

J. E. RUNNER.
COMBINATION BLOCK AND TILE MACHINE.
APPLICATION FILED DEC. 17, 1910.

1,017,917.

Patented Feb. 20, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

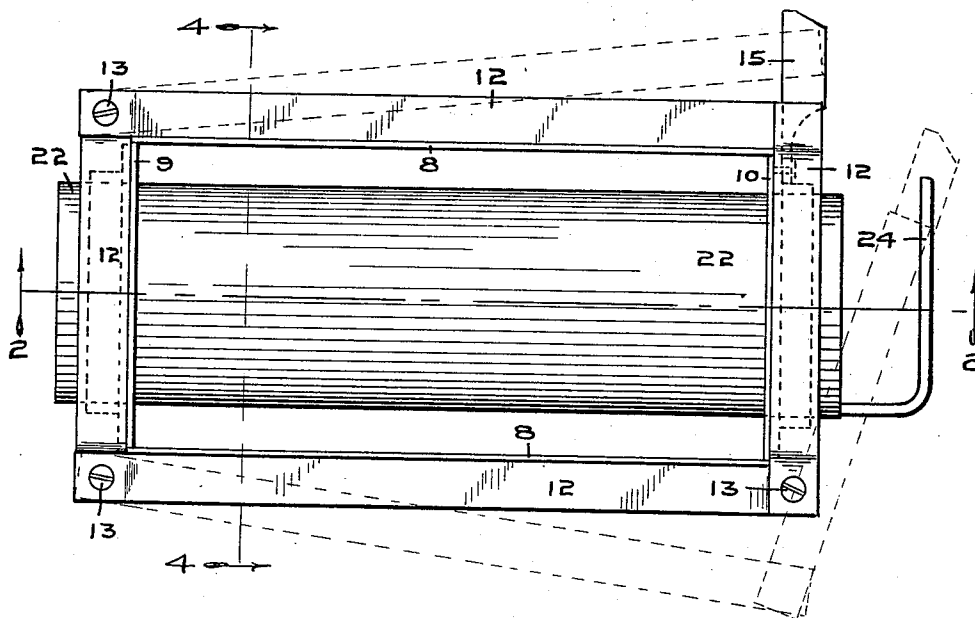
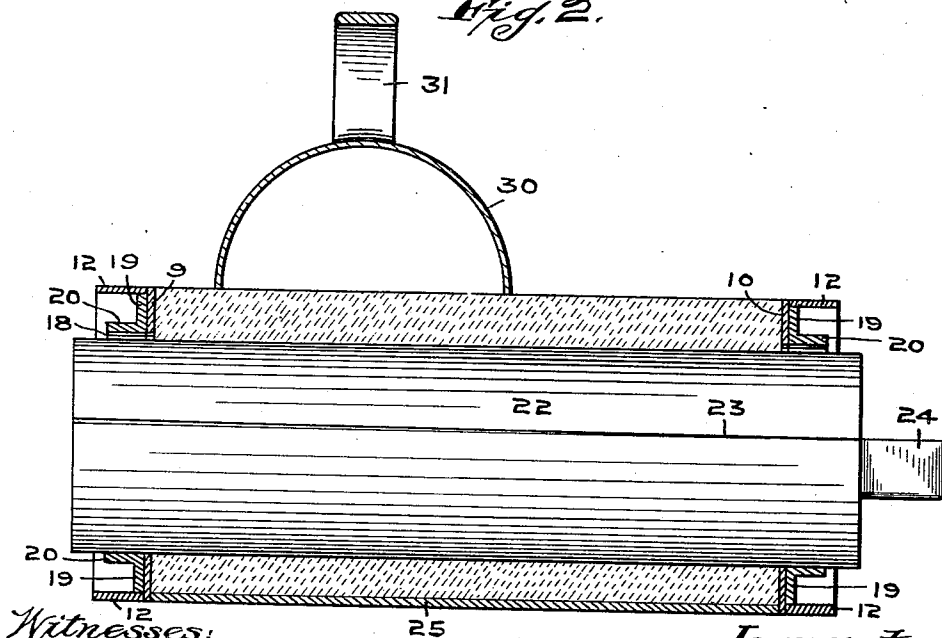


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3

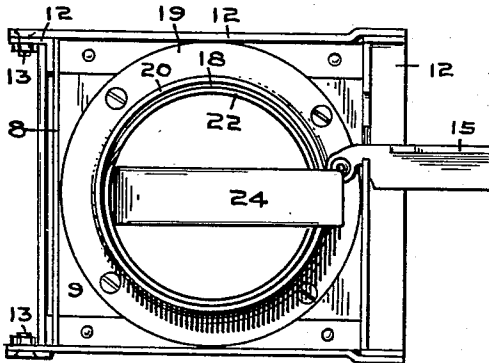


Fig. 4.

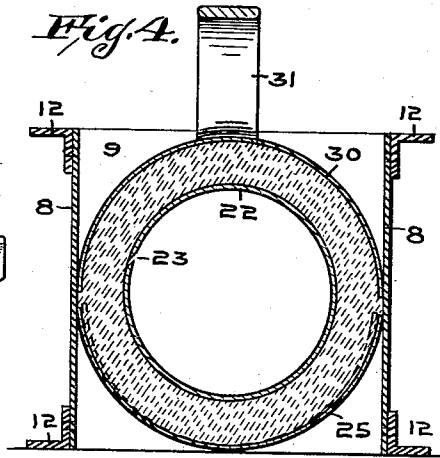


Fig. 7.

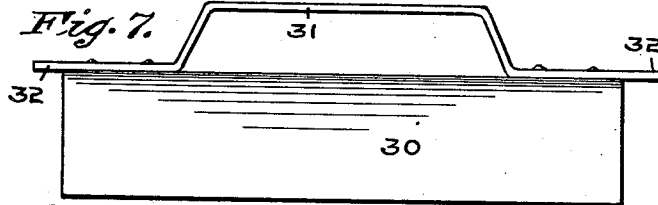


Fig. 5.

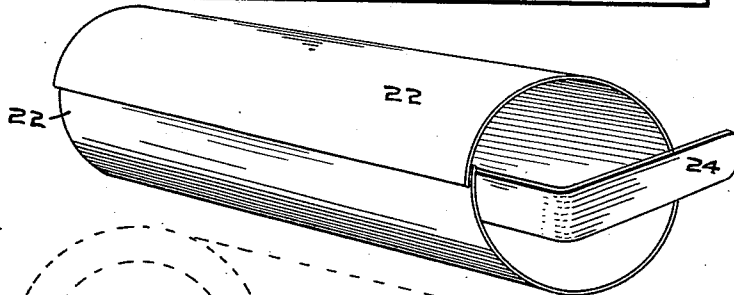
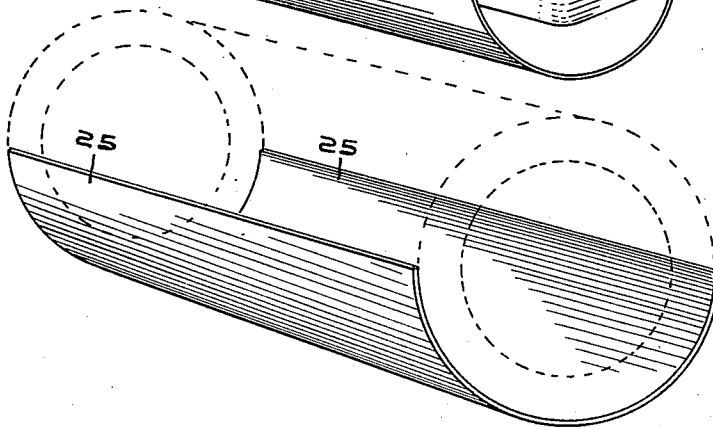


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOSEPH E. RUNNER, OF DUGGER, INDIANA.

COMBINATION BLOCK AND TILE MACHINE.

1,017,917.

Specification of Letters Patent.

Patented Feb. 20, 1912.

Application filed December 17, 1910. Serial No. 597,809.

To all whom it may concern:

Be it known that I, JOSEPH E. RUNNER, a citizen of the United States, residing at Dugger, in the county of Sullivan and State of Indiana, have invented certain new and useful Improvements in Combination Block and Tile Machines, of which the following is a specification.

This invention relates to improvements in hand-molds for molding tile and hollow blocks out of concrete, and the object of the invention is to provide a device by the aid of which a farmer or other person having no special skill in the art, may mold his own tile or hollow blocks.

A further object of the invention is to provide a molding mechanism which can be made and sold at small cost, and which will be durable and the use of which will be readily acquired by any person of average intelligence.

I accomplish the above objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a top plan view of my mold with the parts assembled ready to be filled with concrete. Fig. 2 is a longitudinal vertical section on the line 2—2 of Fig. 1 with the mold filled with concrete and leveling trowel upon the mold. Fig. 3 is a view of the front end of the device as illustrated in Fig. 1. Fig. 4 is a vertical section on the line 4—4 of Fig. 1, showing a newly formed tile and the trowel within the mold in position of completing the tile. Fig. 5 is a perspective view of the split-cylindrical sleeve trowel and core for finishing the hole in a tile or hollow block partly compressed for removal. Fig. 6 is a perspective view of the sheet metal pallet upon which the tile is molded and upon which it is to remain until dry, and Fig. 7 is a view in side elevation, on a smaller scale than the remaining figures of the drawing, of the trowel for finishing the top of the tile.

Like characters of reference indicate like parts throughout the several views of the drawings.

The body of the mold comprises a rectangular, box-like structure with parallel sides 8 and ends 9 and 10, but no top or permanent bottom. The sides and ends comprise inner plates of metal and a frame-work of bar or angle-iron 12 with extended and overlapped ends which are connected by bolts 13 at three of the corners of the mold thereby hinging both sides 8 to the end 9 and one

of the sides to the end 10. The other side 8 is removably secured to the end 10 by any convenient and quick-manipulated means, here shown as the latch-bar 15. By raising the latch-bar 15 that corner of the mold will be disconnected in a manner to permit the sides and ends to be separated, as shown by the dotted lines in Fig. 1. This is to permit the mold to be removed from the finished product without jarring and mutilating the latter in handling. The ends 9 and 10 are provided with holes 18, approximately of the same size as the hole to be made in the tile or hollow block, and these are reinforced by rings 19 having outwardly turned flanges 20.

The core for forming the round opening through the tile or block comprises a longitudinally split cylindrical sleeve 22, of a diameter to slip freely through the holes 18 of the mold-ends, and when so inserted, the sleeve 22 is long enough to project beyond each end of the mold in the manner shown in Fig. 1. The edges at the split 23 are set so as to slide past each other when the sleeve is compressed. This sleeve has a handle 24, and with the split sleeve completes a trowel for finishing the bore of the tile or block.

25 is the pallet upon which the tile is molded, and upon which it is allowed to remain while being removed from the mold, and until it has become thoroughly dried and seasoned. This pallet will preferably be formed out of sheet steel, semi-cylindrical in shape, as shown in Figs. 4, and 6.

The rectangular body of the mold, securely fastened by means of latch-bar 15, is placed upon the flat top of a molding table or upon any other suitable surface and the pallet 25 is placed therein, in the position shown in Fig. 4. The sleeve 22 is then placed in position, as shown in Fig. 1, and the mold is ready to receive the concrete for the construction of a tile. This is placed in the mold and tamped firmly into the space between the pallet 25 and sleeve 22. Then the mold is filled above the sleeve 22 to a level with the top edges of the sides 8 and ends 9 and 10, and any excess above said amount is removed by running a scraper over the mold upon the upper edges of the sides 8 as guides. I have found a convenient scraper for removing the excess of cement in the trowel which I afterward use for imparting a half-round outside finish to the upper half of the tile. This is comprised of a semi-cylindrical

sleeve 30 turned with the hollow part down, to the top of which a handle 31 is attached. The straight edges of the sleeve form a pair of scrapers for removing the excess of concrete, as above described, and when used for giving shape to the top of the tile the sleeve 30 is turned lengthwise of the mold and is pressed down into the latter until arrested by contact with ends 9 and 10, of extension 32, which are, preferably, continuations of the strap-iron from which the handle 31 is made. The amount of concrete remaining in the mold after it is leveled off by the use of the scraper, I have found to be just the required quantity for completing the tile when finished by pressing it down by the aid of the sleeve or trowel 30.

After the trowel 30 is down, with the handle extensions 32 contacting with ends 9 and 10 of the mold-body, and while the trowel is held firmly down by pressing down on its handle 31, the handle 24 of split sleeve 22 is grasped and moved in a direction to rotate the sleeve. The adhesion of the fresh concrete with the metal of the sleeve 22 will cause the latter to impart a troweling effect to the interior walls of the tile or block, and the sliding past each other of the split edges which results, reduces the diameter of the sleeve enabling it to be withdrawn by a continued troweling operation which does not mar or injure but improves the inner wall of the tile. After the sleeve 22 is withdrawn, the trowel 30 is also withdrawn, the mold unlocked by lifting the latch-bar 15, and the vertical walls removed, leaving the green tile supported by pallet 25. The latter is then carried, with the tile, to any convenient place, for the concrete to dry. A separate pallet is required for each tile made. The pallet is spread, by the force applied in pressing trowel 30 down to form the top of the tile, from the position shown by dotted lines in Fig. 4, to the position shown by full lines, or with its edges against the walls of the mold, and when the pressure is released and the vertical walls removed the resiliency of the pallet serves to hold the green tile together and preserve it, in a marked degree. In fact, I have found that with the use of an inelastic pallet the tile in most instances will fall apart in moving it while green.

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

1. A combined block and tile machine comprising an open top and bottom rectangularly shaped mold-box, the ends of said mold-box being provided with opposite core-holes, a semicircular resilient pallet to fit the internal dimensions of said mold-box and adapted to shape and hold the molded

product, a semicircular trowel adapted to form the upper exterior surface of the molded product, and a longitudinally split sleeve having both resulting edges normally in the same cylindrical surface, said sleeve being removably supported in said core-holes by the mold-box and adapted to be rotated in one direction to smooth the internal surfaces of the core-holes in the molded product and to be rotated in the reverse direction to reduce the diameter of said sleeve to permit its free removal from said molded product.

2. A combined block and tile machine comprising an open top and bottom rectangularly shaped mold-box, the ends of said mold-box being provided with opposite core-holes, a semicircular resilient pallet to fit the internal dimensions of said mold-box and adapted to shape and hold the molded product, a semicircular trowel adapted to form the upper exterior surface of the molded product, and a longitudinally split sleeve having both resulting edges normally in the same cylindrical surface, said sleeve being removably supported in said core-holes by the mold-box and adapted to be rotated in one direction to smooth the internal surfaces of the core-holes in the molded product and to be rotated in the reverse direction to reduce the diameter of said sleeve to permit its free removal from said molded product.

3. A combined block and tile machine comprising an open top and bottom rectangularly shaped mold-box having its sides and ends pivotally connected at three of its corners, a latch to secure the side and end at the remaining corner, the ends of said mold-box being provided with core-holes, a semicircular resilient pallet to loosely fit the internal dimensions of said box at the beginning of a molding operation but in a close manner under pressure and adapted to shape the bottom of the product, a semicircular trowel adapted to form the upper exterior surface of the molded product, and a longitudinally split sleeve having both resulting edges normally in the same cylindrical surface, said sleeve being removably supported in said core-holes of said mold-box and adapted to be rotated in one direction to smooth the internal surfaces of the core-holes in the molded product and to be rotated in the reverse direction to reduce the diameter of said sleeve to permit its free removal from said molded product.

In witness whereof, I have hereunto set my hand and seal at Linton, Indiana, this thirteenth day of September, A. D. one thousand nine hundred and ten.

JOSEPH E. RUNNER. [L. S.]

Witnesses:

JOHN WIGGS,

JOHN W. RISLIS.