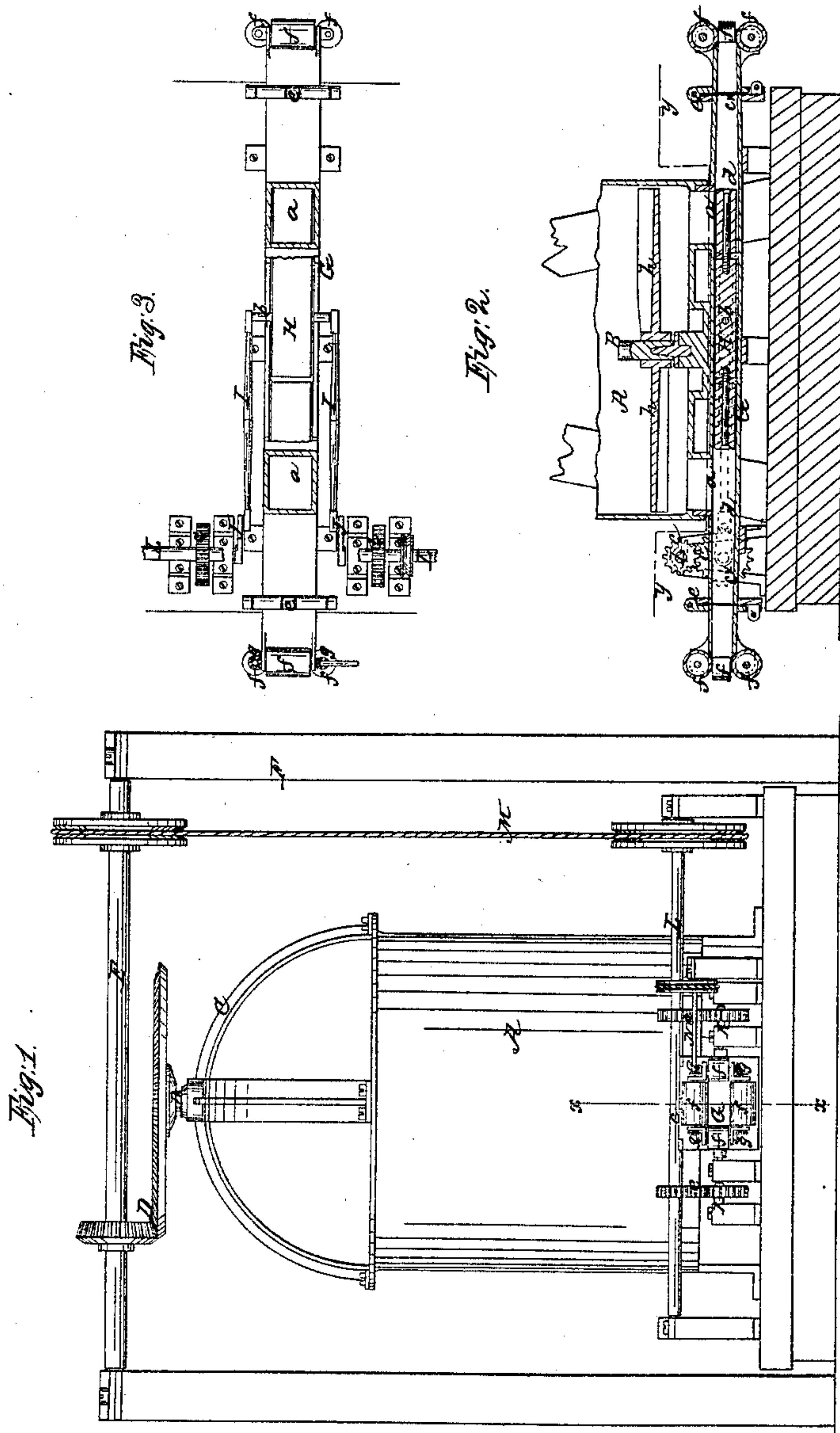


R. L. Walker,

Brick Machine.

No 57,415.

Patented Aug. 21, 1866.



Witnesses.
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UNITED STATES PATENT OFFICE.

ROBT. L. WALKER, OF GLOBE VILLAGE, MASSACHUSETTS.

IMPROVED BRICK-MACHINE.

Specification forming part of Letters Patent No. 57,415, dated August 21, 1866.

To all whom it may concern:

Be it known that I, ROBERT L. WALKER, of Globe Village, in the county of Worcester and State of Massachusetts, have invented a new and Improved Brick-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation of my invention; Fig. 2, a vertical section of the lower part of the same, taken in the line *xx*, Fig. 1; Fig. 3, a horizontal section of the same, taken in the line *yy*, Fig. 2.

Similar letters of reference indicate corresponding parts.

This invention relates to a new and improved machine for pressing and molding bricks, and has for its object the pressing and molding of the bricks with rapidity, in a very compact manner, and with a smooth and finished appearance.

A represents an upright cylinder, which constitutes the case of the mud or pug mill. This cylinder may be of iron, and of any suitable dimensions, and within it there is placed centrally a vertical shaft, B, having arms projecting laterally from it to temper the clay, which is thrown into A in a properly-moistened state.

The shaft B extends up above the cylinder A and through a spider, C, the latter serving as the upper bearing for the shaft. The shaft B is rotated by bevel-gears D from a driving-shaft, E, on a framing, F. (See Fig. 1.)

G is a horizontal box or tube of rectangular form in its transverse section, and communicating with the lower end of the cylinder A by two openings, *a a*, at opposite sides of the shaft B, as shown clearly in Fig. 2.

H is a piston or plunger, which works within the box or tube G, and has a rod, *b*, passing transversely through it, the ends of said rod having pitmen I attached, connected to cranks J J on shafts K K, which are driven by gears *c* from a shaft, L, the latter being driven by a belt, M, from the shaft E. (See Fig. 1.)

The side of the portion of the box or tube G through which the rod *b* of the piston or plunger H passes has oblong horizontal slots

made in it for the rod *b* to work in and admit of the piston or plunger having the requisite length of stroke.

The portion of the box or tube G in which the piston or plunger H works has its sides, as well as its top and bottom, parallel with each other; but said box or tube at both ends, beyond where the piston or plunger H works, has its bottom *c*^{*} slightly inclined, so as to cause the outer parts of the box or tube to gradually contract in a vertical direction from the points *d*, which indicate the outward limit of the movement of the piston or plunger, to the extreme ends of said box or tube. (See Fig. 2.) These taper portions of the box or tube are divided transversely, and connected by a hinge or joint, *e*, to admit of the outer ends being raised and said parts readily cleaned out in case of becoming choked up or clogged with foreign substances, such as stones, &c.

At each end of the box or tube G there are placed four rollers, *f*, one at each side and one at the top and bottom. The shafts or journals of these rollers are connected by gears *g*, and are driven from a shaft, N, which receives its motion from the shaft L.

The clay, properly moistened, is thrown into the cylinder or case A, and is properly tempered by the rotation of the arms of shaft B. The tempered clay is forced through the openings *a a* into the box or tube G by the lower arms *h* of the shaft B each time the piston or plunger H is moved or drawn back to expose one of said openings, which are exposed alternately under the reciprocating movement of the piston or plunger, the clay passing down through *a* in front of H, which forces the clay through the taper ends of the box or tube G, thereby compressing and molding it.

The rollers *f* perform two important functions—to wit, arresting the discharge of the clay from the ends of the box or tube G, and giving the clay a smooth and finished appearance, causing the clay to be discharged with sharp angles or corners.

I would remark that the driving mechanism of the rollers *f* is only shown at one side of the machine. The rollers at the other side of the machine are to be driven or rotated in precisely the same way.

This machine will mold and press bricks very rapidly and in a perfect manner. The

clay, as it is forced from the ends of the box or tube G, is cut off, by any convenient knife attachment into bricks of the desired length.

I claim as new and desire to secure by Letters Patent—

1. The reciprocating piston or plunger H, fitted within a box or tube, G, placed underneath the cylinder or case A of the mud or pug-mill and communicating therewith, and having its ends beyond the part in which the piston or plunger works of taper form, so as to cause the clay to be compressed as it is

forced out through and from the box or tube, substantially as shown and described.

2. The rollers f, applied to the ends of the box or tube G, and arranged to operate substantially as and for the purpose specified.

The above specification of my invention signed by me this 6th day of June, 1866.

R. L. WALKER.

Witnesses:

WM. F. MCNAMARA,
ALEX. F. ROBERTS.