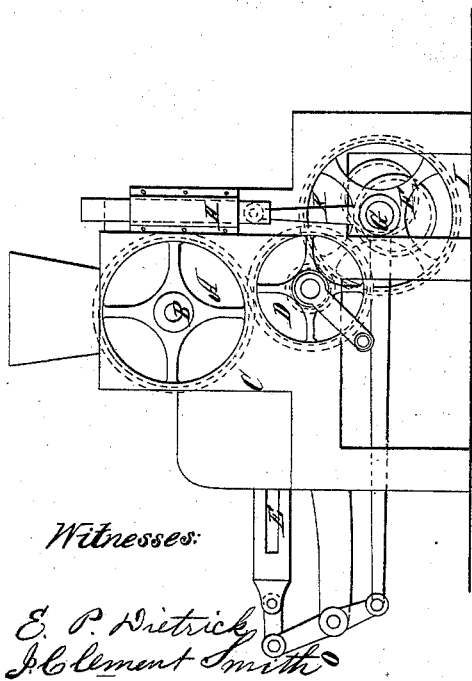
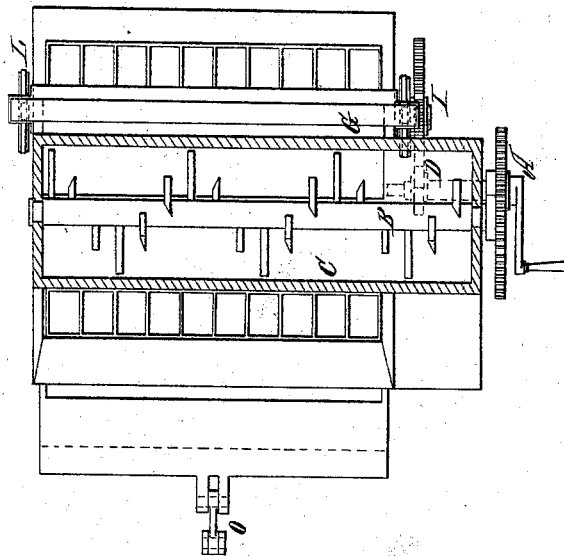
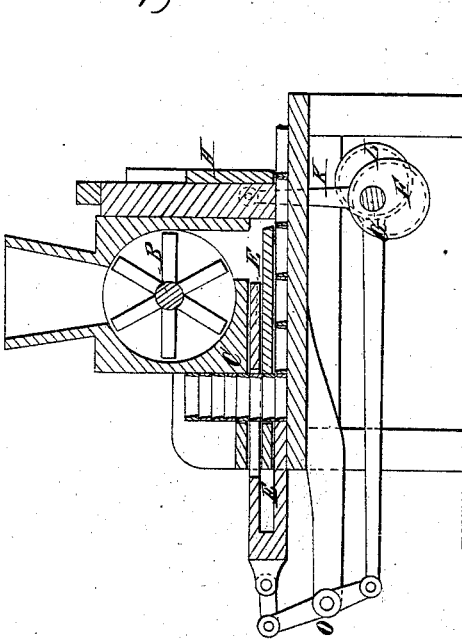


A. R. Mc Nair, Brick Machine.

N^o 54,752.

Patented May 15, 1866.



Witnesses:

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UNITED STATES PATENT OFFICE.

A. R. MCNAIR, OF NEW YORK, N. Y.

IMPROVED BRICK-MACHINE.

Specification forming part of Letters Patent No. 54,752, dated May 15, 1866.

To all whom it may concern:

Be it known that I, ANTOINE R. MCNAIR, of the city, county, and State of New York, have invented a new and valuable Improvement in Brick-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

The object of my invention is to provide means for manufacturing bricks with greater rapidity and in greater perfection than has been possible by the means heretofore devised.

To this end I construct a machine as represented by the drawings, in which letter A is a cog-wheel attached to the front end of a shaft, B. This shaft B extends from the right-hand side to the left of my machine, through the center of the mortar-box, and revolves on boxes or bearings at each end thereof. I attach knives to this shaft, which are made in the form of a right-angled triangle, and extend from the shaft to near the top and bottom of the mortar-box. The office performed by these knives is to mix and temper the mortar in the box. Being made in the form of a right-angled triangle and adjusted on the shaft at proper distances from each other, they perform their functions with certainty and regularity, moving the mortar from the right to the left or from the left to the right, as may be most desirable, the direction given to the mortar depending upon the position in which I place the hypotenuse sides of the triangular knives.

My mortar-box is marked C on the drawings, and has a hopper through which the mortar is introduced. Its top is made circular on the inside, and is so adjusted as to open easily on hinges. The front side of my mortar-box is also made in a circular form. The rear side of the lower half of this box is made upright, and I sometimes place a slide therein, by which I regulate the flow of the mortar to the board which divides the slide-boards, hereinafter mentioned.

Letter D is a cog-wheel and shaft, to which I attach the crank or belt-drum, by which the machinery is moved. Its cogs mesh with the cogs on cog-wheel A.

E is a sliding board, that carries the molds under the mortar-box and delivers them on

the platform on the rear of the machine. E is a similar board, the office of which is to force the mortar into the molds when they are being moved under the presser. These boards E and E are constructed hollow, as represented on the drawings, to afford a space for the molds, and the lower side of the front E is cut out to allow the molds to fall on the rear E, and from thence, one at a time, on the bottom board of the machine, which is effected by the front E being withdrawn from under the pile of molds. E and E are connected together at their outer edges. Between them is a piece of timber, to which they are firmly attached, the thickness of which is equal to the thickness of board separating slide-boards E and E, so as to allow the latter to slide easily in the spaces allotted to them in the machine.

The piece of timber separating E and E is connected with and worked by a series of levers and shackle-hinges, as shown at O. The lower lever of this series is placed in a horizontal position, and is connected, by an eccentric, F, with the shaft G.

The shaft G extends across the lower side of the machine from right to left, and has a cog-wheel at its right-hand end, (marked I,) which meshes in a small cog-wheel near the inner end of the wheel and shaft, (marked D.)

The shaft G has three eccentrics—one at each end and the other at or near its center. The central eccentric is connected with the lever last mentioned, and the others are connected with and operate the presser, hereinafter described.

My presser is marked H on the drawings. It is a square frame of strong timbers or iron bars, the sides of which work vertically in suitable bands or T-slide heads attached to the sides of the machine, and it has a firm central beam or board of the same length and width as the top of the molds, respectively. It also has hinges at the lower ends of the side beams, by which it is connected with the pitmen K.

The pitmen K are connected at their upper ends with the said side beams, and their lower ends are attached to the eccentric-wheels L L.

I sometimes construct my machine in such a manner as to dispense with the small wheel on shaft D. In that case I bring the cog-wheels A, D, and I on a line, and adjust them in such a manner that the cogs of D shall mesh

into those of A and I, D being between them. I sometimes dispense with the wheel D and its shaft. In that case I bring the cog-wheels A and I on a line, and adjust them in such a manner that their cogs shall mesh into each other.

My machine is operated as follows, namely: I place the mortar in the hopper and put the machine in motion. I next place the molds in the opening on the front side of the machine, piled one upon the other. The molds are taken from the pile, one at a time, and moved backward under the mortar-box by the rearward movement of the lower sliding board. At the same time the upper sliding board shoves the mortar from the board that separates the two slide-boards into the molds, and the latter pass under the presser. After being pressed the molds are forced onto the platform on the rear of the machine and the bricks therein are ready to be taken to the yard for drying.

My device of feeding the molds sidewise

and in a pile to the machine from the front side possesses great advantages over the usual method of passing such molds through an opening in the side of the machine one at a time; and my arrangement of the various parts enables me to work the machine with greater velocity and turn out bricks in the mold at a rate of speed heretofore unparalleled.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. Feeding the molds to a brick-machine, and in a pile, from the front side, substantially as specified.

2. The eccentric wheels F and L L, in combination with shaft D, levers and hinges O, presser H, and sliding boards E and E, as described, constructed and arranged substantially as and for the purposes set forth.

A. R. McNAIR.

Witnesses:

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