

H. BULMER & C. SHEPPARD.
Improvement in Brick-Machines.

No. 128,787. Patented July 9, 1872.

Fig. 2.

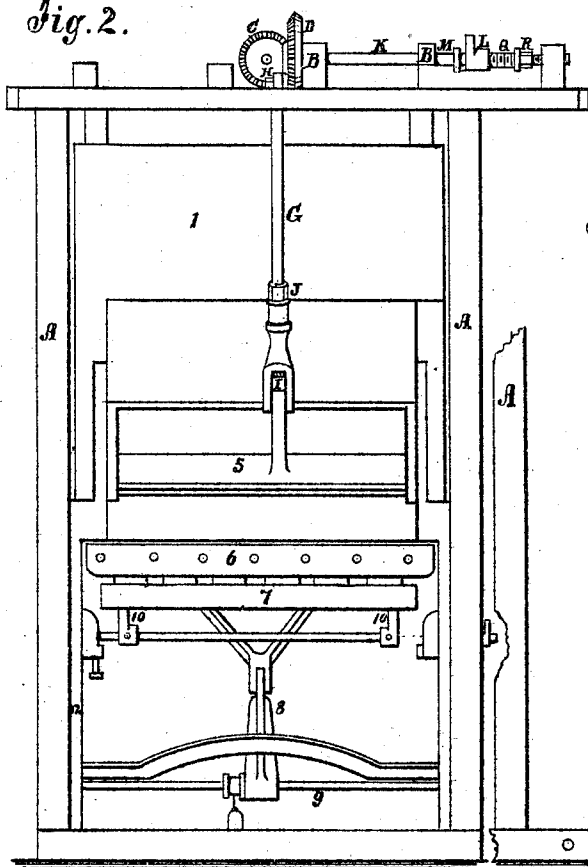


Fig. 3.

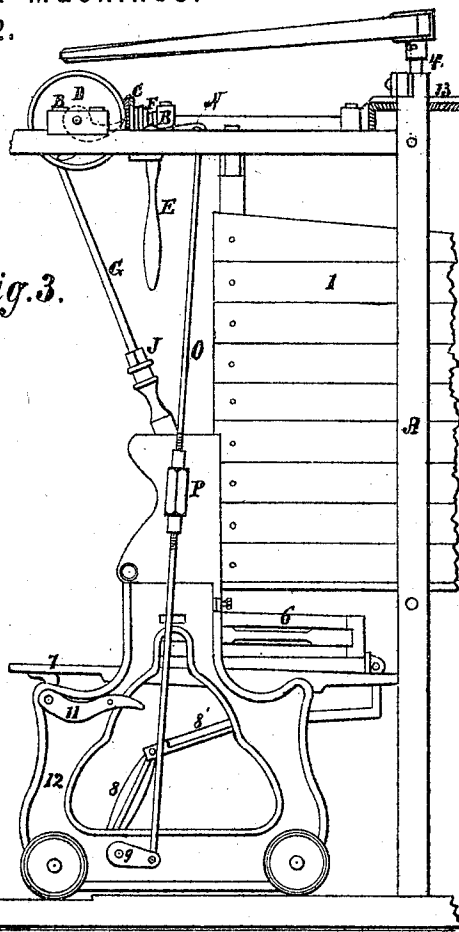


Fig. 1.

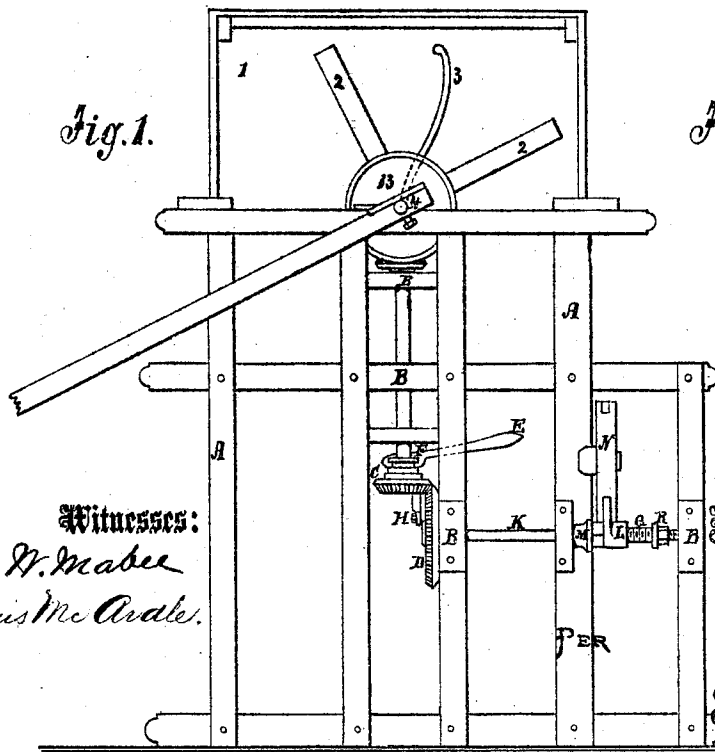
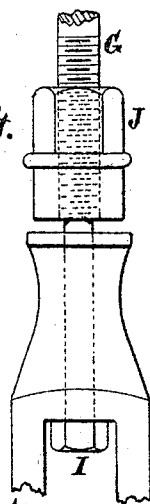


Fig. 4.



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UNITED STATES PATENT OFFICE.

HENRY BULMER AND CHARLES SHEPPARD, OF MONTREAL, CANADA.

IMPROVEMENT IN BRICK-MACHINES.

Specification forming part of Letters Patent No. 128,787, dated July 9, 1872.

Specification describing a new and Improved Brick-Machine, invented by HENRY BULMER and CHARLES SHEPPARD, of Montreal, in the Province of Quebec and Dominion of Canada.

This invention relates to an attachment to brick-machines, whereby the clay is pressed into the mold at suitable pressure and the molds, when filled, are pushed out from below the drum without manual labor.

The machine may be worked by steam, water, or horse power, and will, with the same attendance, manufacture a greater number of bricks than the devices for the same purpose now in use. The different parts are so arranged that when stones or other obstructions get into the drum, or when the molds are displaced, the machine will be partially thrown out of gear and thus prevent injury to it. The pressure upon the clay in the molds is greater and the clay may be used much stiffer than in the hand brick-making machine. The pressure upon the clay may be regulated at pleasure, and to suit stiff or soft clay.

In the accompanying drawing, Figure 1 represents a plan or top view of the machine; Fig. 2, a front elevation; Fig. 3, a side elevation of the same; and Fig. 4, a detail side view of a section of pressure-rod and adjusting-nut.

Similar letters and figures represent corresponding parts.

The parts indicated by figures are those of the ordinary hand brick-machine, and the parts indicated by letters are the portions of the machine for which a patent is solicited.

1 is a mill-tub, in which the clay-knives 2 2, attached to the shaft 4, revolve and mix the clay. When mixed it is forced through an opening in the bottom of the tub and below the drum by the two feeders 3 on the lower end of the knife-shaft. 5 is a presser, (connected by the rod G with the crank-wheel D,) which forces the clay into the molds. 6 6' are wooden molds, each divided for molding six bricks at a time. The mold 6 is below the presser filled with clay, and 6', which is empty, is lying on the mold-bed 7, ready to be moved below the drum for filling when the full one is moved out. 8 8' are levers acted upon by the connecting-rod O, which moves forward the empty mold below the presser and the full one to the front of the mold-bed, ready for emptying. 9 is a

shaft provided with a crank-arm, to which the levers 8 8' are attached. 10 are cams for lowering the front of the mold-bed to remove the molds when they are disarranged or obstructed. These are operated by the handle 11. 12 is an iron frame for supporting the presser, mold-bed, levers, &c. 13 is the crown-wheel.

A is the frame for supporting the mill-tub, machinery, &c.; B B, pillow-blocks, of wood or metal; C C, pinions which transmit motion from the crown-wheel to the crank-wheel D. The pinion C is movable upon the shaft and is thrown in or out of gear with the crank-wheel by the clutch F and the handle E. D is a crank-wheel, in which the crank-pin H is fixed. G is a pressure-rod, the upper part of which is connected with the crank-pin, while its lower end has a thread cut upon it, and passes through the coupling and is fitted with a small nut, I. Above the coupling an adjusting-nut and collar, J, is screwed upon the rod. By turning this nut the length of the rod and the pressure upon the drum may be regulated at pleasure. L is a cam near the end of the shaft K. This cam is loose upon the shaft and fits upon the fixed collar M by a beveled clutch. The cam is pressed against the collar and kept in gear with it by the spring Q. The pressure of the spring against the cam may be regulated at pleasure by the nut R. In case of any obstruction from misplacement of the molds or other causes the beveled clutch on the collar presses against the cam and forces the spring to yield, so that the cam is thrown out of gear with the collar and the shaft is allowed to complete a revolution, when the cam is again thrown into gear with the collar by the spring. N is a lever with the fulcrum in the center. One end is attached to the connecting-rod O and the other is acted upon and depressed by the cam L at each revolution of the shaft. As one end of the lever is depressed by the cam the connecting-rod on the other end is raised, and, being connected at the lower end to the lever-shaft 9 by a crank, it acts upon the levers 8 8' so as to move forward the empty mold 6' below the drum and the full one 6 to the front of the mold-bed. P is a swivel-joint with a right and left screw, by which the length of the rod and the stroke of the levers may be regulated.

Having thus described our invention, we

claim as new and desire to secure by Letters Patent—

1. The pressure-rod G working loose in the eye of the fork that connects it with the hinged presser, in combination with the presser and the crank-wheel D, all constructed and operating as and for the purpose specified.

2. The combination of the collar M, cam L,

spring G, and nut R with the shaft K, lever N, connecting-rod O, and crank-shaft and levers 9 8 8', all as and for the purpose specified.

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