No. 736,586. PATENTED AUG. 18, 1903.

J. C. DOUGHERTY.

TANK MOLD.

APPLICATION FILED MAR. 7, 1903.

NO MODEL.

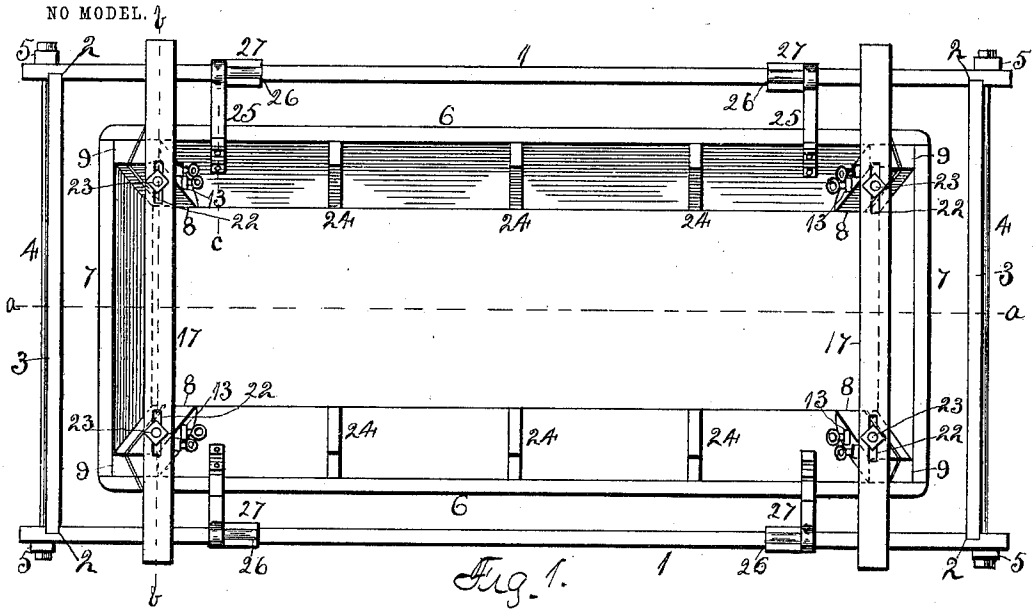


Fig. 1.

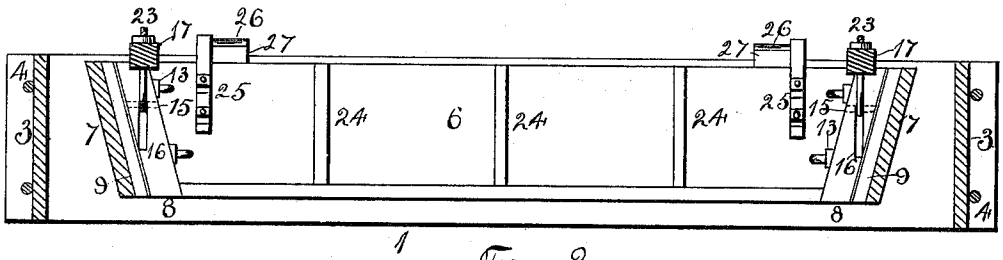


Fig. 2.

Fig. 3.

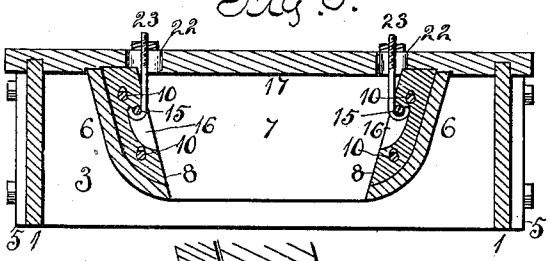
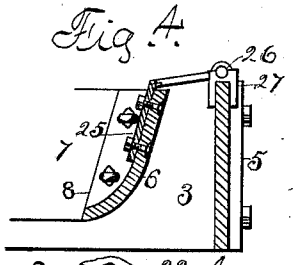


Fig. 4.



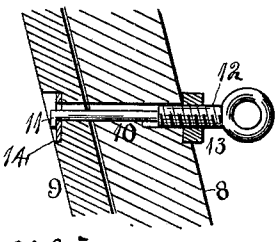
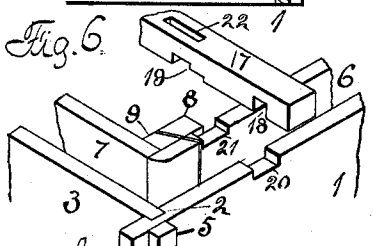


Fig. 5.

Fig. 6.



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No. 736,586. Patented August 18, 1903.

UNITED STATES PATENT OFFICE.

JOHN CHARLES DOUGHERTY, OF ROCKFORD, ILLINOIS.

TANK-MOLD.

SPECIFICATION forming part of Letters Patent No. 736,586, dated August 18, 1903.

Application filed March 7, 1903. Serial No. 146,774. (No model.)

To all whom it may concern:

Be it known that I, JOHN CHARLES DOUGHERTY, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Tank-Molds, of which the following is a specification.

This invention relates to improvements in molds for making cement tanks, and comprises an outer frame and an inner frame, the inner frame made in sections capable of separation and supported by the outer frame, and in the several details of construction hereinafter set forth.

In the accompanying drawings, Figure 1 is a plan view of my improved mold. Fig. 2 is a lengthwise central section on dotted line *a*, Fig. 1. Fig. 3 is a transverse section on dotted line *b*, Fig. 1. Fig. 4 is a transverse section on dotted line *c*, Fig. 1. Fig. 5 is a vertical section through a corner-post, showing the connecting device. Fig. 6 is an isometrical representation of one corner of the mold, showing the notches in the frames and cross-bars.

The outside frame comprises the sides 1, having gains 2 cut in their inner faces near their ends, end sections 3, having their ends located in the gains, bolts 4, passing through the side sections, and upright posts 5, located at each corner of the frame. These bolts hold the sections of the outer frame firmly together.

The inner frame comprises the side sections 6 and end sections 7. At each end of the side sections is secured a block 8, and at each end of the end sections is secured a block 9, and when the sections are placed together the corner-blocks fit together and have their meeting faces located diagonally to the length of the side sections, as shown in Fig. 1. These corner-blocks are connected together by the device shown at Fig. 5, in which the shank 10 has a hooked end 11 and an enlarged externally-screw-threaded section 12, upon which is placed a nut 13. The outer end of the shank has an eye. A hole is bored through the corner-blocks, and the block 9 has a plate 14 secured to it. The shank is located in the hole and its hooked end turned to engage the plate 14. The shank is then held from turning and the nut 13 turned up on the threaded section, which will draw the sections of the corner-blocks together. Any number of the fastening devices can be used for each corner-block, and in this instance I have employed two for each block. A pin 15 is located in the section 8 of each corner-block, and below it is a cut-away portion 16.

A cross-bar 17 is located over the outer frame at each end and has notches 18, receiving the upper edge of the outer frame, and is also provided with notches 19, receiving the upper edge of the side section of the inner frame. The upper ends of the outer frame has notches 20, and the upper edges of the inner frame has notches 21, which receive the cross-bars. Slots 22 are formed in the bars and extend in their lengthwise direction. A rod 23 has its upper ends screw-threaded and its lower end formed with a hook, which engages a pin 15 in one of these corner-blocks, and a similar rod has a connection with each corner-block. These rods extend up through the slots 22 in the end bars, and each receives a nut on its upper end, by means of which the inner frame is drawn up to the cross-bars 17, as shown in Fig. 3. Braces 24 serve to strengthen the side bars of the inner frame.

To the inner face of the side bars of the inner frame are secured angle-irons 25, having their upper horizontal portion provided with a rounded section 26, extending at right angles to the length of the bar. On the upper edge of the sides of the outer frame are located four iron supports 27, having a semi-circular recess in their upper face, which receives the rounded section 26 of the angle-irons, as shown at Figs. 1 and 4. When the inner frame is suspended from the cross-bars 17, it will be located centrally within the outer frame by the notches in the cross-bars receiving the upper edges of the side bars of the outer and inner frames.

The concrete is placed in the space between the outer and inner frames, and when sufficiently set the cross-bars 17 are removed by detaching the hooked rods 23. The means used to connect the sections of the corner-posts are then removed and the side bars 6 of the inner frame are turned outward on their pivotal engagement with the side bars of the outer frame, after which the ends of

the inner frame can be removed, and by removing the rods 4 the outer frame can be taken apart.

By this construction a very compact, simple, and strong mold is had, one quickly set up and taken apart. The diagonal cut at the point of connection between the sides and ends of the inner frame permits the sides of the inner frame to free themselves from the ends.

I claim as my invention—

1. A mold for making concrete tanks comprising an outer frame and an inner frame, the sides of the inner frame having a pivotal engagement with the sides of the outer frame.

2. A mold for making concrete tanks comprising an outer frame and an inner frame, bars resting on the outer frame and links suspended from the bars having a hook connection with the inner frame.

3. A mold for making concrete tanks comprising an outer frame and an inner frame, bars resting on the outer frame to which the inner frame is connected, the bars having notches in their under face receiving the upper edges of the outer and inner frames.

4. A mold for making concrete tanks comprising an outer frame and an inner frame, the inner frame composed of sections and the sections connected by bolts, the shank portion of which is screw-threaded, one end provided with a hook, its other end with means for turning the shank and a nut in engagement with the screw-threaded section, the sections having key-shaped openings permitting the passage of the hooked end of the bolt.

5. A mold for making concrete tanks comprising an outer frame and an inner frame, posts secured to the corners of the inner frame, the inner frame separated into side and end sections by a cut extending through the corner-posts and side sections diagonally to the length of the side sections, and means for connecting the sections by connecting the corner-posts.

6. A mold for making concrete tanks comprising an outer and an inner frame, bars resting on the outer frame to which the inner frame is connected, the upper edges of the frames having notches and the bars having notches in their under face, the notches of the bars and frames interlocking.

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