P. HARNIST.

Brick-Machines.

No. 148,882. Patented March 24, 1874.

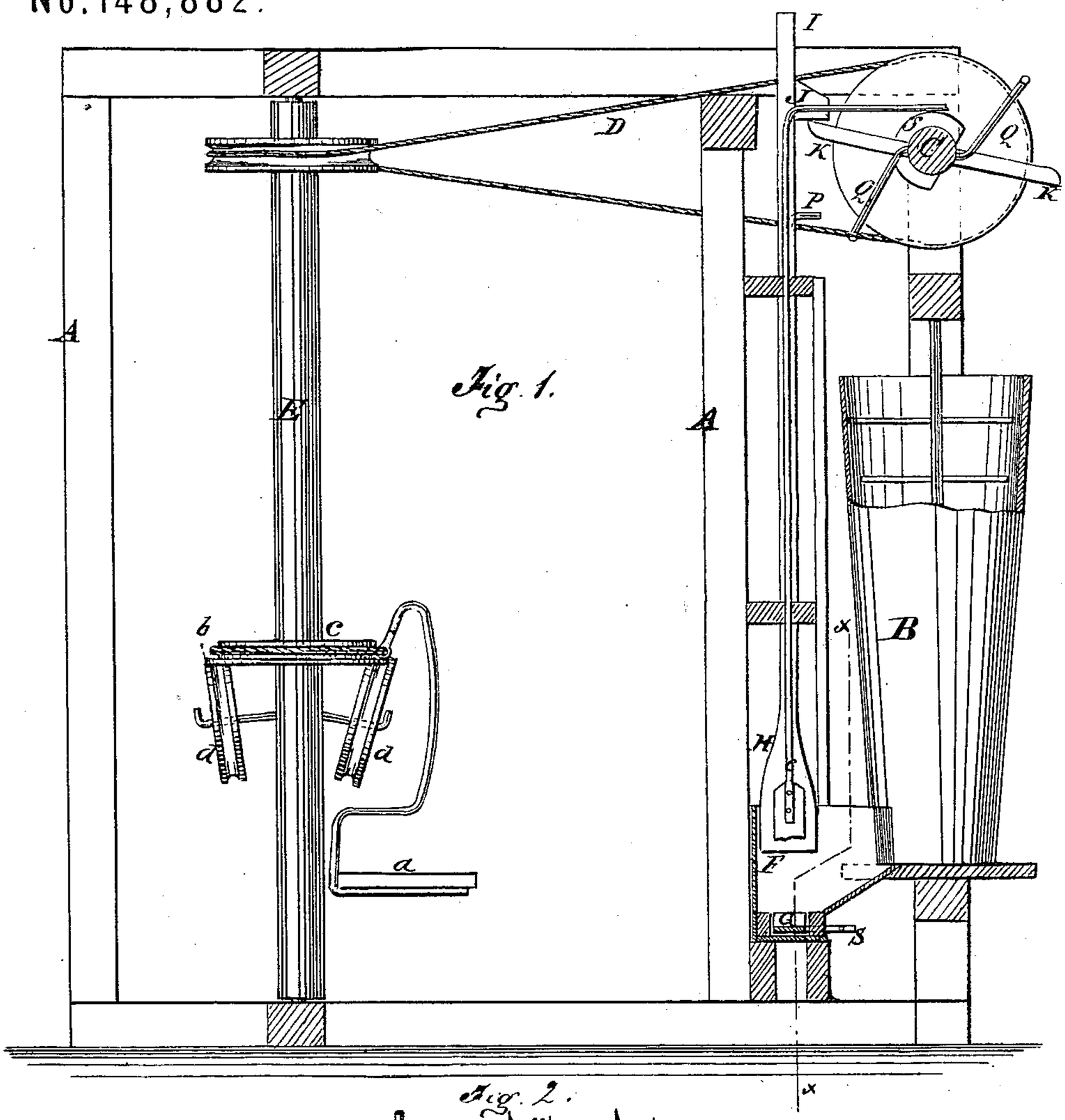

Fig. 1.

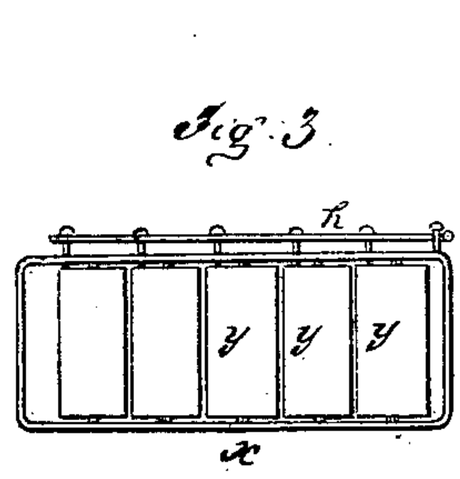

Fig. 3.

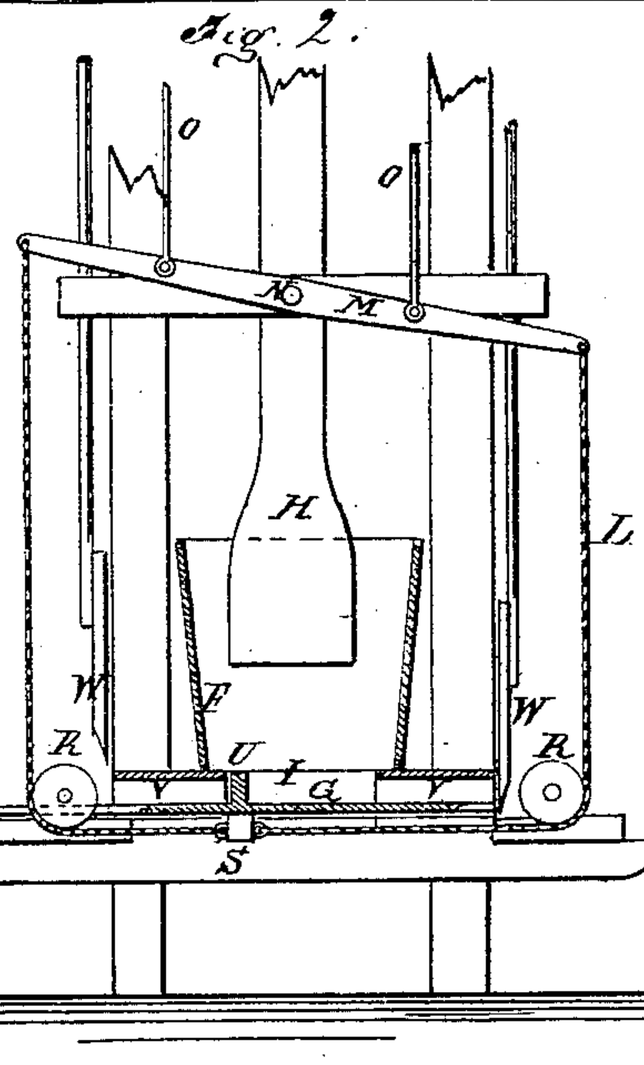

Fig. 2.

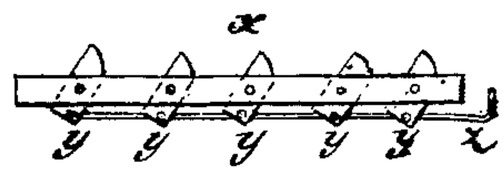

Fig. 4.

Witnesses.

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UNITED STATES PATENT OFFICE.

PETER HARNIST, OF MARINE, ILLINOIS.

IMPROVEMENT IN BRICK-MACHINES.

Specification forming part of Letters Patent No. **148,882**, dated March 24, 1874; application filed October 4, 1873.

To all whom it may concern:

Be it known that I, PETER HARNIST, of Marine, in the county of Madison and State of Illinois, have invented a new and useful Improvement in Brick-Machines, of which the following is a specification:

This invention relates to the construction of machines for manufacturing bricks, the object being to furnish a simple, cheap, and improved machine for that purpose; and it consists in the construction and arrangement of parts hereinafter described.

In the accompanying drawing, Figure 1 represents a sectional elevation; Fig. 2, a section of Fig. 1 taken on the line *x x*. Fig. 3 is a view of the transferrer onto which the bricks are delivered from the molds.

Similar letters of reference indicate corresponding parts.

A represents a frame-work of nearly square form, on the ground, having two mixing-cylinders, B, which stand side by side, and are operated by means of bevel-gears from the cam-shaft, or by any suitable means. C is the cam-shaft, which is revolved by means of the belt D from the upright shaft E. F is a box, into which the prepared clay is delivered from the mixing-cylinders or pug-mills B. G represents a sliding bottom. H is a stamper, to which is attached a long upright shank, I, on which is a lug, J. The stamper is raised twice at each revolution of the cam-shaft by means of the arms K K, which engage with the lug J. The stamper drops by its own gravity, and in so doing compresses the clay in the trough. The sliding bottom G is moved to the right and left alternately by means of the cord L and working-beam M, (see Fig. 2,) which beam oscillates on the central pin N by means of the rods O O, which rods extend up and have hooks P on their ends. These rods are alternately raised, and the working-beam oscillated, by means of the arms Q Q of the cam-shaft C. The cord L passes round the rollers R R, and is attached to the sliding bottom G at the point S. As the working-beam oscillates, the bottom is carried to the right and left alternately. U is a ledge on the sliding bottom, which forces the clay into the molds V V. W W represent vertical knives, which descend at the right moment and cut the brick to the proper length. At the next movement of the sliding bottom in that direction, the brick is forced from the mold onto the transferrer X, a transferrer composed of hinged boards connected by a rod, Z. (Shown in Figs. 3 and 4.) When the transferrer is full it is carried away and deposited on the conveyer *a*. The bricks are carried to the dry-house. The conveyer is formed of a hanging platform, *a*, which travels on an endless rope, *b*, passing around pulley *c*. Said pulley is supported by others *d*. The bricks are delivered from the transferrer by pulling the rod Z, which is pivoted to each of the boards, so as to turn the bricks on their edges for drying. The knives W W have each a rod, *e*, with the upper end of the rods turned to a right angle, so as to reach out over the cams *f* of the shaft C. The knives are sufficiently heavy to pass through the brick as they drop. The movements of the stamper, the sliding bottom, and the knives are so arranged that each operates to do its appropriate work at the proper time.

I do not claim either the conveyer or transferrer in this patent.

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

1. The combination of the sliding bottom G I, molds or channels V with the stamper H and hopper F, as shown and described, whereby the clay is stamped and formed into brick-shaped blocks, and the latter ejected on opposite sides of the machine, alternately.

2. The combination of the vibrating lever M, cords L, reciprocating bottom G I, molds V, hopper F, stamper H, cutters W, shaft C provided with cam S, and arms K Q, as shown and described.

PETER HARNIST.

Witnesses:

HENRY L. JUDD, M. D.,

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