

J. S. Elliott,
Brick Machine.

N^o 55,841.

Patented June 26, 1866.

Fig. 1.

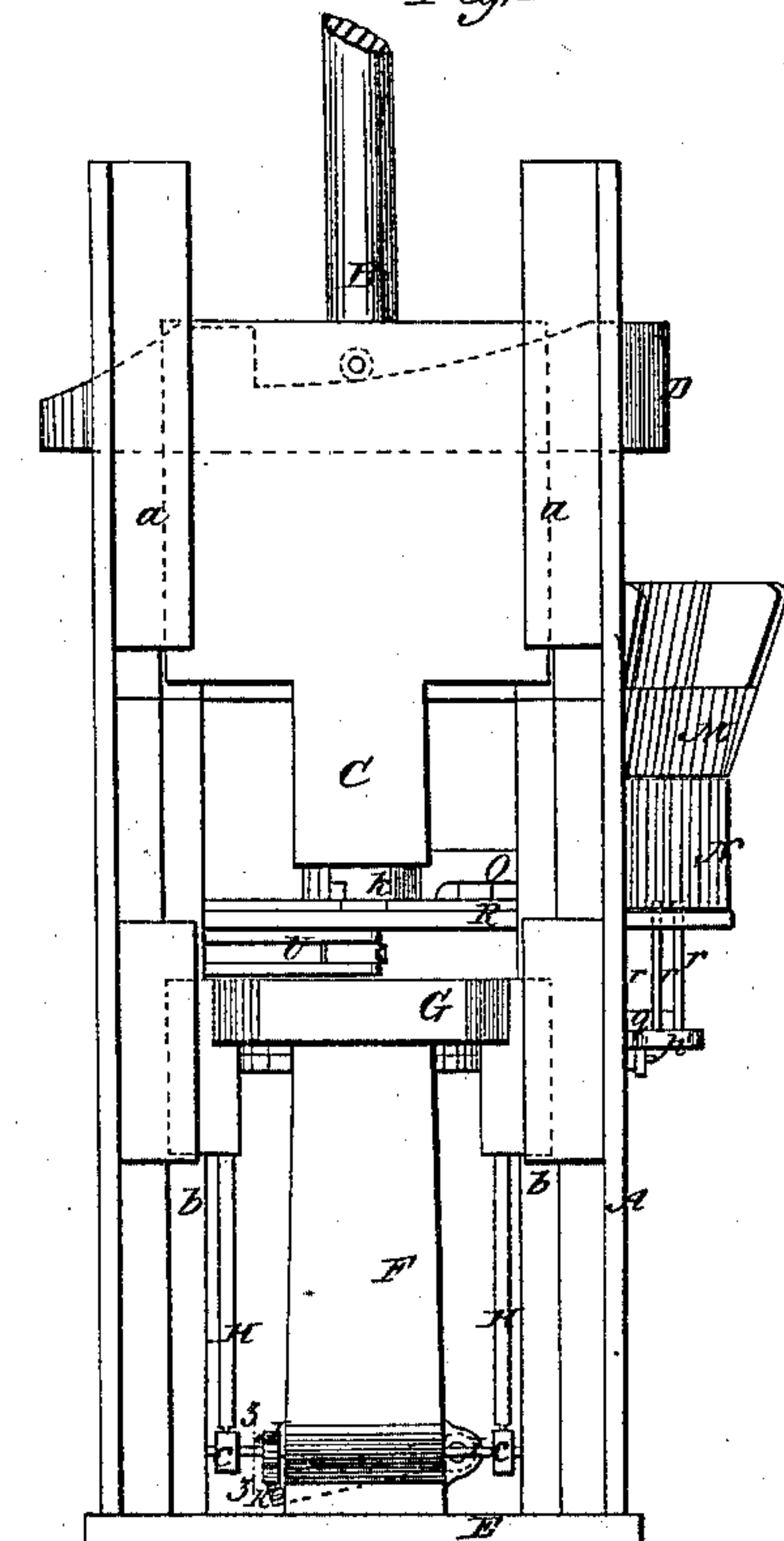


Fig. 2.

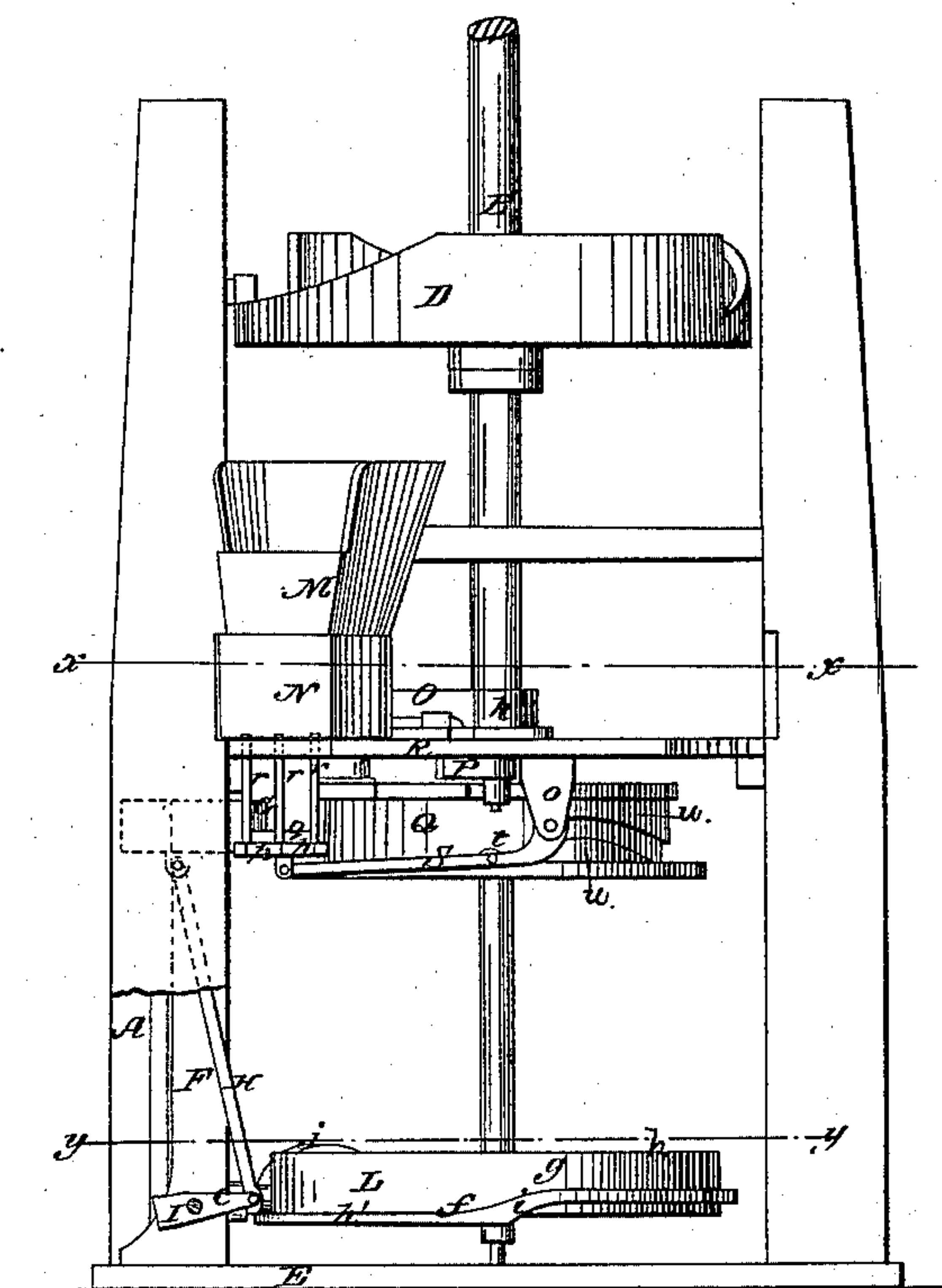


Fig. 3.

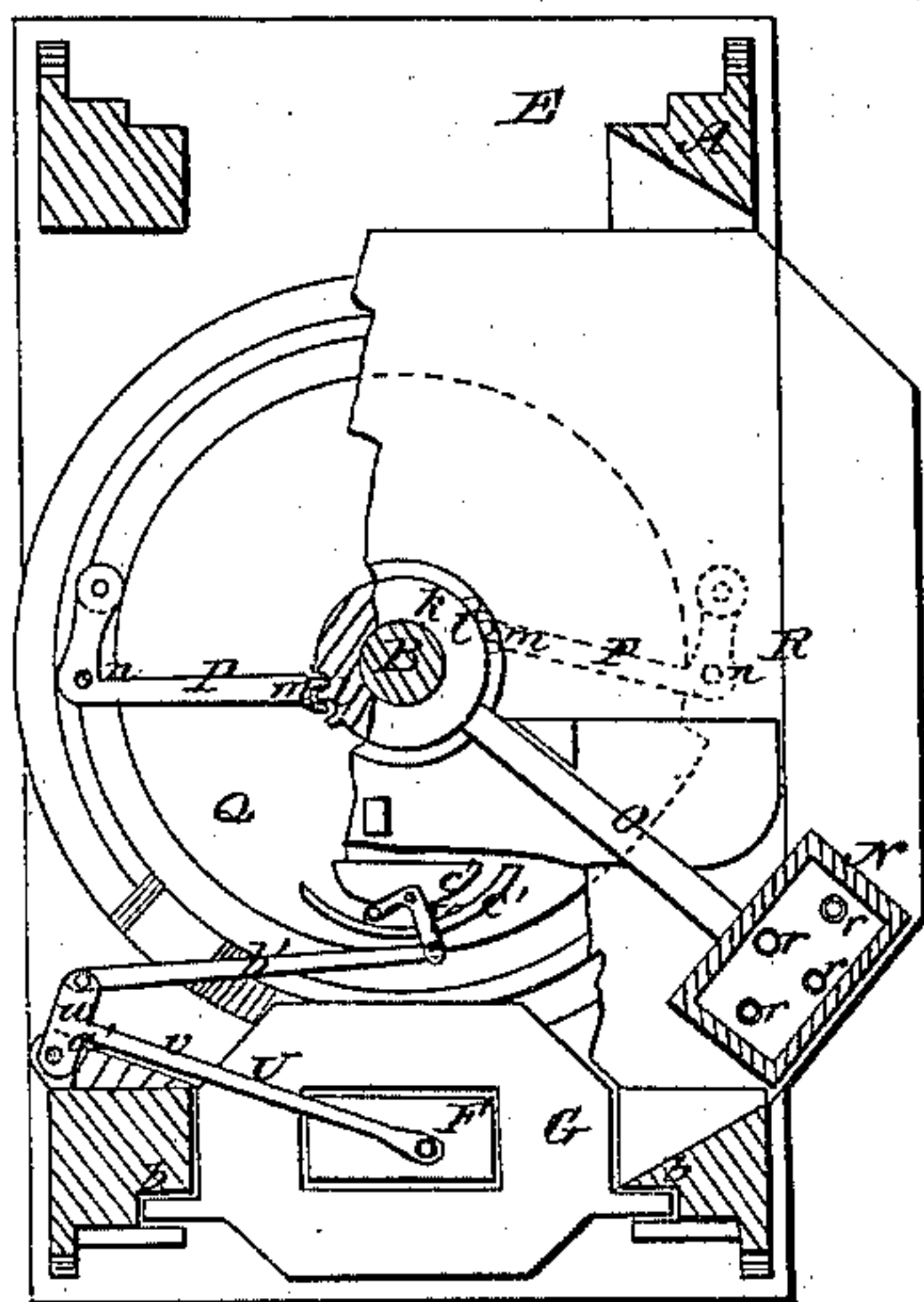
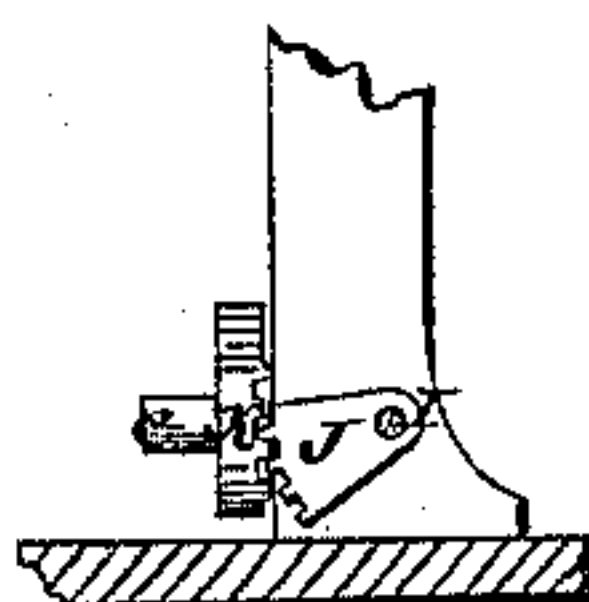
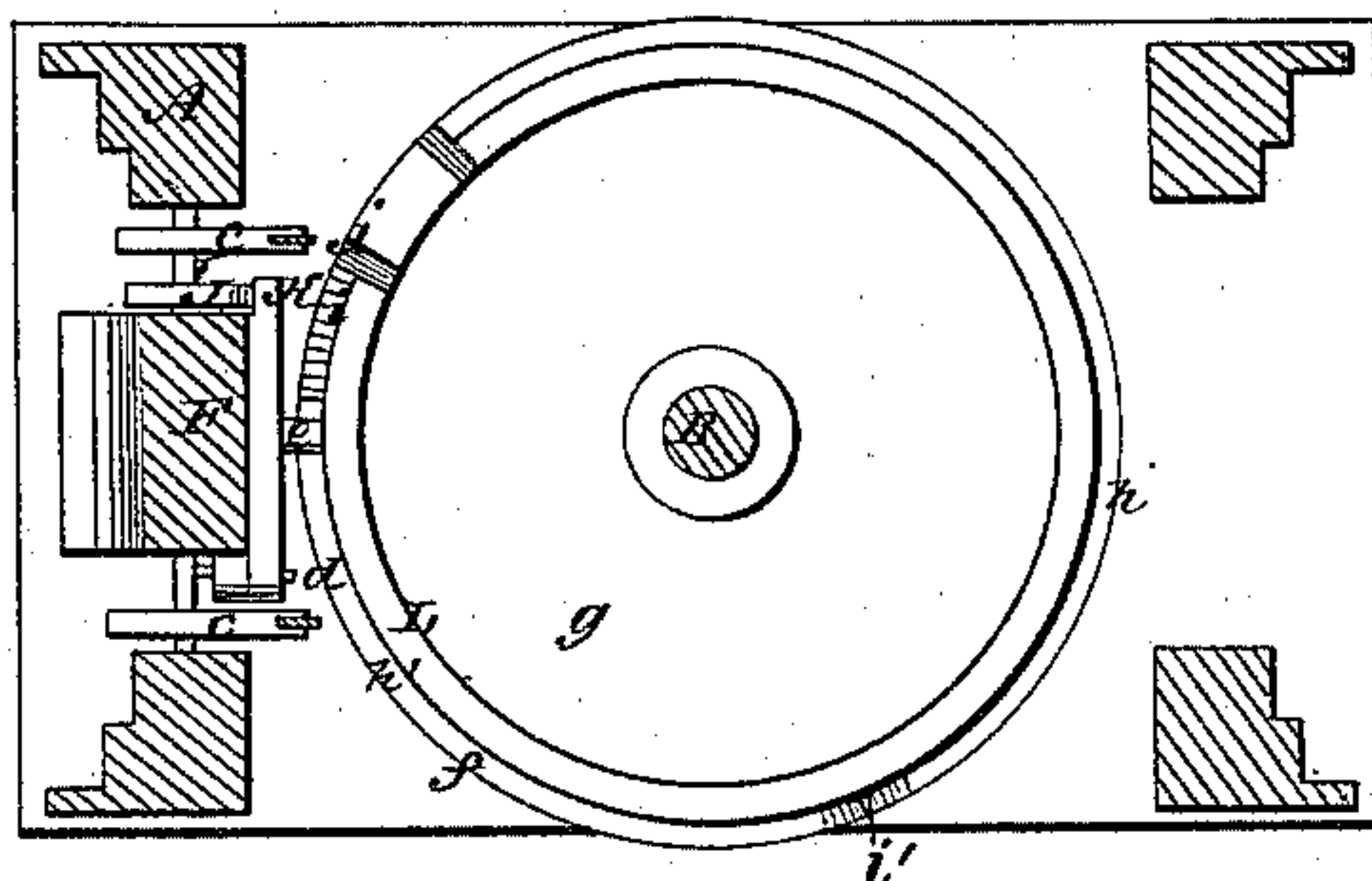


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOSIAH S. ELLIOTT, OF EAST BOSTON, MASSACHUSETTS.

IMPROVED BRICK-MACHINE.

Specification forming part of Letters Patent No. 55,841, dated June 26, 1866.

To all whom it may concern:

Be it known that I, JOSIAH S. ELLIOTT, of East Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Brick-Press; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front elevation of my invention; Fig. 2, a side elevation of the same; Fig. 3, a horizontal section of the same, taken in the line *x x*, Fig. 2; Fig. 4, a horizontal section of the same, taken in the line *y y*, Fig. 2; Fig. 5, a section pertaining to the same, taken in the line *z z*, Fig. 1.

Similar letters of reference indicate corresponding parts.

This invention relates to certain new and useful improvements in a brick-machine for which Letters Patent were granted to me, bearing date February 14, 1860; and it consists in an improved means for preventing the clogging or choking up of the hopper and carrier; and also in an improved manner of operating the carrier, and also the mold in which the bricks are compressed.

The invention also consists in a sweep for discharging the brick from the stationary bottom of the mold, all arranged and operating as hereinafter set forth.

A represents a framing, which may be constructed in any proper manner to support the working parts, and B is an upright shaft placed centrally in said framing and having a ram, C, fitted between guides *a a*, at the front side and upper part of the framing, as shown clearly in Fig. 1. This ram is operated by a cam, D, placed on the upper part of the shaft B, and it may be arranged as in the original patented machine, or in any other suitable way.

To the base E of the machine there is attached permanently an upright bar, F, which is at the front part of the framing A and in line with the ram C. The upper surface of the bar F forms the bottom of the mold G, and this mold is a sliding one, and works between guides *b*, attached to the sides of the framing, and over the upper part of the bar F.

The mold is operated, raised, and lowered

as follows: Two bars, H H, are pivoted to its under side, and the lower ends of these bars are pivoted to the outer ends of arms *c c* on a shaft, I, which passes loosely and transversely through the lower part of bar F, and has its ends fitted in the sides of the framing A. On the shaft I there is secured a toothed segment, J, into which a segment, K, gears, which works on a pin, *d*, at the inner side of bar F, the segment K having a friction-roller, *e*, attached to it, which works on a cam, L, on the lower part of the shaft B, said cam being composed of a flange, *f*, projecting horizontally from the periphery of a wheel, *g*, and having one portion, *h*, higher than the other portion, *h'*, the two portions being connected by inclined planes *v*. The mold is raised by the segment K being forced upward as the elevated portion *h* passes under the roller *e*, the segment K operating the segment J, and causing the shaft I to turn, so that the arms *c c* will act upon the bars H H, the mold being lowered in consequence of the segment K being forced down on the lower portion, *h'*, of the flange by a lip, *j*, on wheel *g*.

The mold, it will be seen, has a positive movement and is operated with but a small degree of friction.

M is a hopper, permanently secured to the framing A, and N is a carrier, which conveys the mortar or other material of which the bricks are made to the mold G. This carrier has a vibrating or reciprocating motion given it as follows: The carrier is secured upon the outer end of an arm, O, the inner end of which is attached to a sleeve, *k*, fitted loosely on shaft B, said sleeve having teeth *i* made in it at opposite sides of its lower end, into which segments *m*, at the inner ends of right-angular levers P, work. (See Fig. 3.) These levers P are actuated alternately by a cam, Q, on the shaft B, and they have their fulcrum-pins *n* passing into a platform, R, in the framing A, over which is the carrier N when underneath the hopper M. By this arrangement the carrier N is moved from underneath the hopper M, over the mold G, and back again underneath the mold.

The device is preferable to the means employed for the purpose in the original patented machine.

S is an arm, which is pivoted at one end in

a pendant, *o*, attached to the platform R. The outer or disengaged end of this arm has cross-bars *p* attached to it by a pivot or joint, and on these cross-bars a weight, *q*, is placed, and four upright rods, *r*, attached, said rods being in line with holes in the platform R. The weight *q* has a tendency to keep the rods *r* down below the upper surface of the platform R, and said rods are shoved upward into the carrier each time the latter is moved underneath the hopper M, by means of a roller, *t*, attached to the arm S, working in an inclined groove formed by the cleats *u u*, attached to the cam Q. (See Fig. 2.) These rods *r*, thus operated, prevent the mortar from arching over in the carrier, and insures the latter being properly filled.

Each time the filled carrier arrives over the bar F the ram C descends and compacts or compresses the mortar in the mold G, the latter being elevated, so as to receive the mortar from the carrier. When the ram ascends out from the carrier the latter is forced back underneath the hopper to be refilled, and the mold descends, leaving the brick on the top of bar F, from which it is removed by a sweep, U, which works over the top of F. This sweep is composed of a bar, *v*, having a cross-head, *w*, at one end, one end of the head working on end *a'*, attached to the platform R, and the other end of the head connected by an arm, *b'*, with a small right-angular lever, V, secured to the under side of the platform R, and operated

by curved projections *c'* on the top of cam Q. (See Fig. 3.)

This machine is a decided improvement over the original patented one, is less liable to get out of repair, and operates with less friction.

I do not claim the ram C, nor the cam for operating the same; nor do I claim the fixed bar F, nor the mold G, irrespective of the mode of operating the same. Neither do I claim the carrier N, irrespective of the means for operating the same; but

I do claim as new and desire to secure by Letters Patent—

1. The operating of the carrier N by means of the levers P, connected with the sleeve *k*, to which the arm O of the carrier is attached, and actuated by the cam Q, substantially as shown and described.

2. The operating of the mold G by means of the bars H H, arms *c c*, and toothed segment J on shaft I, toothed segment K, and cam L, all arranged substantially as and for the purpose specified.

3. The rods *r*, arranged and operated substantially as shown and described, for insuring the proper filling of the carrier, as set forth.

4. The sweep U, arranged and applied to operate substantially in the manner as and for the purpose set forth.

JOSIAH S. ELLIOTT.

Witnesses:

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