2 Sheets—Sheet 1.

W. L. HIPPERT.

Brick-Pressing Machine.

No. 212,799. Patented Mar. 4, 1879.

Fig. 1.

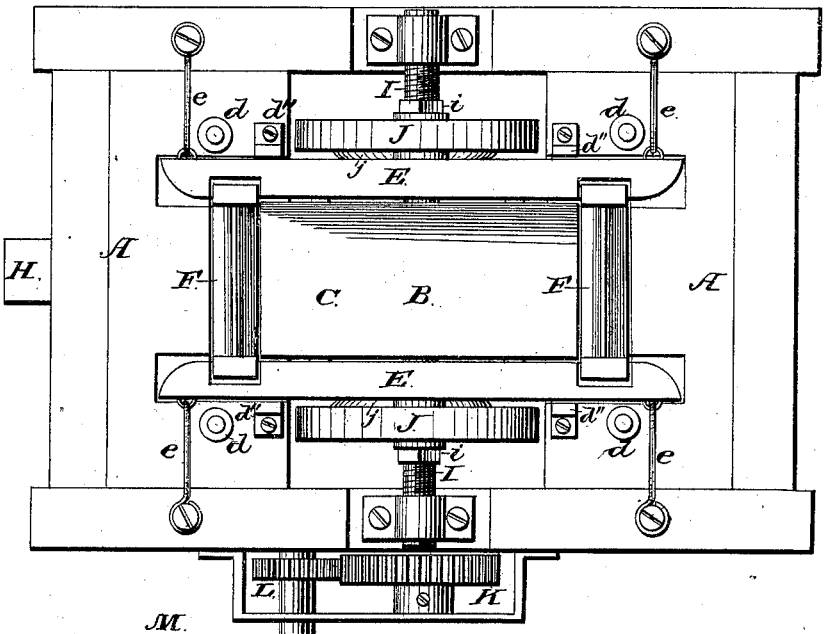
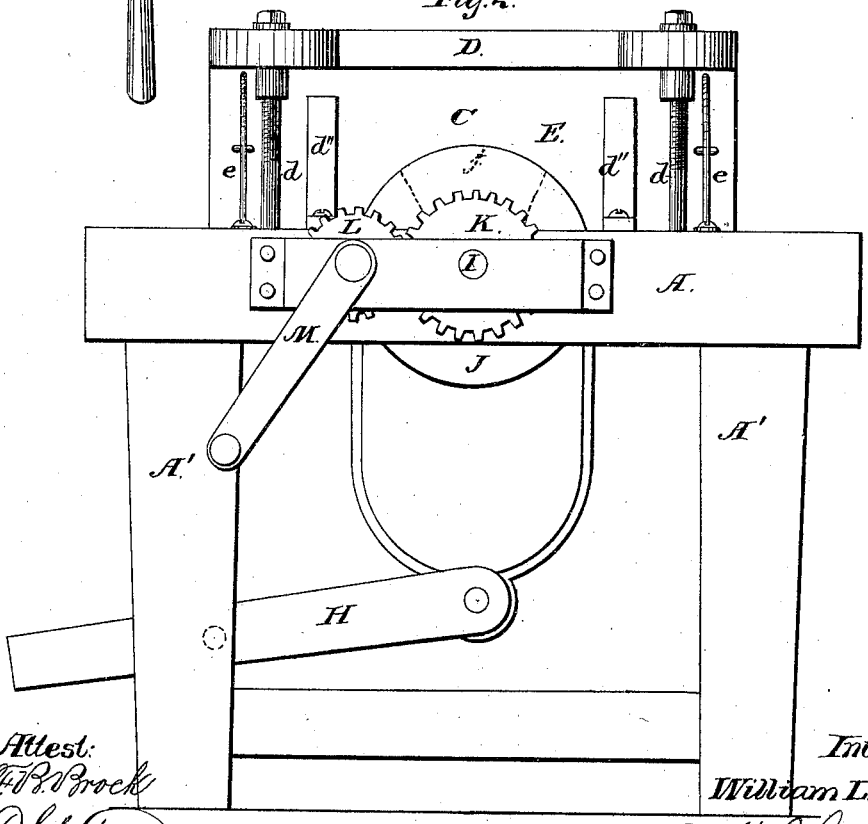


Fig. 2.



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2 Sheets—Sheet 2.

W. L. HIPPERT.

Brick-Pressing Machine.

No. 212,799. Patented Mar. 4, 1879.

Fig. 3.

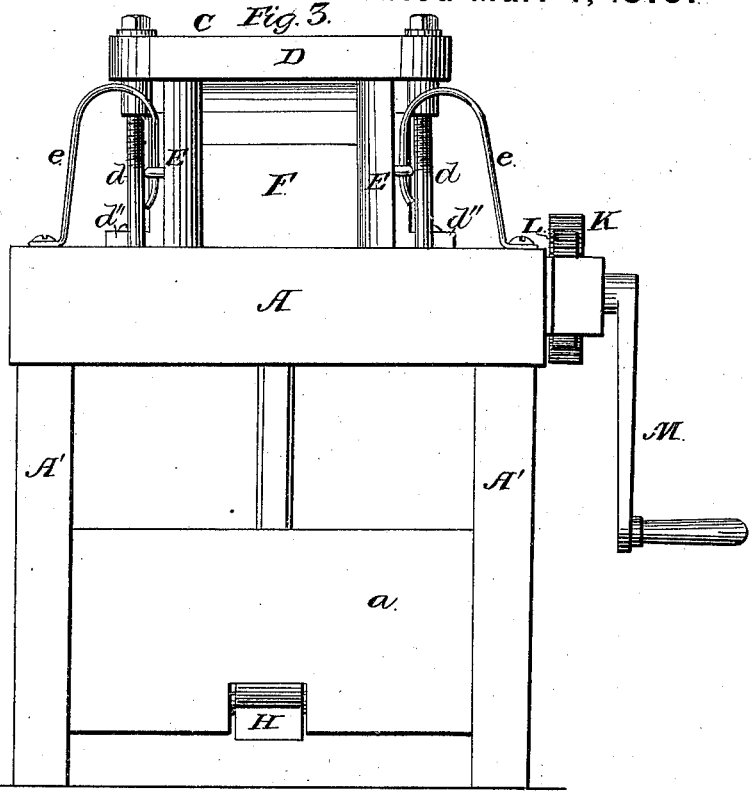
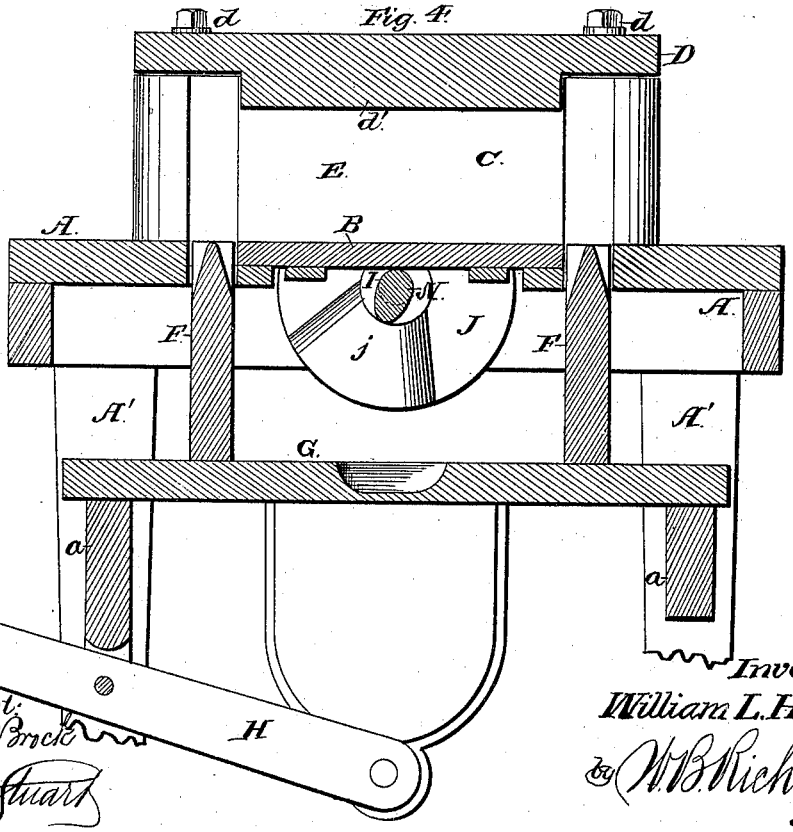


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM L. HIPPERT, OF GALESBURG, ILLINOIS.

IMPROVEMENT IN BRICK-PRESSING MACHINES.

Specification forming part of Letters Patent No. **212,799**, dated March 4, 1879; application filed December 17, 1878.

To all whom it may concern:

Be it known that I, WILLIAM L. HIPPERT, of Galesburg, in the county of Knox and State of Illinois, have invented certain new and useful Improvements in Brick-Pressing Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 is a top-plan view of a machine embodying my invention, with the top piece, D, removed, showing arrangement of press-box. Fig. 2 is a side elevation. Fig. 3 is an end view, and Fig. 4 is a longitudinal vertical sectional view.

My invention consists in a shaft having cam-disks at each end for operating the movable sides of the press-box, and a central cam for operating the movable bottom thereof; and further consists in the combination of press-box ends with the foregoing devices, which ends are actuated simultaneously by a treadle to open and close the ends of the press.

The invention also consists in the construction and combination of parts hereinafter described and claimed.

Referring to the drawings by letters, the same letter indicating the same part in the different views, letter A represents the top, and A′ the supports, of a frame on which the working parts of the press are seated. The central part of the top A is cut away for the reception of a plate, B, which is seated loosely therein, and constitutes the bottom of the press-box C. D is the top of the press-box, and is supported on standards *d*, and has a projecting under surface, *d′*, which is the same linear size and is placed in the same horizontal plane as the plate B. The projecting surface *d′* and the bottom B are of the same linear size as the finished brick is intended to be on two sides. E E are the sides of the press-box, and are placed one on each side of the bottom B, and so seated that they can each be drawn a short distance laterally away from the bottom B by means of springs *e*, and are retained in vertical positions by the bottom B and projection *d′* on their inner sides and standards *d″* on their outer sides. F F are the ends of the press-box, attached at their lower ends to a bar, G, which rests in its lowest and normal position on cross-bars *a* of the supporting-frame, and which can be raised and lowered by means of a foot treadle-lever, H. The pieces F pass upward through the top A, one at each end of the bottom B, and are sharpened at their upper ends, as shown at Fig. 4 of the drawings, and are attached to the bar G, so that when it is at its lowest position the upper ends of the pieces F are as low as the upper surface of the bottom B. The end pieces F are a little broader than the bottom B, and reciprocate in grooves in the side pieces E.

I is a shaft, having suitable bearings in the top A, and arranged transversely across the press-box C and below the bottom piece B, and has a cam-disk, J, on each end. Each cam-disk J has a cam-projection, *j*, on its side next the press-box C, and the disks J are of such diameter and are arranged in such positions on the shaft I that when they are rotated by the shaft the cams *j* will impinge against the sides E and press them simultaneously toward and to the bottom B, while the cams *j* are above the shaft I, and will allow the springs *e* to retract the sides E, while the cams *j* are below the shaft I, and also below the sides E. The disks J are adjustable on the shaft I by means of nuts *i*, which are seated on a threaded portion of the shaft.

The shaft I has a pinion, K, on one end, which gears with a driving-pinion, L, the shaft of which has a crank, M, fixed thereon. N is a cam on the central portion of the shaft I, and so arranged as to elevate the bottom B at the same time that the sides E are pressed inward by the cams *j*, and allow the bottom to fall by its own gravity as the sides E are retracted.

In operation, the crank M is turned so as to bring the cams *j* on the disks J below the sides E, and at the same time to turn the cam M downward and allow the bottom B to fall to its lowest position, which is preferably about in same horizontal plane as the top A. The outer end of the pedel-lever H is then raised to lower the end pieces F, as shown at Fig. 4

of the drawings. The brick which has been previously formed and partially dried is now pushed into the box C at one end. The end pieces F are then raised by the treadle H, to inclose the brick, when the crank M may be turned to give the shaft I one revolution, thereby pressing the brick, and also allowing the bottom B to again fall and the sides E be retracted, when the end pieces F may be lowered, and the brick removed by pushing another into its place, and ready for a repetition of the same operation.

The sharpened upper ends of the pieces F will permit the sand and débris to fall through, and also prevent scraping the brick in elevating the ends.

I claim as new—

1. The shaft I, having cam-disks J, constructed as described, and cam N, in combination with the box C, having movable sides E and bottom B, substantially as and for the purpose specified.

2. The ends F and treadle-lever H, in combination with the shaft I, having cam-disks J and cam N, and with the box C, having movable sides and bottom and fixed top, substantially as and for the purpose specified.

3. The springs *e*, in combination with the box C, having movable sides E, and with the shaft I, having cam-disks J, substantially as and for the purpose specified.

4. The crank M and pinion L, in combination with the shaft I, having pinion K, cam-disks J, and cam N, and box C, having movable sides and bottom and adjustable ends, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WILLIAM L. HIPPERT.

Witnesses:
H. A. ALLEN,
P. R. RICHARDS.