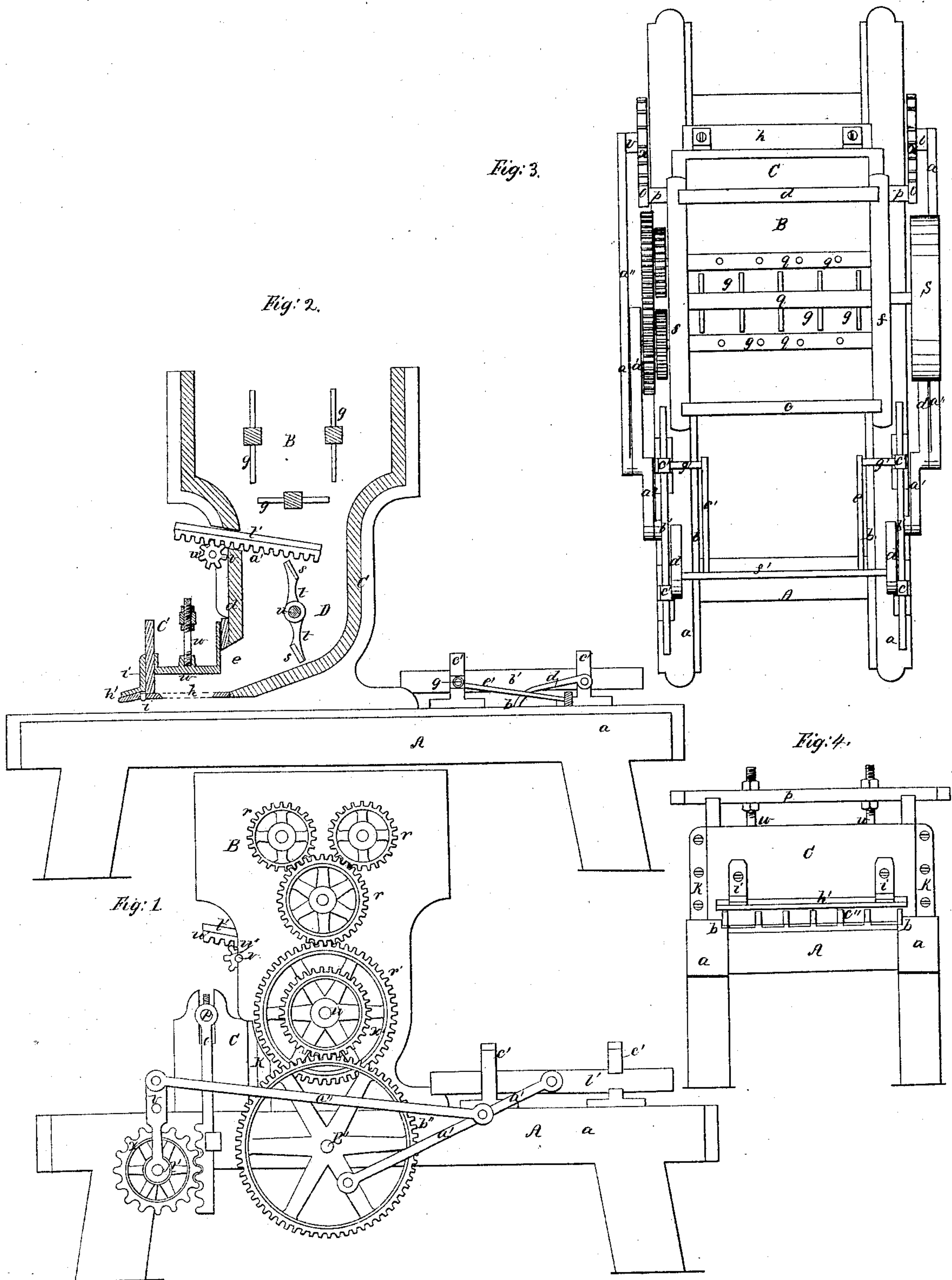


S. Parks,

Brick Machine,

No 17,390,

Patented May 26, 1857.



UNITED STATES PATENT OFFICE.

STEPHEN PARKS, OF SAN FRANCISCO, CALIFORNIA.

BRICK-MACHINE.

Specification of Letters Patent No. 17,390, dated May 26, 1857.

To all whom it may concern:

Be it known that I, STEPHEN PARKS, of San Francisco, in the county of San Francisco and State of California, have invented
5 a certain new and useful Improvement in Modes of Feeding Empty Molds in Machines for Molding and Pressing Bricks; and I do hereby declare that the following is a full, clear, and exact description of the
10 same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, is a side elevation of the machine. Fig. 2, is a longitudinal vertical section of the same, the plane of section being
15 through the center. Fig. 3 is a plan or top view of the same. Fig. 4, is a detached front view of the frame and molding, or press-box.

20 Similar letters of reference indicate corresponding parts in each of the several figures.

This invention consists in a novel arrangement of parts for feeding and properly
25 guiding the empty molds underneath the molding or press box.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

30 A represents the framing of the machine, the side pieces (a) (a) of which are grooved or rabbeted at their inner sides as is shown at (b) to form guides for the molds which are fitted or placed between said side pieces
35 (a) (a).

On the framing, A, and rather forward of its center, a box B is placed; the upper part of this box is of rectangular form; the sides and end pieces being parallel with each
40 other; but the back end piece (c) at the lower part of the box B, is of curved form, as plainly shown at Fig. 2; the lower end of the end piece (c) being so curved as to extend forward underneath the front end piece
45 (d). The said front end piece (d) does not extend downward to the lower end of the back end piece (c); a space (e) is allowed between them as shown clearly in Fig. 2. The side pieces, (f) (f), of the box, B, are
50 parallel with each other their entire length and height.

Within the upper part of the box, B, three shafts (q) (q) (q) are placed transversely; these shafts have arms (g) passing through
55 them; the teeth or arms being of such a length that they will not interfere with each

other as the shafts (q) rotate. These shafts (q) are connected by gear-wheels (r) at one end, as shown plainly in Fig. 1.

In the lower part of the box, B, a rotary
60 scraper D is placed. This scraper is formed by having blades (s) attached to the outer ends of arms (t) which are secured radially to a shaft (u) placed transversely within the box.

65 The blades (s) are placed tangentially with the shaft (u), as shown in Fig. 2; said blades extend the whole width of the box B, or from side to side. Two blades (s) are employed; the blades being at opposite sides
70 of the shaft.

In the box, B, a feed-board (t') is placed. This board is allowed to slide in and out of the box, slightly inclined from a horizontal position, as shown in Fig. 2. To
75 the under side of the board (t'), racks (u') are attached; one at each side, in which racks, pinions (u'') gear; said pinions being placed upon a shaft, (v).

In front of the box B, and resting upon
80 the upper part of the frame, A, a molding or press-box, C, is placed; and a piston or plunger (n) is placed and fitted snugly within the box C. Underneath the box C, or at its lower end, a grate (h) is placed,
85 and at the front edge of the grate (h), a stationary scraper (i) is attached; said scraper being formed of a vertical board or strip having its lower end rounded in semi-cylindrical form; see Fig. 2.

90 To the front side of the molding or press-box, C, a smoother (h') is attached; said smoother being formed of a board slightly inclined from a horizontal plane, and attached to the box, C, by brackets (i').

95 On one end of the rotating scraper shaft (u), a wheel (r') is attached; said wheel gearing into the wheel (r) of the lower shaft, (q).

On the front end, and underside of the
100 frame, A, there is placed transversely a shaft, A', and on each end of this shaft, a pinion (x) is placed, and also a lever or arm (v). The pinions (x) gear into racks, (o), at the lower parts of vertical bars,
105 which have their upper ends attached to a cross head (p) which is connected to the piston or plunger (n) by two rods (w).

On the back end of the frame, A, there are placed four guides, C¹, two at each side,
110 in which guides, slides (b') are fitted. To the slides (b'), at their outer sides, at about

the center, rods (a') are attached; the lower end of one of said rods being connected to a toothed wheel, (b''), which is attached to one end of a shaft, B' , underneath the frame,

5 A. The wheel (b'') gears into a pinion (x') on the scraper shaft (u). The opposite end of this shaft has an arm attached to it, to which the lower end of the other rod (a') is attached. Rods (a'') are attached

10 to the rods (a') and the upper ends of the arms (v) on the shaft A' . To the inner sides of the slides (b') arms (g') are attached at right angles, and on the arms (g') the rods (e') of a cross-head (f') are placed

15 loosely, so that the said cross-head may rise and fall. To the inner sides of the two outermost guides, C' , inclined planes (d) are pivoted, one to each outer guide, as shown in Fig. 3.

20 The molds, C'' , shown in Fig. 4, are of the usual construction. The rabbets (b) should be faced with iron. The box, B , and the molding or press-box C , and its piston or plunger (n) may be constructed of cast

25 iron, and also the rotary scraper, D .

The operation is as follows: The feed-board (t') is shoved into the box B , by turning the pinions (u''), and the communication between the upper and lower parts

30 of said box is cut off. The machine is then put in motion; and the clay, after being perfectly moistened, is thrown into the upper part of the box, B , where it is quickly tempered by the action of the teeth or arms

35 (g). The feed-board (t') is then drawn outward, to leave a sufficient space to allow the tempered clay to pass downward into the lower part of the box B , from whence it is pressed or forced by the blades (s) of the

40 rotary scraper, D , through the space (e) into the molding or press-box, C , and underneath the piston (u), the downward motion of which bears directly upon the clay, and forces it through the grate into

45 the molds. Then, as the piston rises, another mold is brought underneath the box, C ; the latter empty mold forcing the preceding and filled one out from underneath the box, C , and also underneath the stationary scraper (i) and smoother, (h'). The

50 scraper (i) takes off the superfluous clay, and the smoother (h') finishes or smoothes the upper surfaces of the clay in the molds. The molds are placed, one at a time, on the

55 back end of the frame A , in the rabbets (b) and between the two inclined planes (d).

The cross-head (f') during its backward movement, passes over the upper surfaces of these inclined planes, and therefore does not come in contact with the mold; but when

60 it has passed over the inclined planes, it drops down behind the mold; and as the cross-head is moved forward, and carries the mold with it the cross-head raises the inclined planes and passes underneath them.

65 It will be observed that the arms (g') (g') project inward toward the center of the machine, and consequently act as movable guides to insure the even and proper movement of the molds to and under the press

70 box. If it were not for these arms (g') (g'), the mold just forward of the one in contact with the cross-head would be liable to rise up, owing to the resistance of the filled molds, and derange the proper and even

75 action of the machine. The reciprocating movement of the cross-head (f') is produced by the rods (a') (a'') and the arms (v) (v) on the shaft A' , and the wheel (b') and arm on the shaft B' . The movement of the cross-

80 head (f') is such that the molds will be fed underneath the molding or press-box, C , at the proper time; and the blades (s) (s) so rotate that they will act upon the clay to force it into the box, C , when the piston

85 or plunger is raised.

I do not claim the rotating shafts (g), provided with teeth, or arms (g), for tempering the clay, for they have been previously used. Neither do I claim feeding

90 the molds to the press box by means of a reciprocating or swinging cross-head; for I am aware that such a device has been used before. But

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

Feeding the molds to or underneath the molding or press box C , and also discharging them therefrom, by means of the reciprocating and swinging cross-head (f'), operated by the rods (a') (a'') connected with the slides (b') and the shafts A' , B' , when used in combination with the pivoted inclined planes (d) (d) and projecting arms

105 (g') (g') substantially as described, for the purpose specified.

STEPHEN PARKS.

Witnesses:

JAS. S. HANDLEN,
L. A. DE GROOTE.