





W. P. MEEKER.

TILE PRESS.

APPLICATION FILED DEC. 4, 1907.

Patented Dec. 22, 1908.

4 SHEETS—SHEET 3.

907,386.

Fig. 6.

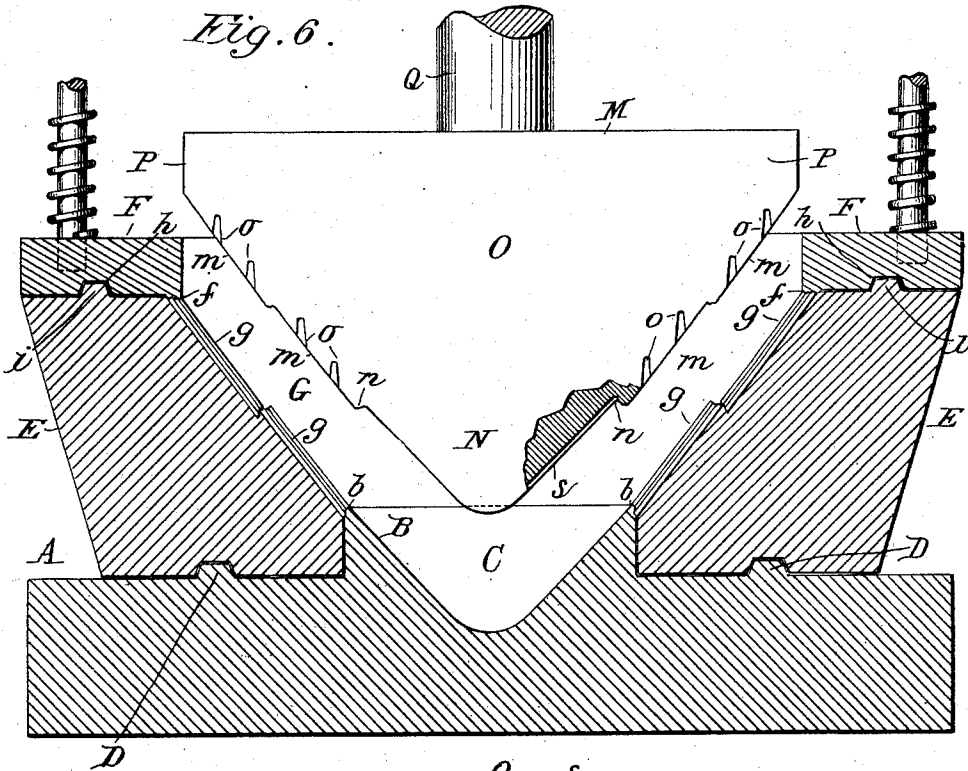
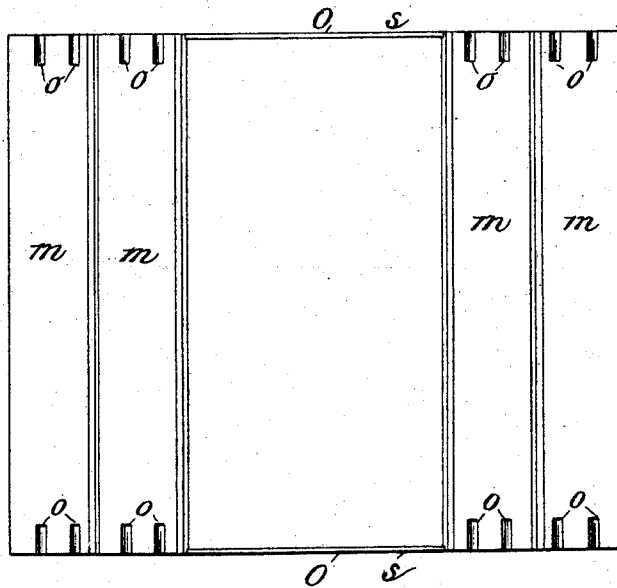


Fig. 7.



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Fig. 8.

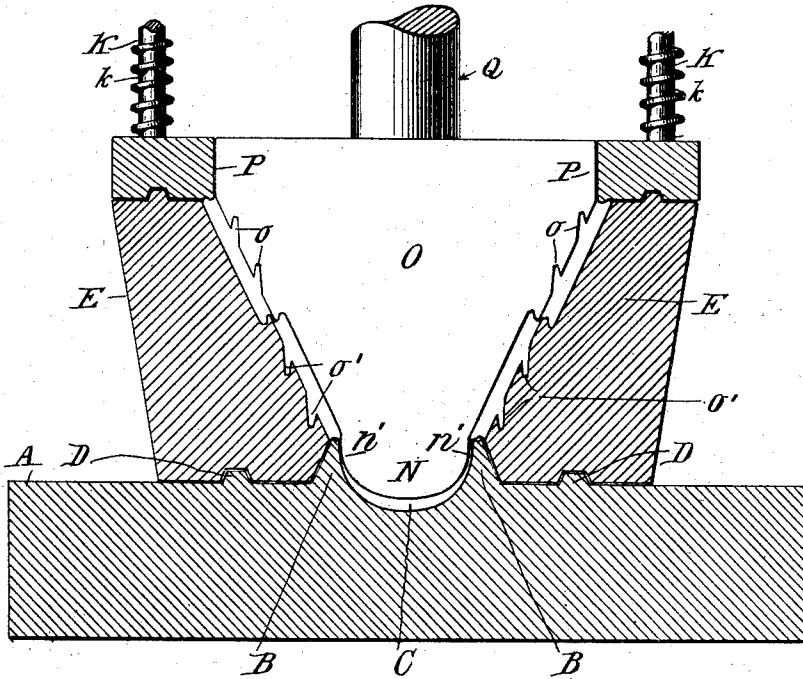
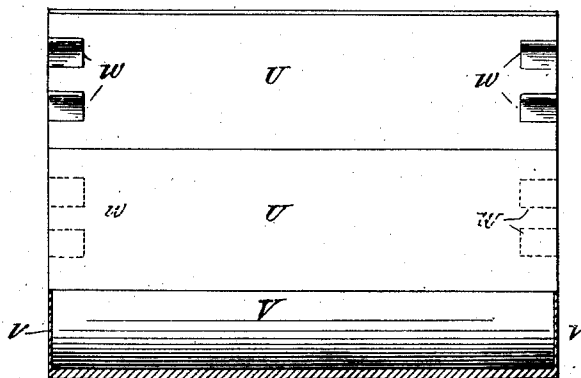


Fig. 9.



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# UNITED STATES PATENT OFFICE.

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## TILE-PRESS.

No. 907,386.

Specification of Letters Patent.

Patented Dec. 22, 1908.

Application filed December 4, 1907. Serial No. 405,023.

*To all whom it may concern:*

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

My invention relates to tile presses of that type wherein a reciprocating plunger is used to force molten, vitreous material into the sides of the mold and to form it into tiles provided with undercut lugs or projections upon their backs; and my improvements consist in the particulars hereinafter more fully set forth and claimed.

In the drawings Figure 1 is a cross sectional view taken on the line Y Y of Fig. 2 and looking to the right; Fig. 2 is a longitudinal sectional view taken on the line X X of Fig. 1 and looking to the left; Fig. 3 is a perspective view of the plunger; Fig. 4 is a perspective view of the movable top and side members of the mold; Fig. 5 is a perspective view of the base; Fig. 6 is an end view partly in section of a modified form of my press; Fig. 7 is a bottom view of the plunger used therein; Fig. 8 is a view similar to Fig. 6 of another modification of my press, and Fig. 9 is an inside view of half of a tile blank made therein.

In all the figures the same parts are referred to by corresponding reference letters.

The bottom of the mold A is formed of a single piece of heavy iron, and is provided with a raised central portion B having ribbed edges *b b*, and a centrally disposed gutter or groove C. The base B is also provided with guide lugs D D. The sides of the mold are formed of two members E E which are secured together by suitable end braces *e e* bolted thereto, and which are provided with recesses or grooves *d d* adapted to receive the lugs or ribs D D of the base.

The cover of the press is formed of a rectangular frame F having dependent ends G G provided with rabbeted edges *g g*; and the inner sides of the top are provided with a dependent flange *f f*, and the top is also provided with recesses or sockets *h h* adapted to receive the guide ribs or lugs *i i* on the tops of the sides E E. The top is connected with the cross head J by the guide rods K K which are threaded into holes *l l*, in the top and slide through holes *j j* in the cross head J and are surrounded by the expansion springs *k k*.

The plunger M is provided with oppositely

inclined, tile-forming faces *m m* and with a rounded nose N set back at *n n* from the planes of the sides. The plunger is also provided with lug-forming recesses *o o*, flat ends O O, flat vertical upper sides P P and a suitable neck Q, whereby it is attached to the cross head J.

In use, the plunger and top being raised, a suitable quantity of melted glass is thrown into the gutter C, and, the side members E E being in place upon the bottom of the base A, the plunger M and the top G are brought down, the top closing the sides of the mold, and the plunger, continuing its descent, striking the mass of melted glass and forcing it up into the spaces between the sides of the plunger and the sides of the mold, filling the same so quickly as to prevent the forming of rings or wrinkles when the glass touches the cooler side portions of the mold. It will be observed that the ends of the plunger do not fit closely against the ends of the gutter or groove C, but that slight spaces are left between them; and this permits the glass to be distributed equally on both sides of the mold; for an excess of glass lying toward one side of the gutter may find its way toward the other side around the ends of the plunger. The plunger having been brought firmly down, it is next raised, carrying with it the top so as to clear the sides of the mold. The sides are then, by the use of the handle R lifted off the bottom A, carrying with them the molded glass; and the sides with the glass in them are then placed upon any suitable support which will leave the gutter-like web between the tile free from contact with the surface below it; and the molded glass is allowed to remain in the sides until it has hardened sufficiently to retain its form, when it may be removed from the sides by turning them upside down and letting the tile-members rest upon their free edges.

While the molded glass is cooling in one pair of sides, another pair can be used, in combination with the bottom of the plunger, to press another quantity of glass; and by this arrangement overheating of the sides so that the glass would be liable to stick to them is avoided, and the molded glass is so quickly detached from the plunger and the bottom as to prevent its adhering to them.

In Figs. 6 and 7 I have shown a modification of my press wherein the sides E E and the cooperating plunger M are adapted to form two tiles on each side of the plunger,

and the recessed nose of the plunger is adapted to press the glass remaining in the bottom of the mold into a suitable form for a cove or sanitary base tile. Furthermore, in the form shown in Figs. 6 and 7, I have shown a rib or bead *s* placed at the ends of the ribbed nose, the effect of which will be to form terminal grooves at the ends of the cove, along which the end web of glass may be broken out, leaving a rounded or beveled end finish for the cove similar to the end finish on the tile-sections.

In Fig. 8 I have shown another modification of my press in which two tiles are formed on each side of the press at the same time, the upper tile being pressed face outward and the lower face inward, the sides being recessed to form the lugs on the back of the lower tiles, and the nose *N* of the plunger *O* being provided with almost vertical sides *n' n'* to cut close to the lower tile edges and leave a very thin connecting film between the tiles and the gutter web. This form permits the glass, when first placed in the mold, to rest up against its lower sides above the gutter *C*, because the marring caused thereby will be upon the backs of the tiles and will be of no injury to their commercial value.

Fig. 9 is an inside view of half of one of the tile blanks formed in the press shown in Fig. 8, the gutter web being in section.

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

1. The combination, in a glass-tile mold, of a base provided with a glass receiving space, detachable sides provided with molding faces separated at their ends, a reciprocating top to rest upon the sides and to close the spaces between the separated ends, and a cooperating plunger.

2. The combination, in a glass-tile mold, of a base provided with a raised central portion having a glass receiving space therein, detachable sides separated at their ends and adapted to straddle the raised portion of the base, a reciprocating top to rest upon the sides and close the spaces between their separated ends, and a cooperating plunger.

3. The combination, in a glass-tile mold, of a base provided with a glass receiving space, detachable side members with terminally separated molding faces to rest upon the base, a detachable top to rest upon said side members overlapping their inner edges and closing the spaces between their separated molding faces, and a cooperating plunger.

4. The combination, in a glass-tile mold, of a base provided with a glass receiving

space, detachable side members each provided with a plurality of molding surfaces separated at intervals, a reciprocating top to rest upon the side members and close the spaces between their separated molding surfaces, and a cooperating plunger.

5. The combination, in a glass-tile mold, of a base provided with a glass receiving space, detachable, terminally-separated side members, each provided with a plurality of molding surfaces, a reciprocating top to rest upon the side members and close the spaces between their separated molding surfaces, and a cooperating plunger.

6. The combination, in a glass-tile mold, of a base provided with a depression forming a glass receiving space therein, detachable side members provided with terminally-separated molding surfaces, a reciprocating top to rest upon said side members and to close the terminal spaces between the molding surfaces, and a cooperating plunger adapted to leave web-forming spaces between its ends and the ends of said glass receiving space.

7. The combination, in a glass-tile mold, of a base, detachable sides provided with upper and lower tile molding surfaces, the lower being adapted to form the back of a tile and the upper the face of a tile, and a cooperating plunger adapted to form the complementary faces and backs of the tiles.

8. The combination, in a mold for forming glass tiles with undercut portions on their backs, of a jacket portion adapted to form the back of one tile and the face of another tile, and a cooperating portion adapted to form the complementary face and back for such tiles.

9. The combination, in a glass-tile mold, of a base, detachable sides provided with a plurality of upper and of lower tile molding surfaces, the lower being adapted to form the back of tiles and the upper the face of tiles, a reciprocating top to rest upon the side members, and a cooperating plunger with its lower portion adapted to form the backs of tiles and its upper portion adapted to form the faces of tiles.

10. The combination, in a glass-tile press, of a base, side members resting upon said base, a top adapted to rest upon said side members and a cooperating plunger, said side members being adapted to be detached from the rest of the press so as to carry with them the molded glass.

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