D. Hess,

Brick Machine.

No. 82,116. Patented Sep. 15, 1868.

Fig. 1.

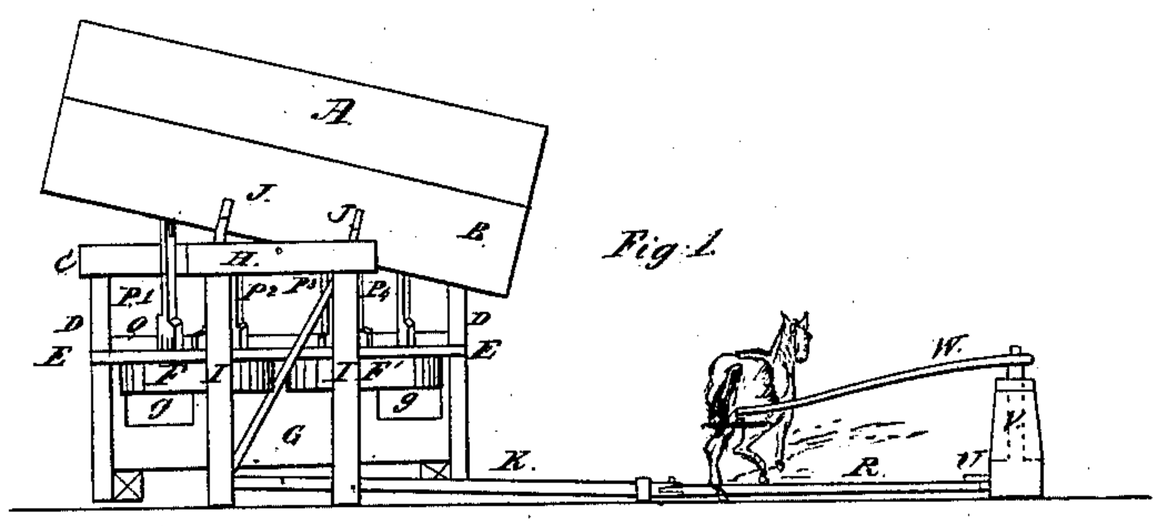


Fig. 4.

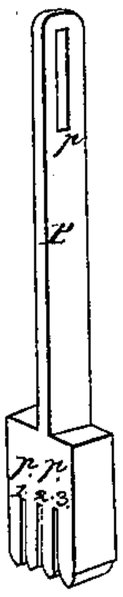


Fig. 2.

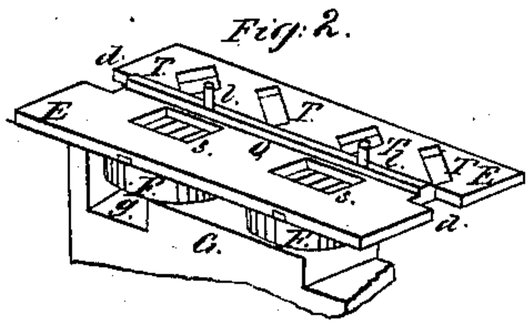


Fig. 5.

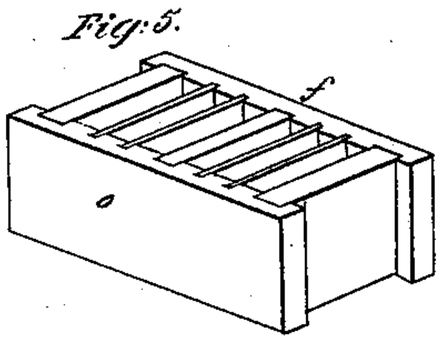


Fig. 3.

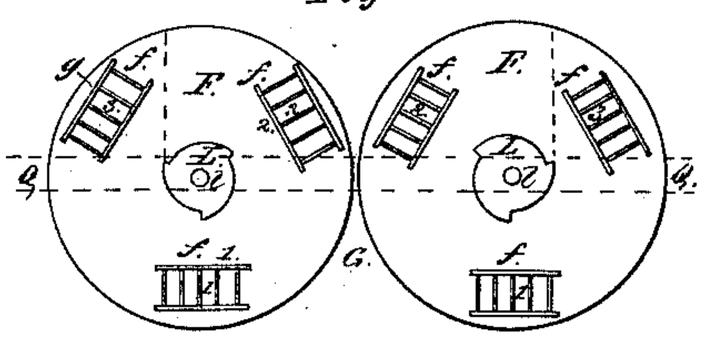


Fig. 6.

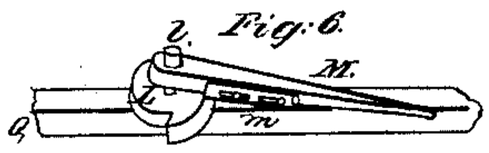
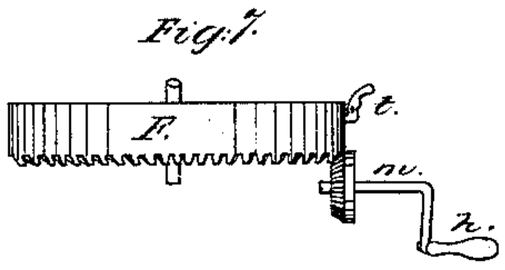


Fig. 7.



Witnesses:

Geo Mollet

A. G. Stout

Inventor:

Daniel Hess

United States Patent Office.

DANIEL HESS, OF BLANDVILLE, KENTUCKY.

Letters Patent No. 82,116, *dated September* 15, 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 I, DANIEL HESS, of Blandville, in the county of Ballard, and State of Kentucky, have invented a new and useful Improvement in Brick-Making Machines; and I do hereby declare that the following is a full and exact description of the construction and operation thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side elevation.

Figure 2, a perspective view of the top of the table, to show the openings for filling the moulds, and for the plungers.

Figure 3 shows the upper surface of the two revolving mould-beds, moulds, and three-toothed turning-ratchets.

Figure 4 shows one of the plungers.

Figure 5, a mould-box, with six open cells for pressing bricks edgewise.

Figure 6 shows the adjustable lever for turning the mould-beds.

Figure 7 represents an improved mode for revolving the mould-beds F, by means of bevel-cogs on the outer edge of the circumference, and a pinion, *m*, with a crank-handle, *h*, and a ratchet-like stop-catch or click, *t*, so arranged as to arrest the revolution at the proper point, which is easily effected by ordinary means.

The nature of my invention consists in the simplicity of its construction, without the expensive gearing usually required, and in the manner of pressing brick edgewise, by means of plungers connected with an oscillating weighted box and beam on a revolving mould-bed.

To enable others to make and use my invention, a brief description will suffice.

In front are two end posts, D D, and a cross-beam, C, between which posts there is a table, E, notched out at *d*, to embrace the posts D. This table has two bevelled or hopper-like openings, S S, and a cross-piece, Q, between the posts D, behind which are openings, T, for the plungers P^1, P^2, P^3, and P^4.

Fig. 1 shows the end view, and the two posts I, with a cross-piece, H, equal in height to the cross-piece C. A stout beam, B, with a box, A, to contain any weighty material, is poised on a central pivot between the top of the cross-pieces C H. Two lever-bars, J, are attached to the oscillating-beam B. These levers unite below, V-shaped, where they are affixed, by a pivot, to a jointed rod, K R, which connects to a crank-arm, U, on a vertical beam, V, held in a suitable framework, and turned by horse-power, by means of a long lever, W, as shown.

The four plungers, P, are suspended to the lower side of the box-beam B, by means of a pivot in a slot, *u*, the lower enlarged end, *p p*, of a size to suit the moulds, with slots cut out for the partitions in the moulds, 1, 2 3, (when four apartments are in each mould-box.)

Under the table E, and made to turn on a solid press-bed, G, are the two circular mould-beds, F F, on a central shaft or spindle, *l*. These shafts have their bearings in a cross-piece, Q, (on the table E, between the posts D,) and project upwards for a fixed three-toothed ratchet, L, and an adjustable turning-lever, M, fig. 6, by which the mould-bed is turned one third way round for every action of the respective plungers, as gauged, so that the plungers perform their office with precision.

There is also a key in front to each mould-spring, to lock the revolving table or mould-bed at the exact point (temporarily inserted) while filling the mould, at the same time that the plunger 2 or 3 is pressing one mould, and the plunger 1 or 4 is discharging the previously-pressed brick into the recess *g* adjoining the press-bed G, so that each revolution of each mould-bed presses three times, alternately, one being turned to the right, the other to the left.

These moulds may be made to press four, six, or more bricks, edgewise, at a time, and consist simply of open boxes, say nine inches deep, without any top, or sliding or hinged bottom, partitioned as shown, either fixed to radiating arms or in a circular mould-bed, F.

The speed of the alternate action of the oscillating box and plungers is governed by the movement of the

horse. A regular gait will keep a smart hand busy in filling the moulds with prepared clay. This being loose, offers but little resistance to the press until the weighted box comes to a level or horizontal position, then the whole preponderating weight is thrown upon the pressing-plunger, and performs the work effectually; and when expelled from the mould, the brick is sufficiently hard to be put in hack or kiln. An endless apron can be used to receive the brick and convey them to any distance.

Experience has proved that the weighted box is of great advantage, and from six to eight tons' weight is found to be a light draught for one horse, and works to the admiration of those interested, both the maker and purchaser of the brick made.

Impressed with the idea that pressing brick edgewise was first performed by me, I learn, however, that the patents of J. Morley, May 29, 1866, and J. Gregg, October 30, 1866, press their brick edgewise, but not on a revolving mould-bed, in the manner that I press them.

I am also aware that in A. H. Sampson's patent, June 14, 1853, a revolving bed is shown, with three sets of moulds. While the first set is filled, the second is pressed and stamped and the third pushed out by plungers, but the arrangement is substantially different in producing this result, and the bricks are not pressed edgewise.

I find no instance of a weighted box, except those in the office, of my previous applications.

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

1. The arrangement of a centrally-poised beam, B, with its weighted box A, oscillated by the arms J and connecting-rod K, in combination with the plungers P, substantially in the manner and for the purpose specified.

2. In combination with my oscillating box A B, I claim the plungers P, with their enlarged base *p p* and slots 1, 2, 3, &c., when operated substantially in the manner set forth.

3. The arrangement of the press-bed G and table E, in combination with the revolving mould-tables F between them, together with the moulds *f* for pressing bricks edgewise, when arranged substantially as set forth.

4. The arrangement of the table E, with its hopper-openings S, in combination with the revolving mould-beds F and moulds 1, 2, 3, arranged in the manner and for the purpose specified.

DANIEL HESS.

Witnesses:

A. G. STOUT,

GEO. A. COLLET.