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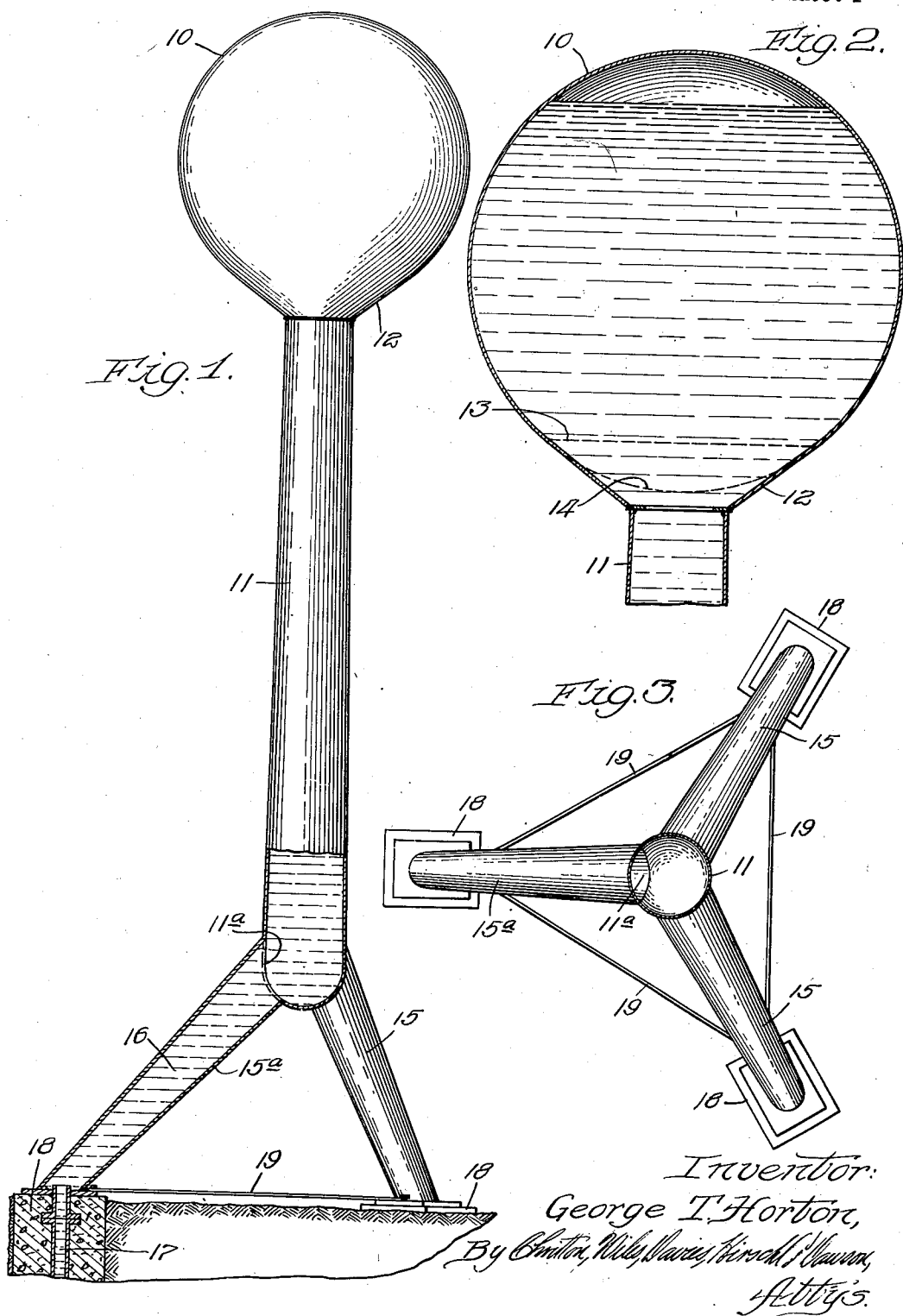
G. T. HORTON

2,264,668

ELEVATED TANK

Filed May 4, 1940

2 Sheets-Sheet 1



Inventor:
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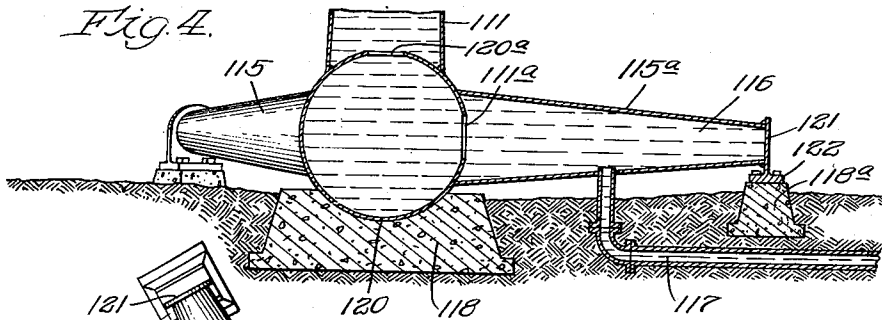
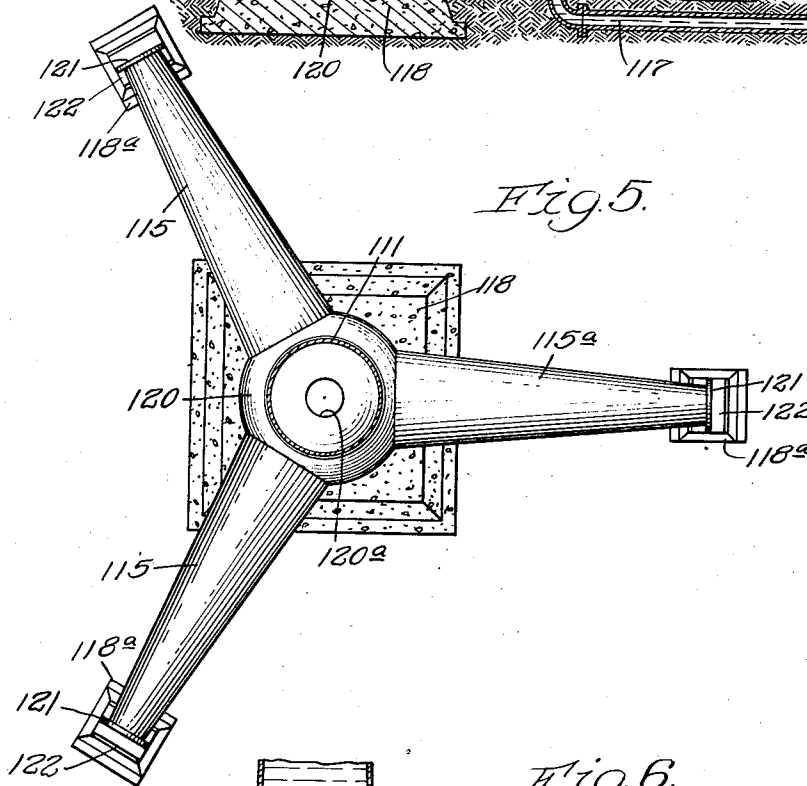
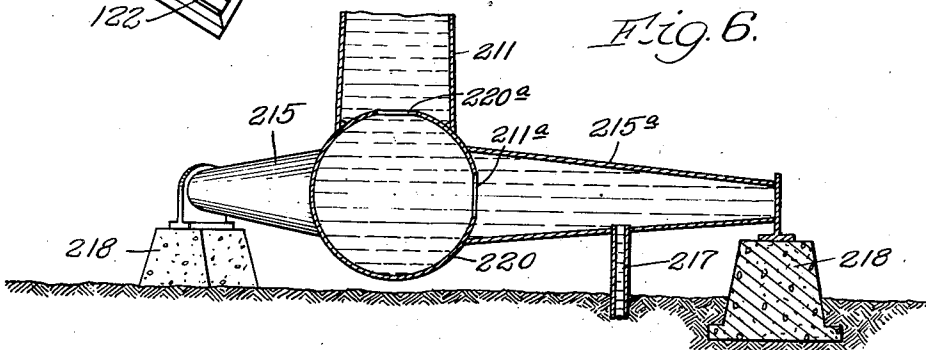
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,264,668

ELEVATED TANK

George T. Horton, Chicago, Ill.

Application May 4, 1940, Serial No. 333,406

2 Claims. (Cl. 220—1)

This invention relates to improvements in elevated tanks and more especially an elevated steel tank as is commonly employed for the storage of water and other fluids.

Among the features of my invention is the provision of a substantially spherical tank supported on a substantially cylindrical riser pipe which in turn is supported by radial hollow tubular legs.

Other features and advantages of my invention will appear more fully as I proceed with my specification.

In those forms of device embodying the features of my invention shown in the accompanying drawings, Fig. 1 is a view in side elevation partly in section, Fig. 2 is an enlarged sectional view of the upper portion, Fig. 3 is a horizontal sectional view looking downwardly, Fig. 4 is a vertical sectional view showing a modified form of bottom, Fig. 5 is a top plan view of the modified bottom, and Fig. 6 is a view similar to Fig. 4 showing another modification.

As shown in the drawings the tank includes a substantially spherical portion 10 supported on a substantially cylindrical riser pipe 11 by means of an inverted frusto-conical collar portion 12 which joins the spherical portion tangentially. The junction line between the spherical portion 10 and the collar 12 is indicated in Fig. 2 by the constructional broken line 13 which may or may not indicate the junction line between plates. In this figure the broken line 14 is also constructional for the purpose of showing an imaginary continuation of the spherical portion 10 to illustrate better the tangential connection with the upper portion of the collar 12 and the spherical portion 10.

Structures of this kind are ordinarily built of sheet metal plates of various shapes and sizes suitably welded together, and no attempt has been made to show the separate plates or their junction lines.

The particular feature in this application is the method of supporting the structure. In general this is accomplished by the provision of radial tubular legs here shown as three in number although there may be more.

In the form shown in Figs. 1 and 3 the legs, as indicated by 15, are slanted substantially at an angle of 45°. These legs are hollow and one of them as indicated by 15^a may be filled with water 16 and serve to connect the inlet 17 with the bottom of the riser pipe 11, the latter being provided with a suitable opening 11^a to permit the passage of water therethrough.

The lower ends of the legs 15 are supported upon suitable foundations 18. 19 indicates tie-rods that may be used to connect the legs to give additional support.

In the construction shown in Figs. 4 and 5 the radial legs 115 are horizontal and one of them as indicated by 115^a is filled with water 16 to connect the inlet pipe 117 with the bottom of the riser pipe 111, a suitable hole 111^a being provided for this purpose. In the construction here shown, the lower end of the riser pipe 111 is joined to a spherical bottom 120 resting on a foundation 118. The outer ends of the legs 115 are also supported upon foundations 118^a. This support is accomplished by closing the ends of the legs with vertical plates 121, the lower edges of which are carried on the plates 122 resting on the foundations 118^a. A hole 120^a in the upper portion of the spherical part 120 permits passage of water therefrom into the riser pipe 111.

The construction shown in Fig. 6 is similar to that shown in Figs. 4 and 5 except that the entire weight is taken by the ends of the legs 215 on the foundations 218, there being no foundation under the spherical bottom portion 220.

While I have shown and described certain embodiments of my invention, it is to be understood that it is capable of many modifications. Changes, therefore, in the construction and arrangement may be made without departing from the spirit and scope of the invention as disclosed in the appended claims, in which it is my intention to claim all novelty inherent in my invention as broadly as permissible, in view of the prior art.

What I claim as new, and desire to secure by Letters Patent, is:

1. An elevated tank, including: a substantially cylindrical riser pipe; a hollow substantially spherical portion of substantially larger diameter than the riser pipe supported on the upper end of the riser pipe and in communication therewith; a hollow substantially spherical portion at the lower end of the riser pipe and in communication therewith; and a plurality of radial hollow tapering members with their larger ends attached to said last-mentioned spherical portion and serving as supporting legs for the tank.

2. A device as claimed in claim 1, with an inlet pipe entering one of the legs, said leg serving as a fluid connection between said inlet pipe and said riser pipe.

GEORGE T. HORTON.