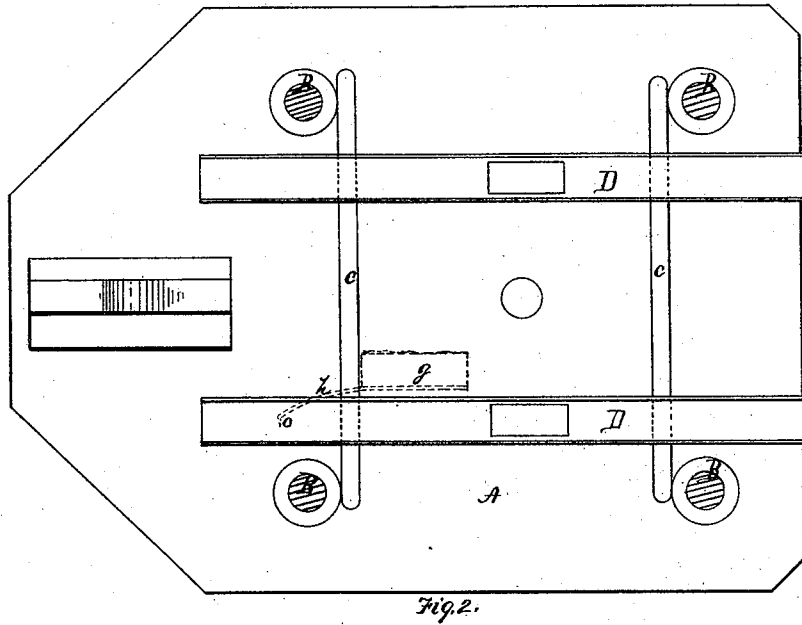
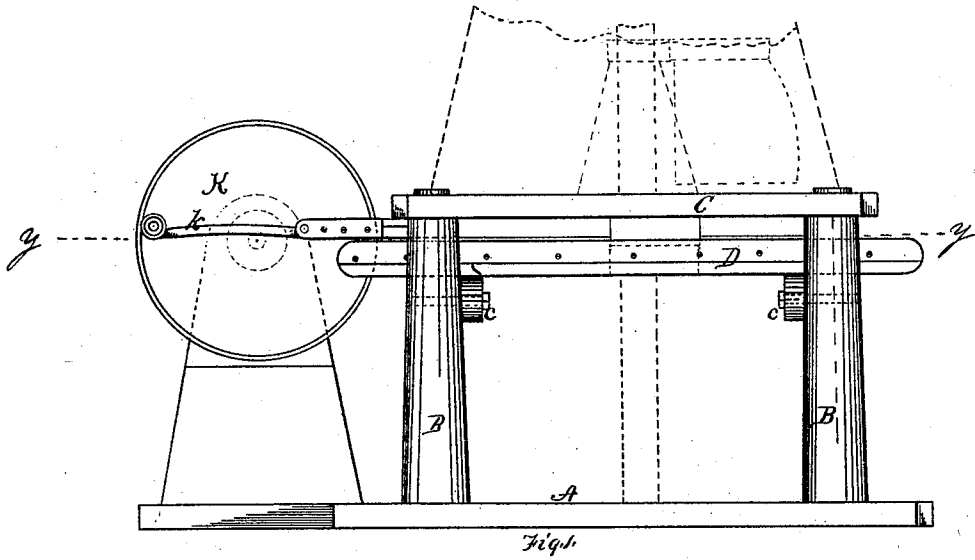


J. DALZELL.
BRICK-MACHINE.

No. 179,164.

Patented June 27, 1876.



WITNESSES.

James L. Gray
R. C. Mansfield

INVENTOR

James Dalzell
By Bakewell & Kerr
Attys.

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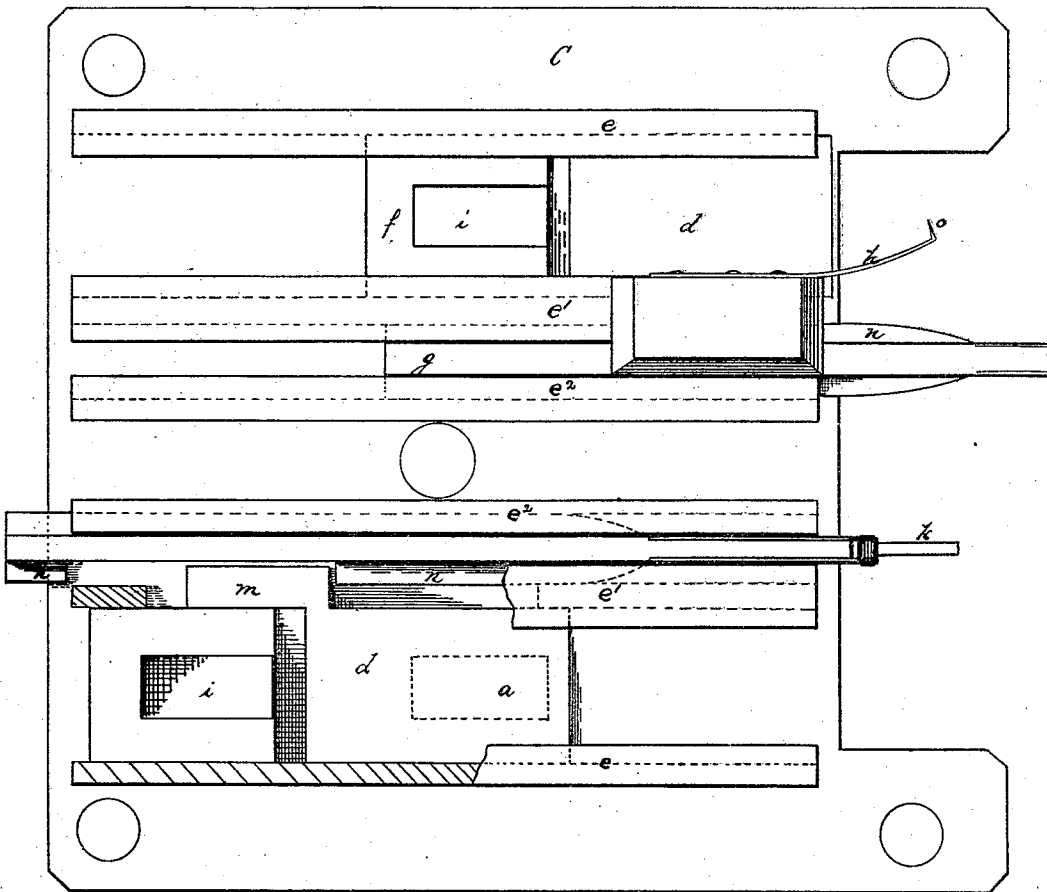


Fig. 3.

Witnesses.

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UNITED STATES PATENT OFFICE.

JAMES DALZELL, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN BRICK-MACHINES.

Specification forming part of Letters Patent No. **179,164**, dated June 27, 1876; application filed May 1, 1876.

To all whom it may concern :

Be it known that I, JAMES DALZELL, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Brick-Machines; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a side elevation of a brick-machine embodying my improvements. Fig. 2 is a sectional view on the line *y y*, Fig. 1, the top part being broken off to show the moldways. Fig. 3 is a view of the under side of the bottom plate of the hopper, showing the cut-off, and the mechanism for operating the cut-off and feeding in the molds.

Like letters refer to like parts wherever they occur.

Figs. 1 and 2 are introduced mainly to show the relation of the several parts of a machine.

My invention relates to mechanism for actuating the cut-off, and for feeding in the empty molds and delivering them when filled; and it consists in combining with the brick-machine a slide, or equivalent device, so constructed as to actuate the cut-off during a part only of each stroke, and the mold during one stroke only of its reciprocation.

I will now proceed to describe my invention, so that others skilled in the art to which it appertains may apply the same.

A indicates the base of a brick-machine, and B a series of posts for supporting the bottom plate C of the hopper. *c c* are cross-bars, or like devices, secured to posts B, for supporting the usual or any approved moldways, D, D. A suitable hopper with central shaft, inclined arms for working the clay, and a sweep for forcing the clay into the molds, may be employed, but as such devices are no part of the present invention, may be of various kinds, and are not necessary to a thorough comprehension of my devices, they are omitted from the drawing. To the bottom plate C of the hopper I secure a series of guide pieces or ways, *e e¹ e²*, in which move the cut-off *f* and a slide, *g*, for actuating the cut-off and molds. *f* represents the cut-off, having a port, *i*, corresponding to the port *a* of hopper bottom C, and a plate or extension, *d*, which closes the

port *a* as the port *i* of the cut-off passes from beneath the port of the hopper. This plate or extension *d* is made thinner than the portion of the cut-off in which the port *i* is formed, thus facilitating the action of the cut-off, and providing clearance for the molds. Upon the edge of cut-off *f*, next slide *g*, is a lug, *m*, which engages with lugs upon the slide (or the lugs may be formed by cutting away the rib *n* of the slide) the guide piece or way *e¹*, between the cut-off and slide and which serves for both, being slotted to permit the lugs upon the cut-off and slide *g* to engage, as before specified. The lug *m* upon the cut-off is in length about equal to the length of the brick-mold employed, while the recess in slide *g*, or the distance between the projections on *g* which actuate the cut-off, is about twice the length of a brick-mold, so that the slide moves the length of a mold both in going and coming before it commences to actuate the cut-off, thus giving full time for the filling of a mold before the cut-off is actuated to sever the clay, by the forward stroke of the slide, and sufficient time to place empty molds on the ways during the back stroke of slide *g*.

Secured to slide *g*, which moves the cut-off, is a yielding arm, *h*, bent at its extremity, as shown at *o*, or provided with a lug, which moves with the slide over the moldways in the path of the molds. This arm *h* may be controlled by a spring, but is preferably a steel spring curved at its end, or otherwise formed to hook back of and carry along the mold during the forward motion of the slide, but adapted to yield and slide over any mold which may be in its path on the return stroke of the slide. The slide *g* is reciprocated by means of the crank-shaft and driving-wheel *k*, which may receive power from the same source as the shaft of the hopper.

The several parts being in the following position, *i. e.*, the port *i* of the cut-off directly under the port *a* of bottom plate C, a mold in position beneath the port, slide *g* drawn back, and one or more empty molds on the moldways in the path of arm *h*, the operation of the devices will be as follows: On the advance of slide *g*, the arm *h* will take against a mold and carry it along the ways once its length, by which time the slide will have engaged

with the cut-off, which it then actuates to close the port of the bottom plate C and to sever the clay. The continued motion of the slide which actuates the cut-off, at the same time carries the empty mold into position in line with the port *a*, forcing the filled mold forward out of the way. On its return stroke the slide moves for a short distance—say, about the length of a mold—before it engages with the cut-off and retracts it to open the port *a* of the bottom plate, thus causing the arm *h* to clear the cut-off sufficiently to take hold upon the empty molds upon the moldways, preparatory to feeding them up on the next forward stroke of the slide.

Though the description has been limited to one cut-off and feed mechanism, it will be observed, on reference to the drawing, that two sets are shown. The construction and operation are the same no matter how many times the devices are duplicated, and the only further directions necessary to add here, are that when two or more sets are employed with a single hopper, and sweep for filling the molds, the cut-offs should be geared to operate suc-

cessively and immediately after the sweep has passed the corresponding port in the bottom plate C.

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

1. In a brick or similar machine, the combination of the cut-off, the arm for feeding forward the mold, and the slide for actuating the cut-off and arm, the slide being constructed substantially as described, so as to actuate the cut-off during a part only of each stroke, and the mold during one stroke only of its reciprocation.

2. In a brick or similar machine, the combination of the cut-off and the reciprocating slide, constructed substantially as described, so as to actuate the cut-off for a part only of each stroke.

In testimony whereof I, the said JAMES DALZELL, have hereunto set my hand.

JAMES DALZELL.

Witnesses:

F. W. RITTER, Jr.,
JAMES I. KAY.