

W. O. BEAILOR.
TILE MACHINE.

APPLICATION FILED AUG. 17, 1910.

1,031,512.

Patented July 2, 1912.

2 SHEETS-SHEET 1.

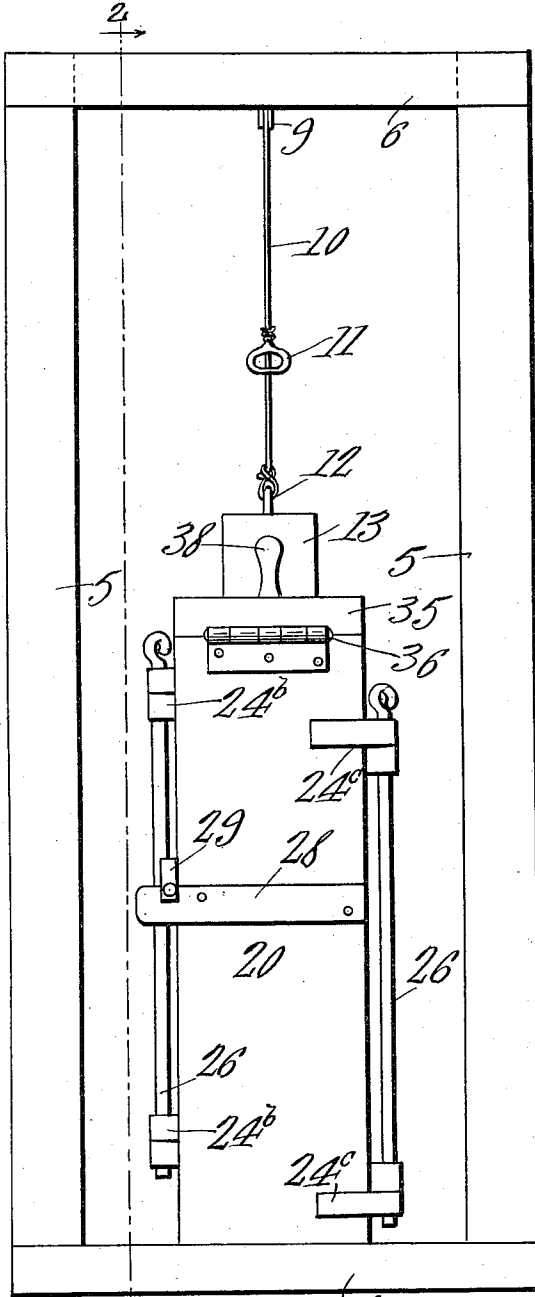


Fig. 1.

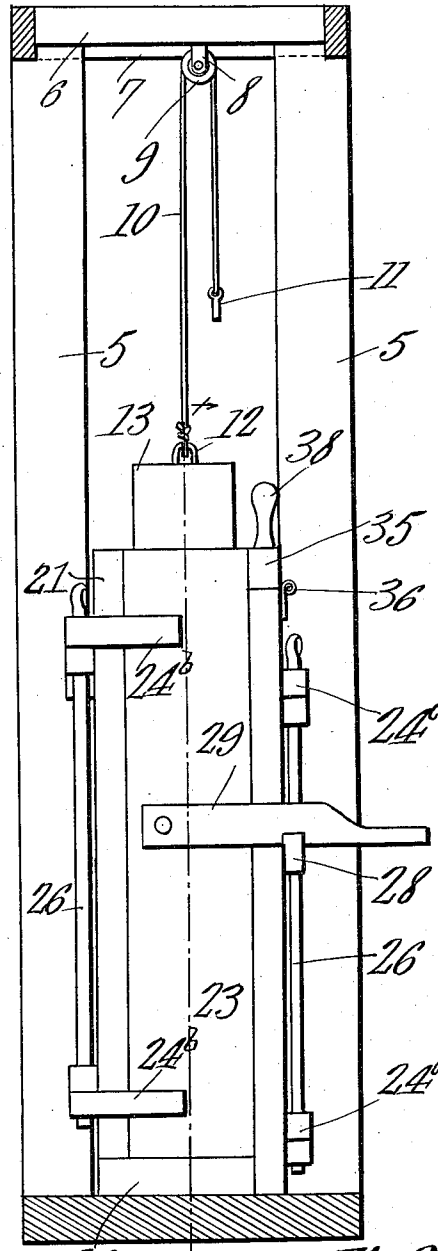


Fig. 2.

Witnesses

W. H. C. Clarke
W. H. C. Clarke.

by

Chas. Snow & Co.
Attorneys

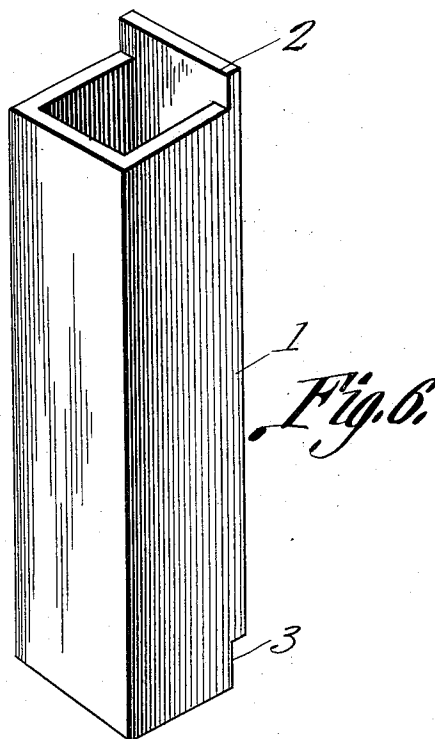
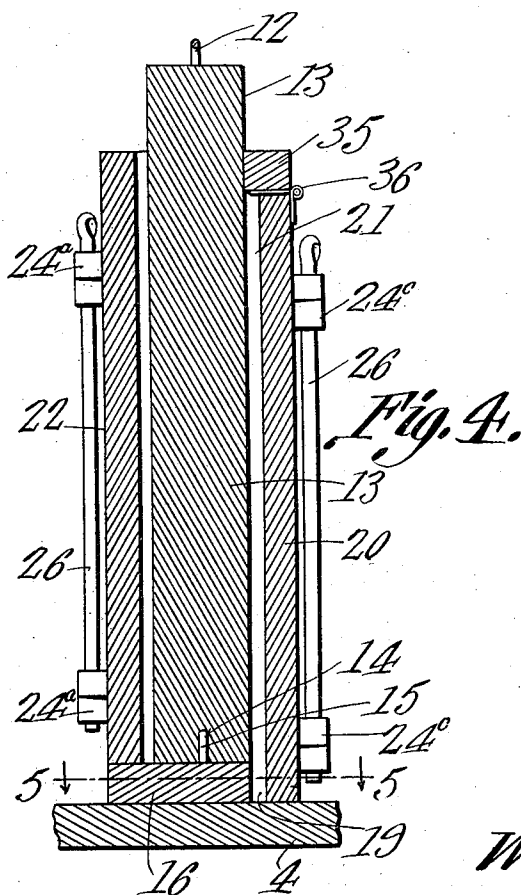
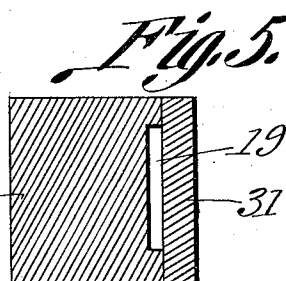
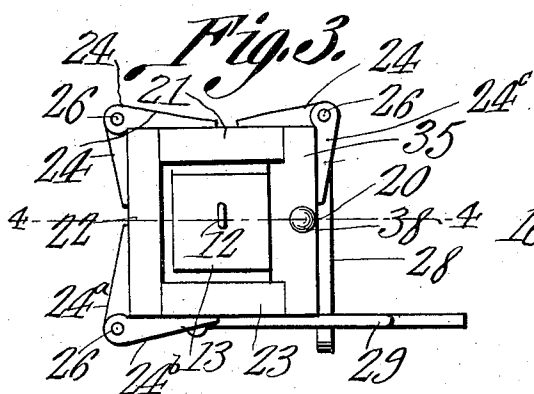
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William O Beailor

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W. H. Clarke
W. H. Clarke

Inventor

by *C. A. Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM O. BEAILOR, OF MIDLAND, MICHIGAN.

TILE-MACHINE.

1,031,512.

Specification of Letters Patent.

Patented July 2, 1912.

Application filed August 17, 1910. Serial No. 577,589.

To all whom it may concern:

Be it known that I, WILLIAM O. BEAILOR, a citizen of the United States, residing at Midland, in the county of Midland and State of Michigan, have invented a new and useful Tile-Machine, of which the following is a specification.

This invention relates to tile machines.

The principal object of the invention is to provide a machine which is adapted to manufacture a tile having a tongue or extension at one end and a rabbet at the other end, the tongue of each tile in the series being adapted to engage the rabbet of the next adjacent tile, whereby to lock all of the tiles together and permit them to be laid in soft or sandy soil without providing boards or other means to prevent them from sagging out of alinement with each other.

Further objects of the invention are generally to improve and simplify the construction of tile machines as well as to increase their efficiency in operation and to decrease the expense attending their manufacture and maintenance.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of the claim without departing from the spirit of the invention.

In the accompanying drawings forming part of this specification:—Figure 1 is a front elevation of a tile machine constructed in accordance with the present invention. Fig. 2 is a vertical sectional view, taken on line 2—2 Fig. 1. Fig. 3 is a plan view of the mold and core. Fig. 4 is a vertical section on the line 4—4 of Fig. 3. Fig. 5 is a transverse section on the line 5—5 of Fig. 4. Fig. 6 is a perspective view of one of the forms of tile which the improved machine of the present invention is adapted to manufacture.

Like reference numerals indicate corresponding parts in the different figures of the drawing.

The tile which the machine of the present invention is particularly adapted to manufacture is best shown in Fig. 6 and consists of a body portion 1 which may be either square or round in cross section and is

formed at one end with a tongue or projection 2 and at the other end with a rabbet 3 of the same length and dimensions as the tongue 2, whereby the tongue or projection 2 of one tile is fitted into the rabbet 3 of the next adjacent tile so as to lock the two tiles together and hold them properly in alinement with each other in any kind of soil.

The tile machine is constructed preferably with a base 4 from the corners of which extend upwardly a plurality of uprights or standards 5 preferably four in number, one being arranged at each corner of the base 1, the standards being connected with each other at their upper ends by means of an approximately rectangular frame work 6. Extending across the center of the frame-work 6 as shown in Fig. 2 is a cross piece 7 from which is suspended at 8 a pulley 9 over which passes a suspending element or rope 10. The flexible element 10 at its outer end is provided with a handle 11 by means of which it may be operated, and at its inner end it is secured to an eye 12 attached to the upper end of a core 13 which extends downward through the mold and is of the same shape as the opening which it is desired to produce in the tile. In other words, if it is desired to manufacture a square tile, the core 13 will be square and if it be desired to manufacture a circular tile, the core 13 will be circular. At its lower end, as best shown in Fig. 4, the core 13 is formed with an upwardly extending socket 14 which is intended to fit over a pin or projection 15 extending upward from the bottom piece 16 of the mold as shown in Fig. 5. The bottom piece 16 is secured in any suitable manner to the base member 4 of the frame so as to be stationary thereon, and is provided in its forward edge with a rabbet 19 so as to provide a space which is adapted to form the tongue 2 on the tile 1. The mold casing consists of four side walls 20, 21, 22 and 23. The wall 21 is provided with two sets of brackets 24, 24; the wall 22 is provided with two similar sets of brackets 24^a, 24^a respectively and each of the walls 20 and 23 is provided with one set of brackets 24^b and 24^c respectively. Extending downward through the different sets of brackets are the vertically removable hinge rods 26 which serve to hinge the different members of the mold together as shown in Fig. 3 and can be vertically withdrawn when it is desired to open the mold

at any particular corner thereof. For the purpose of locking the outer wall 20 to the side wall 23, said outer wall, as shown in Fig. 1 is provided with a keeper 28 which
5 is adapted to be engaged by a latch 29 pivoted upon the side wall 23.

For the purpose of forming the outer surface of the tongue 2, the lower end of the front wall 20 is extended downward as indicated at 31 so as to contact with the base member 4 and form the outer wall of the rabbet 19. It will be seen from Fig. 5 of the drawings that the bottom piece 16 is not completely square until the lower end of
10 the wall 20 is in engagement therewith. While the wall 20 rests at its lower end upon the base member 4 of the tile machine, the other three walls 21, 22 and 23 rest upon the upper surface of the bottom piece 16 of the mold. All of the walls are spaced away
15 from the core member 13 by a distance regulated by the thickness of the tile which it is desired to produce. The means for forming the cut-away portion 3 in the upper end of the tile preferably consists of an extension member 35 shown in Fig. 1, said member being hinged at 36 to the upper end of the wall 20. The hinged extension 35 serves to bring the upper end of the wall
20 20 up to the same level as the upper end of the other walls 21, 22 and 23. As best shown in Fig. 3, the hinged extension 35 is provided with a boss 37, which, when the extension 35 is in position on the upper end of the wall 20 contacts with the core 13 and serves to displace a sufficient quantity of the cement or other material to form the rabbet 3 in the tile. For the purpose of moving the extension 35 into and out of position
25 on the upper edge of the wall 20, said extension is provided with a handle 38.

Constructed as described, the operation of the tile machine is as follows. After the core 13 has been connected with the pin or extension 15, the walls 20, 21, 22 and 23 are arranged around said core with the walls 21, 22, and 23 resting at their lower ends upon the bottom piece 16 and the wall 20 projecting downward and resting at its lower end
30 upon the base 4 of the frame. The walls are

then locked in closed position and the handle 38 of the extension 35 is grasped and drawn outward so as to move the boss 36 out of contact with the core 13. The cement or other molding material is then
35 poured evenly into the tile machine all around the core 13 and after the machine is properly filled the molding material is tamped. The extension 35, by means of the handle 38 is then moved into position so as to displace the material at the upper end of the tile machine so as to form the cut-away portion 3. The tongue 2 of the tile is formed by the material which is located in the cut-away portion 19 shown in Fig. 5. After the tile has set sufficiently, the latch 29 is opened and the mold members are removed.

The tile machine of the present invention is strong, simple, durable and inexpensive in construction as well as thoroughly practical and efficient in operation.

What is claimed as new is:—

A tile machine comprising a base member, a bottom piece mounted on said base member and having a cut away portion in one edge thereof, a core member removably mounted on said bottom piece, and a mold structure surrounding said core and comprising a plurality of doors hinged to each other, one of
40 said doors having an extension projecting downwardly beyond the lower edges of the other doors, said downward extension being arranged on the cut away side of the bottom piece and serving to close the outer end of said cut away portion, one of said doors being shaped so that its upper end is lower than the upper end of the other doors, the upper end of said last mentioned door having hingedly mounted thereon a block,
45 said block having a projection on the inner face thereof extending inward between the adjacent doors and contacting the core.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIAM O. BEAILOR.

Witnesses:

W. D. FALES,
CLAYTON SMITH.