

No. 657,174.

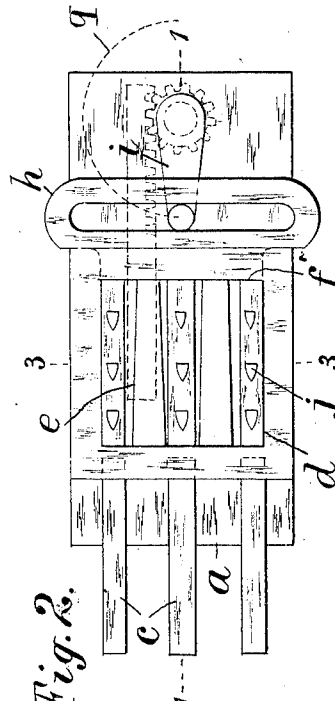
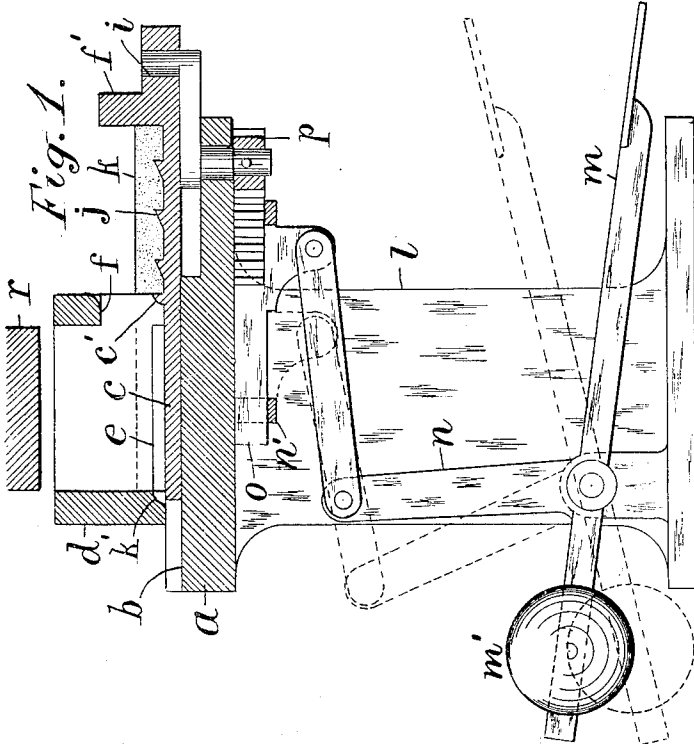
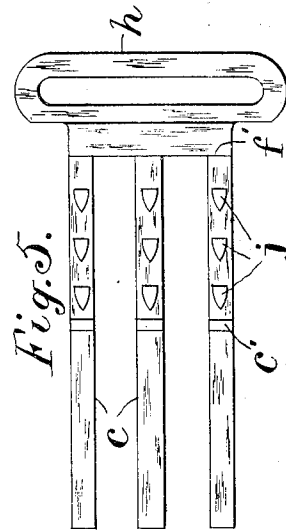
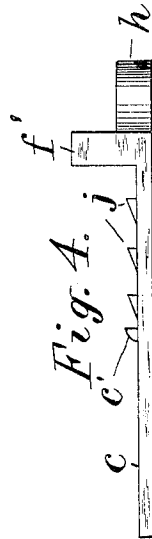
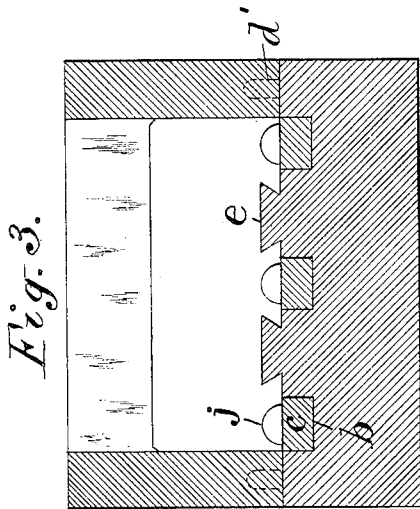
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W. P. MEEKER.

MANUFACTURE OF DOVETAILED TILES.

(Application filed Jan. 4, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

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MANUFACTURE OF DOVETAILED TILES.

SPECIFICATION forming part of Letters Patent No. 657,174, dated September 4, 1900.

Application filed January 4, 1900. Serial No. 367. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. MEEKER, a citizen of the United States, residing at No. 192 Market street, Newark, county of Essex, State of New Jersey, have invented certain new and useful Improvements in the Manufacture of Dovetailed Tiles, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

The present invention relates to a tile-press in which the bottom of the mold or mold-bed is provided with dovetail ribs to form dovetail grooves across the under side of the tile; and the object of the invention is to furnish a means of removing the tile from the mold when formed therein without pushing it upwardly within the mold. This object may be accomplished by forming the mold with an aperture in one side through which the tile may be withdrawn by mechanical agency or by lifting the mold from the mold-bed to permit the tile to be drawn off of the dovetail ribs laterally. By this construction the tile is withdrawn from the dovetail ribs by a single movement, and the necessity is avoided for forcing the tile to the top of the mold before drawing it from the dovetail ribs.

In the annexed drawings, Figure 1 shows an apparatus in which the mold is provided in one side with an aperture to withdraw the tile, the tile being drawn from the mold and the view being taken in section (where hatched) upon line 1 1 in Fig. 2. Fig. 2 is a plan of the apparatus with the parts in readiness to mold a tile. Fig. 3 is a cross-section of the mold on line 3 3 of Fig. 2 looking toward the perforated side of the mold. Fig. 4 is an edge view and Fig. 5 a plan of the means for retracting the molded tile. Fig. 3 is drawn upon a larger scale than the other figures.

a designates a mold-bed, shown with three longitudinal grooves b. The mold d rests upon the bed above the grooves, being centered thereon by dowel-pins d'. The bed is provided with dovetail ribs e, attached thereto between the grooves b. The mold is formed with aperture f at one end of the ribs e, and the ribs are tapered toward such aperture. Draw-bars c are fitted to the grooves and formed at one end with a block f', adapted

to close such aperture. The draw-bars are of sufficient length to fill the grooves below the mold when the block f' is retracted, as shown in Fig. 1, to remove the tile k to prevent access of material to the grooves. The bars are united by a slotted cross-head h, which is actuated by a crank i at the close of the molding operation to withdraw the block f' from the side of the mold and the tile from the ribs e. The upper surfaces of the bars, which lie normally within the mold, are provided with projections or teeth j to engage the material of the tile, and thus draw it from the dovetails when the draw-bars are retracted. Transverse cleats c' are also shown upon the draw-bars at the rear edge of the tile k. These cleats lie within recesses k' in the rear wall of the mold during the molding of the tile and fit behind the rear edge of the tile to assist in drawing it forward.

The mold-bed is mounted upon a stand l upon which a treadle m is pivoted and counterbalanced by weight m'. The treadle is provided with a crank-arm n to reciprocate a slide o, which is fitted to guides n' beneath the mold-bed. The slide is formed with rack-teeth, which engage a pinion p upon the axle of the crank i, and the movement of the treadle operates to rotate the crank one-half a revolution, as indicated by the dotted line q in Fig. 2. Such movement of the crank retracts the draw-bars to the position shown in Fig. 1, while the reverse movement of the treadle (effected by the weight m') presses the block f' into the side of the mold and locks it therein by the setting of the crank i at right angles to the slot in the cross-head h. The mold is then in readiness to receive the clay or other material for compression, which is effected by any well-known means, as by the plunger r, the bottom end of which is indicated in Fig. 1. When the material is compressed, a single downward movement of the treadle operates to clear the mold from the tile and to retract the tile from the dovetail ribs e, so that it may be removed and another tile molded. As only a single movement of the treadle is required, which is effected by the foot of the operator, the hands of the operator are left entirely free to manipulate the tile or the apparatus for pressing the material. The movement of the tile laterally from the

mold to clear the dovetail ribs saves much complication in the mechanism, as it avoids the necessity of lifting the tile to the top of the mold to draw it laterally from the ribs.

5 By using a stationary mold-bed with the dovetail ribs fixed rigidly to its upper surface the mechanism for retracting the tile is much simplified and operates by a single movement to draw the tile from the ribs and simultaneously remove it from the mold.

10 It is obviously immaterial how the mold is cleared from the edge of the tile to permit the retraction of the latter from the stationary dovetail ribs, and it is therefore immaterial
15 whether the mold be formed with an aperture in the side or lifted from the mold-bed after molding each tile, to permit the retraction of the tile.

Having thus set forth the nature of the invention, what is claimed herein is—

20 1. In a tile-press, a stationary mold-bed having dovetail ribs upon its upper surface, and provided with means for drawing the molded tile laterally from the mold, to clear such
25 dovetail ribs.

2. In a tile-press, the combination, with a stationary mold-bed having dovetail ribs upon its upper surface, of a mold fitted to such mold-bed, means for clearing the mold from the
30 edge of the tile when molded, and means for drawing the molded tile laterally from the mold, to clear the dovetail ribs.

3. In a tile-press, the combination, with a stationary mold-bed having dovetail ribs fixed
35 upon its upper surface, of draw-bars fitted to grooves in such bed parallel with the ribs and formed with projections to engage the tile when molded to draw it laterally from such ribs.

40 4. In a tile-press, the combination, with a stationary mold-bed having dovetail ribs upon its upper surface, of a mold fitted to such mold-bed with one side movable as set forth, and draw-bars fitted within the mold-bed and
45 provided with projections to engage the tile when molded to draw it laterally from the dovetails.

5. In a tile-press, the combination, with a stationary mold-bed having dovetail ribs upon
50 its upper surface, of a mold fitted to such mold-bed and formed with lateral aperture at one end of such ribs, and a removable block in the aperture whereby the tile when molded

may be displaced laterally from the dovetail ribs.

6. In a tile-press, the combination, with a
55 mold-bed having dovetail ribs upon its upper surface, of a mold fitted to such mold-bed and formed with lateral aperture at one end of such ribs, and draw-bars fitted within the
60 mold-bed and provided with block to close such aperture, and with projections to engage the tile when molded to draw it laterally from the dovetails.

7. In a tile-press, the combination, with a
65 stationary mold-bed having dovetail ribs upon its upper surface, of a mold fitted to such mold-bed, means for clearing the mold from the edge of the tile when molded, draw-bars fitted within the mold-bed and formed with
70 projections to engage the tile when molded, and a treadle with connections to such draw-bars for retracting the tile from the dovetails.

8. In a tile-press, the combination, with a
75 mold-bed having dovetail ribs upon its upper surface, of a mold fitted to such mold-bed and formed with lateral aperture at one end of such ribs, draw-bars fitted within the mold-bed and provided with block to close such aperture, and with projections to engage the tile
80 when molded, a treadle with connections to such draw-bars adapted to lock the block within such aperture, and the treadle having a weight to normally move the block into such aperture.

9. In a tile-press, the combination, with the stationary mold-bed having dovetail ribs fixed
85 to its upper surface, of a mold fitted to such mold-bed, and means for clearing the mold from the edge of the tile when molded, whereby the tile may be removed laterally from the stationary dovetail ribs.

10. In a tile-press, the combination, with the mold, of a stationary mold-bed having dovetail ribs fixed immovably upon its upper
95 surface, whereby the mold must be cleared from the tile and the tile slid laterally from the dovetail ribs.

In testimony whereof I have hereunto set my hand in the presence of two subscribing
100 witnesses.

WILLIAM P. MEEKER.

Witnesses:

L. LEE,

THOMAS S. CRANE.