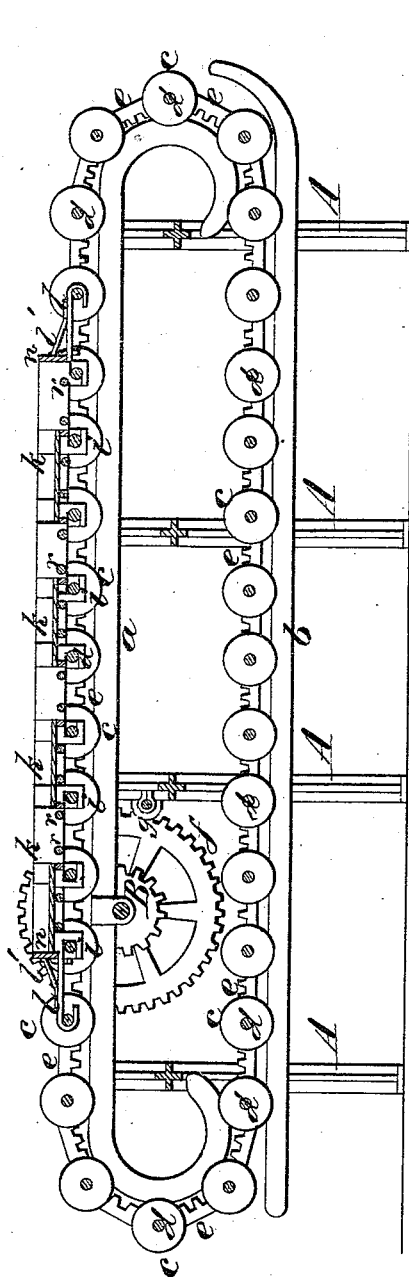


C. DIEBOLD.  
Tile-Molding Machine.

No. 161,391.

Patented March 30, 1875.

Fig. 1



WITNESSES  
*Robert Covatt*  
*E. H. Bates*

INVENTOR  
*Chas. Diebold*  
*Chapman & Co.*  
ATTORNEYS

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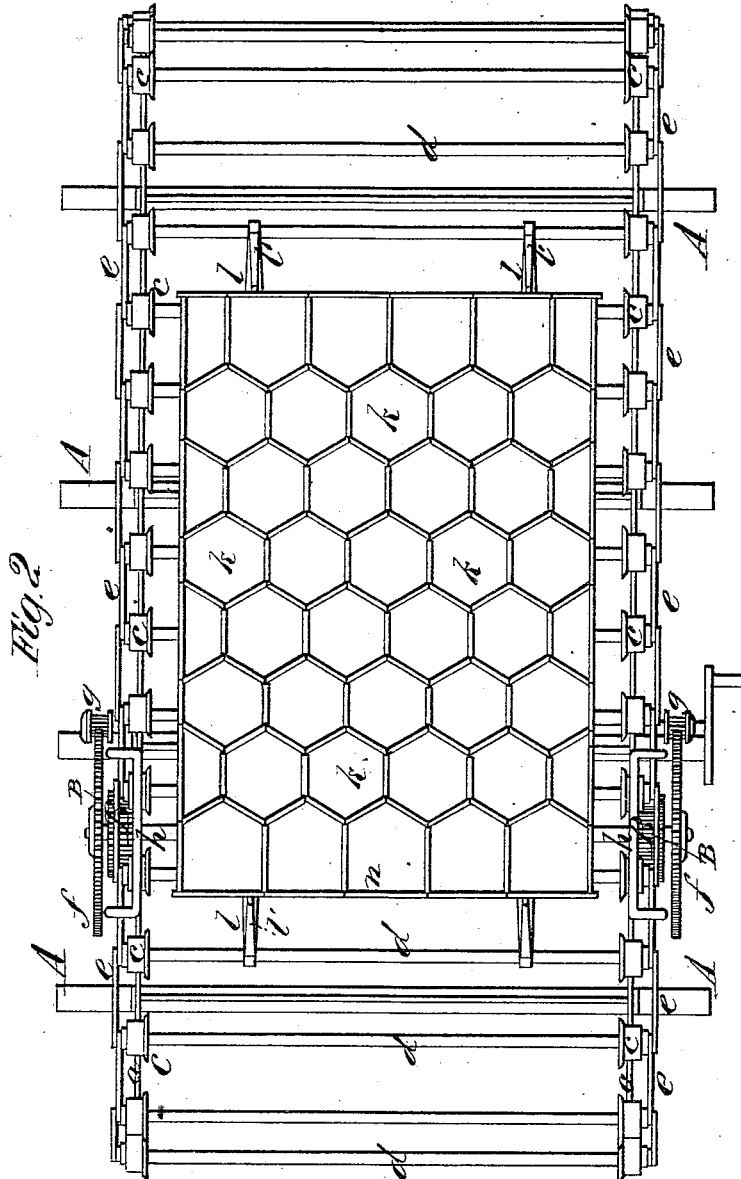


Fig. 2

WITNESSES  
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ATTORNEYS

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Tile-Molding Machine.

No. 161,391.

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Fig. 3

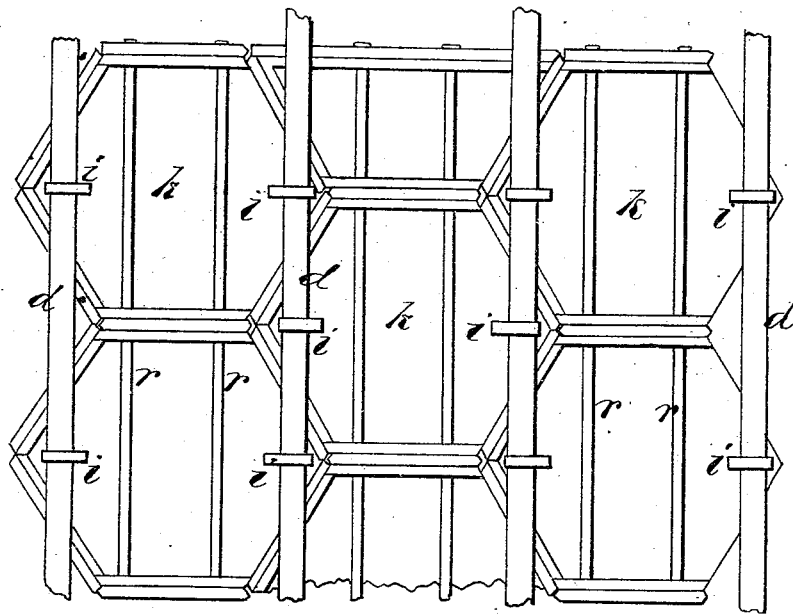
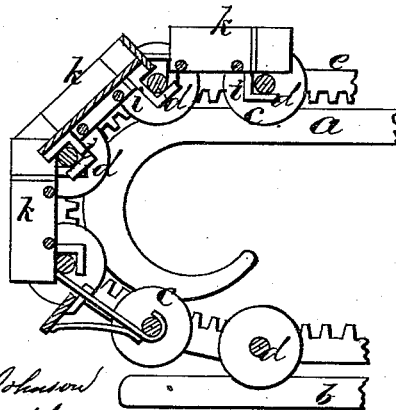


Fig. 4



WITNESSES  
*Erasmus W. Johnson*  
*Robert Cornutt*

Fig. 5

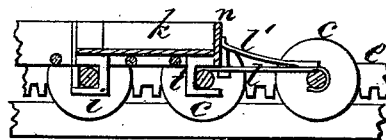
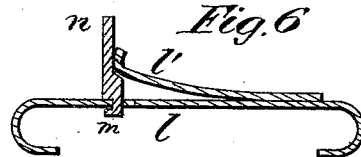


Fig. 6



INVENTOR  
*Chas. Diebold*  
*Chipman & Foreman*  
 ATTORNEYS

# UNITED STATES PATENT OFFICE.

CHARLES DIEBOLD, OF LEBANON, PENNSYLVANIA.

## IMPROVEMENT IN TILE-MOLDING MACHINES.

Specification forming part of Letters Patent No. 161,391, dated March 30, 1875; application filed March 6, 1875.

*To all whom it may concern:*

Be it known that I, CHARLES DIEBOLD, of Lebanon, in the county of Lebanon and State of Pennsylvania, have invented a new and valuable Improvement in Molding Tiles; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical section of my device, and Fig. 2 is a plan view of the same. Figs. 3, 4, 5, and 6 are detail views.

This invention has relation to means for molding tiles, especially those which are made of furnace slag or cinder; and the nature of my invention consists in the employment, in combination with an endless revolving carriage, of a number of molds, whose front sides are hinged in such manner that as the molds commence to descend at the end of the supporting and guiding ways an attendant can easily remove the cast tiles; also, in the employment of clasps, in combination with the molds and an endless carriage, said clasps being used only when the molds do not extend entirely around the carriage.

The invention also consists in a novel arrangement of railway for supporting and guiding the mold-carriage, as will be hereinafter explained.

In the annexed drawings, A A designate a number of frames, which have rigidly secured to them upper rails, *a*, and lower rails, *b*, which are parallel to each other, except at their ends, which are curved, as shown in Fig. 4, and disconnected from each other. On these rails travel flanged wheels *c c*, which are connected together in pairs on opposite sides of the machine by means of rods or axles *d*. The rods *d* are arranged at regular distances apart in lines parallel to each other, and the ends of these rods, on each side of the machine, are attached loosely to links *e*, having teeth on their edges. B designates a spur-wheel, the teeth of which engage with

the teeth on links *e*. There is a wheel, B, on each side of the machine, and these two wheels are keyed on the same shaft, on which shaft a large spur-wheel, *f*, is keyed, which engages with a driving-pinion, *g*. Directly above the wheels B B are holding-down rods *h h*, which keep the links *e* engaged with said wheels.

The drawings, Figs. 1 and 2, represent eight rows of molds, *k*; but in practice the entire endless carriage may be filled with the molds, provided they are arranged in rows extending transversely across the machine. The molds represented are hexagonal, each composed of four sides secured to a bottom-plate, the other two sides being secured to the molds in an adjacent front row, so that as the rows of molds successively descend at the front end of the machine to return back on the lower rails, the front ends of the filled molds will leave their places and allow an attendant to slide out the cast tiles.

When the molds are horizontal and in positions to receive the plastic tile material their sides are all closed, as shown.

The molds are tied together in transverse rows by means of rods or bolts *r*, and the molds are united to the axles *d* by means of hooks *i*, which allow them to articulate freely as they pass around at the front and rear ends of the machine.

When the molds do not extend entirely around the endless carriage, I employ hooks *l* at the molds, which hook over the axles *d*, and are attached by other hooks, *m*, to plates *n*. Each hook *l* is provided with a brace, *v*, which abuts against the plate *n*, and keeps this plate in its place against the ends of the molds, as shown in Figs. 1 and 5.

It will be observed that the rollers *c* are supported upon the upper and lower rails as the carriage revolves; consequently the carriage will not bind at any point, nor be hard to move.

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

1. In a tile-molding machine, the endless

revolving carriage, the molds *k* connected thereto, and the upper and lower disconnected rails *a b*, combined in the manner described.

2. Mold-boxes *k*, arranged in transverse rows, hinged to the axles *d*, substantially as described.

3. The hooks or clasps *l*, hooked to plates *n*, and constructed with braces *l'*, substantially as described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

CHAS. DIEBOLD.

Witnesses:

LEWIS REHR,  
BUSSLER BOYER.