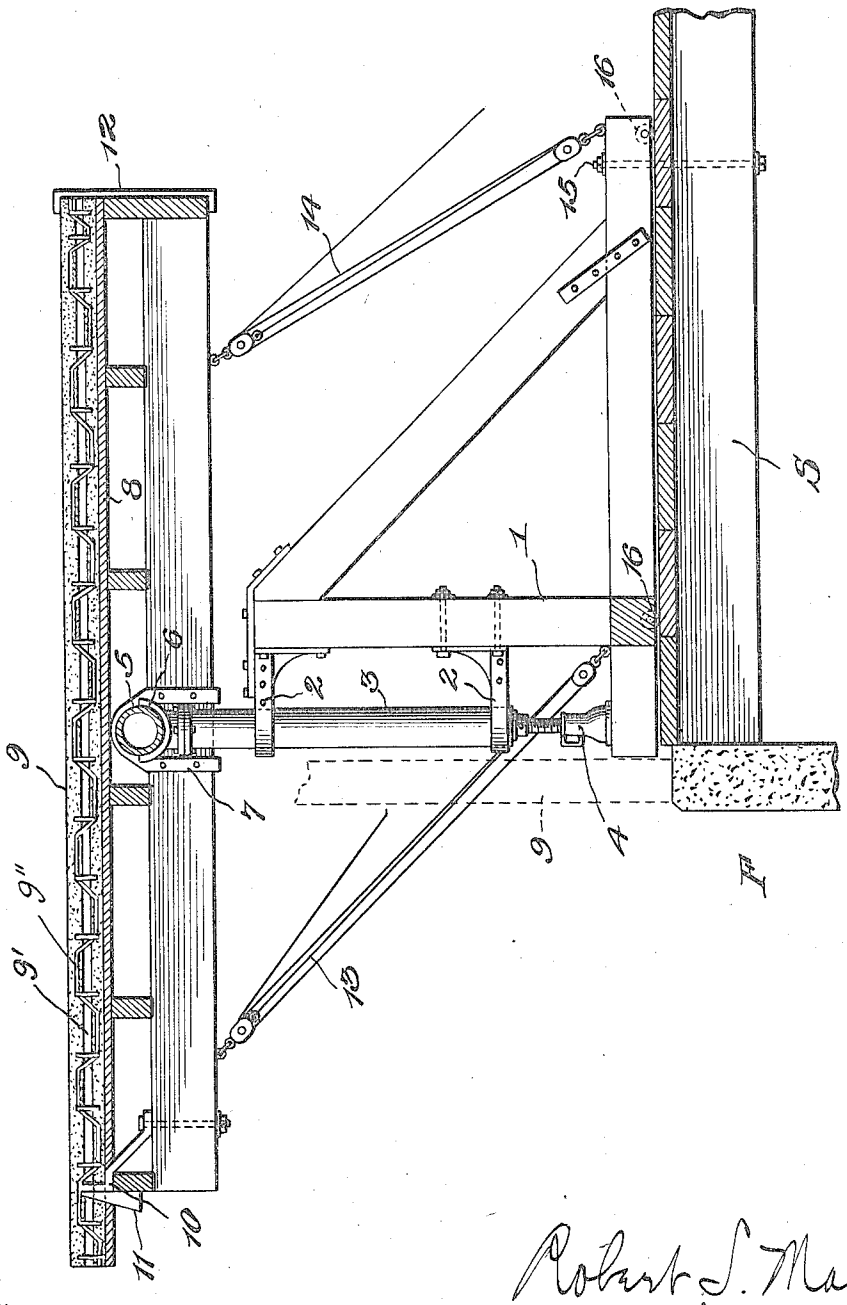
R. S. MARVIN.

APPARATUS FOR CONSTRUCTING HOLLOW REINFORCED CONCRETE WALLS.

APPLICATION FILED JULY 2, 1914.

1,148,246. Patented July 27, 1915.



Witnesses

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ROBERT S. MARVIN, OF SANTA MONICA, CALIFORNIA.

APPARATUS FOR CONSTRUCTING HOLLOW REINFORCED-CONCRETE WALLS.

1,148,246. Specification of Letters Patent. Patented July 27, 1915.

Application filed July 2, 1914. Serial No. 848,690.

To all whom it may concern:

Be it known that I, ROBERT S. MARVIN, a citizen of the United States, residing at Santa Monica, in the county of Los Angeles and State of California, have invented new and useful Improvements in Apparatus for Constructing Hollow Reinforced-Concrete Walls, of which the following is a specification.

This invention relates to certain new and useful improvements in apparatus for constructing hollow reinforced concrete walls, and the primary object thereof is to provide an apparatus of novel and improved form whereby the walls or slabs may be formed in a horizontal position and then moved to a vertical position upon the foundation or upon other slabs which have been previously placed in position.

In the drawings, the figure is a side elevation, partly in section of the invention.

The foundation F and the floor structure S are first placed in position, so that the apparatus forming the subject of the present invention may be placed upon the floor structure S and supported thereby.

The invention includes a frame 1, provided with a pair of brackets 2 which slidably support a vertical post 3, the post being held in up position and against downward movement by a jack 4 which engages the lower end thereof and seats on the base of the frame, which in turn is supported by the floor structure, whereby by turning of the jack screw the post may be lowered or raised.

A horizontal shaft 5, preferably of tubular form, extends the length of the structure and is rotatably supported by two or more of the frames 1, but one of the frames being shown in the drawings. The shaft 5 seats in bearings 6 carried by the upper ends of the posts, and is held against upward movement relative to the bearings by straps 7, which straps are connected to the platform 8 on which the slabs or wall are formed. The slabs or wall 9 are formed on the platform in any desired manner by the use of reinforcing rods, or the like.

For the purpose of holding the wall against movement during the lowering thereof, stops 10 are preferably employed, which stops are allowed to project up into the molded wall during the formation of same, and are engaged by wedges 11, which also project up into the molded wall, whereby upon setting of the wall, the wedges may be withdrawn so as to allow the stops to be easily removed from the wall after the latter has been lowered and placed in position. To retain the rear end of the wall against outward movement during lowering thereof, a clip 12 is employed which engages the upper or outer face of the wall and thereby prevents outward movement of same relative to the platform 8 during lowering of the platform.

Block and tackles 13 and 14 are used, the former to draw the outer end of the platform 8 downwardly and the latter to steady the upward movement of the rear end of the platform during lowering thereof, as will be obvious upon reference to the drawings.

In operation, the wall is first formed on the platform, and upon setting thereof, wedge 11 is withdrawn, whereupon the block and tackle 13 is moved to draw the front end of the platform downwardly, the block and tackle 14 being used to control and steady the upward movement of the rear end of the platform. When the wall is in vertical position over the foundation F and alined therewith, the jack screw is then rotated to gradually lower the post 3 and therewith the platform and wall, until the wall seats on the foundation F, the parts having been previously buttered with cement or the like. The clip 12 is then removed, and the frame released from any suitably anchoring means, such as bolt 15, and moved backwardly away from the wall on the rollers 16 which the frame is provided with.

The walls are formed with an air space 9′ by first spreading a layer of concrete on the platform with reinforcing rods 9″ embedded therein, and after setting of the concrete, placing a layer of sand on top of the set layer of concrete, the rods 9″ projecting above the same, after which a top layer of concrete is placed on the sand and the rods 9″. After the top layer of concrete sets sufficiently, the sand is washed out with a jet of water under considerable pressure, thereby leaving the air space 9′.

What is claimed is:

1. In an apparatus of the type set forth, a frame, brackets on the frame, a vertical post slidably connected to the brackets, a platform rotatably connected to the upper end of the post, a jack engaged with the lower end of the post to hold same in raised position and to allow lowering thereof, and

means to move the platform from a horizontal to a vertical position.

2. In combination with a frame, a vertical post slidably connected to the frame, a platform rotatably supported by the post, means engaging said post at the lower end thereof to support said post and the platform carried thereby so that they may be vertically adjusted to lower them when said platform is in vertical position.

3. In combination with a frame, a vertical post slidably connected to the frame, a platform rotatably supported by the post, means to rotate the platform about the post, and means to hold the post in up position and to enable lowering thereof with the platform.

4. In combination with a platform, carrying means for the platform, means for rotatably connecting the platform and the carrying means, means for supporting the carrying means, said carrying means being movable in said supporting means, and means engaging the platform carrying means to raise and lower the same in the means for supporting the carrying means, and to hold the carrying means in raised or lowered position.

5. In combination with a rotatably supported platform, a stop fixed adjacent one end thereof and adapted to be projected in a wall or the like formed on the platform, a removable wedge having one end projected in the wall and impinged against the stop therein, and means detachably engaged with the other end of the platform and wall and serving in conjunction with the stop and wedge to prevent relative movement of the wall and platform during rotation of the latter.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ROBERT S. MARVIN.

Witnesses:
CYRUS T. HARRIS,
J. M. ERICKSON.

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