

**No. 679,846.**

**Patented Aug. 6, 1901.**

**R. T. HUGHES.**

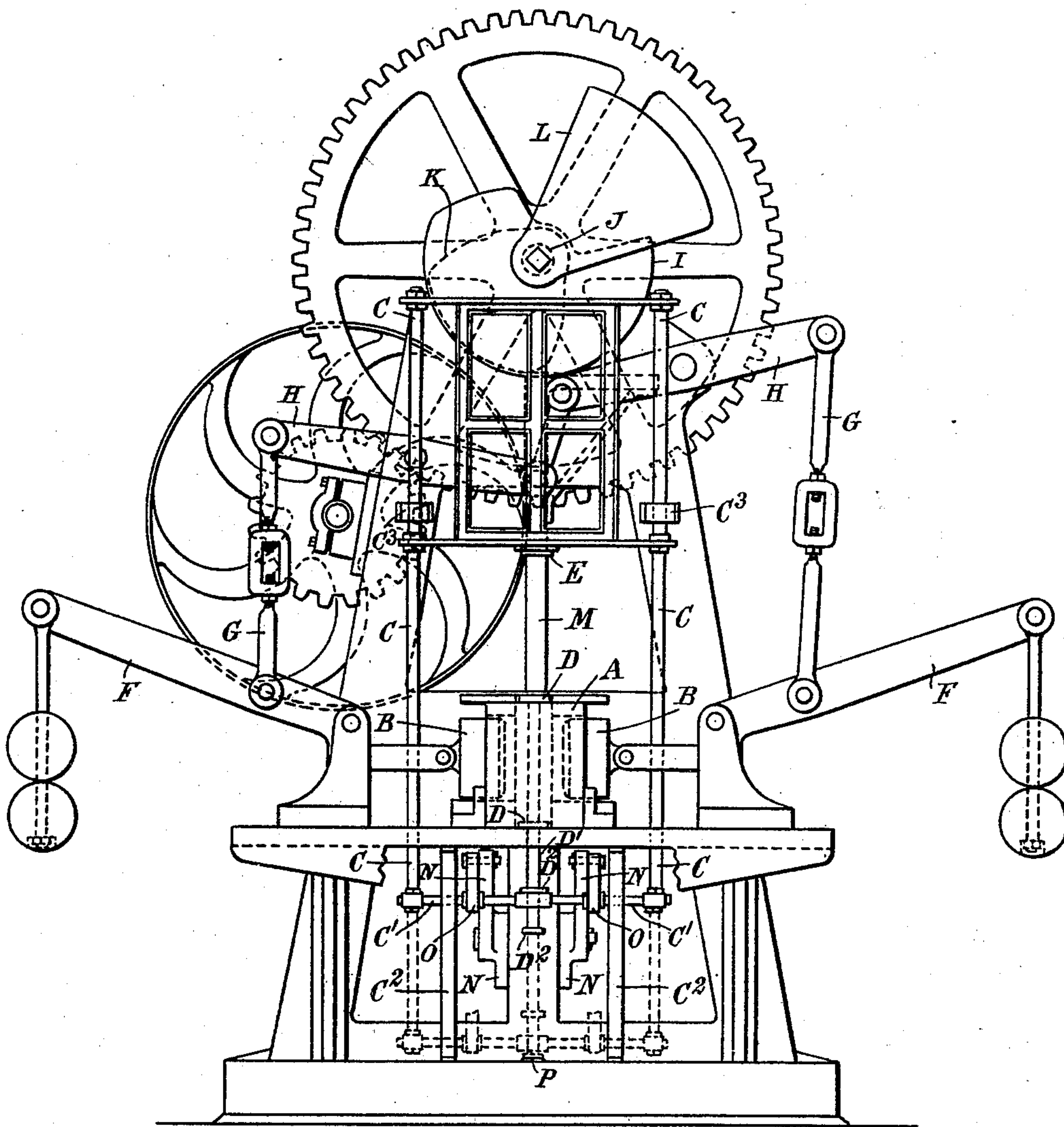
**MACHINERY FOR PRESSING BRICKS OR THE LIKE.**

(Application filed Feb. 6, 1901.)

(No Model.)

**2 Sheets—Sheet 1.**

*Fig.1.*



*Witnesses*

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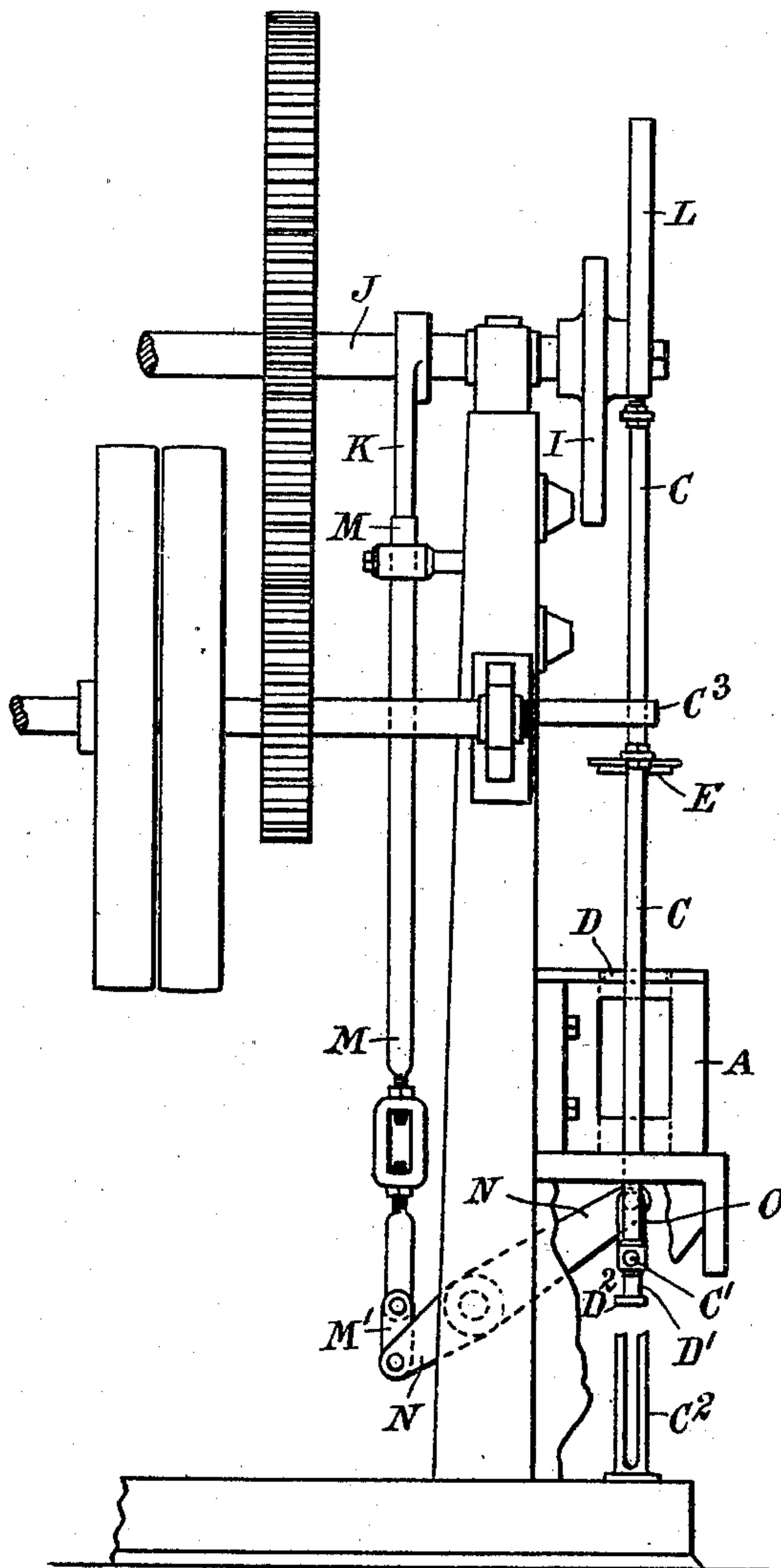
MACHINERY FOR PRESSING BRICKS OR THE LIKE.

(Application filed Feb. 8, 1901.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 2.



Witnesses

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# UNITED STATES PATENT OFFICE.

RALPH TOWNSEND HUGHES, OF SALTBURN, ENGLAND.

## MACHINERY FOR PRESSING BRICKS OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 679,846, dated August 6, 1901.

Application filed February 6, 1901. Serial No. 46,212. (No model.)

*To all whom it may concern:*

Be it known that I, RALPH TOWNSEND HUGHES, brick manufacturer, a subject of the Queen of Great Britain, residing at Red Lodge, Saltburn-by-the-Sea, in the county of York, England, have invented certain new and useful Improvements in Machinery for Pressing Bricks or the Like, of which the following is a specification.

My improvements relate to brick-pressing machinery, such as described in the specification of a former patent granted to me, No. 646,027, dated March 27, 1900. In the machine described in this former patent the top of the mold was closed by a horizontal sliding block at the time when side plungers were caused to advance to form indents in the sides of the brick that was being molded. According to my present invention I cause the top of the mold to be at this time closed by a plunger carried by a vertical sliding frame, which also carries the discharging-plunger by which the compressed brick is to be discharged from the mold. A cam on the cam-shaft gives a rising motion to the frame when a brick is to be discharged and another cam depresses the frame when the mold is to be closed. When the sliding frame is in its lowest position, both plungers are within the mold, one closing its lower end and the other its upper end. The discharging-plunger is arranged to rise or fall somewhat in the sliding frame, while the other plunger, which enters the top of the mold, is fixed to the sliding frame, and as the sliding frame completes its downward movement somewhat compresses the brick before the side plungers which are to make the side indents in the brick complete their forward movement.

The drawings annexed show a machine constructed according to my invention.

Figure 1 is an end elevation; and Fig. 2 is a part side elevation, in which the levers which are to actuate the side indent-plungers are omitted, so that the other parts may be seen more clearly.

A is the fixed mold.

B B are the side plungers which are to form the indents.

C is a vertical sliding frame carrying the discharging-plunger D and the plunger E, which is to close the top of the mold. The

bottom bar C' of the sliding frame slides up and down between vertical guides C<sup>2</sup>, which are secured to the fixed frame of the machine. The two vertical side bars slide through other fixed guides C<sup>3</sup>.

The side plungers B can, as in my former patent, be simultaneously thrust inward toward one another by weighted levers F and drawn back away from one another by connecting-rods G G, which connect them with other levers H H, both of which can be rocked simultaneously by the action of a cam I on a continuously-revolving cam-shaft J. The cam-shaft J also carries two other cams K L, which are to give the up-and-down movement to the sliding frame C. The cam K acts upon the upper end of a vertically-sliding rod M to depress it. The lower end of the rod is coupled by a short link M' to one arm of each of a pair of levers N, and other arms of these levers are connected by short links O with the bottom bar C' of the frame C, so that when the sliding rod M is depressed the sliding frame C is raised. The cam L acts to depress the frame C and hold it down at the time when a brick is being compressed.

The discharging-plunger D can move up and down within the mold A, and a stem D' projects downward from it and extends through the bottom bar C' of the frame C. Upon the stem D' are two collars D<sup>2</sup> at a distance apart somewhat greater—say, one and one-half to two inches greater—than the thickness of the bar C'. When the frame C is lifted, its bottom bar C' comes against the upper collar D<sup>2</sup> and lifts the discharging-plunger D. When the frame C is lowered, the discharging-plunger is brought into position to close the bottom of the mold, and the stem D' comes down onto a step P, arranged on the foundation-plate. The stem thus comes to rest while the frame C completes its downward movement and brings down the plunger E into the upper end of the mold.

The parts shown on the right-hand side of Fig. 2 are repeated on the left-hand side, and are as in my previous patent so set that when a brick is being pressed in one press a compressed brick is discharged from the other.

I claim—

1. The combination of the tubular mold A, the two side plungers B, the sliding frame C,



the plungers D and E carried by it and cams on a continuously-revolving cam-shaft for raising and lowering the frame C and moving the side plungers toward and away from one another at the proper times substantially as described.

2. The combination of the tubular mold A, the sliding frame C, the discharging-plunger D which can move up and down within the mold its stem D' extending downward through the bottom bar of the sliding frame, the collars D<sup>2</sup> on the stem D' one above and the other below this bottom bar and at such a distance apart that the stem can rise or fall a short distance independently of the sliding frame the stop P for limiting the descent of the plunger D the plunger E fixed to the sliding frame and serving to close the top of the mold and cams upon a continuously-revolving cam-shaft for controlling the upward-and-downward movement of the sliding frame.

3. The combination of the tubular mold A, the two side plungers B, the vertically-sliding frame C, the discharging-plunger D which can move up and down within the mold, its stem D' extending downward through the bottom of the frame C, the collars D<sup>2</sup>, the stop P and the upper plunger E fixed to the

sliding frame in such position that it enters and closes the top of the mold when the sliding frame is lowered and the stem D' rests upon the stop P and means for raising and lowering the frame C and for moving the side plungers toward or away from one another at the proper times.

4. The combination of the tubular mold A, the two side plungers B, the sliding frame C, the discharging-plunger D, its stem D', the collars D<sup>2</sup>, the stop P for limiting the descent of the plunger D, the plunger E fixed to the sliding frame and cams upon a continuously-revolving cam-shaft to first lower the frame C until the downward movement of the plunger D is arrested by the stop P and the plunger E has entered into and closed the top of the mold and to subsequently cause the side plungers to be simultaneously thrust inward to make indents in the sides of the brick and finally to withdraw the side plungers and then lift the frame C and cause the discharging-plunger to discharge from the mold the now compressed brick.

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Witnesses:

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