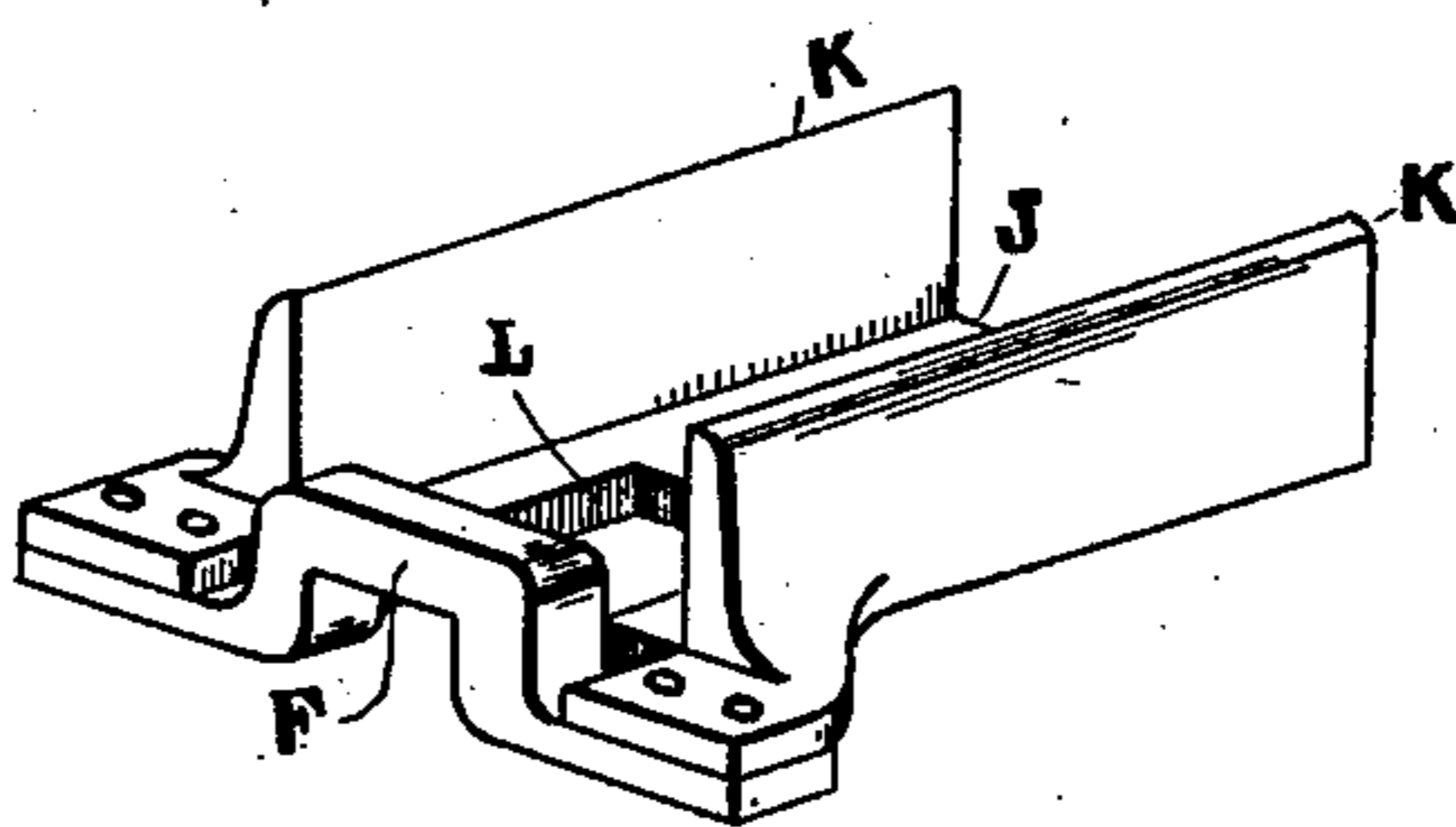
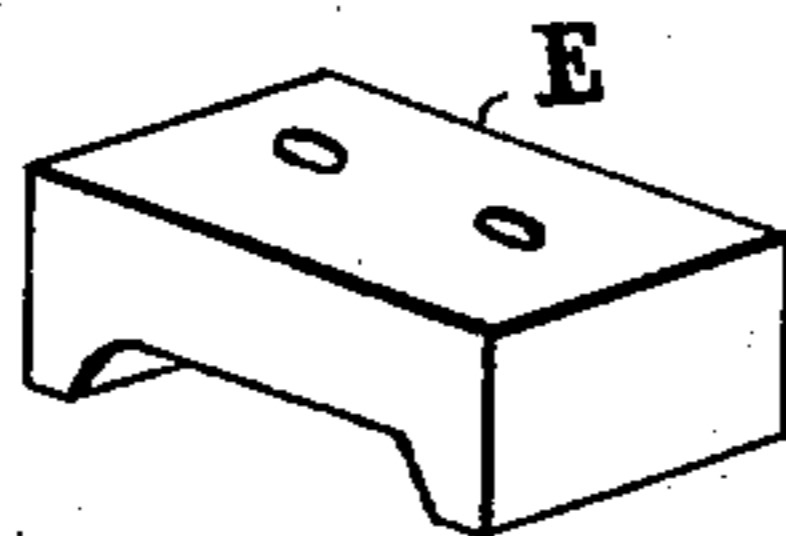


Fig. III.



WITNESSES

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UNITED STATES PATENT OFFICE.

SAMUEL MCADOO, OF TORONTO, OHIO, ASSIGNOR TO AMERICAN CLAY MANUFACTURING COMPANY OF NEW JERSEY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF NEW JERSEY.

BRICK-CUTTER.

SPECIFICATION forming part of Letters Patent No. 689,651, dated December 24, 1901.

Application filed February 14, 1901. Serial No. 47,216. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL MCADOO, a citizen of the United States, residing at Toronto, in the county of Jefferson and State of Ohio, have invented or discovered new and useful Improvements in Brick-Cutters, of which the following is a specification.

In the accompanying drawings, which make part of this specification, Figure I is a side view of my brick-cutter, showing one side of the metal guideway broken away. Fig. II is a perspective view of the metal guideway and the stationary dies attached thereto. Fig. III is a perspective view of one of the movable dies. Fig. IV is a side view of a freshly-molded brick. Fig. V is a side view of a channeled brick.

My invention relates to machines for forming channels, grooves, or irregular shapes in freshly-molded bricks.

Prior to the present invention the method of forming kiln-bottom bricks was to cut by hand a channel in the freshly-molded clay. This necessitated a large number of skilled laborers, increased shop space, and usually resulted in an inferior grade of brick.

The object of the present invention is to increase the output of brick, decrease the number of skilled laborers, and assure a uniform standard or grade of brick. The mechanism by which I accomplish this will be fully understood by those skilled in this art by reference to the specification and drawings.

A represents a pulley mounted on shaft B, said shaft being capable of adjustment, so that the slack of the belt C can be taken up.

D represents a non-adjustable pulley.

E E are punches secured to the outer face of the belt C. These punches are formed on their projecting ends and top to mesh with a corresponding die F. This die can also be shaped to form grooves or irregular surfaces in freshly-molded bricks. The die and punches indicated in the drawings are used for forming what is known to the trade as "kiln-bottom" bricks.

G is a stationary support which prevents vertical displacement of the belt and punches E E while in operation.

H is a table having guides I I, only one—the back guide—being shown.

J is the metal guideway, having flanges K K, these flanges keeping the brick from being displaced laterally while undergoing the action of the punches and die.

L is a slot in the metal guideway.

The stationary die F is secured, preferably, to the end of the metal guideway J.

M represents an endless belt or carrier and is used for conveying the freshly-molded bricks N N to the die-machine and is also used to remove the clay offal O.

N' represents a brick in position to be pushed toward the stationary die, N² a brick about to be pressed, and N³ a brick after being channeled.

The operation of my invention is as follows: The endless belt C, revolving in the direction indicated by arrow 1, carries the punches E E forward and around the pulleys A and D. When a punch E is in the position indicated by 2, a brick N is pushed under the pulley-wheel D to the position indicated at N', and the punch E, passing around the pulley-wheel D, presses against the brick at N' and moves it forward through the metal guideway J, as indicated at N². The brick is next forced against the stationary die F. The inner sides and top of the punches E E fit snugly around the outer sides and top of the stationary die F. The forward lower central portion of the brick is pressed against the stationary die F, and movable punch E presses against the upper and side portions of the rear end of the brick. As the punch E moves forward and past the stationary die F the lower central portion of the brick is forced out and drops through a slot upon the carrier-belt M. The brick after passing through the operation of the punches E and die F is carried forward by punch E and deposited at the end of the table, as indicated by N³.

I have described the die and punches in operation on freshly-molded bricks; but it is not my intention to limit the invention to brick-machines, as the broad principle of a punch or punches suitably housed and attached to any mechanism that will carry them

around to and past a stationary die located in line of travel, whereby the object to be stamped, cut, or otherwise operated upon by dies of this type, is included in this invention.

Having described my invention, I claim—

1. In brick-machines, a punch, means for moving said punch continuously forward in one direction, a stationary die, said die forming a stationary projection in the line of travel of said punch whereby an unburned brick is channeled by the action of said punch and die.

2. In brick-machines, a punch, means for moving said punch continuously forward in one direction, a stationary die, said die forming a vertical stationary projection in the line of travel of said punch whereby an unburned brick is channeled by the action of said punch and die.

3. In brick-machines, a punch, means for moving said punch continuously forward in one direction, a guide, a stationary die secured at one end of said guide, said die forming a vertical projection in the line of travel

of said punch, whereby an unburned brick is channeled by the action of said punch and die.

4. In a brick-machine, a stationary die, a punch, means for moving said punch continuously forward and in one direction, a guide in line with said punch, and a slot in advance of said stationary die whereby the offal is permitted to fall clear of said guide.

5. In a brick-machine, a stationary die, a punch, means for moving said punch continuously forward and in one direction, a guide in line with said punch, a slot in advance of said stationary die whereby the offal is permitted to drop clear of said guide and an endless conveyer traveling in a line with said punch and said slot whereby bricks can be brought to the machine and the offal removed.

Signed at Toronto, Ohio, this 1st day of February, 1901.

SAMUEL McADOO.

Witnesses:

GUY JOHNSTON,
W. C. WHITTEN.