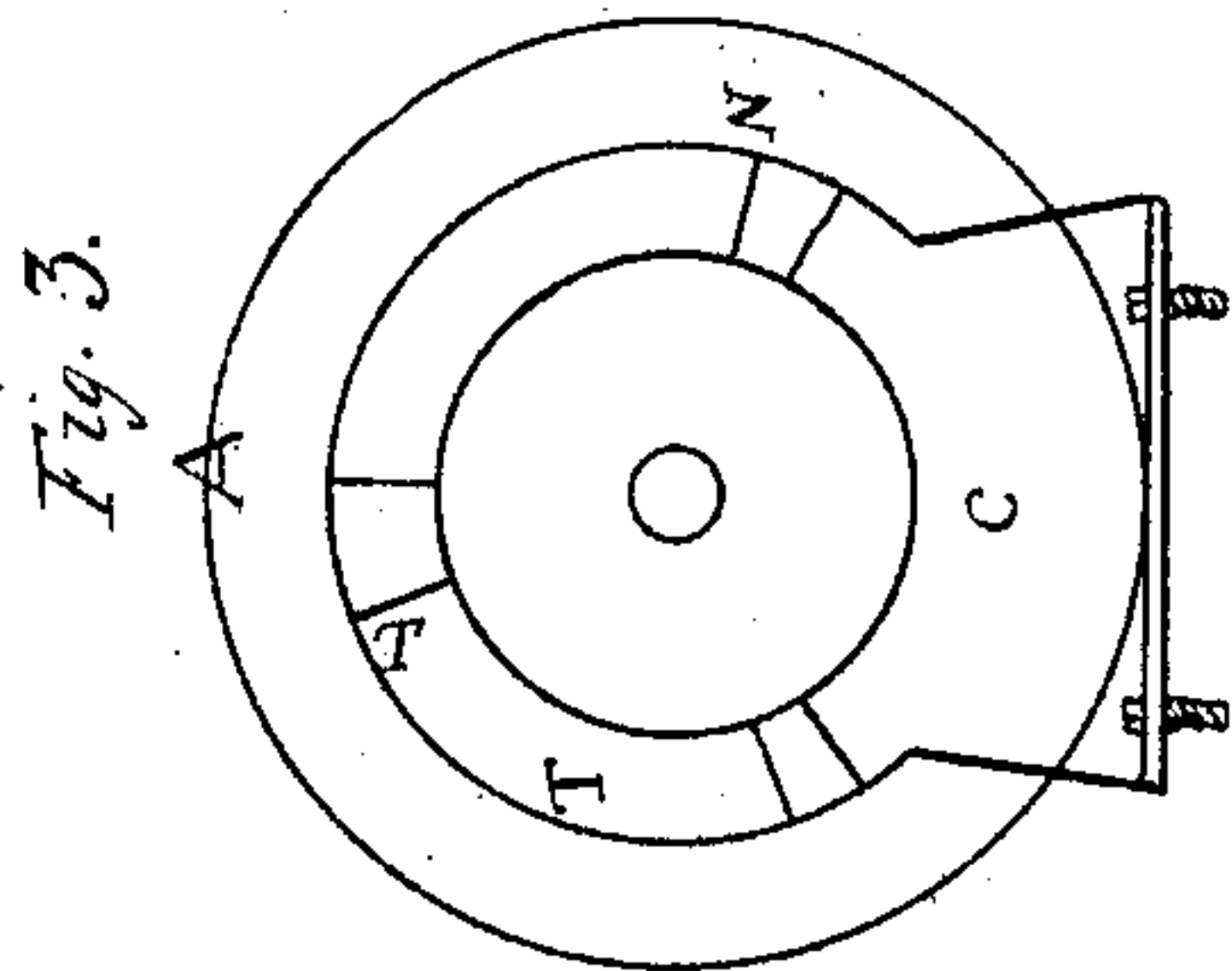
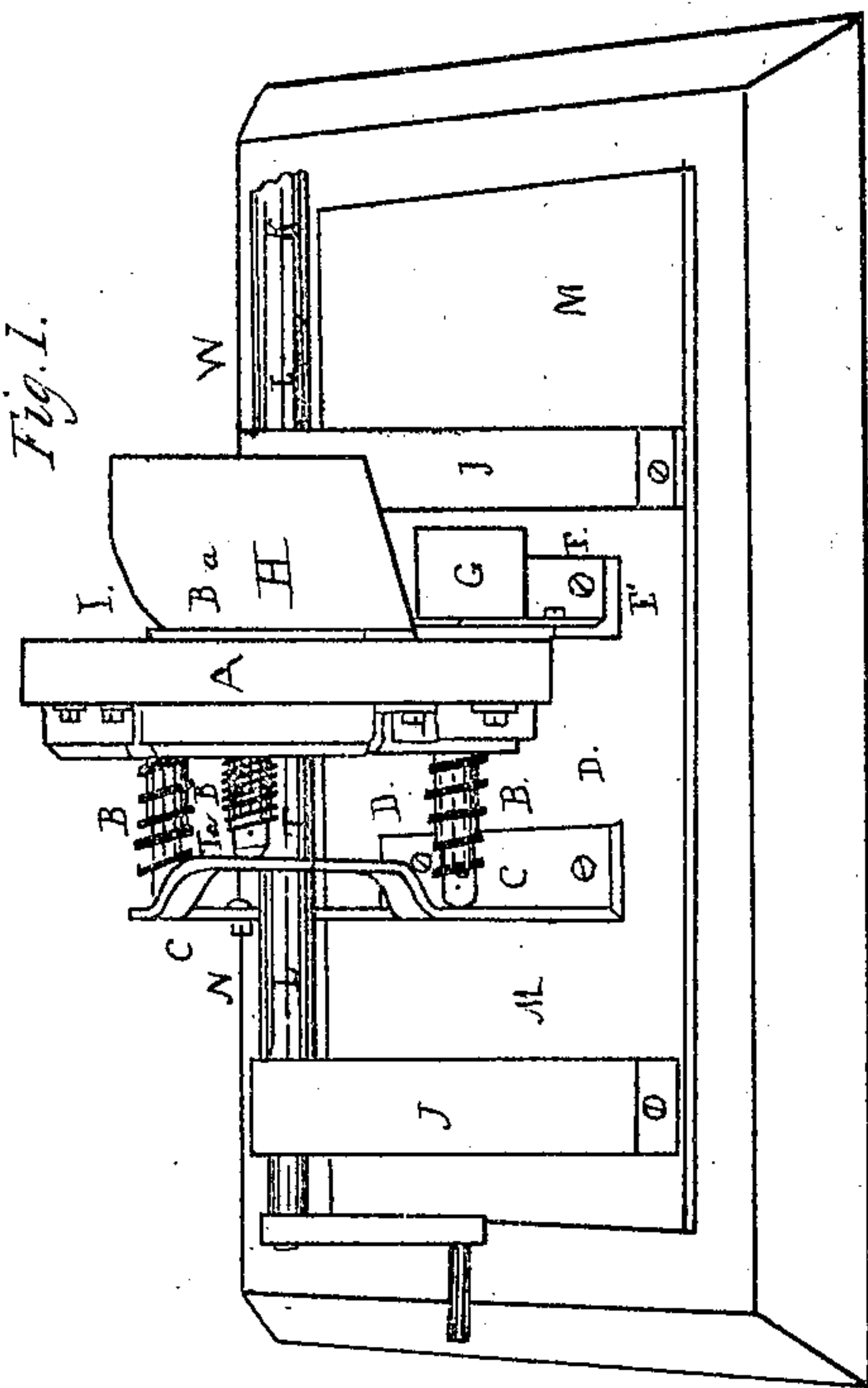
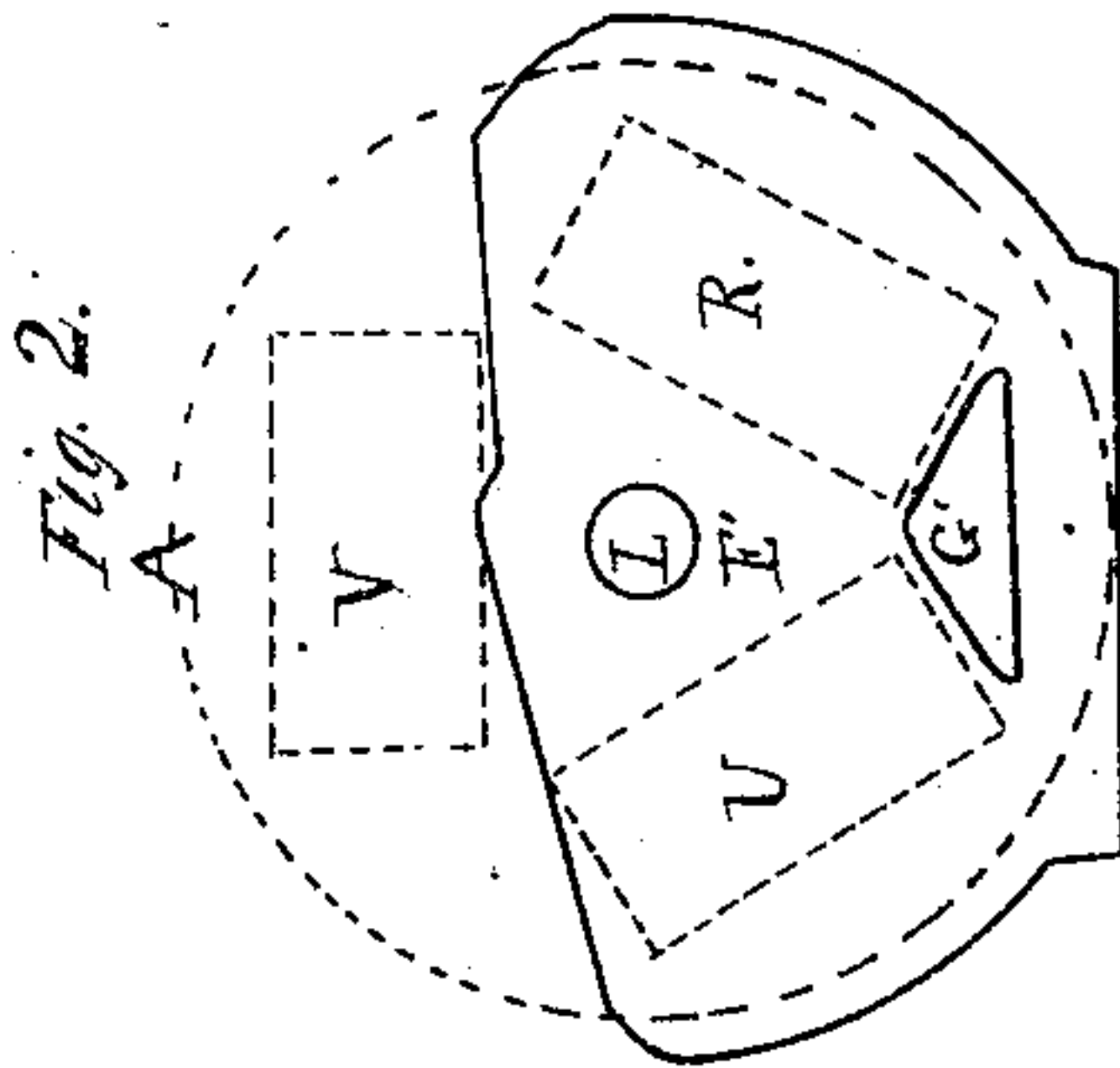
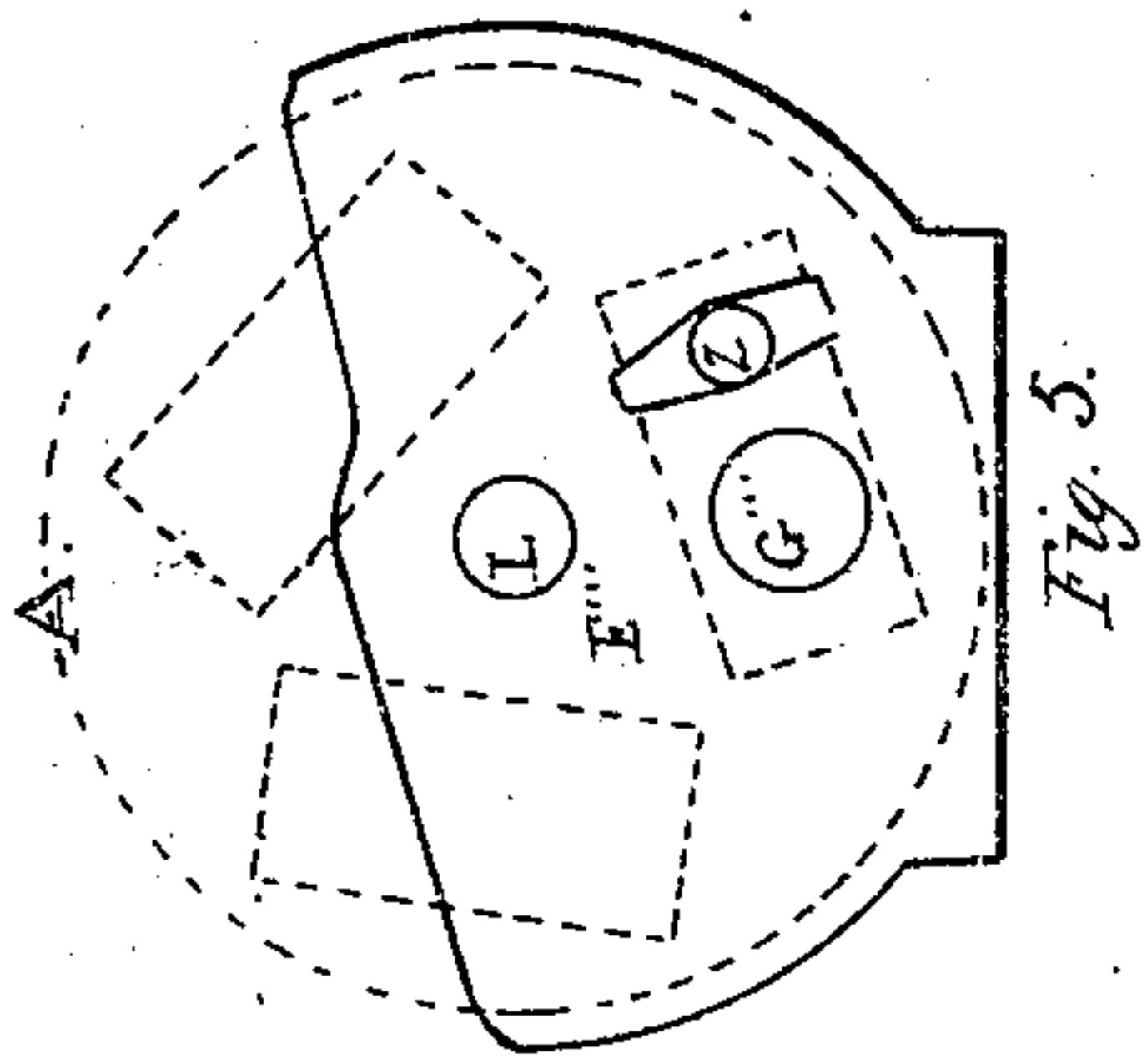
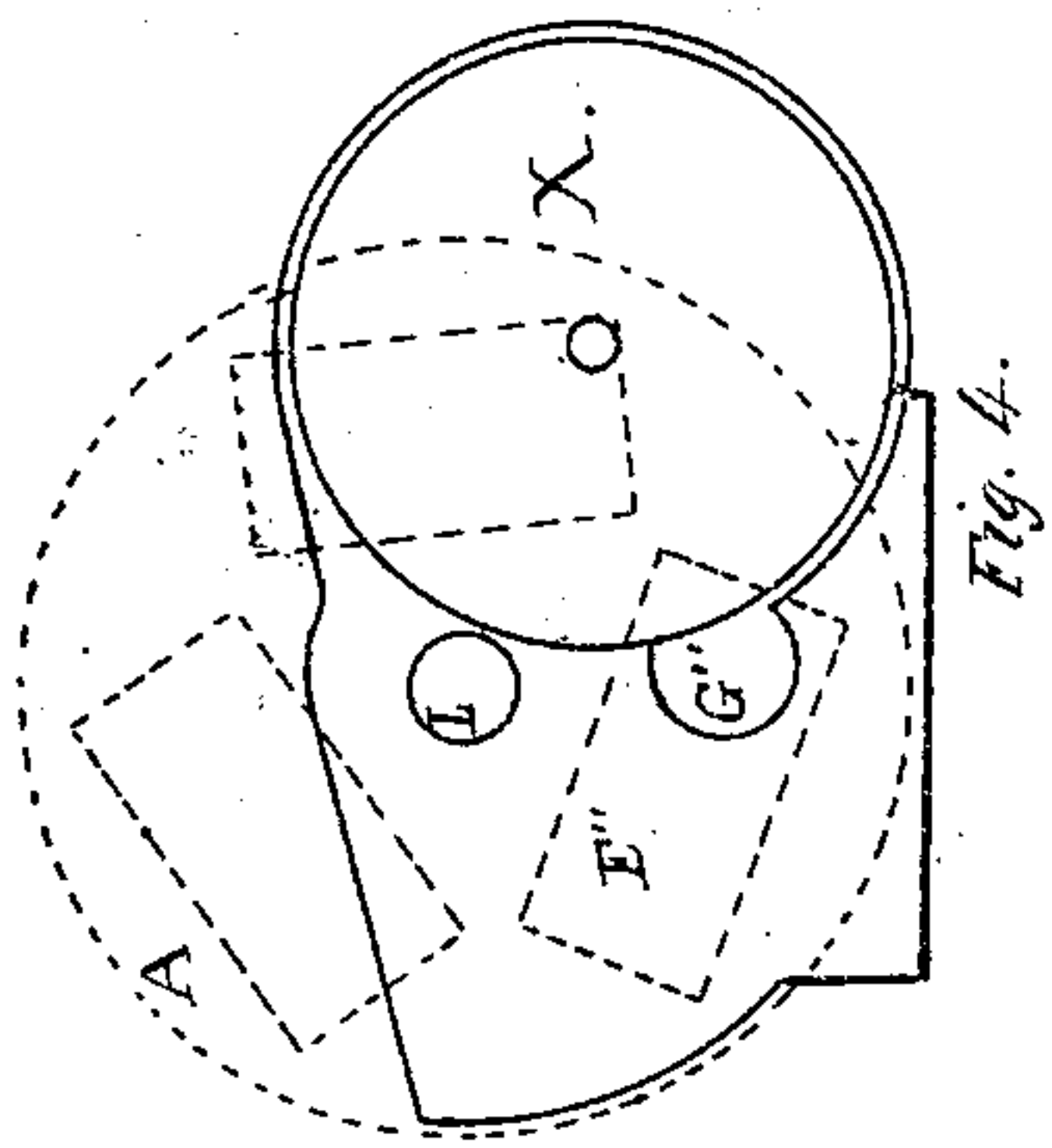


*S. J. Parker.*  
*Brick-Machine.*

*N<sup>o</sup> 73258*

*Patented Jan. 14, 1868.*



*Witnesses:*

*Joseph C. Burritt*  
*A. Van Order*

*Inventor:*

*Samuel J. Parker*

# United States Patent Office.

SAMUEL J. PARKER, OF ITHACA, NEW YORK.

*Letters Patent No. 73,258, dated January 14, 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, SAMUEL J. PARKER, of Ithaca, Tompkins county, New York, have invented an Improved Brick-Machine; and I do hereby declare that the following is a full and exact description thereof, reference being had to the annexed drawings, and to the letters thereon.

Figure 1 is a side elevation of my machine, adjusted for first quality brick.

Figure 2, a view of the feed-plate for my first quality brick.

Figure 3, the cam-plate.

Figure 4, a view of my feed-plate for the second quality of brick; and

Figure 5, my feed-plate for my third quality of brick.

My object is to make a simple and durable machine, ready adjustable for making three varieties of brick: first, a hard-pressed, finely-finished brick; second, a brick worked with more moisture of the clay, and pressed, as far as convenient, for that degree of moisture; and third, a brick worked quite moist.

For these purposes, I use one general arrangement, and several lesser devices that I shall describe.

In fig. 1, A is the mould-wheel, made with one, two, three, or more moulds, the size, flatwise, of a brick, but somewhat thicker than the brick, that it may be dressed off, and made true as it wears; and B are one, two, or more plungers, that play in the moulds; and C is the fixed cam, adjustable by the set-screws D, that gives motion to the plungers in the moulds; and E' is the stationary feed-plate, adjustable by the set-screws F to the mould-wheel A, and having the feed-entrance or pipe G, through which the clay enters the moulds as the wheel A revolves, and the delivery-shelf H attached to it. The feed-pipe is made less in size than the face of the brick towards the feed-pipe or entrance. This is so made because clay, at a right tension or plasticity and pressure, moulds smoothly against a metallic surface, but is roughened easily where cut off from the clay at the feed-pipe. Thus I designedly contract my feed-pipe as much as possible, and cut off by the motion of the wheel as little as I can of clay from clay. The delivery-shelf is also peculiar, in that it is made by such a curve on its upper edge, at I, as to just clear the emerging brick, yet be certain to catch it, when the pitman or plunger of the mould pushes it out of the mould. The delivery-shelf is also cut away slightly, a quarter or a half of an inch, next to the mould-wheel, in the full-sized machine, so that, for an instant, the plunger comes out of the mould beyond the front of the face of the mould-wheel A, and recedes again while the mould-wheel is moving. This is represented at B a, and is for the purpose of leaving the brick on the shelf so far clear of the mould-wheel that the operator can put a thin spatula of wood or a steel trowel in between the mould-wheel and the brick on the shelf, and the better remove them to the receiving-boards; and also that the onward motion of the mould-wheel shall then detach the brick the better from their adhesion to the plunger, and leave them on the shelf. The wheel A is supported and revolves on the shaft L and at K. On it are put the horizontal screw-arms or other revolving appliances that press the clay from a stout chamber into the feed-pipe G. The whole is held by the bed-piece M, and at N is seen the removable additional cam on the surface of the cam C.

By the arrangement just described my first quality of bricks is made, and the process is that the clay, as dry as can be conveniently worked, enters the mould by as small a feed-pipe as can be conveniently used; and as A revolves, the clay fills the mould, and as the mould moves on, the feed-plate cuts off the supply of clay from the mould, until the filled mould arrives opposite a perfectly smooth metallic part of the feed-plate at R, fig. 2, when at this instant the friction-roller, on the end of the plunger tubes B, meets the removable additional cam N, which sufficiently compresses it when surrounded on all sides by smooth metal, and leaves a very finished impress on the brick. Then the wheel, passing the cam N, revolves on, and the rollers on B reach the elevated surface T on the cam C, which thrusts the plungers, as at B a, beyond the face of the mould-wheel, and thus the brick out on the shelf, as has been described. In fig. 2 is seen the first-quality brick feed-plate removed. The red lines show the three moulds in the mould-wheel A in one of their positions, R being pressed by the additional cam N, and U just about to be filled, and V just about to be emptied on the shelf H, fig. 1, as has been described. In fig. 3 is seen the cam-plate C removed, and A is the outline of the mould-wheel, and N the removable additional pressure cam, and T the delivery part of the cam C. In fig. 4 is seen the plate for the medium or second quality of brick. It is adjustable in the place of E' to the machine. When at W, on the shaft L, is fixed a cog-wheel, which meshes into another cog-wheel on the shaft of the wheel X, and moves the



latter twice as fast as the mould-wheel A. The effect is, as the moulds in A are filled through round feed-pipe G'', the wheel X cuts off the clay as by a smooth-edged saw-plate or revolving knife-edge, and after it is cut off, smooths the surface next to X as by a troweling motion.

Thus the operation of the machine is precisely as has been described, except that there is no cam N used, but only the cutting and smoothing of the cutter X in making this quality of brick. In fig. 5 the feed-plate E''' differs from the plates E' and E'' in that no cam N is used nor cutter X, but an additional feed-pipe, Z, with lateral grooves, is used. The effect is that a thin clay plasters or smooths over the cut surface of the clay from clay which takes place as the clay enters and parts from G'''. And thus by this arrangement I use a thinner clay but obtain a less smooth brick. I also use other arrangements and combinations of the described parts of my brick-machine, but they, as well as the advantages and uses of my invention, are apparent to those skilled in the art to which they appertain.

*Claims.*

1. The perpendicular adjustable cam C, in connection with the plungers and mould-wheel, arranged and operating together as shown and described.
2. So arranging the mould-wheel A, feed-plate E' E'' E''', and contracted feed-pipe G' G'' G''', in connection with each other, that nearly the entire surface of each brick shall be subjected to the smoothing contact of metal, as described.
3. The arrangement of the adjustable auxiliary cam N, in connection with the main cam C, as and for the purposes described.
4. The cutting-wheel X, arranged in connection with the feed-pipe G'' and feed-plate E'', as set forth.
5. The secondary feed-pipe Z and its side grooves, in connection with the feed-pipe G and feed-plate E''', substantially as described.
6. The combination of the wheel A on the horizontal shaft L, adjustable cam C, feed-plates E' E'' and E''', when substantially made, and operating as described.
7. The combination of the wheel A on its shaft L, adjustable cam C, auxiliary cam N, cam-surface T a, plate E', and table H, arranged and operating substantially as described.
8. The feed-plate E' E'' E''', when made adjustable, and arranged with reference to the mould-wheel A, substantially as shown and described.

SAMUEL J. PARKER.

Witnesses:

JOSEPH C. BURRITT,  
A. VAN ORDEN.