

2 Sheets, Sheet 1.

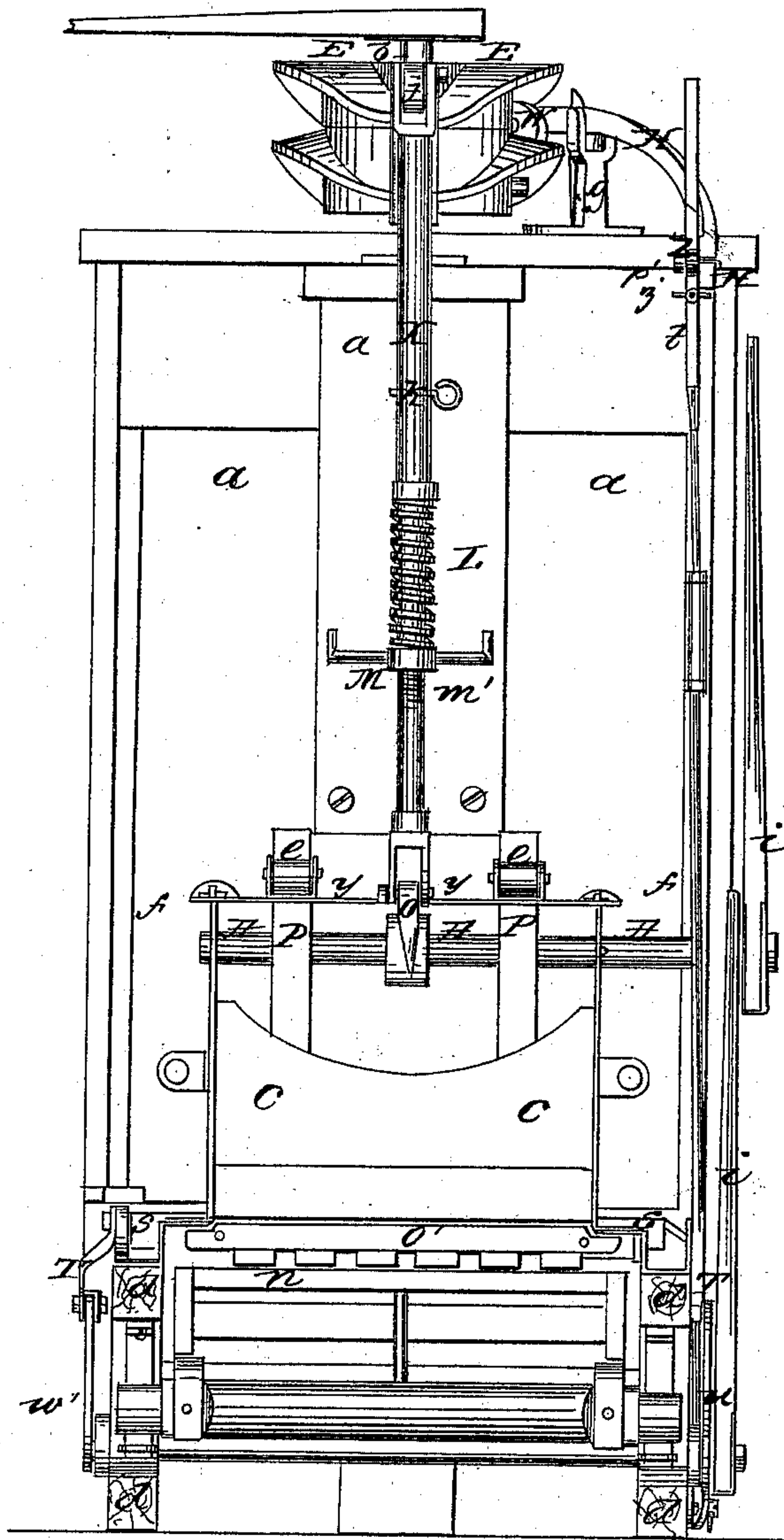
F. E. Frey,

Brick Machine.

N^o 80,862.

Patented Aug. 11, 1868.

Fig. 1.



Witnesses

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Inventor

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FRED E. FREY, OF BUCYRUS, OHIO, ASSIGNOR TO HIMSELF, D. J. SHECKLER,
AND JAMES M. KELLEY.

Letters Patent No. 80,862, dated August 11, 1868.

IMPROVED BRICK-MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, FRED E. FREY, of Bucyrus, in the county of Crawford, and State of Ohio, have invented a new and useful Improvement in Brick-Machines; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and the letters of reference marked thereon, in which—

Figure 1 represents a front elevation of the machine.

Figure 2 represents a plan or top view of the same, and

Figure 3 represents the pitman *t*, with the gearing-springs *Z* attached.

Similar letters of reference indicate the same parts.

The nature of my invention consists in constructing a portable or stationary brick-machine with the pug or clay-mill made of suitable material, either square, round, or any other suitable shape. Through the mill horizontally is run a shaft, provided with agitating-knives, which intersect with stationary bars or knives running horizontally through the mill, for the purpose of breaking up and mixing the clay in the mill before it enters the press-box, into which it is forced through an aperture in the bottom of the mill by the usual scroll-shaped knives attached to said shaft. This shaft is provided at its top with two cams, which operate, by means of suitable attachments, two levers, one of which, in combination with an adjustable pitman and press-board, presses the clay from the press-box into the brick-moulds, and the other, by means of suitable attachments, pushes the brick-moulds, when filled, from under the press-box on an adjustable platform, and replaces them with empty ones.

The following is a description of the accompanying drawings.

a is the pug or clay-mill, in which the clay is ground or mixed immediately before it passes into the press-box.

C is the press-box.

b is the perpendicular shaft, which is provided with the agitating and scroll-shaped forcing-knives *b'*, fig. 2.

d d is the lower part of frame of the mill, upon which the press-box *C* rests.

E E are two cams attached to and revolving with the shaft *b*, which operates the lever *H* by means of the roller *W*, and the lever *j* by means of the roller *V*.

g g are the fulcras of the levers *H* and *j*.

X, fig. 1, is a pitman, which, by the oscillation of lever *j*, operates lever *O*, fig. 1, which is attached to the shaft *A*, and presses the clay from the press-box *C* by means of the pinions *q q*, fig. 2, upon the shaft *A*, working in the racks *P P*, attached to the press-board *G'*, fig. 2.

t, figs. 1 and 3, is a pitman, which, by the oscillation of the lever *H*, operates the angle-shaped lever *w* and lever *w'*, which work the base-pitmen *T T*, attached to the sliding bar *S*, by means of which the empty brick-moulds are pushed forward under the gate in the bottom of the press-box *C*, and the filled moulds are pushed forward on the adjustable platform *n*, in a condition to be carried to the brick-yard.

I construct the pitman *X*, fig. 1, so as to have elasticity, for the purpose of regulating the pressure on the clay in the press-box, in the following manner:

The upper half of this pitman is made tubular, and the lower half solid, and of such a diameter as to fit up into the tubular half.

k is a pin, passing through and secured in the solid or lower half of the pitman, and extends out beyond both sides of the tubular half. Running through this tubular half transversely, are slots, to enable the pin *k* to be moved up and down, and allow the pitman to be held in the position desired. By changing the pin *k* up or down, the pitman can be lengthened or shortened.

L is a spiral spring, coiled loosely around the lower or solid half of the pitman *X*, with its lower end resting against the screw-nut *M*. When it is desired to increase or decrease the amount of pressure on the clay in the press-box *C*, it can be done by tightening or loosening the spiral spring *L*, by raising or lowering the screw-nut *M*, which works in the thread *m'*, fig. 1, cut for that purpose on the lower half of the pitman *X*. This can be done while the machine is in motion, thereby adapting it to stiff or hard clay.

y is an adjustable plate, which holds the racks *p p* in their position by means of the friction-rollers *e e*, and is adjusted by the set-screws *ff*, thereby obviating the customary wear and slipping of the cogs.

The pitman *t* is provided with the springs *z*, which clasp the pin *p'* in the lever *H* by means of the thumb-screw *z'*, thus enabling the pitman *t* to ungear itself should a mould get fast, or some other obstruction occur.

n is an adjustable platform with rollers, upon which the moulds *O'*, fig. 1, rest, while being filled.

i i are two hand-levers, by which the machine can be used as a hand-press, if desired, by detaching the pitmen *H* and *t*.

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

1. The lever *j*, compressible pitman *X*, spring *L*, nut *M*, lever *O*, the rack-shaft *A*, and pinions *q q*, racks *P P*, and press-board *G'*, when constructed, combined, and arranged in the manner and to operate substantially as described.

2. In combination with the rack-shaft *A*, pinions *q q*, and racks *P P*, the adjustable plate *y*, friction-rollers *e e*, and set-screws *ff*, when combined and arranged as described, and to operate in the manner and for the purposes set forth.

FRED E. FREY.

Witnesses:

GEO. W. MCGILL,
ELI GRANT.