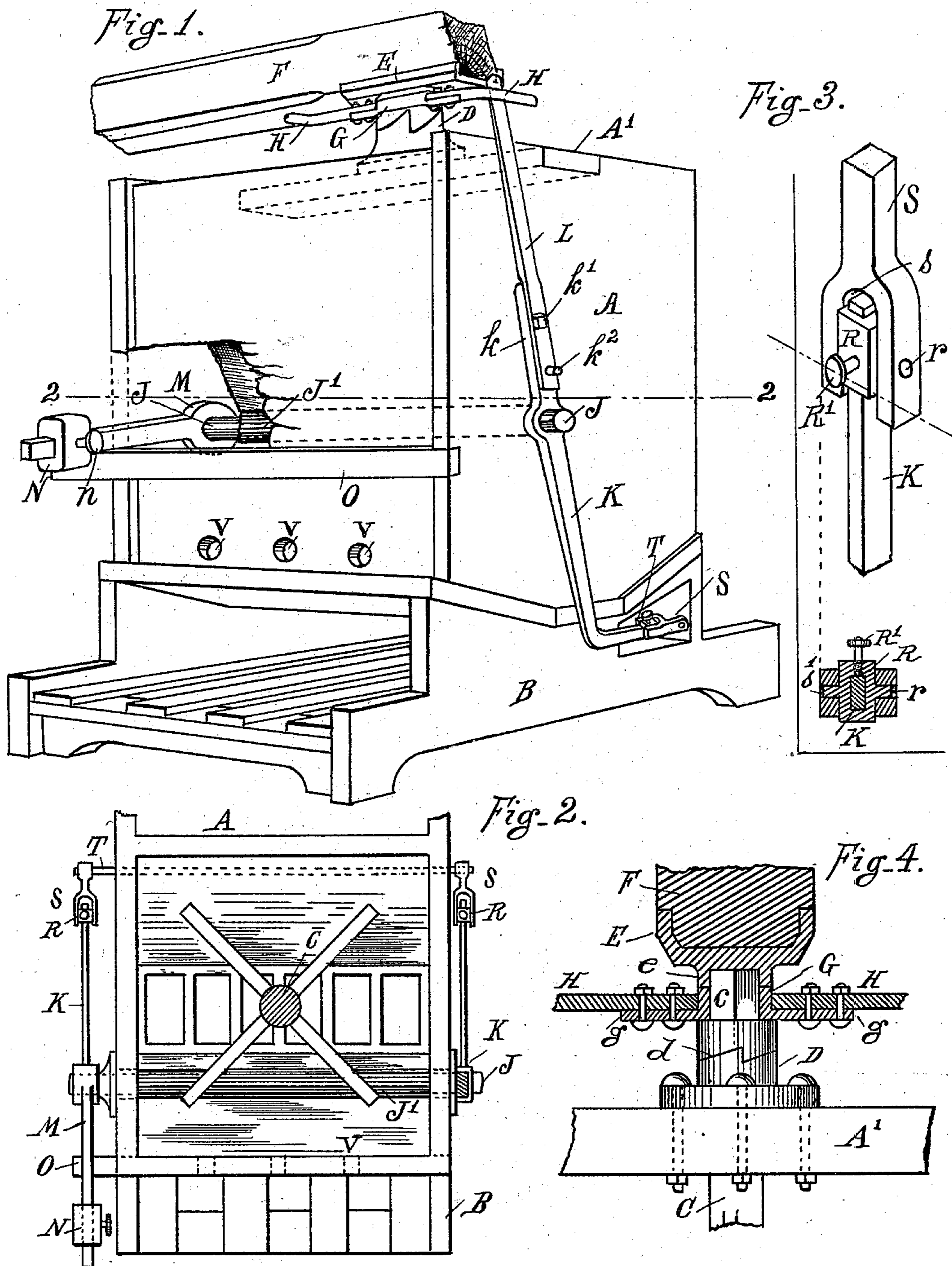


(No Model.)

A. E. BIGELOW.  
BRICK MACHINE.

No. 559,094.

Patented Apr. 28, 1896.



Witnesses.  
Will Q. Olden.  
Henry A. Stevens

Inventor.  
Almon E. Bigelow.  
by his Atty. N. DuBois.

# UNITED STATES PATENT OFFICE.

ALMON E. BIGELOW, OF SPAULDING, ILLINOIS.

## BRICK-MACHINE.

SPECIFICATION forming part of Letters Patent No. 559,094, dated April 28, 1896.

Application filed March 11, 1895. Serial No. 541,261. (No model.)

*To all whom it may concern:*

Be it known that I, ALMON E. BIGELOW, a citizen of the United States, residing at Spaulding, in the county of Sangamon and State of Illinois, have invented certain new and useful Improvements in Brick-Machines, of which the following is such a full, clear, and exact description as will enable those skilled in the art to which it pertains to make and use my said invention.

My invention relates to that class of brick-machines which have a rotating pug-mill operated by means of a sweep, the shaft of said pug-mill being provided with arms which operate a lever by means of which the molds when filled are automatically removed from the machine.

The purposes of my invention are to provide a lever of novel and improved construction; to provide simple and effective means for adjustably connecting the lever with the mold-shifter; to provide in connection with the lever a weight adapted to automatically return the lever to position after the lever has been operated to shift the molds, as will be hereinafter described, and to provide simple and effective means whereby access may be had to the grates above the molds for the purpose of breaking the clods or removing obstructions therefrom.

With these ends in view my invention consists of certain novel features of construction and combinations of parts shown in the annexed drawings, to which reference is hereby made, and hereinafter described and specifically claimed.

In the drawings I have shown only so much of the main frame of the brick-machine as is necessary to illustrate the connection of my improvement therewith.

In the drawings, Figure 1 is a perspective view of the complete machine with my improvements in position thereon. Fig. 2 is a horizontal transverse section, on a reduced scale, through the machine on the line 2 of Fig. 1. Fig. 3 is an enlarged detached combined partial perspective view of and vertical section through the lever-coupling. Fig. 4 is a partial enlarged vertical section through the sweep and the arm on the axis of the pug-mill shaft.

Similar letters indicate like parts in all of the views.

The main frame A of the machine is rectangular in form and is supported on any suitable base B. At the top of the frame is a cross-piece A', which supports the cam-block D, and the block is secured to the cross-piece.

The pug-mill shaft C is vertically situated in the center of the machine and extends upward through a central hole in the block D. The upper end c of the shaft C is squared or oval, as shown in Fig. 4. The sweep-plate E has on its under side a vertical hub e, in which the part c of the shaft fits. The sweep F rests on and is suitably secured to the plate E. The arm-plate G also fits on the end c of the shaft C and is provided with diametrically opposite extensions g, integral with the plate, to which the arms H are bolted or otherwise suitably secured.

A horizontal shaft J extends transversely through the machine and in front of the shaft C. This shaft is inclosed in a tube J', which serves to protect the shaft from contact with the clay in the machine. To each end of the shaft J a downwardly-extending bent lever K is secured. One of the levers K has an upward extension k, with which the bar L is connected by a pivotal bolt k'. The bar L has near its lower end a hole in which a wood break-pin k<sup>2</sup> fits, and the pin extends into a corresponding hole in the lever K.

The bar L extends upward adjacent to the arms H, and as the arms revolve they engage with the upper end of the bar to move the lever K in an obvious manner. The wooden pin k<sup>2</sup> is provided to prevent breakage of the arm. When there is any unusual strain on the arm, the pin k<sup>2</sup> breaks off, thereby relieving the strain upon the arm. In case of the breakage of the pin k<sup>2</sup> a new pin may be readily supplied and the parts restored to their normal position. The weighted arm M is secured, preferably, to one end of the shaft J. It may, however, without departing from my invention, be directly secured in any suitable manner to the lever K on that side of the machine. The weight N slides on the arm M and may be clamped in any desired position by means of the set-screw n.

A bar O, secured to the front of the ma-

chine, projects beyond that end of the machine on which the arm M is situated and serves as a stop to limit the downward movement of the arm M. A block D, having inclined surfaces *d* of the usual well-known form, is secured to the cross-piece A'.

The lower part of the lever K is bent at an angle, as clearly shown in Fig. 1. The horizontal part of the lever K fits in a square hole passing longitudinally through a block R. On the sides of the block R are integral pivots *r*. A set-screw R' in the block R serves to clamp the end of the lever K in any desired position in the block. The rod S has at one end a fork *s*, the sides of the fork being provided with holes *s'*, in which the pivots *r* fit, so as to connect the rod S with the block R. A transverse rod T connects the ends of the rods S on the opposite sides of the machine.

The shaft J, the levers K, the rod T, and the bar I together constitute a mold-shifting device which serves to push the molds in under the grate of the machine, and which is operated in one direction by the revolving arms H, engaging with the arm L, and is operated in the opposite direction by the arm M, provided with an adjustable weight N, which serves as a counterpoise to the mold-shifting device and may be accurately adjusted to exert only as much force as may be necessary to move the mold-shifting device, thus insuring smoothness in operation and obviating any undue concussion and wear of the parts.

By means of the adjustable block R, I am

enabled to regulate the throw of the lever K, so as to accurately control the position of the mold relative to the grate.

In the front of the machine is a series of holes V, adapted to receive a poker or other suitable instrument by means of which obstructions to the grate may be removed.

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

In a brick-machine, the combination of a pug-mill; a central vertical shaft turning in said pug-mill; an arm-plate fitting on and turning with said shaft and provided with detachable arms adapted to operate a mold-shifting device; a sweep-plate secured to said central shaft; a sweep secured to said sweep-plate; a mold-shifting device consisting of bent levers secured to a shaft passing transversely through said pug-mill, one of said levers having an arm adapted to be operated by the arms on said arm-plate and the lower ends of said levers being joined by a rod adjustably connected therewith; an adjustable counterpoise connected with the shaft of said mold-shifting device; and a stop on said pug-mill adapted to limit the movement of said counterpoise; as set forth.

In witness whereof I have hereunto subscribed, at Springfield, Illinois, this 19th day of February, A. D. 1895.

ALMON E. BIGELOW.

In presence of—

HENRY A. STEVENS,  
TAD BAILEY.