

C. V. Hemenway.

Brick Mach.

N^o 95,108.

Patented Sept. 21, 1869.

Fig. 3.

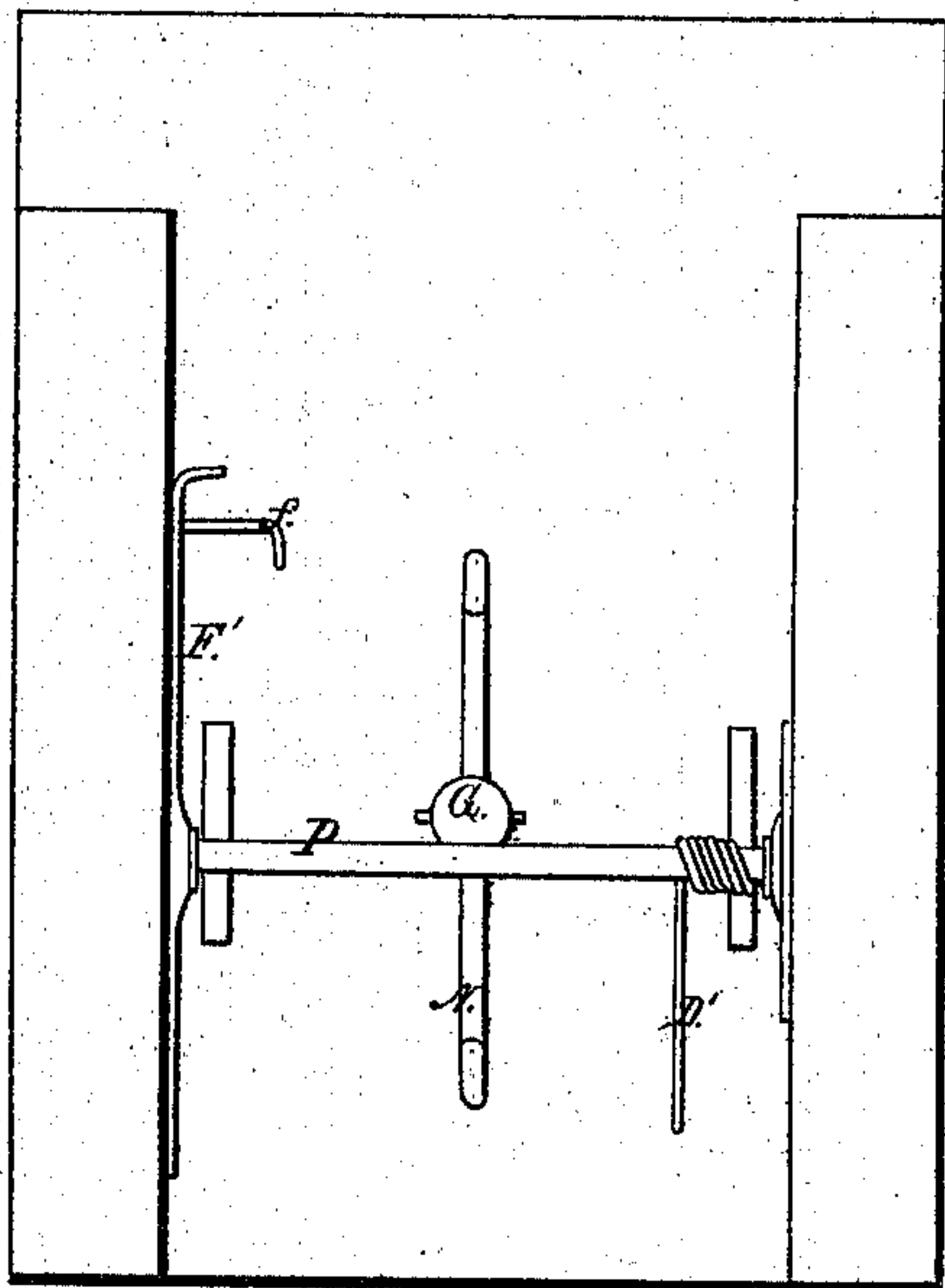


Fig. 2.

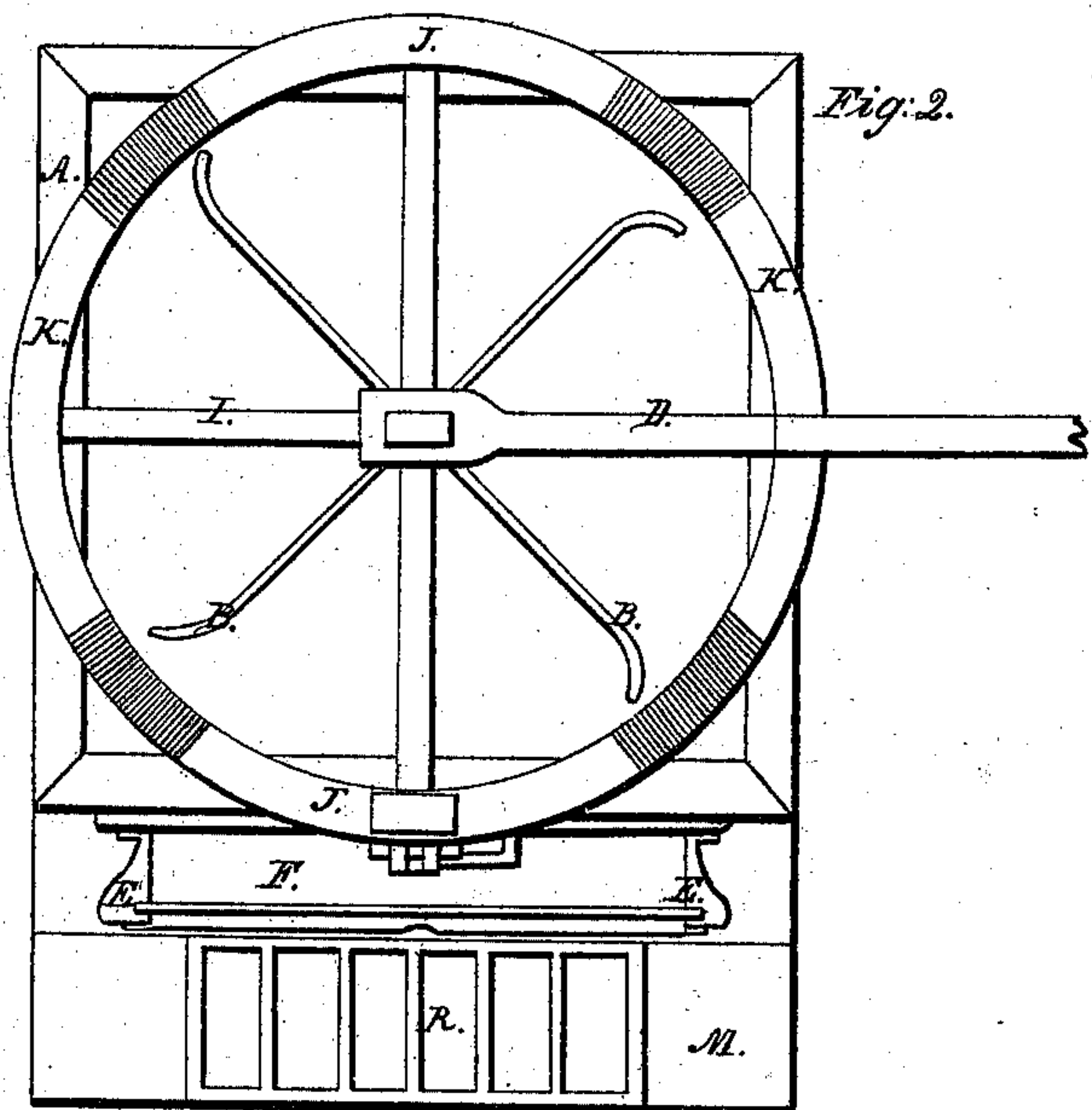


Fig. 4.

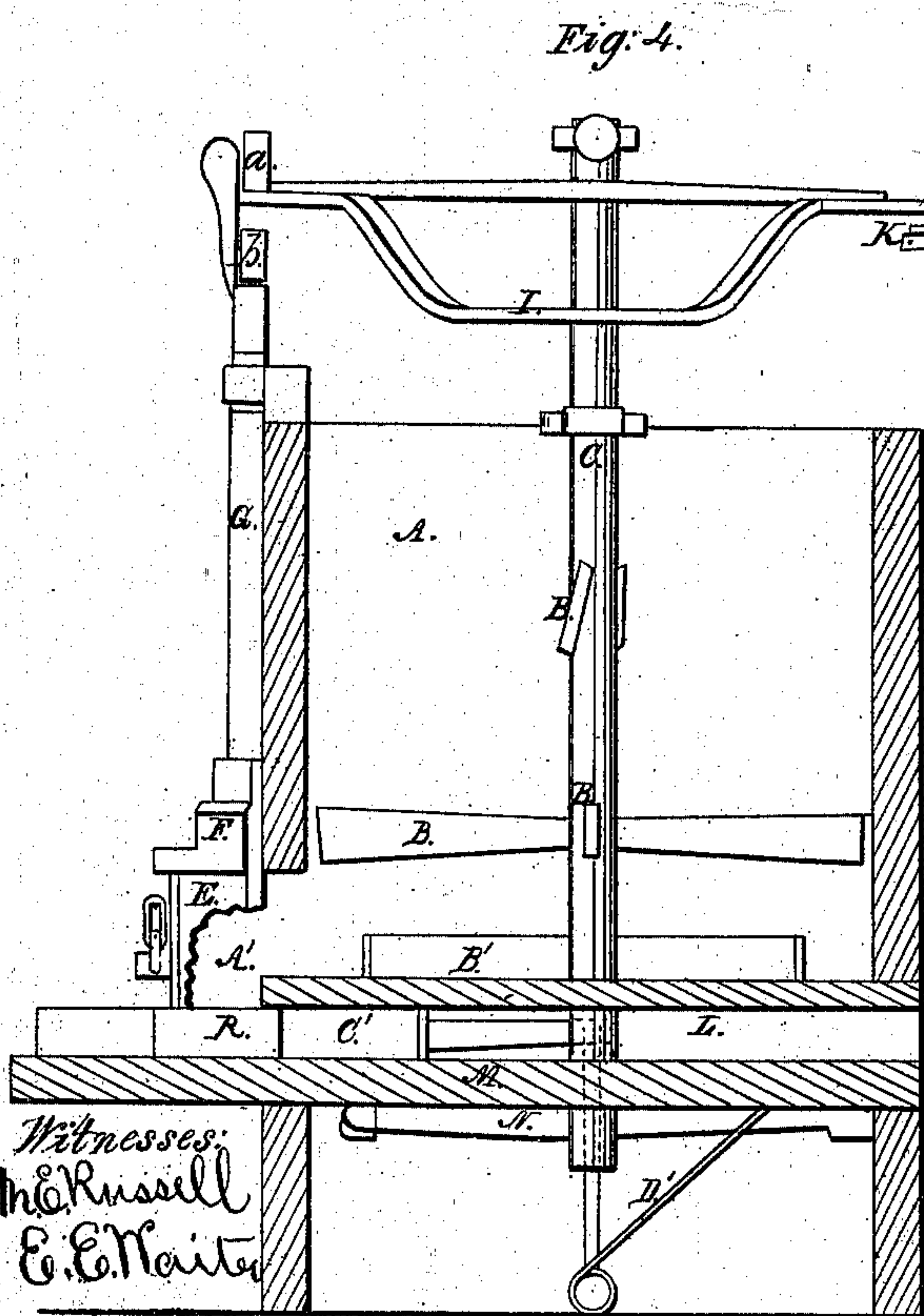
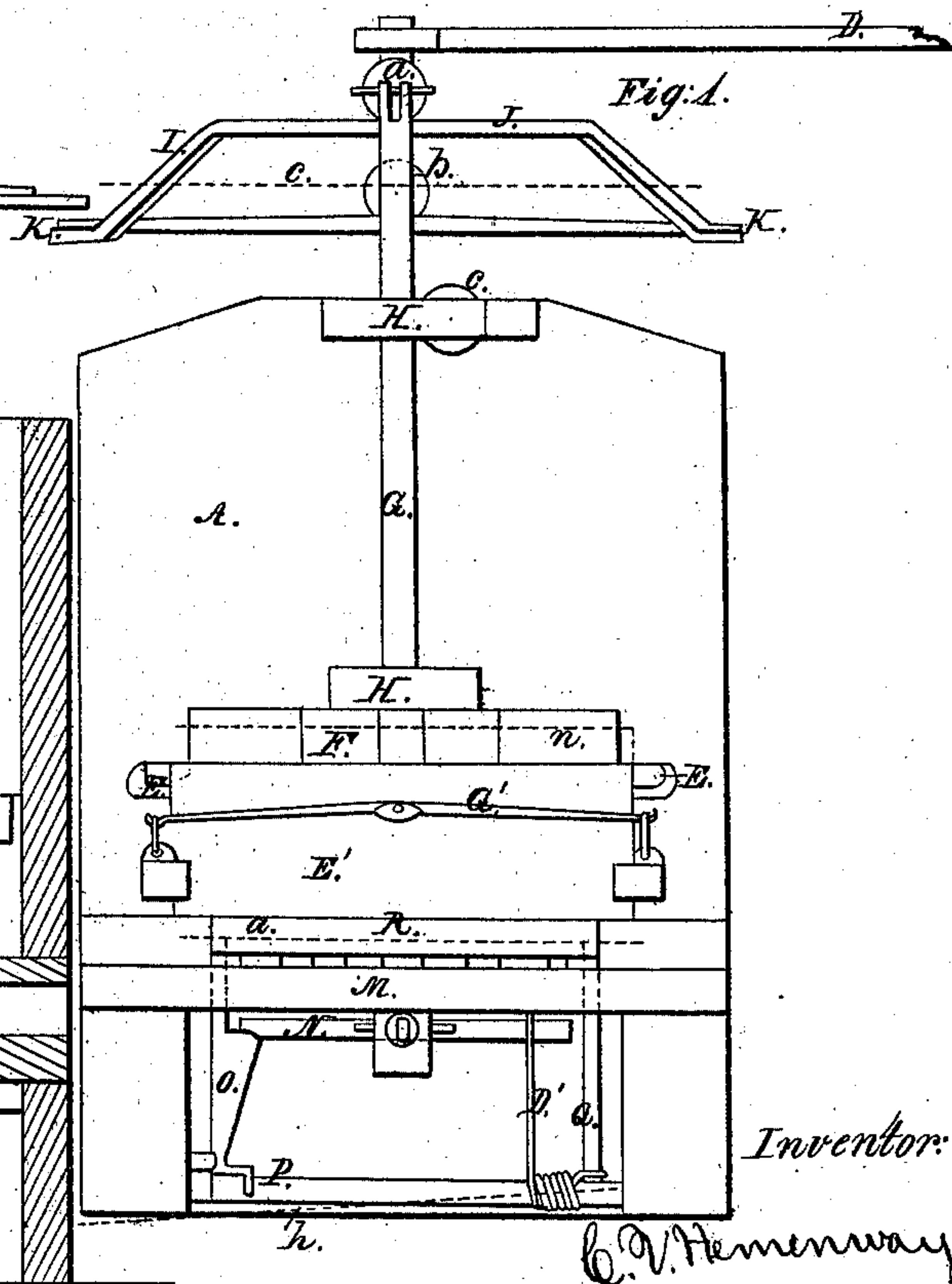


Fig. 1.



Witnesses:
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C. V. HEMENWAY, OF NEW LONDON, OHIO, ASSIGNOR TO HIMSELF
AND A. A. POWERS, OF SAME PLACE.

Letters Patent No. 95,108, dated September 21, 1869.

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, C. V. HEMENWAY, of New London, in the county of Huron, 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 and complete description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a front view of the machine.

Figure 2, a view of the top.

Figure 3, a view of the bottom.

Figure 4, a transverse vertical section.

Like letters of reference refer to like parts in the different views presented.

This invention relates to a machine for making bricks, by means of which the clay is forced into the moulds directly from the mill by a cam, which, operates on the end of the shaft to which the follower of the press is attached, at the same time delivering the filled moulds successively, one after the other, at the front of the machine, as hereinafter more fully described.

In fig. 1—

A represents the case, into which the crude clay is thrown, for being reduced to proper consistence for moulding, the reduction of the clay being effected by the arms B, fig. 2, radiating from the shaft C, fig. 4, the same being operated by the sweeps D, to which animal, or other power may be applied.

E, fig. 1, is the box or die of the press, in which is fitted a follower, F. Said follower is attached to the lower end of the shaft G, and secured to the side of the case by means of guide-stays H, in which it moves upward and downward, by means of the cam-wheel I, with which the upper end is put in connection, by means of the friction-roller *a*, above the upper side of the wheel and the friction-roller *b*, on the under side, as shown in fig. 4.

The cam-wheel referred to is so constructed that two of its opposite sides J, are elevated above an equatorial line, *c*, whereas the other two opposite sides K are below said line, thereby forming cam-like elevations and depressions, whereby the follower is operated, as will presently be shown.

The device for removing the filled moulds from under the press is as follows:

It will be observed that the shaft O descends through the bottom of the case, thence through the space L, through the table M, into the space below the machine.

From the projecting end of the shaft proceed radial arms N, fig. 4, which, as the shaft is made to revolve, impinge upon the arm O, projecting upward from the rock-shaft P.

At the opposite end of said shaft is an arm, Q, which, together with the arm O, passes up through the

table, and they are connected to each other by a bar, indicated by the dotted line *a*, fig. 1, at the rear of the moulds R, and whereby the moulds are pushed from under the press, on to the front end of the table M.

Having thus described the construction and arrangement of the press, the practical operation of the same is as follows, viz:

As above said, the crude clay is put into the case or mill A, and therein reduced to a proper consistency for being pressed into the moulds.

The first set of moulds is brought into position for receiving the clay by pushing them under the press-box from the front. The follower of the press being elevated by the cam J of the wheel, as shown in fig. 1, the inner side of the press-box thereby becomes open to the mill, and from which the plastic clay is forced out into the press, and into the mould R, through the throat or opening A', by means of the revolving radial arms B', fig. 4.

The clay thus forced from the mill into the press-box is pressed into the moulds by the descent of the follower, which is forced down by the cam-K, acting upon the roller *b*, of the shafts G.

The amount of pressure thus exerted upon the follower by the cams of the wheel is sufficient only to cause the clay to properly fill the moulds; hence, no great power is required to operate the press. The filled mould is removed from under the press by the introduction of a second one, and which is done by inserting one end of the mould in the opening C, fig. 4, in the rear of the filled mould R, which, as the shaft O revolves the arms N, impinge upon and push forward the arm O, thereby forcing the bar *a*, whereby the two arms O and Q are connected, against the rear side of the empty mould, driving it forward against the filled mould R, and crowding it from under the press on to the table in front of the machine, as shown in fig. 2, the length of the arms O and Q being such as to carry the empty mould immediately under the press.

It will be observed that the pressure is applied to the mould, and the same forced out from under the press during the time that the roller *a* is passing over the face of the cam K, the empty mould being pushed into position at the time that the mould under the press is filling, or while the follower is raised up, and continued thus raised up during the time that the roller *a* travels over the face of the cam J. Hence, as fast as one set of moulds is filled, it is followed and pushed from under the press by a second, thereby filling two sets of moulds, and delivering them at the front of the machine, at each revolution of the wheel, and so on, as long as the wheel continues to revolve, a succession of filled moulds is presented on the table, in front of the press. Each time that the arms O and Q have been pressed forward by the arm or sweep N, for discharging the moulds from under the press, they

are returned by the reaction of the spring D', in time to be again driven forward by the arm or sweep N.

The mill may be used independently of the press, for the purpose of reducing the clay to a proper consistency for moulding, by withdrawing the pin f, fig. 3, thereby allowing the lever F', pivoted to the side of the case, to drop, as indicated by the dotted line h, and thus prevent the sweep N from engaging the arm O, but which will revolve freely thereof, above the shoulder of the arm.

The front side of the press, as seen at E', fig. 1, is so fitted to the press or box E, that it can move upward, as indicated by the dotted line n, fig. 1, the purpose of which is, that on pushing the set of moulds R from under the press, should a stone or other like obstruction present itself above the surface of the mould, it could not slide out, unless such obstruction be removed, or the front of the press or box be forced upward by

the obstruction, which latter will be the case, and thus allow the mould to come forth, which, on being done, the side is again forced down to the position shown by the spring G', for scraping the surface of the mould.

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

1. The adjustable side E' and spring G', as arranged in combination with the press-box E, in the manner as and for the purpose set forth.

2. The rock-shaft P, arms O Q, and spring D', when constructed and arranged to operate by means of the sweep N, in the manner as described, and for the purpose specified.

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Witnesses:

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