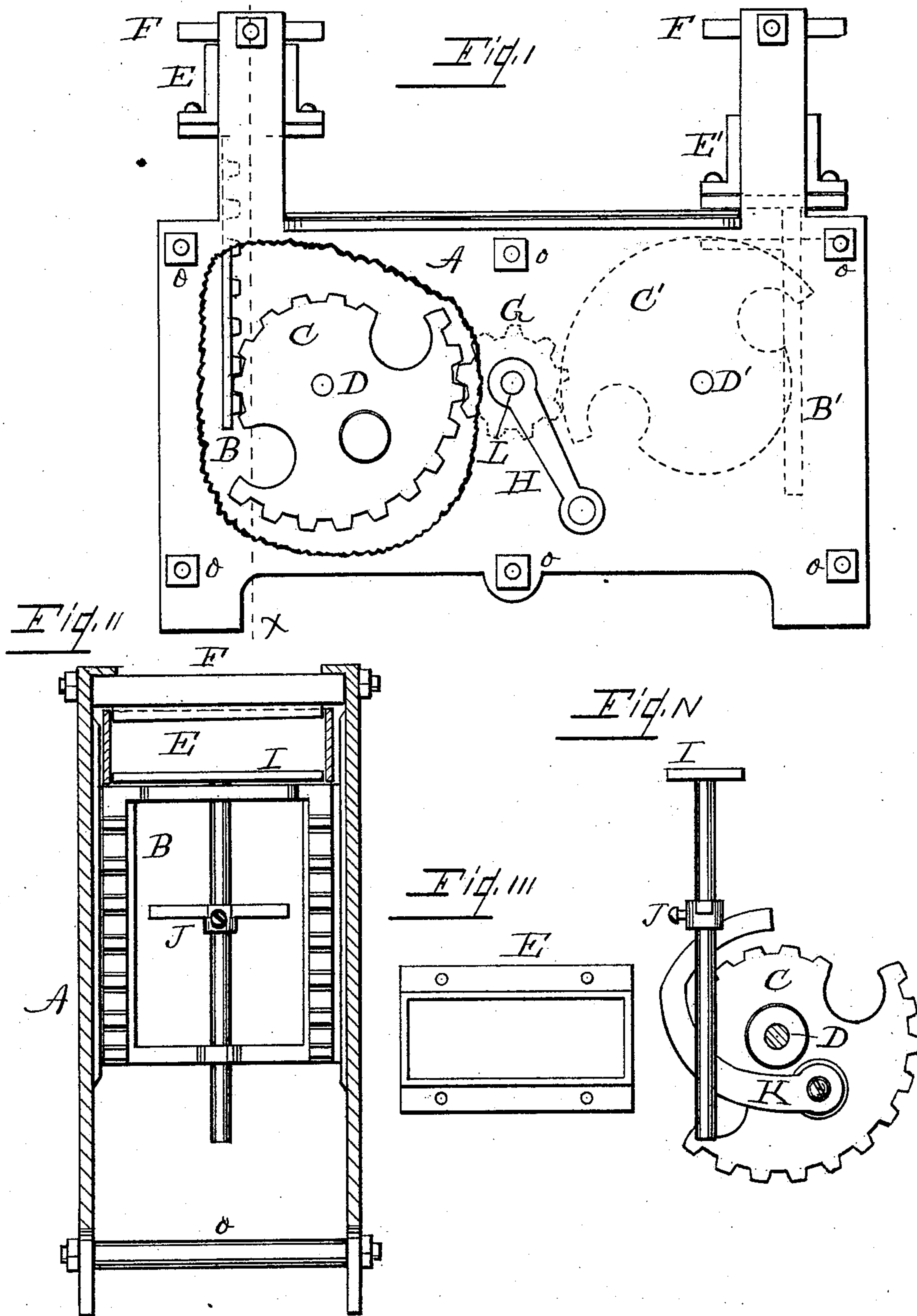


(No Model.)

B. OWEN.
BRICK MACHINE.

No. 404,857.

Patented June 11, 1889.



Witnesses

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UNITED STATES PATENT OFFICE.

BENJAMIN OWEN, OF DAYTON, OHIO.

BRICK-MACHINE.

SPECIFICATION forming part of Letters Patent No. 404,857, dated June 11, 1889.

Application filed July 30, 1888. Serial No. 281,450. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN OWEN, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Brick-Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in brick-machines, the several features of which will be fully hereinafter set forth.

The purpose of the machine is to make pressed brick, and the functions are such that the two parts of the machine operate alternately, thereby discharging and receiving at one end while in the opposite end a brick is being pressed.

The mechanism is illustrated in the accompanying drawings, in which—

Figure 1 is a side view of the machine with a portion cut away to exhibit the interior. Fig. 2 is a transverse section of the same on line *x*, Fig. 1, with the exception of three parts. Fig. 3 is a top view of the brick-mold. Fig. 4 is a view in detail of the discharging mechanism.

Like letters designate like parts throughout the several views.

A is a staunch metallic frame. The sides are identical in form and are firmly bound together by a series of cross-bolts O. These bolts are shouldered and the sides of the frame are held between the shoulders and nuts. Vertical grooves are formed in the inner surfaces of the frame near the ends, and which are traversed by the rack-frames B. There are bearings in the sides for the shaft L and the spindles D D'. To the projections of the frame at the top are attached the cross-plates F F, and these have attached to their under surfaces plates which fill the top of the mold, and against which the upper surface of the brick bears as the same is undergoing compression.

The rack-frame B consists of a quadrangular frame, a broad plane surface at the top, a cross-bar at the bottom, with an orifice for

the stem of the discharging-plate I, a series of cogs on either side, and tongues at the sides, which enter the grooves of the frame. In orifices of the rack-frame is held the stem of the discharging-plate I. This plate has a plane upper surface, and is the size laterally of a brick, and in its normal position rests on the top of the rack-frame. To the stem of the discharging-plate is attached the arm J. To the top of the rack-frame is attached the mold E. This mold is open top and bottom, and the sides have flanges, by which it is made fast to the rack-frame. The spindles D D' are fixedly attached in orifices in the sides of the frame and the double sectors are pivoted thereon. The operative parts at both ends of the frame are identical, and both gear into the pinions G on the crank-shaft, which is held in bearings in the sides of the frame. To this shaft external to the frame are attached two cranks—one on either side—one of which is shown at H, Fig. 1. Immediately inside the frame the two double sectors C are held by collars on the spindles, and these engage the two series of cogs which form a part of the rack-frame. The double sector has two series of segmental cogs, their radial centers being directly opposite, the outer gearing into the rack-frame and the inner the pinions on the driving-shaft. The relative position of the double sector C at one end and its counterpart C' is indicated by dotted lines. As thus geared the two identical parts of the operative mechanism alternate in their movements.

In the illustration, Fig. 1, the mold is shown forced up against the cross-plate, and on the opposite end the mold is down in position to receive the imperfectly-formed brick. To a boss on the inside of the double sector is attached the arm K, which engages the arm J on the stem of the discharging-plate. To all of the four double sectors are attached these arms. The illustration Fig. 4 shows the opposite double sector, or the fellow of that shown in Fig. 1. On the outer face of this arm is an arc which in a downward movement engages the arm on the stem of the discharging-plate. In the downward movement of the rack-frame this arm holds the discharging-plate from descending, thereby carrying up the brick to the top of the mold,

when it is removed, and at this point the stem-arm passes the end of said arm and the discharging-plate drops by its gravity to the top of the rack-frame.

5 In the illustration Fig. 2 the cross-piece or cap-plate, the discharging-plate, and the rack-frame are not shown in section, and here is shown the relation of the cap or cross piece, the mold, and the rack-frame when the brick
10 is undergoing compression.

The brick is prepared by forming the same in an ordinary mold, and after being partially dried is subjected to pressure in the machine. While the brick in one end is subject to pressure the other mold is lowered in position to
15 discharge the pressed brick and receive the formed material for another.

In operation the crank is grasped to give motion to the machine, and from the description already given it is sufficiently apparent
20 as to the operation of compressing and discharging the brick. As the two parts of the machine are identical in construction and perform the same functions, one part could be
25 dispensed with.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

30 1. In a machine for pressing brick, the combination of the frame A, with vertical grooves,

cap-plate F, the rock-frame B, with mold E attached, discharging-plate I, with arm J on stem thereof, double sectors C, pivotally held in said frame and having the operating-arm K attached thereto, and the pinions G, attached
35 to the crank-shaft L, substantially as shown and described.

2. In a brick-machine, the discharging device comprising the plate I, held in the rack-frame, and mold normally resting on said rack-
40 frame, and the operating-arm of the double sectors to hold said plate at a fixed elevation during a partial descent of the mold, substantially as set forth.

3. In a machine for pressing brick, the combination of the frame A, with vertical grooves, cap-plate F, with plate to enter the mold, the rack-frame B, with mold E attached, discharging-plate I, double sectors pivotally held in
50 said frame, and pinions G, attached to the crank-shaft L, substantially as shown and described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

BENJAMIN OWEN.

Witnesses:

B. PICKERING,
SUMNER T. SMITH.