

*Peter Walrath,
Brick Machine.*

N^o 83,010.

Patented Oct. 13, 1868.

Fig. 3.

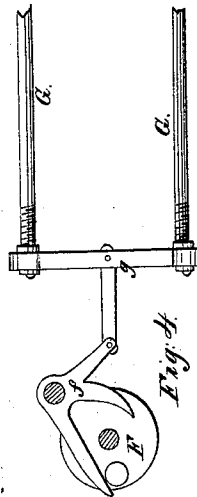
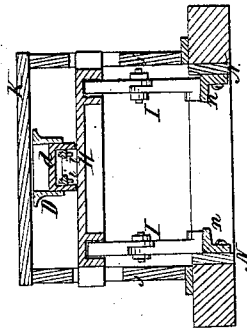


Fig. 1.

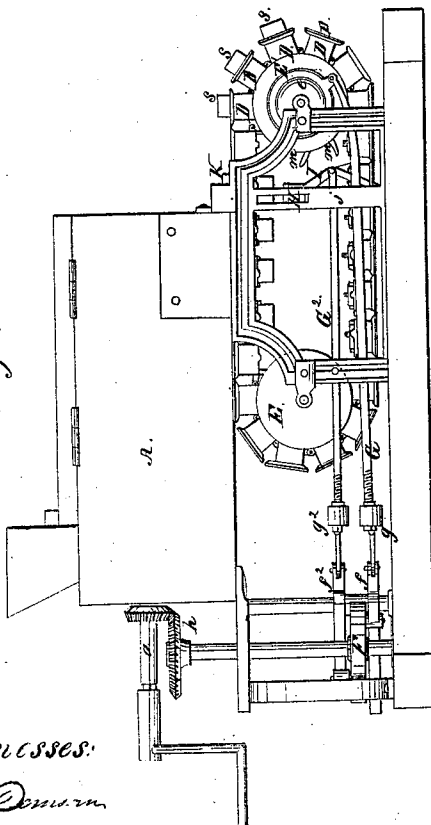
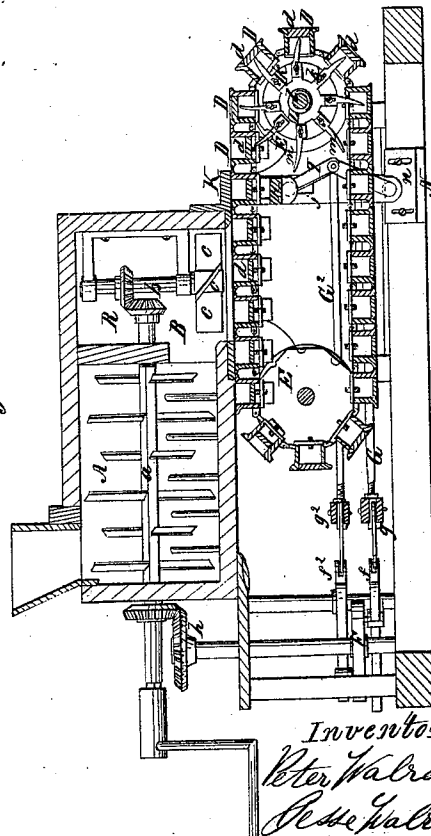


Fig. 2.



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Att.*

United States Patent Office.

PETER WALRATH AND JESSE WALRATH, OF CHITTENANGO,
NEW YORK.

Letters Patent No. 83,010, dated October 13, 1868.

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 we, PETER WALRATH and JESSE WALRATH, of Chittenango, in the county of Madison, and State of New York, have invented a new and improved Brick-Machine; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of our invention;

Figure 2 is a vertical longitudinal section; and

Figures 3 and 4 are detail views.

Similar letters of reference indicate corresponding parts in the different figures.

In the accompanying drawings—

A is the grind-mill, having a horizontal grind-shaft, *a*.

B is a chamber, which receives the clay from the grind-mill, and contains a vertical shaft, *p*, (fig. 2,) and scrapers *c c* for forcing the clay into the moulds.

The moulds consist in an endless chain made up of boxes D D, said boxes being hinged or pivoted together, and running over a pair of sprocket-wheels, E E'. The moulds D have each a follower, or movable bottom, *d*, (fig. 2,) which is acted upon to press the contents of the mould, and also to force the brick out of the mould at the proper time.

The pressing is done by beam H, which slides vertically in slots in the framework *j*. This press-beam is operated by a pair of knee-joints, I, which are in turn operated by rods G², cross-head *g*², bell-crank *f*², and cam-wheel F.

The chain of moulds moves forward intermittently, by means of ratchet-wheels *e*, (fig. 1,) which act on the sprocket-wheel E', the said ratchet-wheel being operated by a cam-wheel, F, acting through the bell-crank *f*, (see also plan view of bell-crank *f*, fig. 4,) cross-head *g*, and rods G, the said cam-wheel F being actuated by gears *h* connecting with the main shaft *a*.

The followers *d* are acted upon, to force the bricks from the moulds, by a delivery-wheel, L, (fig. 2,) which is fixed on the sprocket-wheel shaft *l*.

The said delivery-wheel has a series of arms, *m m*, which project sufficiently to enter the chamber of the mould-boxes and move the follower *d*, as the delivery-wheel L rotates and follows a forward motion of the moulds.

The arms *m m* are secured to the delivery-wheel L by set-screws *k*, (fig. 2,) which pass through slots in the arms, so that by slackening the set-screws the delivery-arms *m m* can be adjusted with more or less projection from the wheel L, and thus regulate the delivering-throw of the followers *d*.

K is a press-apron, which covers the moulds as they are brought over the press.

The thickness of the brick is regulated by set-screws *i i*, (fig. 3,) which regulate the drop or backward movement of the followers *d*, and, by allowing more

or less clay to enter the mould, thus regulate the thickness of the brick.

The lower ends of the knee-joints I rest in adjustable seats or bearings *n*, (figs. 2 and 3.) The seats *n* are slotted, and held to the plate N by set-screws, as shown in fig. 2, and the contact-faces of *n* and N are serrated, as shown in fig. 3, so that by slackening the set-screws the seats *n* can be made to engage with plates N, at different heights, and in this manner adjust the throw of the press-beam H.

Its operation is as follows:

Power is applied to the grind-shaft *a*, and drives the crowding-shaft *b*, by means of gears R, (fig. 2,) and the cam-wheel F by means of gears *h*. The clay passes from the grind-mill A *a* into the crowding-chamber B, and is forced into the moulds by the oblique scrapers *c c*. The cam-wheel F, by means of ratchet-wheel *e*, (fig. 1,) moves the mould-chain forward the width of a mould, D, so that a filled mould is carried under the apron K, and the chain of moulds then stops, while the cam F operates the press-beam H, to force up the follower of the said mould, which is under the press-apron K. As soon as the pressing-movement is reversed, the ratchet *e* again moves the chain, and another filled mould is brought over the press; and so the action continues, the intermittent movement of the moulds and press alternating. As a filled mould reaches the delivering-wheel L, the arms *m* force up the follower, and the pressed brick is pushed out of the mould, as shown by the delivered bricks *s s*, (fig. 1,) so that the brick can be removed by hand, or by other suitable means.

The moulds, in passing under the crowding-chamber B, are exposed to the action of the scrapers *c c*, in various positions, while three bricks are being pressed, and the moulds are always filled fully and uniformly. The pressing-devices can be disconnected from bell-crank *f*² and thrown out of action, and the machine used for making common or unpressed bricks with equal facility.

The machine is also well adapted for manufacturing peat, in which case the set-screws *i i* are turned back, to let the followers *d* drop, so that the moulds are worked to their full capacity.

Having thus described our invention,

What we claim as new, and desire to secure by Letters Patent, is—

The grind-mill and crowding-devices *a b c*, endless chain of moulds D D, with movable bottoms *d*, delivering-wheel L *m*, press I H, with the intermittent operating-devices F *f*² G², and ratchet *e*, with throwing-devices F *f* G, all constructed and operating as herein described, and for the purpose set forth.

The above specification of our invention signed by us, this 20th day of May, 1868.

Witnesses:

WM. DUNCAN,
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PETER WALRATH.
JESSE WALRATH.