No. 708,241. Patented Sept. 2, 1902.

W. P. MEEKER.

TILE PRESS.

(Application filed Aug. 3, 1901.)

(No Model.)

Fig. 1.

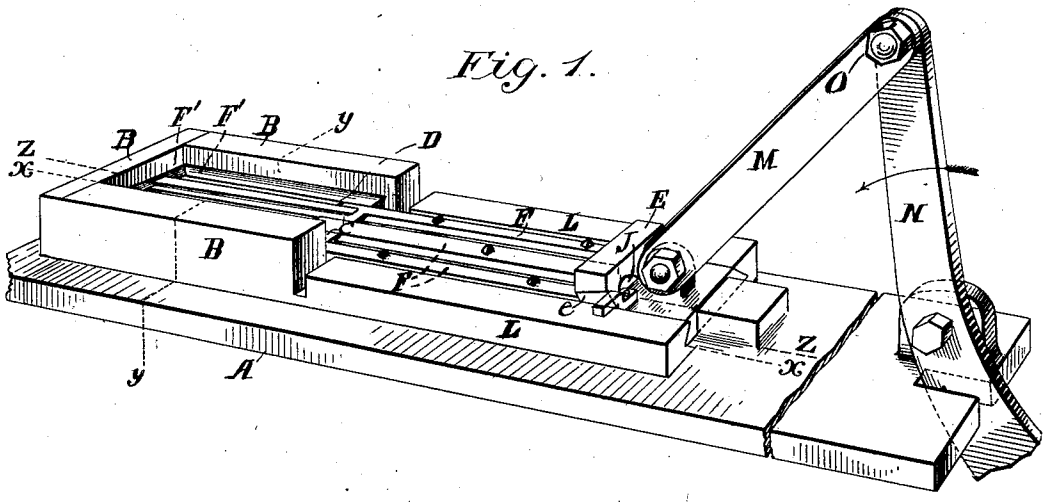


Fig. 2.

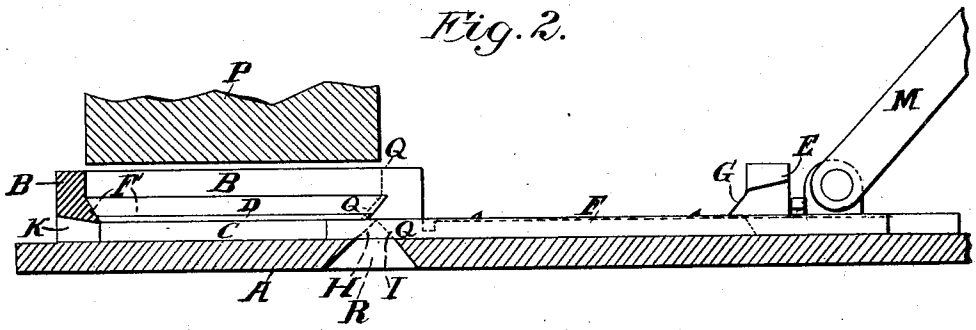
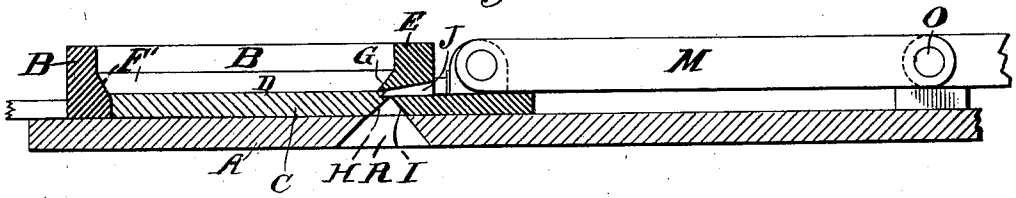


Fig. 3.



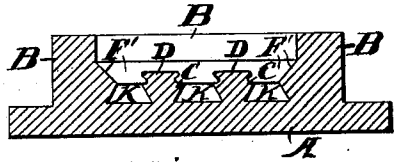


Fig. 4.

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UNITED STATES PATENT OFFICE.

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TILE-PRESS.

SPECIFICATION forming part of Letters Patent No. 708,241, dated September 2, 1902.

Application filed August 3, 1901. Serial No. 70,747. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM PASSMORE MEEKER, a citizen of the United States, residing in the city of Newark and State of New Jersey, have invented certain new and useful Improvements in Tile-Presses, of which the following is a specification.

My invention relates particularly to that class of tile-presses which are intended for the manufacture of dovetailed-back tiles; and my improvements are directed particularly to certain means whereby such tiles may be formed with beveled edges, which will permit the tiles to be set closer and more accurately than could be done with the old forms.

I will now proceed to describe my improved press, and in doing so I will refer to the drawings, in which—

Figure 1 is a perspective view of the press-bed and matrix with the sliding fingers withdrawn. Fig. 2 is a longitudinal sectional view of the same, taken on the line *x x*. Fig. 3 is a longitudinal sectional view taken on the line *z z* of Fig. 1, but with the movable end and fingers inserted in the matrix; and Fig. 4 is a cross-sectional view taken on the line *y y* of Fig. 1 looking to the left.

In all the figures the same reference-letters refer to the same parts.

A is the bed-plate or base of the press, and B B B are the three stationary sides of the matrix.

C C are tapered flanges or ribs on the bottom or bed plate of the matrix, which ribs carry the undercut flanges D D, which serve to form the dovetail grooves in the bottom of the tile, as described in my Patent No. 657,174, of September 4, 1900.

E is a sliding head, which serves to close the fourth side of the matrix when the head is pushed into place, as shown in Fig. 3. This head carries the fingers F F F, which when the head is pushed into position in the matrix form, with the ribs D D, the bottom of the matrix, and when the head is drawn out, as shown in Figs. 1 and 2, these fingers serve to carry out the tile from the matrix, so that it can be removed from the press.

The sides B B B of the matrix are provided interiorly with beveled offsets F′ F′ F′, which, it will be seen, will serve to produce an incline or bevel on the corresponding edges of the tile when formed within the matrix. The sliding head E is also provided with a similarly-beveled offset G, so that when the head is pushed into position in the matrix these offsets F′ F′ F′ G will form a continuous incline or bevel around the inner side of the matrix.

The ends of the ribs C C are undercut or beveled, as shown at H in Fig. 3, and the base of the sliding head E is undercut or beveled between the fingers F F F, as shown at I, Fig. 3. The sliding head E is also provided with holes J J, the inner ends of which are of the same outline as and serve to receive the ends of the dovetailed flanges D D. These holes J J flare toward their outer ends, as shown in Fig. 3. The ends of the sliding head E are beveled on their inner side at *e* to make a snug joint with the bevels F′ F′ on the sides B B, and this undercut or bevel inclines inward toward the rear of the head, so as to leave a space or opening between the rear of the head and the beveled offsets F′ F′ when the matrix is closed. The broken line Q Q in Fig. 2 indicates the position of the inner side of the movable head E when the matrix is closed. In like manner the openings in the back of the matrix, through which the fingers F F F pass, on the inner side of the matrix fit closely around the fingers, but are flared toward the outside, as shown at K in Fig. 2. The head E slides between the undercut flanges L L, and the fingers F F F are preferably dovetailed between the ribs C C and the sides of the matrix, as shown. The head E is slid in and out by a toggle-jointed lever M N, as shown, or by any other suitable means.

The operation of my improved press is as follows: The head E is slid into position in the matrix, as shown in Fig. 3, the toggle-jointed lever serving to lock it in place, when the hinge O falls to the horizontal line, as shown in Fig. 3. In this position the inner ends of the fingers F F F have passed through the holes K in the back of the matrix and project beyond the same. The outer beveled ends of the ribs C C meet up against the inner beveled edges of the head E, the beveled ends of the head E E pass in over the beveled offsets F′ F′ on the sides B B, and the undercut flanges D D enter the holes J J in the

head E. This arrangement gives a matrix with a tight bottom provided with undercut flanges and with continuous sides with inwardly-sloping inclines or bevels, all adapted to produce a tile of corresponding form. The matrix is then filled with clay in the usual manner and the clay is pressed by the descent of the patrix P. The patrix is then raised and the sliding head E is slid out from the sides B B B, the fingers F F F serving to carry the tile off the undercut flanges D D and out of the mold, when it can be removed by hand from the fingers F F F and the head E. The head may then be slid into place again, in which operation any portion of the clay which may have gotten into the grooves between the ribs C C will be pushed out by the fingers F F F through the flaring holes K and the inward edge of the head E will pass snugly over the beveled offsets F′ F′ and the undercut flanges D D, and any clay which may have fallen in front of the bevels or flanges will be pushed past the beveled ends of the head E or through the holes J J, and the beveled ends of the ribs C C will cut up through any remaining clay against the beveled edges I of the head E, the severed clay falling through the hole R in the bottom of the bed-plate. By this means I am enabled to construct a press-matrix wherein a tile may be formed not only with undercut dovetailed grooves, but with beveled edges, and from which matrix the tile when formed may be readily removed without injury or distortion.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a tile-press, the combination, with a matrix provided with a removable side, of an inclined or beveled offset on the inner side of said matrix, and entirely surrounding the same in the angle between the base and sides of the matrix, substantially as described.

2. In a tile-press, the combination, with a stationary bed-plate and fixed matrix sides, provided interiorly with downwardly-beveled offsets, in the angle between the sides and bed-plate, of a laterally-removable matrix side, also provided with a downwardly-beveled offset on its inner face, adjacent to the bed-plate, substantially as described.

3. In a tile-press, the combination, with a stationary matrix-bed, of tapered and undercut flanges upon said bed, fixed matrix sides provided interiorly with downwardly-beveled offsets, and a laterally-removable matrix side, also provided with a downwardly-beveled offset on its inner face, substantially as described.

4. In a tile-press, the combination, with a stationary matrix-bed, of tapered and undercut flanges upon said bed, fixed matrix sides, provided interiorly with downwardly-beveled offsets, a laterally-removable matrix side, also provided with a downwardly-beveled offset on its inner face, and carrying fingers attached to said removable side and sliding between said undercut flanges upon said matrix-bed, substantially as described.

5. In a tile-press, the combination, with a stationary matrix-bed, of tapered and undercut flanges upon said bed, fixed matrix sides, provided interiorly with downwardly-beveled offsets, a laterally-removable matrix side, also provided with a downwardly-beveled offset on its inner face, and carrying fingers attached to said removable side and sliding between said undercut flanges upon said matrix-bed, and passing out through exteriorly-flaring holes in the rear side of said matrix, substantially as described.

6. In a tile-press, the combination, with a stationary matrix-bed, of tapered and undercut flanges upon said bed, fixed matrix sides, provided interiorly with downwardly-beveled offsets, a laterally-removable matrix side also provided with a downwardly-beveled offset on its inner face, and with outwardly-flaring holes to receive the ends of said undercut flanges, and carrying fingers attached to said removable side and sliding between said undercut flanges upon said matrix-bed, substantially as described.

7. In a tile-press, the combination, with a stationary matrix-bed, of tapered and undercut flanges upon said bed, fixed matrix sides provided interiorly with downwardly-beveled offsets, and a laterally-removable matrix side, also provided with a downwardly-beveled offset on its inner face, and with ends beveled to correspond with the said beveled offsets on the fixed sides of the matrix, substantially as described.

8. In a tile-press, the combination, with a stationary matrix-bed, of tapered and undercut flanges upon said bed, fixed matrix sides, provided interiorly with downwardly-beveled offsets, a laterally-removable matrix side, also provided with a downwardly-beveled offset on its inner face, and with outwardly-flaring holes to receive the ends of said undercut flanges, and carrying fingers attached to said removable side and sliding between said undercut flanges upon said matrix-bed, and with ends beveled to correspond with the said beveled offsets on the fixed sides of the matrix, substantially as described.

9. In a tile-press, the combination, in a matrix, having laterally-removable side and bottom members, of outwardly-flaring openings in the matrix sides for the relatively moving portions to pass through, substantially as described.

10. In a tile-press, the combination, in a matrix having laterally-removable side and bottom members, of outwardly-flaring openings in the matrix sides provided with closely-fitting inner edges, for the relatively moving inner portions to pass through, substantially as described.

11. In a tile-press, the combination, in a matrix, having laterally-removable side and bot-

tom members of cutting edges upon the meeting portions of the relatively moving parts, substantially as described.

12. In a tile-press, the combination, with a matrix having relatively movable portions, of an opening through the base of the matrix beneath the relatively movable portions, substantially as described.

13. In a tile-press, the combination, with a matrix, having relatively movable portions, with cutting edges thereupon, of an opening through the base of said matrix beneath the point at which the cutting edges meet, substantially as described.

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