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TILE FORMING MACHINE.

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1,132,264.

Patented Mar. 16, 1915.

Fig. 1.

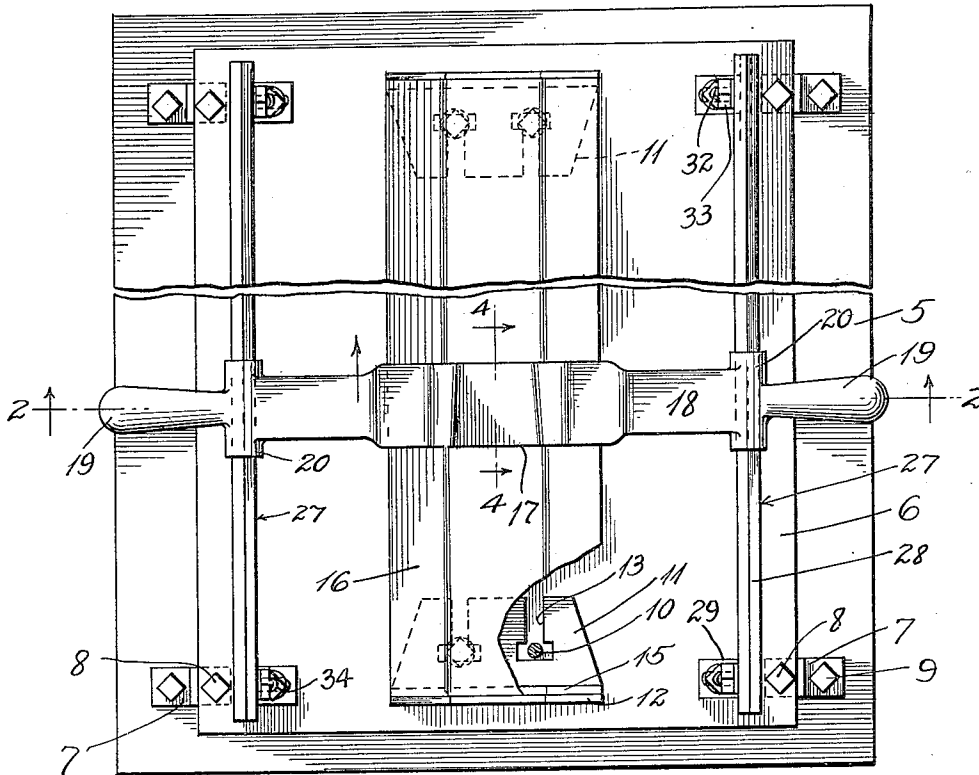


Fig. 2.

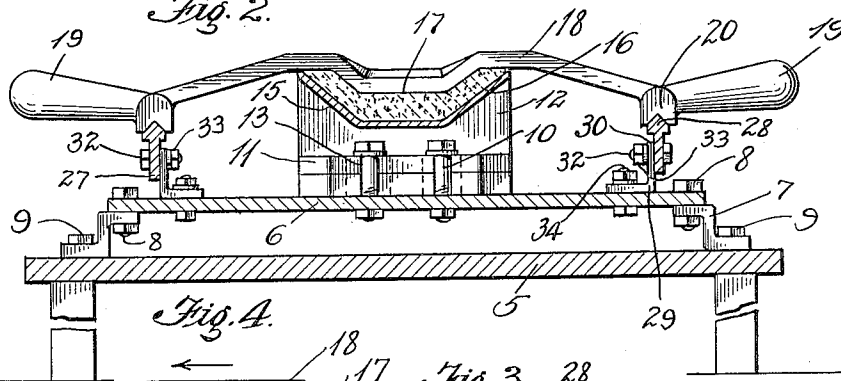


Fig. 4.

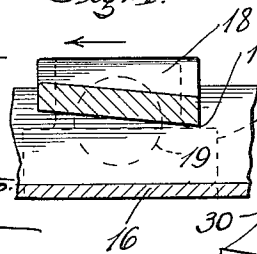
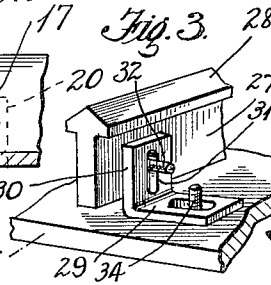


Fig. 3.



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UNITED STATES PATENT OFFICE.

HARRY W. HELLYAR, EDWARD H. COCHRAN, AND HENRY E. WAGGONER, OF LOS ANGELES, CALIFORNIA, ASSIGNORS TO SPANISH MISSION TILE COMPANY, OF LOS ANGELES, CALIFORNIA, A CORPORATION OF CALIFORNIA.

TILE-FORMING MACHINE.

1,132,264.

Specification of Letters Patent.

Patented Mar. 16, 1915.

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To all whom it may concern:

Be it known that we, HARRY W. HELLYAR, EDWARD H. COCHRAN, and HENRY E. WAGGONER, citizens of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Improvement in Tile-Forming Machines, of which the following is a specification.

This invention relates to improvements in molds for forming roofing tiles out of cementitious material, and the principal object of the invention is to provide adjustable end supports for the molds used in forming and curing the tiles.

It is a further object to provide adjustable guides to support the trowel or scraper used to form the upper surface of the tile and finish the exposed surface of the tile so that any adjustment required can be quickly and accurately made.

In the drawings accompanying this specification Figure 1 is a plan view of the structure mounted on a suitable table, the view being broken away and shortened. Fig. 2 is a cross section on the line 2—2 of Fig. 1 showing the converging form of the trowel. Fig. 3 is a perspective detail of the adjusting angle support for the guide bars. Fig. 4 is a cross section on the line 4—4 of Fig. 1 looking in the direction of the arrows.

Heretofore in the manufacture of roofing tiles or similar structures difficulty has been experienced in providing proper adjustment in the manipulation of the trowels and the form supporting frames.

This invention overcomes the above difficulties, and provides a simple method of supporting the metallic mold plate in the end forms used to complete the mold, and an adjustment in two planes for the trowel supporting bars.

More specifically in the drawings 5 designates the top of a table suitably supported on which is mounted the bed plate 6 by means of the legs 7. The bed plate is securely fastened to the legs by the bolts 8, and these legs in turn to the table by the bolts 9.

Extending through suitable holes in the bed plate 6 are the bolts 10 which are of sufficient length to engage the upper surface of the angle plates 11 the walls 12 of which form the end walls of the form. These

plates 11 are provided with the T slots 13 of sufficient size to allow free movement around the bolts 10 so that the proper adjustment may be secured by shifting these plates in relation to the bolts.

A recess 15 is cut on the inner side of the wall forming a shelf upon which the mold plate 16 rests. The lower section of the recess 15 is of the same configuration as the cross section of the mold plate 16, and the upper edge of the wall is cut in the configuration to agree with the edge 17 of the trowel 18. The trowel 18 is an elongated bar, provided with the handles 19, these handles being preferably placed outside the bearing portion 20, the under side of these bearing surfaces being provided with V shaped grooves which are adapted to engage with the supporting bars. The active surface of the trowel 18 heretofore designated by the numeral 17, is of any configuration desired.

The cement engaging face 17 of the trowel, clearly shown in Fig. 4, is inclined upward and away from the operator, and toward the direction of progression of the instrument over the cementitious material, so that a compressing action is produced on the material. The trowel 18, as before stated, rests on guide bars 27, the upper or bearing surfaces of which are V-shaped in cross-section to fit within the V-shaped grooves on the bearing surfaces 20 of the trowel 18. These guide-bars are provided for the purpose of supporting the trowel in relation to the mold-plate 16 and are designed to be adjusted vertically so as to position the lower edge of the trowel 18 out of contact with the edges of the mold-plate. The rails 27 are supported on the angle brackets 29, the vertical web 30 of this angle iron being provided with the vertical slots 31 in which the bolt 32, secured in the rail 27, can be adjusted and secured by means of the nuts 33. The bearing web of the bracket 29 engaging with the bed plate 6, is also slotted in a plane at right angles to the length of the rail, and the bolt 34 secured to the bed plate 6 is embraced by the slot and provides for lateral adjustment of the rails 27. It will thus be seen that an adjustment in all dimensions is provided for, so that any irregularities from wearing or distortions may be readily provided for. In the operation of

the device the parts are assembled as described, the trowel being moved from its position over the mold plate until the mold is filled with the green material of which the tile is to be formed, a sufficient amount being allowed to form a solid tile, the mold plate being preferably filled flush with its upper edge. The trowel is now placed in position with the edge 17 toward the operator, and at the inner end of the stroke. The latter is now pushed outward in the direction of the arrows shown in Fig. 4, the material being compressed on the inclined face 17, the troweling being continued until the tile assumes the form illustrated in Fig. 2, and the face is sufficiently troweled. The mold plate 16 is now lifted out of engagement with the end walls 12 and a new plate 16 introduced while the former plate with its green tile is set aside to cure. Any irregularity in the length or form of the new mold plate 16 may be compensated for by adjustments before described, and the process repeated to form another tile. The various parts of the machine are preferably formed of metal, and the supporting rails

or bars 27 are preferably of the general cross section shown, having the bolt supporting web or flange narrower than the head or bearing portion of the rails.

What we claim is:

In a tile molding machine having a bed plate with a pair of guide-bars thereon and a trowel slidably mounted on said bars, a pair of angle plates supported on the bed plate having their inner vertical walls recessed to form mold supporting shelves, the lower webs of said plates being formed with T-slots, and bolts in the bed plate extending through said T-slots adapted to engage the marginal edges thereof to hold said plates in various adjusted positions.

In witness that we claim the foregoing we have hereunto subscribed our names this 20th day of September, 1912.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."