J. W. Frost,

Brick Machine,

No. 6,882. Patented Nov. 20, 1849.

Fig. 1.

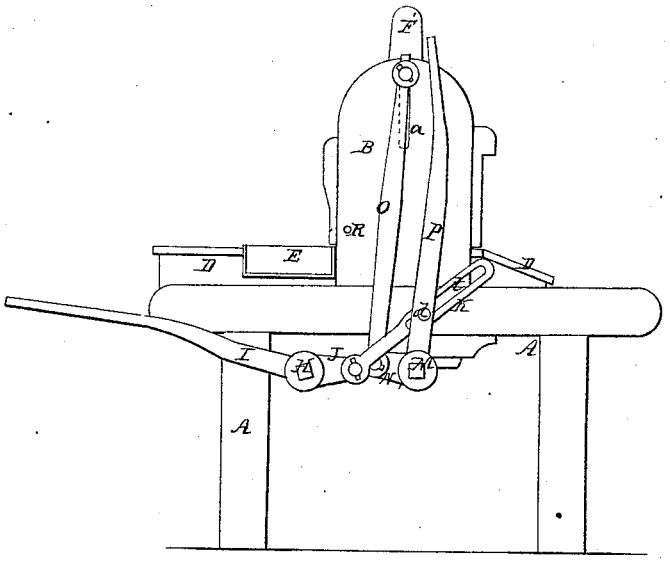


Fig. 2.

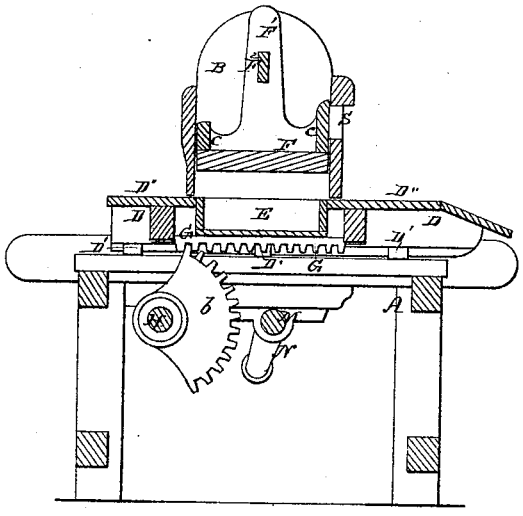
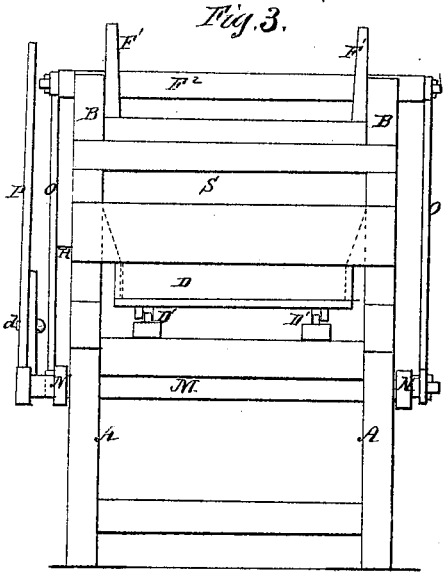


Fig. 3.



UNITED STATES PATENT OFFICE.

JNO. W. FROST, OF CROTON, NEW YORK.

MACHINE FOR MOLDING BRICK.

Specification of Letters Patent No. 6,882, dated November 20, 1849.

To all whom it may concern:

Be it known that I, JOHN W. FROST, of Croton, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Machines for Molding and Pressing Bricks, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1, is a side elevation of the machine, the lever for lifting the presser being elevated and the lever for moving the carriage and brick molds—depressed. Fig. 2 is a vertical longitudinal section, through the center of the same. Fig. 3, is an end elevation of ditto.

The references in the several figures indicate the same parts.

The frame A is made of suitable size, and form to support the several parts of the machine.

B, B, are two upright timbers, mounted on the side beams of the frame, and connected together by horizontal timbers, which with the upright timbers, form the molding and packing box, and between which the presser rises and falls.

D is a horizontal sliding carriage made to slide back and forth below the presser upon ways D′, D′, on the frame, and covered with boards D″ which form the bottom of the molding box, when the molds are moved from beneath the same.

E are the molds formed in a casting and placed in a recess or depression in the carriage, and conveyed alternately under the molding box.

F is the presser for pressing and packing the clay into the molds, made of cast iron having projections *c* rising from its sides, and upright bars F′, F′, from its ends through which a horizontal bar F^2, passes; to the ends of which arms or connecting rods O, O, are secured, the said horizontal bar F^2 being permitted to rise and fall in slots (*a*) formed in the top of the head posts B of the molding box. G is a rack secured to the central rail, on the under side of the carriage, D, into which a cogged sector (*b*) matches.

H is a transverse shaft secured in suitable boxes beneath the carriage having near its center a cogged sector (*b*) which meshes in gear with the rack G and by which the carriage is moved back and forth in removing the filled molds, and replacing an empty set beneath the molding box. I is a lever fixed on the end of the shaft H for turning the said shaft and sector to move the carriage.

J is an arm or crank also fixed on the end of the turning shaft H having one end of a slotted bar K attached to its outer extremity, by a bolt on which it turns, the opposite end of said bar K being attached to a lever P.

M, is a horizontal transverse shaft, secured immediately under the molding box, in suitable bearings, and having on each end a crank N, N, to which the connecting rods O, O, are attached by bolts on which they also turn.

O, O, are the connecting rods or arms for lifting and depressing the presser connected to the cranks N, on the shaft M, at their lower ends and to the extremities of the horizontal bar F^2 at their upper ends.

P is another lever fixed on the end of the shaft M, for elevating and depressing the presser and packing the clay into the molds, and connected to the end of the slotted bar by means of a stud or bolt (*d*) passing loosely through the slot in said bar and secured permanently to the lever P, a short distance above its lower end, in such a manner, as to cause the lower end of the slot to act against said stud or pin (*d*) when the lever I is forced down to remove the filled molds from under the presser and to raise the lever and presser simultaneously with running the carriage out to remove the filled molds.

R is a pin in one of the upright timbers B, for arresting the movement of the lever I and carriage D, when the molds are directly beneath the molding box.

S is an opening in the side of the molding box, through which the prepared clay is introduced, when the presser is elevated, said opening being closed by the side (*c*) of the presser on its descent.

Operation: The levers I, P, being raised so as to bring the molds E immediately under the molding box, and elevate the presser F to its utmost height, the clay properly prepared is introduced to the molding box through the opening S in its side by means of a hopper or other means. The operator then depresses the lever P, which causes the presser, to be drawn down, by means of the connecting rods O and cranks N, and the opening S to be closed by its side (*c*) and the clay to be forced into the molds with suf-

ficient pressure to form a perfect brick, in each mold. When the stud or pin (*d*) in the lever P, reaches the lower end of the slot (*t*) through which it passes loosely, the operator lowers the lever I to the position represented in Fig. 1, which causes the carriage and molds to be moved from under the molding box to the outside, by means of the cogged gearing, and the clay to be cut or scraped even with the tops of the molds by the lower edge of the side of the molding box, in their passage under the same, and simultaneous with the movement of the molds likewise causes the lower end of the slot *t* in the bar to bear against the stud or pin (*d*) and elevate the lever P, cranks N, connecting rods O, and presser F, to their former positions. The opening S in the side of the box being again opened, by the raising of the presser, the clay will pass through the same into the box, and rest on the top of the carriage (forming when the lever I is depressed the bottom of the box as stated). The filled molds are then borne off from the carriage, to any desired place, and their places supplied by similar formed empty molds, and the lever I is raised to its former position against the pin R, causing the molds to be carried by the carriage, immediately under the molding box. These empty molds are filled and removed in the same manner as those described above, and their places supplied by others. In this manner the operation is continued, the operator being enabled to give any required degree of pressure to the bricks commensurate with his strength.

What I claim as my invention and desire to secure by Letters Patent is—

The combination of the slotted bar K, with the levers I, P, pin or bolt (*d*), cranks J, N, secured to the horizontal transverse shafts H, M, connecting rods O, O, attached to presser F, and cogged sector *b*, and rack G, on carriage for causing the presser to be raised in the molding box, simultaneously with the movement of the filled molds from under the molding box, substantially as herein set forth.

In testimony whereof I have hereunto signed my name before two subscribing witnesses.

JOHN W. FROST.

Witnesses:
DAVID LENT,
H. FROST.