

1,221,728.

J. F. HARRIS.  
CONCRETE TANK,  
APPLICATION FILED APR. 28, 1915.

Patented Apr. 3, 1917.  
2 SHEETS—SHEET 1.

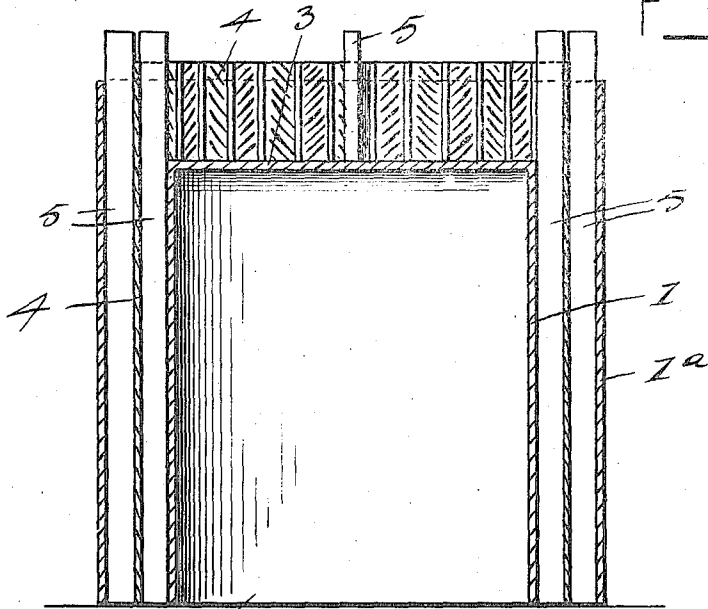


Fig. 1.

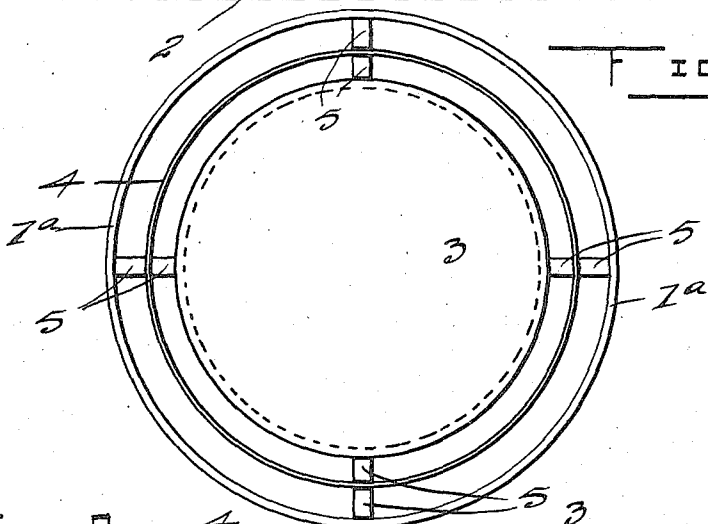


Fig. 2.

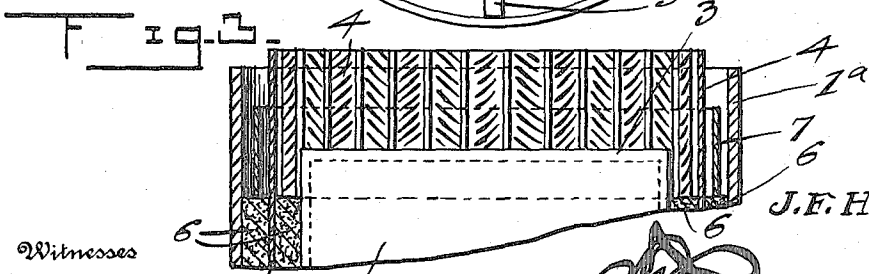


Fig. 3.

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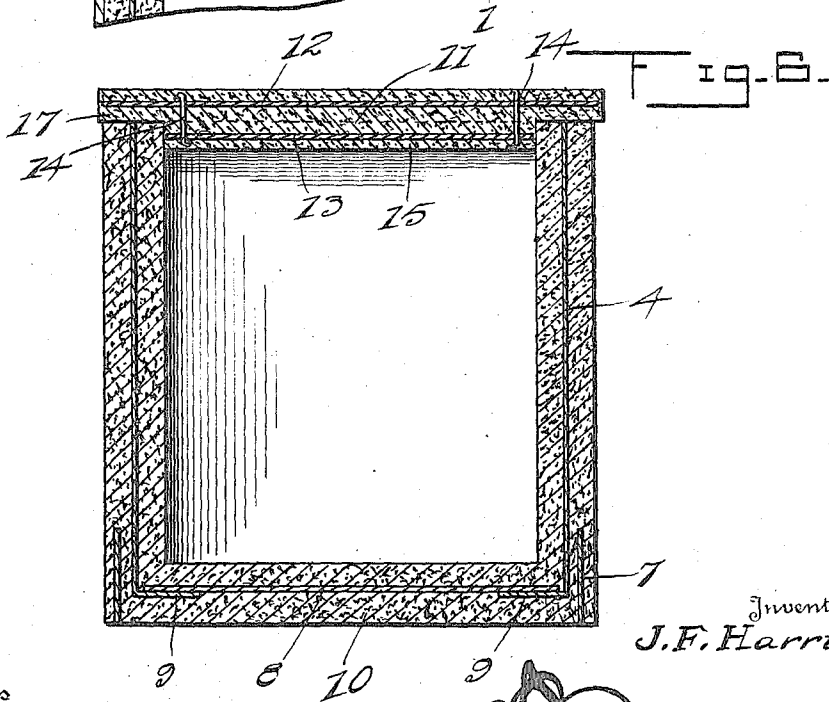
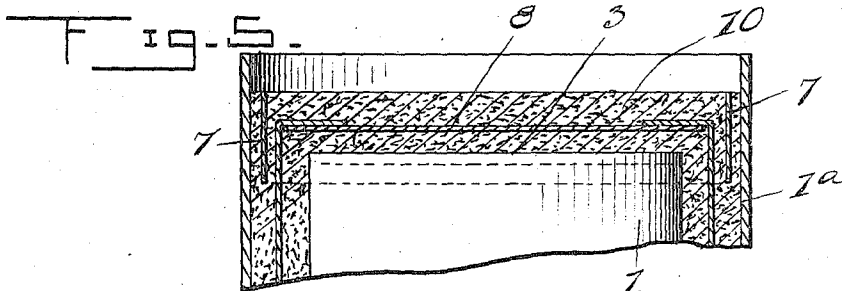
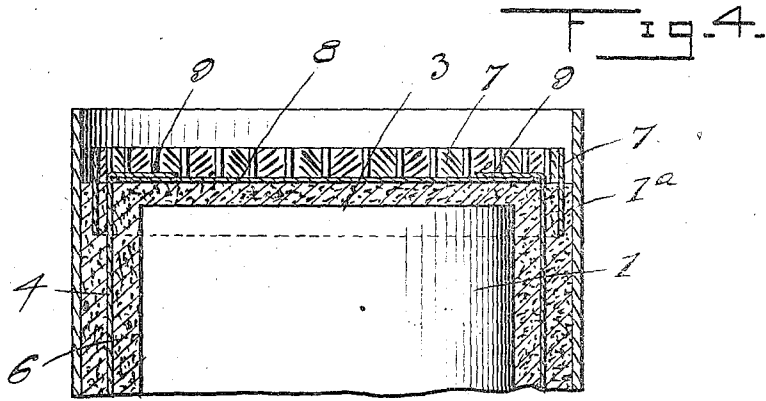
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2 SHEETS—SHEET 2.

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# UNITED STATES PATENT OFFICE.

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## CONCRETE TANK.

1,221,728.

Specification of Letters Patent.

Patented Apr. 3, 1917.

Application filed April 26, 1915. Serial No. 24,518.

### *To all whom it may concern:*

Be it known that I, JOHN F. HARRIS, a citizen of the United States, residing at Wilmington, in the county of New Hanover and State of North Carolina, have invented certain new and useful Improvements in Concrete Tanks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to reinforced concrete tanks, and one of the principal objects of the invention is to provide a reinforced concrete tank of comparatively simple construction, which will be light in weight and strong and durable in use.

Another object of the invention is to provide a concrete tank which will require a very simple apparatus for making it, and the manufacture of which tank may be carried on continuously without requiring the services of highly skilled operatives.

The foregoing and other objects may be attained by means of the construction illustrated in the accompanying drawings, in which:

Figure 1 is a vertical sectional view of a core and a mold having reinforcements placed between the core and mold in condition to receive the concrete material to manufacture the tank.

Fig. 2 is a top plan view of the same.

Fig. 3 is a sectional view of the upper portion of the mold after a quantity of concrete has been poured into the mold, the core being shown in elevation.

Fig. 4 is a similar view, showing a still further step in the manufacture of the tank.

Fig. 5 is a similar view of the same after another step in the manufacture of the tank has been taken, and

Fig. 6 is a vertical sectional view taken through a finished tank, having a cover applied thereto.

Referring to the drawings, the numeral 1 designates a core, preferably made of galvanized iron of the desired thickness, said core having an open lower end 2 and a closed upper end 3. The mold 1<sup>a</sup> comprises a sheet metal cylinder or tube of equal diameter from end to end and open at both ends.

In the molding of the tanks the core 1

and the mold 1<sup>a</sup> are placed in the position shown in Fig. 1 of the drawings, and the reinforcing element 4, which consists of a sheet of metal lathing, having slots and intermediate bars, is placed between the core and mold. To hold the reinforcing element 4 in proper relative position between the core and mold wooden strips 5 are inserted between the mold 1<sup>a</sup> and the reinforcing element and between said reinforcing element and core at different points around inside the mold, as shown more clearly in Fig. 2. The reinforcing element 4 extends up above the upper edge of the mold 1<sup>a</sup>. In this condition the concrete material 6 is poured between the mold and the core and the strips 5 are then withdrawn. The concrete material is poured to the height shown in Fig. 3, that is to a point below the top of the core. A hoop 7 of metal lathing or similar material is placed upon the top of the concrete between the reinforcing element 4 and the mold 1<sup>a</sup>, as shown in Fig. 3, and concrete is then poured in up to the height shown in Fig. 4 of the drawing. A disk 8 of metal lathing, or other form of metal reinforcement, is placed in position, as shown in Fig. 4, on top of the concrete and the outer edge 9 of the reinforcing element 4 is bent over onto the disk 8, and then the concrete material is again poured into the mold to form the bottom 10 of the tank, which terminates practically at the outer edge of the hoop 7. After the concrete material has properly set the mold 1<sup>a</sup> is removed and the finished tank is removed from the core.

As shown in Fig. 6 the tank is inverted to dispose its open upper end on top, and a suitable cover 1 having reinforcing elements 12 and 13, preferably connected by pins or wires 14, closes the tank, said cover having an enlarged central portion 15, which fits within the tank and a flange 17, which extends out slightly beyond the outer surface of said tank.

From the foregoing it will be obvious that a tank made in accordance with this invention will be very strong and durable and that it may be made comparatively light owing to the reinforcing elements which would give great strength to the tank with comparatively thin walls.

Various changes may be made in the de-

tails of the invention without departing from the spirit and scope as defined in the claims.

What is claimed is:

5 1. A molded concrete tank comprising a side and bottom wall, a reinforcing element of sheet metal lathing embedded in the side wall and extending to a point below the upper side of the bottom wall, a flange on  
10 the lower end of said element, said flange extending beyond the side wall into and embedded in the bottom wall, a reinforcing disk of metal lathing embedded in the bot-  
15 tom wall, said disk extending beyond the bottom wall into the side wall and resting upon the said flange, and a wide metal hoop embedded in the side wall in spaced relation to the reinforcing element therein, said hoop  
20 extending from the lower end of the side wall to a point above said flange and disk, said flange and the overlapping portion of the disk increasing the thickness and strength of the reinforce at the juncture of the side  
25 and bottom walls and at points in both directions beyond the juncture, and said hoop reinforcing the lower edge of the side wall and

a portion of the side wall extending from its lower edge to a point above the flange and disk to prevent the side and bottom walls from cracking at a point below the re-  
30 inforcing elements.

2. A molded concrete tank comprising a side and a bottom wall, a reinforcing element embedded in the side wall, a reinforcing  
35 element embedded in the bottom wall, and a wide metal hoop embedded in the side wall in spaced relation to the reinforcing element therein, said hoop extending from the lower end of the side wall to a point above the  
40 reinforcing element embedded in the bottom wall, and said hoop preventing the lower portion of the bottom wall and the lower portion of the side and bottom walls from  
45 cracking at a point below the reinforcing elements.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN F. HARRIS.

Witnesses:

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