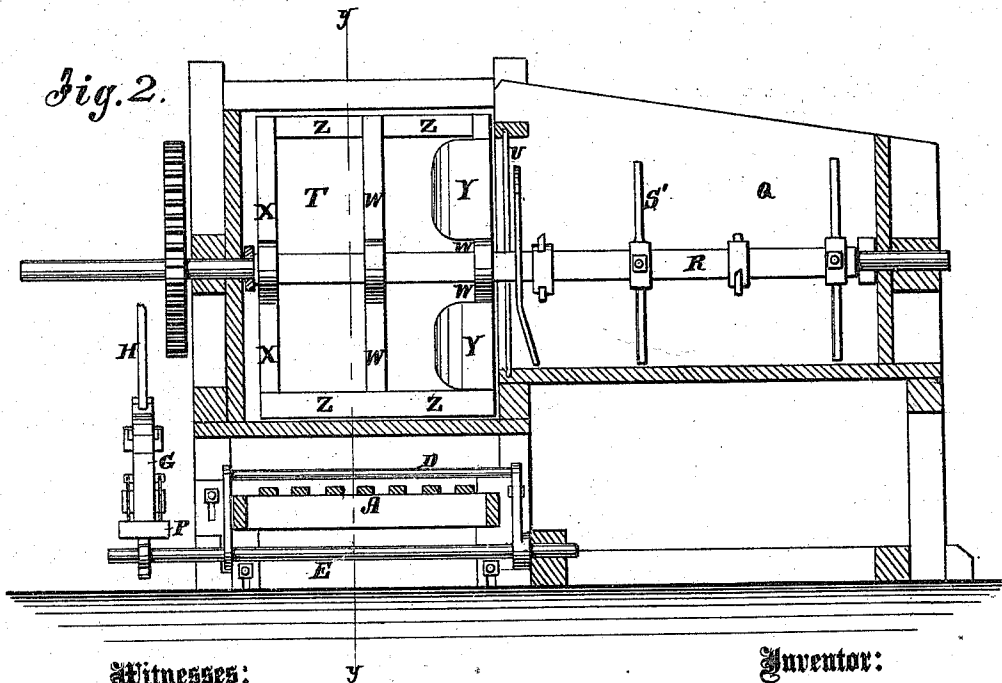
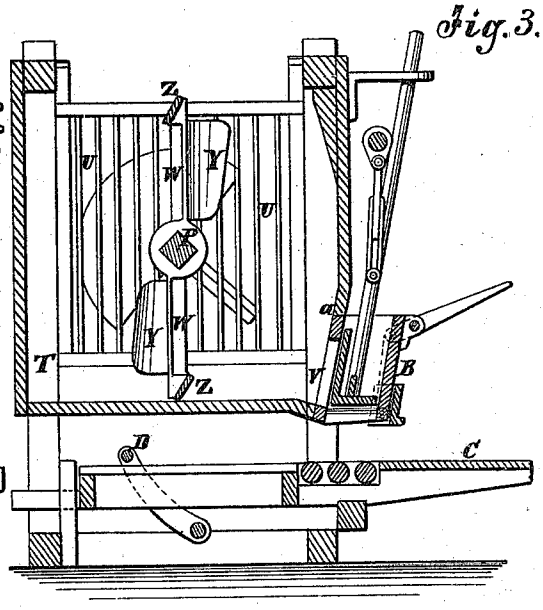
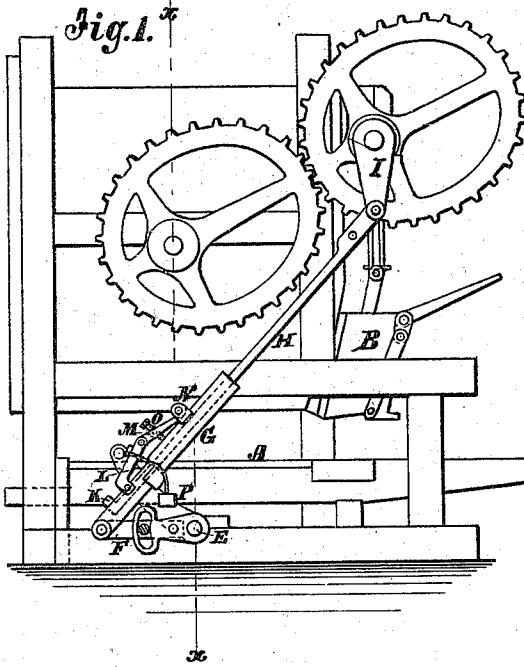


P. K. DEDERICK.
Brick-Machines.

No. 142,375.

Patented September 2, 1873.



Witnesses:

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UNITED STATES PATENT OFFICE.

PETER K. DEDERICK, OF ALBANY, NEW YORK.

IMPROVEMENT IN BRICK-MACHINES.

Specification forming part of Letters Patent No. **142,375**, dated September 2, 1873; application filed December 21, 1872.

To all whom it may concern:

Be it known that I, PETER K. DEDERICK, of Albany, in the county of Albany and State of New York, have invented a new and Improved Brick-Machine, of which the following is a specification:

The invention consists in the improvement of brick-machines, as hereinafter fully described and pointed out in the claims.

Figure 1 is an end elevation of a brick-machine, showing the application of my improved tripping device to the power apparatus for pushing out the mold-boxes. Fig. 2 is a longitudinal sectional elevation taken on the line *x x* of Fig. 1, and showing the attachments to the mixer-shaft, and the relative arrangement of it with the clay-holder and the discharging-throat, by which it is adapted for mixing the clay and discharging it. Fig. 3 is a transverse sectional elevation of the machine taken on the line *y y* of Fig. 2, and showing the arrangement of the press-box.

Similar letters of reference indicate corresponding parts.

A represents the ways, whereon the mold-boxes are placed to be pushed forward under the press-box B to be filled, and thence out upon the platform C, from which they are removed. D represents the pusher, in front of which the boxes are placed, and by which they are pushed along intermittingly. It swings on the rock-shaft E, on which is a crank, F, to which the part G of a connecting-rod, composed of the parts G H, is connected, the part H being connected to the crank I, which works the rock-shaft by these devices. The part H of the connecting-rod is arranged in the part G, so as to slide during part of the movement, the pusher stopping in the back movement before the part H ceases moving in that direction, and being set in motion in the forward direction when on the return movement of the said part H, a lug, K, on it comes up to a stop on the part G, which prevents it from sliding any further on said part G, and so connects the latter that it must move with part H. Now, instead of having this stop so as to make a positive connection, I propose to fix it in the form of a kind of latch, L, with one end merely resting on the part G of the connecting-rod, while the other end is pivoted to one end of a

bar, M, which at its other end is pivoted to the part G, as shown at N, and this bar M has a screw, O, between its connections acting against rod G, so as to deflect its joint with the latch more or less from a right line between pivot N and the end of the latch, which rests on the rod G, and acts as the aforesaid stop for connecting the parts G and H of the connecting-rod, to cause the latter to actuate the rock-shaft. A weight, P, is suspended from the latch in such manner as to constantly pull the parts toward the aforesaid right line, but the screw O holds the joint above the said right line, so that a certain amount of force delivered on the end of the latch-piece by the lug K will raise the weight and double up the latch and bar M, so as to allow the rock-shaft and pusher to remain at rest while the driving-crank I and the part H of the connecting-rod continue their movements, thus throwing the power off from the pusher. By the weight and the screw the tripping-latch and bar M are so adjusted that the requisite force for pushing out the mold-boxes will be sustained without tripping, but any considerable increase such, as will be caused by the binding of the mold-boxes by a stone or the like wedging in between them and the press-box, will instantly cause the tripping of the latch, and thus save breaking the machinery. Q represents the part of the mill in which the mud or clay is supplied. R is the mixer-shaft, and S the mixing arms or blades proper. T is the part of the mill comprising the mixed-clay holder, into which the clay is delivered from the part Q through the screen U, and from which it is delivered through the throat V into the press-box B.

As the machines of this character have been heretofore made, the mixing-box Q and the mixer-shaft were placed enough higher than the bottom of the mixed-clay holder T to afford room in the latter below the shaft R for a special discharging apparatus, consisting of a horizontal shaft with blades upon the ends of arms, which was arranged under the shaft R, and provided with gearing for turning it, and the mixer-shaft was provided with the ordinary mixing-blades S' throughout its whole length. This arrangement was necessary for the lack of any practicable arrangement of contrivances on the mixer-shaft by which the clay

could be at the same time worked along the mixed-clay holder laterally and discharged, and the clay be of the same consistency throughout the length of the press-box; but the said arrangement is objectionable, on account of the extra height and cost involved, and its connection highly desirable, which I have effected by the use, on the mixer-shaft in the mixed-clay holder, of the broad arms W with their planes oblique to the axis of the shaft; the arms X with their planes parallel with the axis of the shaft; the oblique vanes Y on the arms W, next to the screen; and the discharging-blades Z on the ends of the arms, the said blades being slightly spiral to the shaft, also tangential to a circle about two-thirds of the size of the one described by the outer edges of the blades.

The oblique or spiral inclinations of the arms, vanes, and blades are all, of course, in the direction required for working the clay across the mixed-clay holder from the screen, while the shaft turns in the direction for pushing the mixed clay out through the throat V.

With these devices arranged on the mixer-shaft, substantially as represented in the drawing, I am enabled to dispense with the special discharger heretofore used, and to lower the mixer-shaft relatively to the mixed-clay holder, so that they take the place of it, and while serving to discharge the clay they are equally as efficacious in mixing and tempering it as the old arrangement.

To accomplish the third part of my invention, I construct the lower part, *a*, of the side of the case of the mill, whereon the press-box B is arranged, so as to incline inward as much as possible into the angle of the lower part of the case cut off by the circle described by the discharging-blades, and construct the press-box on the same inclination and attach it to the said part, all as clearly shown in Fig. 3, and so considerably lessen the waste space through which the clay has to be pushed, and also lessen the mass of clay to be moved, and thereby economize power.

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

1. The combination, in a brick-machine, of a mixer having aperture V, broad arms W obliqued to axis of shaft, arms X parallel to said axis, oblique vanes Y, and spirally-arranged blades Z, with a press-box, B, arranged as described.

2. The loose-weighted latch L and hinged bar M combined with parts G H, as and for the purpose described.

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Witnesses:

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