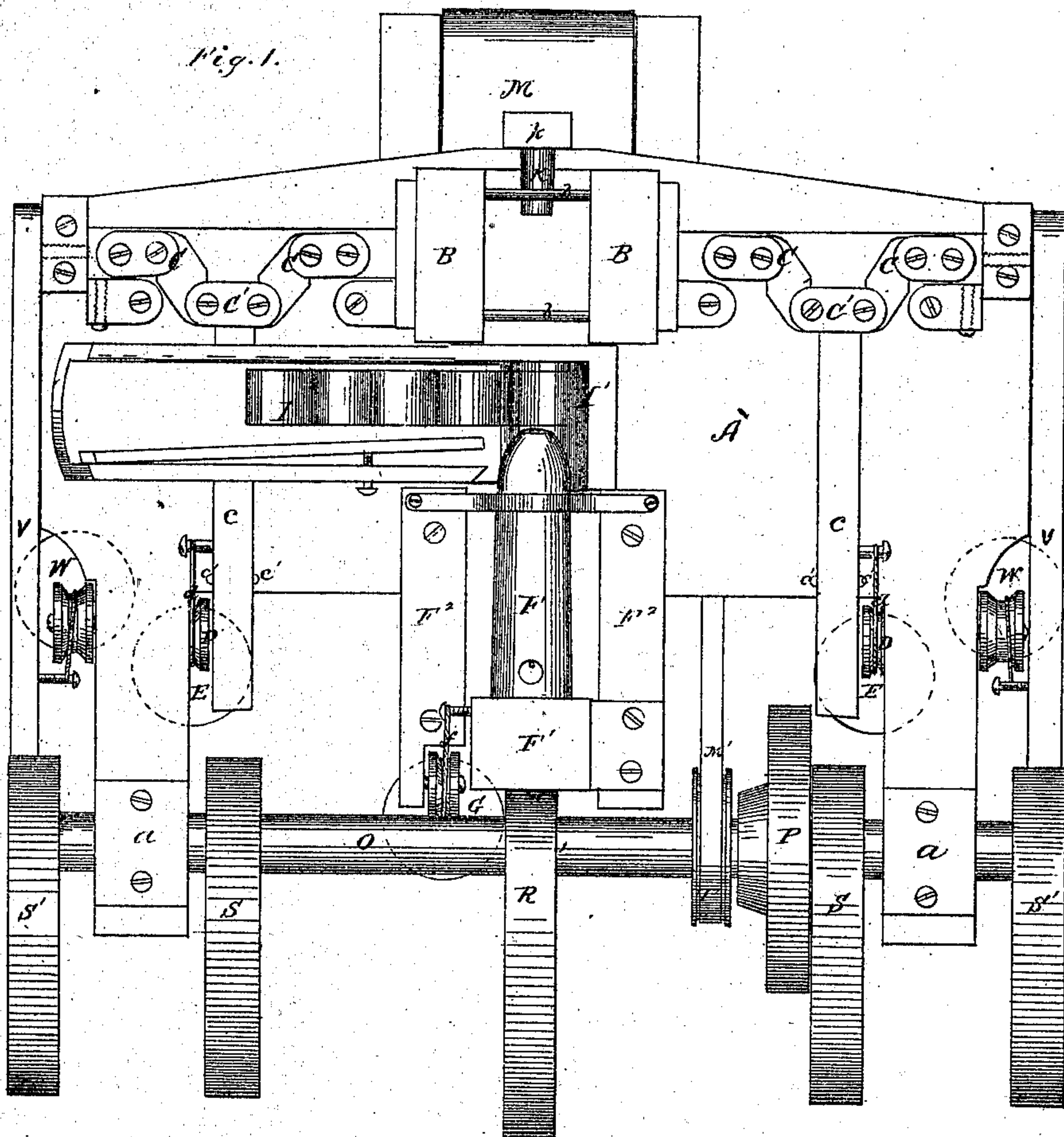


S. R. THOMPSON.
POTTERY MACHINE.

No. 104,795.

Patented June 28, 1870.



Witnesses.

Carroll D. Wright.
Chas. Felton Pidgeon.

Inventor.

Samuel R. Thompson
by Chas. F. Brown,

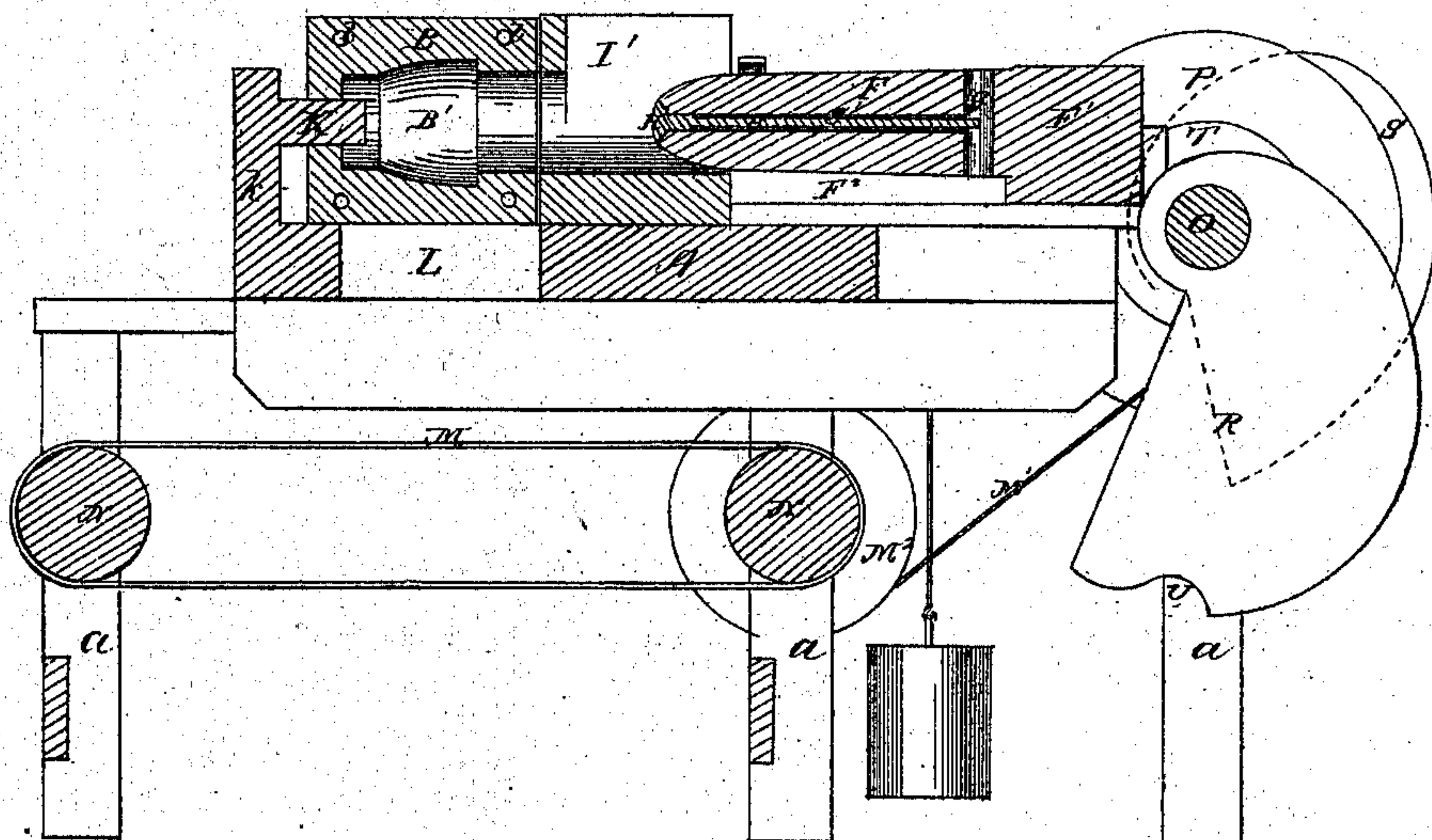
Atty.

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Fig. 2.



Witnesses.

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United States Patent Office.

SAMUEL R. THOMPSON, OF PORTSMOUTH, NEW HAMPSHIRE.

Letters Patent No. 104,795, dated June 28, 1870.

POTTERY MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

I, SAMUEL R. THOMPSON, of Portsmouth, in the county of Rockingham and State of New Hampshire, have invented certain Improvements in Machines for making Earthenware, &c., of which the following is a specification:

Figure 1 is a plan view of my invention.

Figure 2 is a sectional elevation of the same.

The object of this invention is to produce a machine for the manufacture of earthenware and vessels from all kinds of plastic material, and

It consists mainly of a matrix, constructed in two parts, which parts are held apart from each other when not in operation, and a plunger, which conforms in shape to the matrix, both matrix and plunger being operated by a series of cams on a common shaft, in such manner that the two parts of the matrix come in contact, just before the plunger enters the same, with the clay or other material, and separate before the plunger is wholly withdrawn, the withdrawal of the parts being effected by weights.

It also consists in the combination with the matrices above referred to, of a plunger provided with a self-acting valve, in order to admit air to the inside of the newly-formed vessel, and prevent the same from clinging to the end of the plunger by atmospheric pressure.

The details of construction and method of operation will be more fully described hereinafter.

In the drawing—

A represents the bed or table of the machine, which is supported by legs *a a*.

On one side of table A is located the horizontal matrix, which consists of two blocks B B, which have the half-molds B' on their inner sides, and are held in position relatively by the rods *b b*, which are rigidly attached to one part, B, and slide through the other.

The parts B B are connected to toggle-joints C, the outer ends of which are attached by slots and screws to the table A.

The central links C' of joints C are attached to rods or bars *c*, which extend across table A between guides *c'*, and project beyond.

D D represent pulleys, journaled below table A, over which pass cords *d d*, which are attached to rods *c*, and have weights E on their lower ends, which weights keep the rods *c* drawn back to their utmost extent, and hold the parts B B apart, as shown in fig. 1.

F represents a horizontal plunger, provided with a square head F', which plunger is in a direct line with the matrix B, when closed.

The plunger F slides between the ways F², and is connected by cords *f* with weight G, by means of which the plunger is held in the position shown.

The plunger is provided with the transverse orifice *g*, from which runs the longitudinal air-passage *g'*, in

which is the stem H of valve H', which constitutes the end of plunger F.

I represents an inclined spout or trough, which carries the material to be molded into a right-angle shaped receiver I', through which plunger F passes. The receiver I' is provided with a concave bottom, corresponding to the shape of plunger F, and has a circular orifice, through which the latter passes.

K represents a horizontal bar on the standard *k*, which bar or projection enters the matrix B at the opposite end from plunger F, and forms a concavity in the bottom of the vessel molded.

L represents an opening in the table A, under matrix B, through which opening the vessels fall.

M is an endless band, passing around rollers N below table A, which band is operated by belt M' passing from driving-shaft around pulley M².

O represents a horizontal shaft, journaled in projections *a a* of table A, on which shaft are located the driving-pulley P, cams R S S', and pulley T, which operate the various parts of the machine.

V V represent arms, which are pivoted by right and left screws to the sides of table A, said screws bearing against the outermost links of joints C, which are secured to table A through slots, and admit of a slight lateral motion.

The free ends of arms V bear upon the lower sides of cams S', and are caused to bear against the same by weights W.

Motion being imparted to pulley P, the cams R and S bear upon the head F' of plunger F and the ends of rods *c*, and propel the same toward the opposite end of the machine.

The rods *c*, by means of the truckle-joints C, drive the blocks B B together just as the end of the plunger, with a lump of clay, enters it, while the arms V V, being depressed by cams S', turn the right and left screws against the outer links of joints C, and give the straightened joints an additional pressure against blocks B, and set the same firmly together, while the plunger enters to its utmost extent and forces the plastic material into every part of the mold.

When the plunger has entered to its utmost extent it falls back slightly into a depression, U, in the periphery of the cam R, thereby loosening it from the vessel before the opening of matrix B, and slightly opening valve H' by adhesion to the material, while the air, rushing through channel *g'*, prevents the adhesion of the material to the plunger. Meanwhile the cam S, not extending so far as cam R, (as shown in dotted lines in fig. 2,) release rods *c*, which are drawn back by weights E into their former position, thereby separating blocks B, and the cam R releasing plunger F immediately after it is withdrawn by weight G, thus allowing the vessel to drop through aperture

L upon band M, which carries the same from the machine to a convenient place for removal.

The matrix B, plunger E, and projection K can be readily removed, and different sizes substituted.

The clay or other material is formed in suitable cakes, which roll in succession down the spout I, and at every withdrawal of plunger F a cake rolls into receiver I', in front of the same, and is ready for the next operation.

Having thus fully described my invention,

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

1. The plunger F, provided with self-acting valve

H, in combination with matrix B, weight G, and cam R, with its depression U, substantially as described.

2. The arms V V, provided with right and left screws, in combination with joints C and cams S, substantially as described.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

SAMUEL R. THOMPSON.

Witnesses:

CARROLL D. WRIGHT,
CHARLES F. BROWN.