PATENTED DEC 13 1870

J. M. Austin's Brick Machine.

109997

Fig. 3.

Fig. 1.

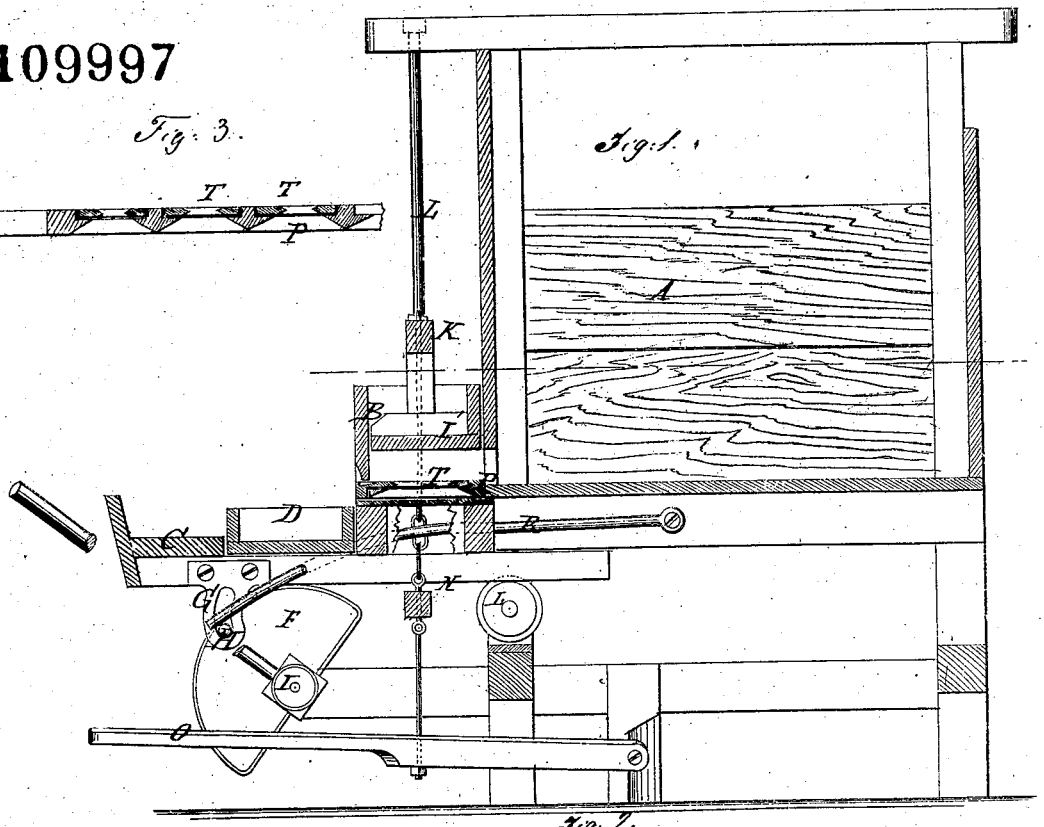
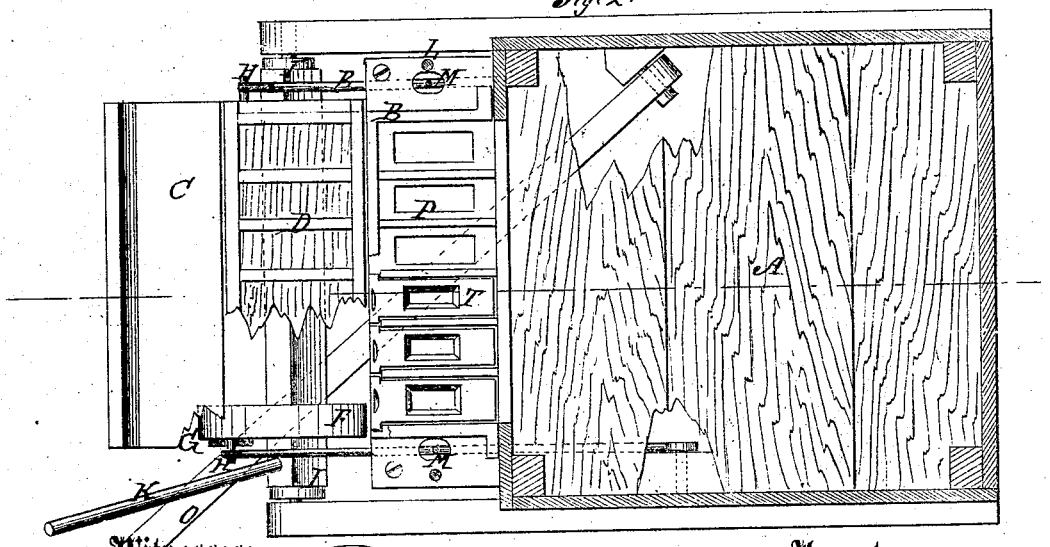


Fig. 2.



Witnesses:

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JAMES M. AUSTIN, OF GEORGETOWN, MISSOURI, ASSIGNOR TO ISAAC TURNER, OF SAME PLACE.

Letters Patent No. 109,997, dated December 13, 1870.

IMPROVEMENT IN BRICK-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES M. AUSTIN, of Georgetown, in the county of Pettis and State of Missouri, have invented a new and improved Brick-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to improvements in brick-machines, and consists in an arrangement of the mold-carriage on a pair of flanged rollers at the rear, and a pair of plane-faced rollers at the front, the latter being connected by vertically-slotted plates on the carriage and pins on the sides of the rollers in such a way that the carriage, which is moved in and out by the turning of the shaft of the front rollers, will be very accurately guided by the said flanged plates, and the movement each way will be arrested at the proper time by the pins coming against the bottoms of the slots.

The invention also consists in the connection of the press-operating devices with the carriage-operating devices in such a way that the rising of the press at the time of the outward movement of the carriage will always be insured.

The invention also consists in the application to the grate, through which the clay is pressed, of detachable plates, with holes through them for forcing the clay through, so that plates with larger or smaller holes may be used, according to whether the clay is thick or thin, the flow of which into the molds varies according to its consistency, which flow it is the object of this part of the invention to regulate.

Figure 1 is a sectional elevation of my improved machine, taken on the line *x x* of fig. 2.

Figure 2 is a horizontal section on the line *y y* of fig. 1, with some parts broken out.

Figure 3 is a section through the grate.

Similar letters of reference indicate corresponding parts.

A is the mud-mixing case, and

B, the press, which may be of ordinary construction.

C is the carriage for moving the brick-molds D under and away from the bottom of the press.

It is highly essential to the successful working of the machine that this carriage work so as not to have any considerable lateral variation, and that it stop exactly at the right point in each movement. To this end I arrange the inner end on the flanged rollers E to roll in and out on them, and be guided laterally by the flanges.

The outer end is arranged on the large plane-faced rollers F, and the slotted flanges are arranged on the carriage to project downward, one on the outer side of each roller, snugly against the said side, and receive a pin, H, projecting from the wheel into the slot, as shown in fig. 1.

The greater part of the weight of the carriage is borne by these rollers, and the motion is imparted by the turning of the shaft I through the medium of the lever K, rolling the said carriage back and forth mainly by the frictional contact, but the slotted plates G and pins H prevent any slipping of the one on the other.

They also cause the stopping of the carriage at the required place, when moved either way, by the contact of the pins with the bottoms of the slots.

The press-follower I is suspended from the cross-head K working on the vertical guides L, and the said cross-head is connected by the rods M and bar N with the foot-lever O, for forcing the follower down to press the clay through the grate P into the mold-boxes D.

In order to insure the rising of the follower at the time the mold-boxes are drawn out, I arrange the curved rods R, pivoted to the frame at S, with the rods M and the pins H, as shown, so that the pins moving under the rods R, which are suitably curved downward for the purpose, raise them and the follower during the outward movement of the carriage.

The clay or mud varies considerably at different times in consistency, according to the nature of the sand and the amount of water mixed with it, so that, with the gratings, of the same size, more clay will be forced into the molds at one time than at another.

I therefore provide the main grating P with openings of the largest size, to be used when the clay is stiff and flows the slowest; and I arrange the said grating-plate with grooves or channels, in which I may slide other plates, T, containing smaller openings, for the clay to be placed on the grating P when the clay is of the character to run more freely.

Any number of these plates T may be provided, the holes being varied in size to suit any condition of the clay.

The said plates are inserted through small openings through the front side of the mold-box, coinciding with the grooves or channels in plate P.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

1. The combination of the press-follower, the operating wheels F of the carriage, pins H, slotted plates G, levers K, and connecting-rods M, substantially as specified.

2. The combination with the mold-box and pressing-case of the grate-bars or plate P, and the detachable plates T, the said plates having the holes arranged in the order substantially as specified.

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