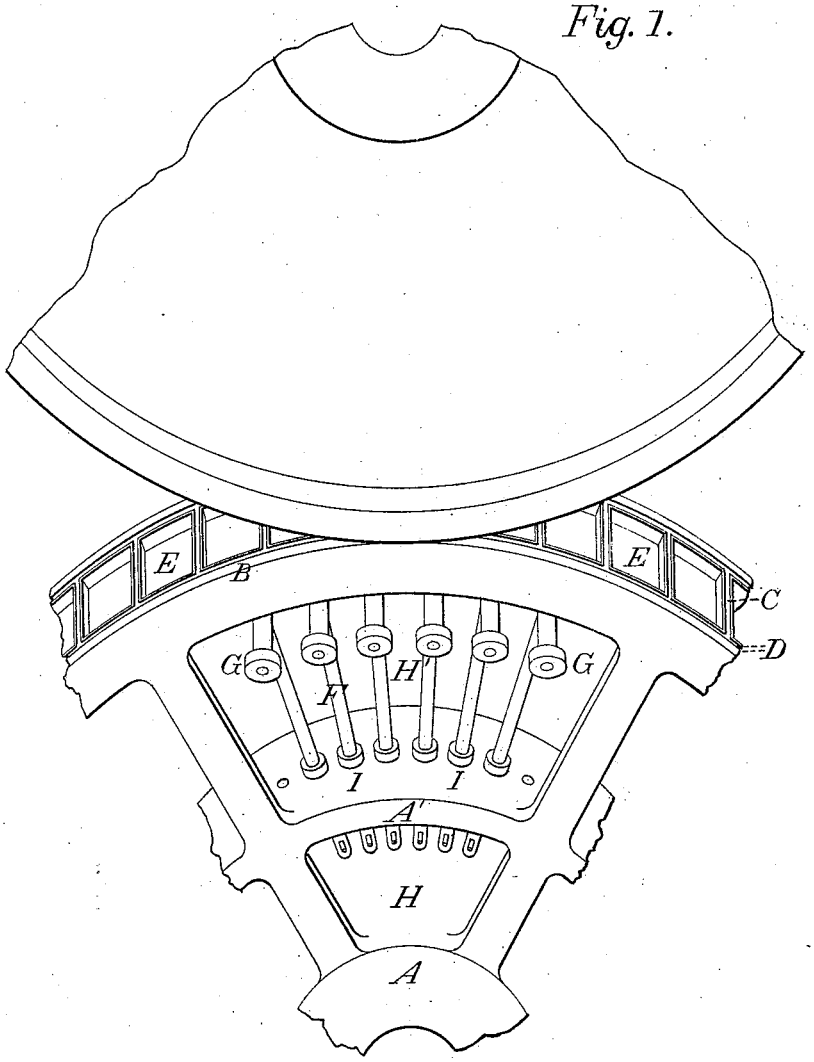
2 Sheets—Sheet 1.

H. L. OLIVER.

MOLD-WHEEL FOR BRICK-MACHINES.

No. 194,838. Patented Sept. 4, 1877.

Fig. 1.



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2 Sheets—Sheet 2.

H. L. OLIVER.

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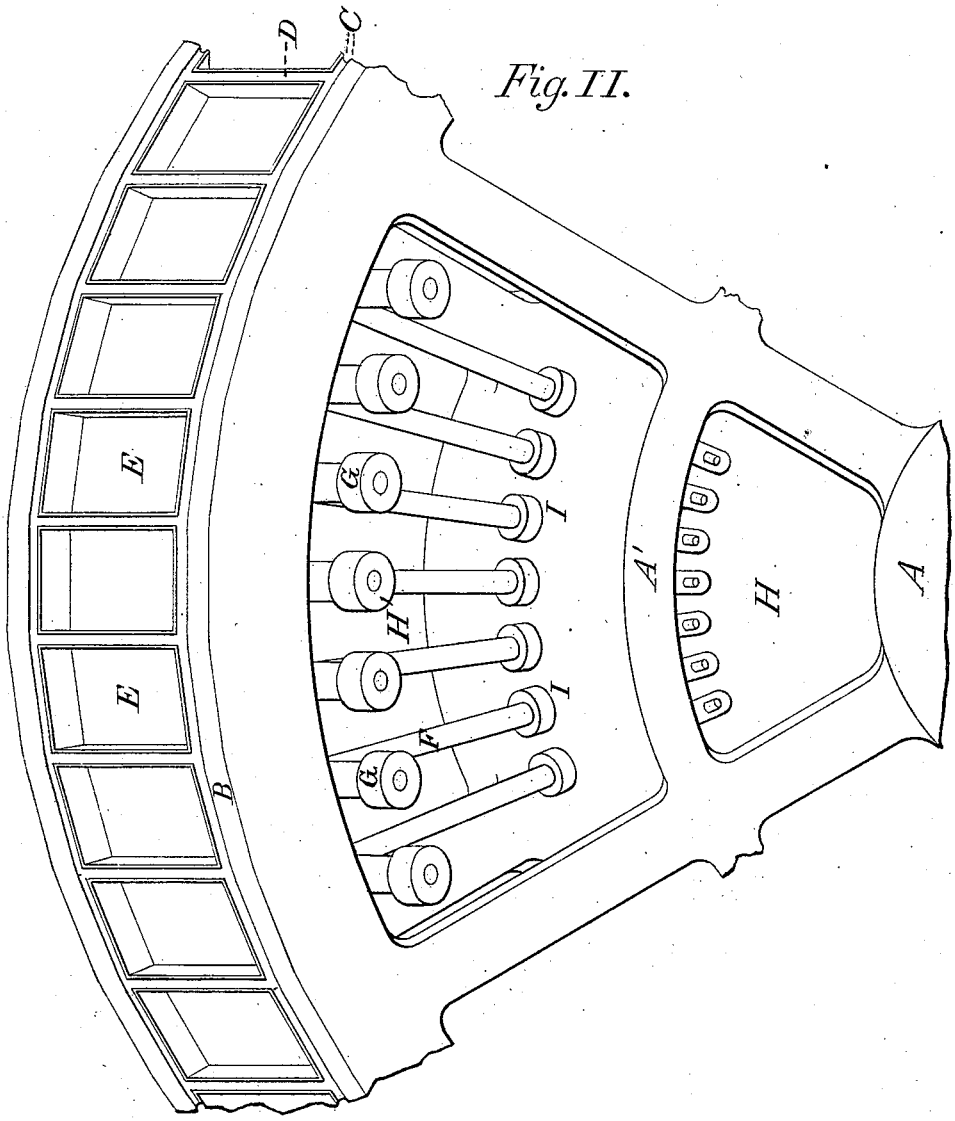
Fig. II.



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UNITED STATES PATENT OFFICE.

HENRY L. OLIVER, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO E. S. HOLMES, OF SAME PLACE.

IMPROVEMENT IN MOLD-WHEELS FOR BRICK-MACHINES.

Specification forming part of Letters Patent No. **194,838**, dated September 4, 1877; application filed August 18, 1877.

To all whom it may concern:

Be it known that I, HENRY L. OLIVER, of the city of Washington, District of Columbia, have invented a new and useful Improvement in Mold-Wheels for Rotary Brick-Machines, which improvement is fully set forth in the following specification and accompanying drawings.

My improvement relates to that class of brick-machines having a mold-wheel and a pressure-wheel rotating in contact therewith; and consists in providing the mold-wheel with grooves, and also in the arrangement and operation of the plungers in connection therewith, as will be hereinafter described.

Referring to the drawings, Figure I is a section of a round mold-wheel, and a section of a pressure-wheel in contact therewith, showing my improvements. Fig. II is a perspective view of a section of a polygonal wheel, showing the operation of the plungers, and also having the circumferential and transverse grooves intersecting each other.

The purpose of my improvement is to prevent the crack in the brick as made by the ordinary rotary machine, all of which machines produce bricks which are cracked on one edge in nearly every case, and in many instances on both edges.

This defect is caused by the action of the machine in forcing the surplus clay on the top or periphery of the mold into the bricks after the same are pressed.

By my improved mold this defect is entirely obviated by means of grooves cut in the periphery near each outside edge, and extending the entire circumference of the wheel, or having these grooves cut at intervals and intersecting the transverse gooves, which will be hereinafter described.

I also cut a groove in the top or upper edge of each partition which divides the molds, these transverse grooves joining the circumferential ones, so that the clay will pass out instead of being forced into the mold. The bricks are thus prevented from cracking, and as a consequence are more valuable when burned.

Referring to the drawings, A represents the wheel proper; B, the periphery thereof. The circumferential grooves are shown at C, and the transverse grooves at D. E E are the plungers, mounted on the shafts F, and provided with shoulders or washers I. G are anti-friction rollers, mounted on short shafts secured to the plungers, and by means of which the cams of the machine operate the plungers. H H′ are apertures or openings through the wheel, leaving the cross-bar or guide A′ for the purpose of preventing any variation of the motion of the plungers, as will be hereinafter described.

It will be obvious that my invention is applicable to a polygonal mold-wheel as well as to a round one, and that the circumferential grooves may be continuous or sectional.

The plungers, already referred to, are made to fit the molds or recesses in the rim of the wheel, and are mounted upon shafts which pass through apertures in the cross-bar or guide A′, and are secured at the end by any suitable means.

Short shafts, carrying anti-friction rollers, by means of which the cams of the machine operate the plungers, are secured to the shafts of the plungers at right angles thereto.

In all the machines with which I am acquainted the plungers have an unsteady motion, and a tendency to tilt with the motion of the machine, and thus partially turn the brick when it leaves the mold, and frequently crack or otherwise injure it.

I provide the cross-bar A′, which serves as a guide for the plungers, and prevents any variation of the motion of them, thus discharging the brick from the mold in a straight line, and avoiding any injury to the brick.

The shoulders or washers on the shafts are on the upper or outer side of the bar A′, so that the plungers are only allowed to move inwardly the thickness of the brick.

The operation of my improved wheel is similar to that of all brick-machines using a rotary mold-wheel, and will be readily understood by any one familiar with the art.

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

1. A rotary mold-wheel for brick-machines, having grooves in its periphery, substantially as and for the purpose specified.

2. A rotary mold-wheel for brick-machines, having grooves adjacent to the edges of the molds, substantially as and for the purpose specified.

3. A rotary mold-wheel for brick-machines, having transverse grooves in its periphery, substantially as and for the purpose specified.

4. A rotary mold-wheel for brick-machines, having circumferential grooves, substantially as and for the purpose specified.

5. A rotary mold-wheel for brick-machines, having the cross-bar or guide A′ for the plungers, substantially as and for the purpose specified.

6. In a rotary mold-wheel for brick-machines, the combination of straight-line plungers and the grooved periphery of the wheel, substantially as and for the purpose specified.

H. L. OLIVER.

Witnesses:
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