

G. W. McCann.

Brick Machine.

N^o 86,667.

Patented Feb. 2, 1869.

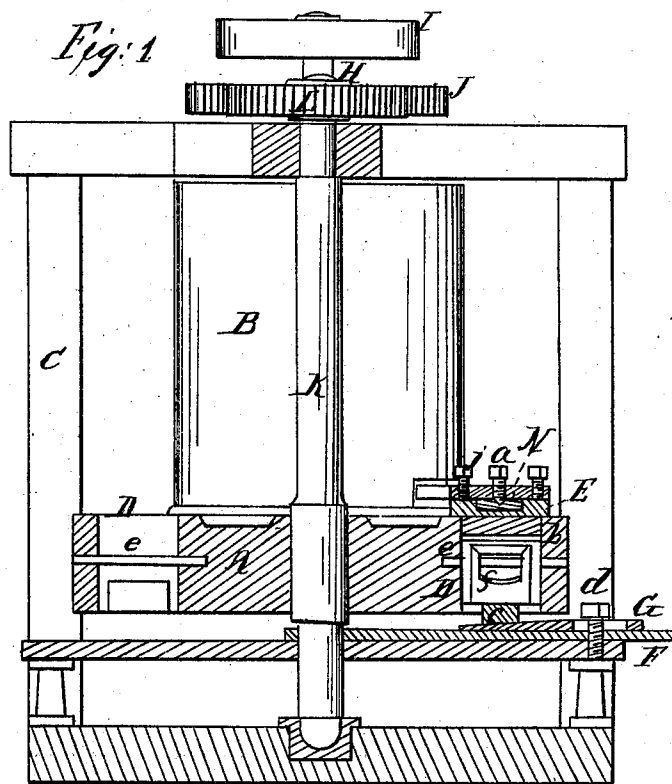


Fig. 7.

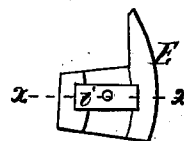


Fig. 3.

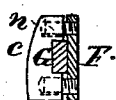


Fig. 2.

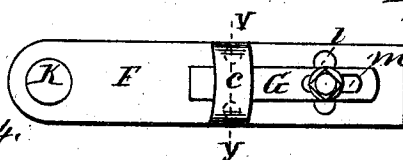


Fig. 4.

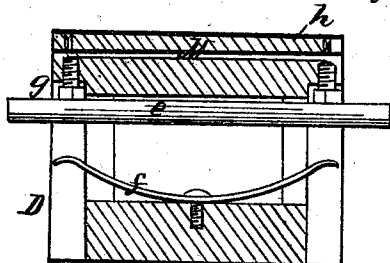


Fig. 5.

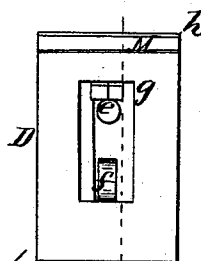
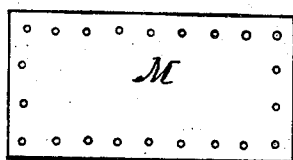


Fig. 6.



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United States Patent Office.

GEORGE W. McCANN, OF SPRINGFIELD, OHIO.

Letters Patent No. 86,567, dated February 2, 1869.

IMPROVED BRICK-MACHINE.

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, GEORGE W. McCANN, of Springfield, in the county of Clark, and State of Ohio, have invented certain new and useful Improvements in Brick-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

My invention relates to brick-machines of the class used for moulding wet brick; and consists in the novel construction and arrangement of a finishing-plate for giving a smooth and even surface to the top of the brick, an adjustable mechanical contrivance for securing any desired bottom pressure, and certain improvements in the construction of the follower in the moulds, by which the efficiency of its operation is greatly increased.

In the drawings—

Figure 1 is a vertical section, through the centre of the mould-wheel;

Figure 2 is a top plan view of the device for securing the bottom pressure;

Figure 3 is a vertical section, on the line *y-y* of fig. 2;

Figure 4 is a longitudinal vertical section of the follower, on the line *z-z* of fig. 5;

Figure 5 is an end view of the follower;

Figure 6 is a top view of the follower; and

Figure 7 is a top plan view of the finisher.

In constructing my machine, I make a frame, C, and mount therein the pug-mill B, with the shaft H, having arms attached for mixing the clay, and also driving-wheel I, and gear-wheel J.

In the same frame, I also mount the mould-wheel A, with its shaft K, so as to revolve, in part, under the pug-mill B.

The shaft K has a gear-wheel, L, attached to it, and is driven by the gear-wheel J, all as shown in fig. 1.

The mould-wheel A is provided, near its periphery, with a series of vertical moulds, extending through it, arranged so as to come successively under an opening in the bottom of the pug-mill, and be filled with the prepared clay.

In each of the moulds, I suspend a follower, D, of peculiar construction, by means of a bolt, *e*, which passes into the periphery of the wheel, and through slots in the follower, as shown in fig. 1.

I construct this follower D of the proper size to fill the mould, and move vertically in an easy manner therein. It is made with a vacant space in its interior, as shown in fig. 4, and has its ends slotted, as shown in fig. 5.

Within it, and to its lower side, I firmly attach a curved spring, *f*, the ends of which extend to and move vertically in the slotted ends, as shown in fig. 4, so that, when the follower rises in the mould, the bolt *e* will press against them, for a purpose hereinafter explained.

In the upper ends of the slotted ends, I place set-

screws *g*, which can be adjusted so as to limit the vertical movement of the follower in the mould, as desired.

On the top of the follower I place a removable top piece, M, which has sewed to its upper and lower sides a piece of heavy felt cloth, *h*, as shown in fig. 4, by means of strong thread passing through the holes, shown in fig. 6.

The upper side of the main body of the follower I make a little hollowing, so as to contain a small quantity of oil, which saturates the cloth on the lower side of the top piece M.

The object of this is to keep the moulds oiled, and thus prevent the follower from sticking in them, as it is obvious that whenever a pressure is brought to bear on the mould, the oil will be forced to the edge of the cloth, and in this way be brought in contact with the walls of the mould.

Near the bottom of the pug-mill B, and to its side, so as to be immediately over the moulds, as they come from under it, I attach a rigid arm, N, and to this arm connect a finishing-plate, E, by means of a screw, *a*, as shown in fig. 1.

This finishing-plate I make substantially in the form shown in fig. 7. Its lower surface is smooth and level, while its upper side is provided with a groove, extending across it, as shown in the same figure, and has inserted in it a wooden block, *i*, as shown in figs. 1 and 7.

The screw *a*, which connects the finishing-plate E to the arm N, does so by entering the block *i*.

In the arm N, I also place set-screws *j*, so that, by means of them, the finishing-plate E may be adjusted, and held as firmly to the upper surface of the mould-wheel as desired.

The object of connecting the finishing-plate E to the arm N, by means of the screw *a* and wooden block *i*, is to allow the plate to be carried away, in the event of its coming in contact with stone or any foreign substance that may have got into the mould, and thus protect the machine from any serious injury that might otherwise happen.

In order to secure any desired bottom pressure to the brick, I connect to the shaft K, so as to turn easily about it, and to rest on the floor of the frame supporting the inclines for giving motion to the followers, a flat arm, F, long enough to project beyond the periphery of the mould-wheel, as shown in fig. 1, and shaped as shown in fig. 2.

It is provided with an annular opening, *k*, through which the shaft K passes, and a slot, *l*, through which passes a set-screw, *d*.

On the upper side of this arm, I place an adjustable wedge, G, also provided with a slot, *m*, through which the set-screw *d* also passes.

The thin end of this wedge passes under an incline, *c*, which moves upon and is held in place by pins, *n*, attached to the arm F, as clearly shown in fig. 3.

When the set-screw *d* is loose, the arm F can be moved laterally a distance equal to the length of the slot *l*, and the wedge G, in like manner, a distance equal to the length of the slot *m*.

The incline *c* is arranged so that the follower D must

pass over it, and, as by these simple devices the incline can be readily adjusted, it is obvious that any desired bottom pressure can be given to the brick when or as it passes under the finishing-plate.

In operating my machine, the power is applied in the usual way. The mould-table carries the moulds successively under the pug-mill, where they are filled; the finishing-plate E makes the upper surface of the brick even and smooth; the follower, as it passes up and over the adjusted incline, gives the brick the desired bottom pressure.

After this is done, the follower, as the table continues its rotation, is carried up by another incline, not shown, and raises the brick to the surface of the table, from which it is easily removed.

When the follower is thus carried up by the incline, the spring *f* comes in contact with the bolt *g*, and is forced back, but, as it passes over the incline, its recoil carries the follower down, leaving the mould ready to be filled again.

The cloth on the upper side of the mould not only gives a clean finish to the brick, but prevents it from sticking to the follower, while the intervening cloth serves partly as a cushion, as well as to keep the mould oiled.

By setting the screws *g*, the position of the follower can be so changed in the moulds as to make the brick of any desired thickness, as the heads of these screws rest upon the bolt *e*, which suspends the follower.

Having thus described my invention,
What I claim, is—

1. The finishing-plate E, provided with a wooden block, *i*, constructed and arranged to operate substantially as herein described, and for the purposes set forth.

2. The follower D, with its removable top M, covered on both sides with cloth *h*, and provided with the spring *f* and set-screws *g*, constructed and arranged to operate substantially as herein described.

3. The swinging arm F, in combination with the adjustable wedge G and incline *c*, constructed and arranged to operate substantially as herein described.

4. The follower D, constructed as herein described, in combination with the bolt *e*, fixed transversely in the mould, and passing through the follower, for the purpose set forth.

5. The spring *f*, in combination with the bolt *e*, for returning the follower to its position, after delivering the brick, constructed and arranged to operate substantially as described.

6. The set-screws *g*, in combination with the bolt *e*, fixed transversely in the mould-wheel, for determining the thickness of the brick, substantially as described.

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Witnesses:

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