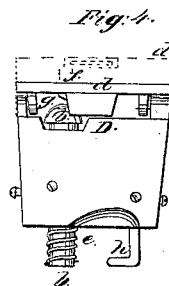
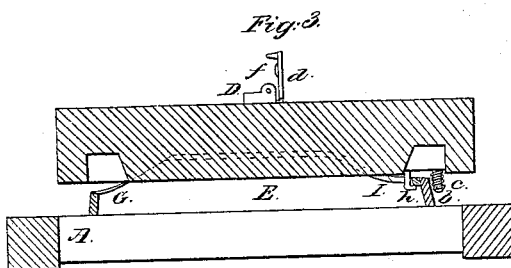
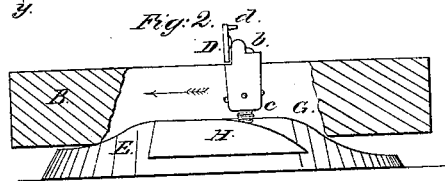
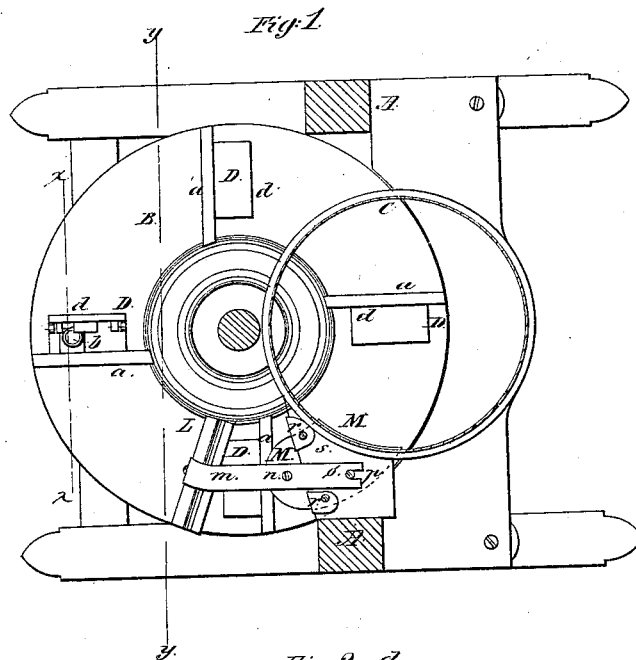


*Hotchkiss & Bus,*

*Brick Machine.*

*No 53,980.*

*Patented Apr. 17, 1866.*



*Witnesses:*  
*J. Nottingham Smith*  
*L. A. Colborn*

*Inventors:*  
*James Hotchkiss*  
*and*  
*Ezra Bus*  
*By their atty,*  
*J. S. Brown*

# UNITED STATES PATENT OFFICE.

JAMES HOTCHKISS AND EZRA BUSS, OF SPRINGFIELD, OHIO.

## IMPROVED BRICK-MACHINE.

Specification forming part of Letters Patent No. 53,980, dated April 17, 1866.

*To all whom it may concern:*

Be it known that we, JAMES HOTCHKISS and EZRA BUSS, of Springfield, in the county of Clarke and State of Ohio, have invented an Improved Brick-Machine; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a plan of the machine, some of the projecting parts being in section; Fig. 2, a vertical section thereof in a plane indicated by the line *x x*, in Fig. 1; Fig. 3, a vertical section in a plane indicated by the line *y y*, Fig. 1; Fig. 4, a side elevation of one of the followers detached.

Like letters designate corresponding parts in all of the figures.

The molds are formed concentrically in a revolving mold-wheel, B, which passes under the supplying-receptacle C, to be filled with clay, and the pressure is given partly by the action of a spiral wing in the receptacle, in connection with a lifting-cam beneath, and partly in connection with the undercam by a stationary steel plate, M, situated just above where the molds leave the receptacle. This plate strikes off the surplus clay and smooths the upper surface of the bricks. It is held in place under a bar, *s*, of the frame merely by slight springs *r r*, which yield when any unyielding substance, such as a stone, strikes against the plate, and allows the plate to be pushed back out of its place, thereby obviating any breakage of any part of the machine.

A little distance behind the plate M is located a clearing-scraper, L, for scraping off any loose clay on the mold-wheel. It is sustained or suspended by a spring, *m*, which reaches back upon the bar *s*, and is held thereon by a screw or bolt, *o*, in a notch, *p*, at the rear end of the spring. Another screw, *n*, passes down through the spring and into the plate M. By this arrangement, when an obstruction throws out the plate M the spring *m* with the scraper L is borne away there-

with, the rear end of the spring slipping out from under the screw-head *o*.

The followers D D in the molds are raised at the proper time by a stationary cam, G, till the bricks are lifted entirely out of the molds. They are respectively provided with hinged tops or lids *d d*, which are turned up, as shown in Fig. 2, as soon as the followers lift the bricks out of the molds. This turning up of the follower-lids throws the bricks off on the mold-wheel and upon their edges, so that they are more readily grasped by the hand for conveying away than when lying flat upon their sides, as ordinarily.

The follower-lids are thus turned or tilted up by means of vertical bolts *b b*, extending down through the followers, in which they slide upward by the action of a stationary-cam, H, Fig. 2, and are again brought down by the action of a spring, *c*, as represented. There are projections *f f* on the under sides of the lids, against which the bolts push in lifting the lids, and they enable the lid to be thrown fully into a vertical position. The lids return to a horizontal position after the bolts *b b* descend, either by their own weight or by the descent of the followers into the molds.

In order to keep the followers from ascending too high in the molds, and to make their return down into the molds again certain, hooks *h h*, Figs. 3 and 4 project from their lower sides, and these hooks run under a ledge or lip, I, Fig. 3, on the side of the cam-track E, formed and arranged substantially as represented. This ledge or lip is located in that part of the circle required for the purpose.

At the rear edge of each mold is inserted a steel or hardened-iron strip, *a*, which receives the wear of the material, so that the molds may remain entire and complete. These strips are generally inserted in dovetail grooves, and they are removable, so that they may be replaced if necessary.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. Attaching the spring-scraper L to the

removable plate M, so as to be removed therewith, substantially as and for the purpose herein specified.

2. Hinged lids upon the followers, substantially as and for the purpose herein set forth.

3. The lifting-bolt *b* and its cam H, in combination with the hinged follower-lids, substantially as and for the purpose herein specified.

4. The springs *c c*, in combination with the lifting-bolts *b b*, for the purpose set forth.

5. The metallic edge strips *a a*, for the purpose specified.

The above specification of our improved brick-machine signed by us in presence of subscribing witnesses.

JAMES HOTCHKISS.  
EZRA BUSS.

Witnesses as to Hotchkiss's signature:

T. B. BROWN,  
J. KATZ.

Witnesses as to Buss's signature:

EDWIN D. BUSS,  
M. T. HARWOOD.