

S. Hawkins.

Tile Mach.

N^o 94,958.

Patented Sep. 21, 1869.

Fig. 1.

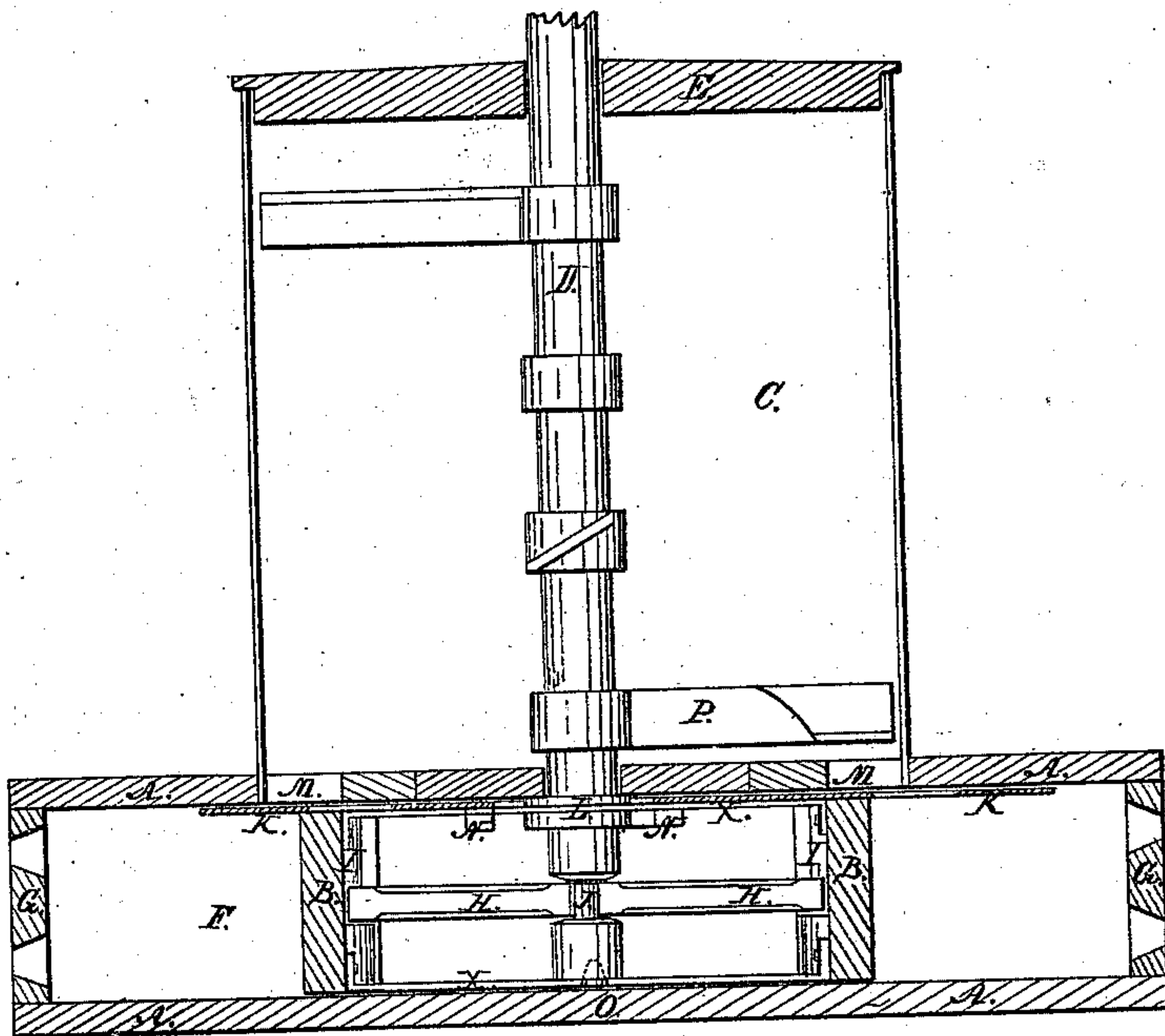


Fig. 3.

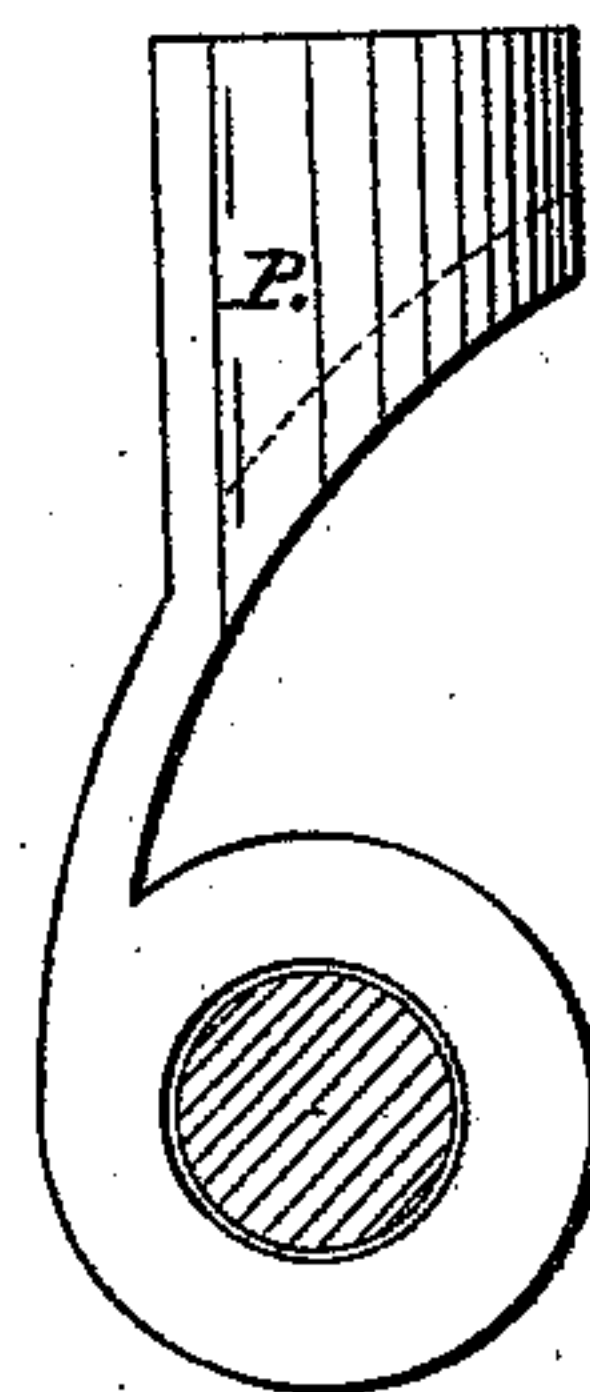
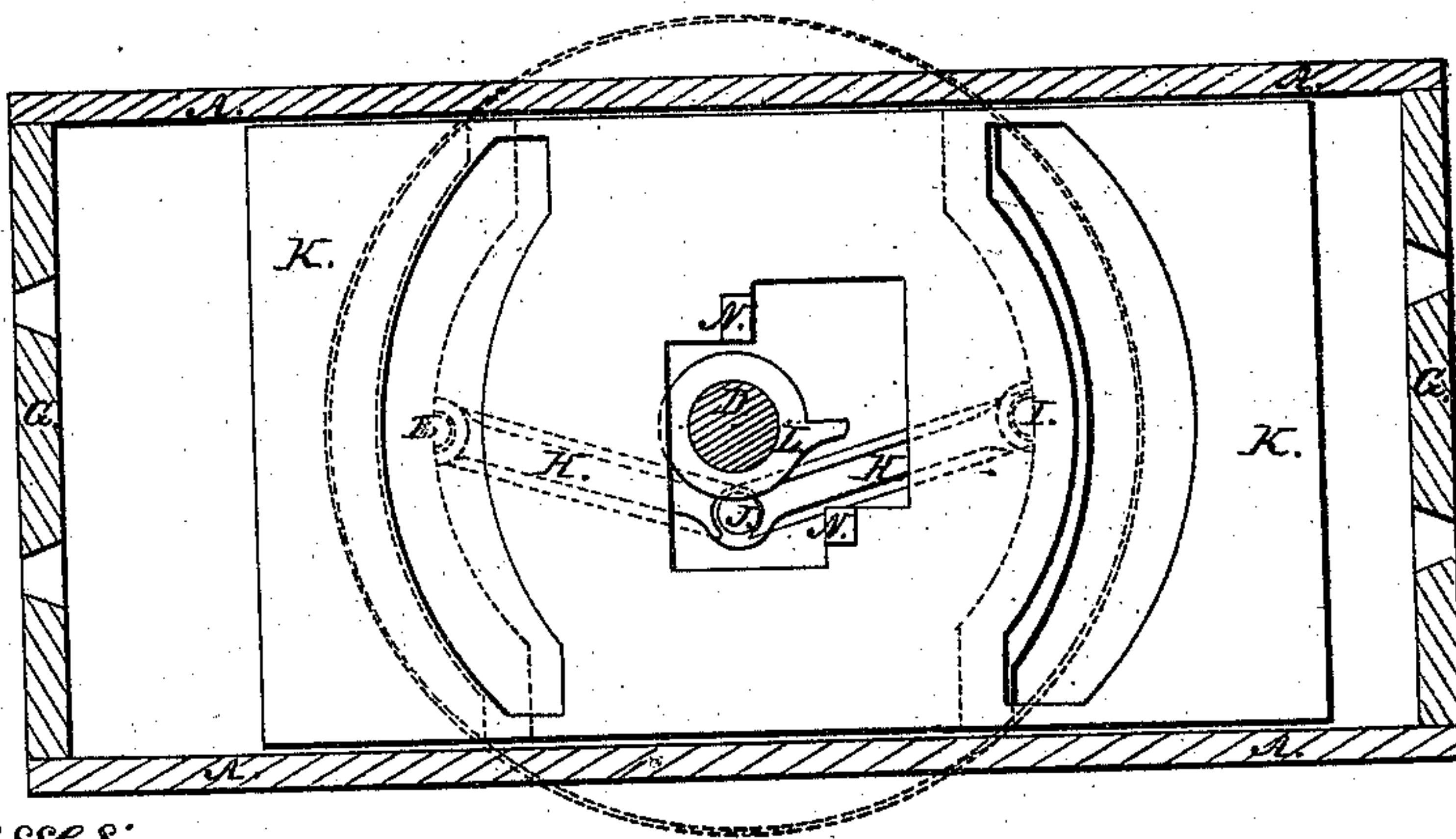


Fig. 2.



Witnesses:

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United States Patent Office.

SIMEON HAWKINS, OF CARMEL, INDIANA.

Letters Patent No. 94,958, dated September 21, 1869.

TILE-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, SIMEON HAWKINS, of Carmel, in the county of Hamilton, and State of Indiana, have invented new and useful Improvements in Tile-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, that will enable skilled artisans to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making part of this specification.

This invention relates to arrangement of the several parts of which the machine is composed, combined with the construction and arrangement of the devices for and manner of operating the followers and cut-off, and has for its object to simplify and cheapen the construction, and to shorten the stroke of the followers, and thereby lessen the power required to operate them.

Figure 1 is a vertical transverse section of a tile-machine constructed and arranged according to my improvement.

Figure 2 is a horizontal section of the same, taken just below the top of the frame, containing the moulding-chambers, followers, and cut-off.

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

A represents the frame of the machine, made of suitable material and dimensions, in which are arranged the moulding-chambers F, followers B, and cut-off K.

C is the clay-hopper, arranged over the frame A, in the bottom of which are suitable openings M, for the issue of the clay directly into the moulding-chambers F.

D is a vertical shaft, having its upper bearing in the cross-piece E, its lower bearing being a step, O, at the bottom. This shaft is furnished with suitable arms or knives, for tempering the clay, and forcing it down through the issues M into the moulding-chambers F.

The machine, as here shown, is made with two moulding-chambers, one in each end of the frame, and is consequently provided with two followers or plungers B, for forcing the mud through the dies G, and a double cut-off, K.

The followers B are connected together by four longitudinal bars, X, attached to their corners, and are given a reciprocating motion by means of a crank, J, in shaft D, near its lower end, and pitman or toggle-bars, H, extending from the crank to the followers B.

The ends of the toggle-bars are hollowed out, to receive the crank at one end, and the semicircular bearings I, on the inside of the followers, at the other end.

The simplicity and other advantages of this arrangement will be apparent, as it saves much labor and cost of fitting up, the only parts requiring to be made smooth and well finished being the crank and the ends of the toggle-bars bearing against it.

The cut-off K is made double, to correspond with the issues M, and is furnished with downward-projecting catches, N, and is actuated by the projecting point of the cam L, on shaft D, which engages with the downward-projecting catches as the shaft is revolved.

The cam L and the downward-projecting catches N of the cut-off are arranged with reference to each other, so as to effect the movement of the cut-off in opposite direction to the movement of the follower, and cause them to meet the latter about in the centre of the issues, thus shortening the movement required of the followers, as they are effective in forcing the clay through the die as soon as the issues M are closed by the cut-off.

As usually constructed and applied, the feed-arm P presses the clay down upon the bottom of the hopper C over its entire surface, causing great friction and strain upon the machine, and consequent loss of power.

In order to obviate this, I have devised the feed-arm P, (a top view of which is shown detached in Figure 3,) of such form as to drive the clay outward from the centre to the issues M, the end of the arm being formed with the usual inclined surface adapted to press the clay down through them.

I make no claim to the several parts of which this machine is composed, in themselves considered, as they have been used for similar purposes; but

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

The reciprocating plungers B B, connected by bars X, and operated by crank J and toggle-bars H, turning upon semicircular bearings I, in combination with double cut-off K K and cam L, when said parts are constructed and arranged to operate with relation to each other, as and for the purpose herein set forth.

SIMEON HAWKINS.

Witnesses:

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