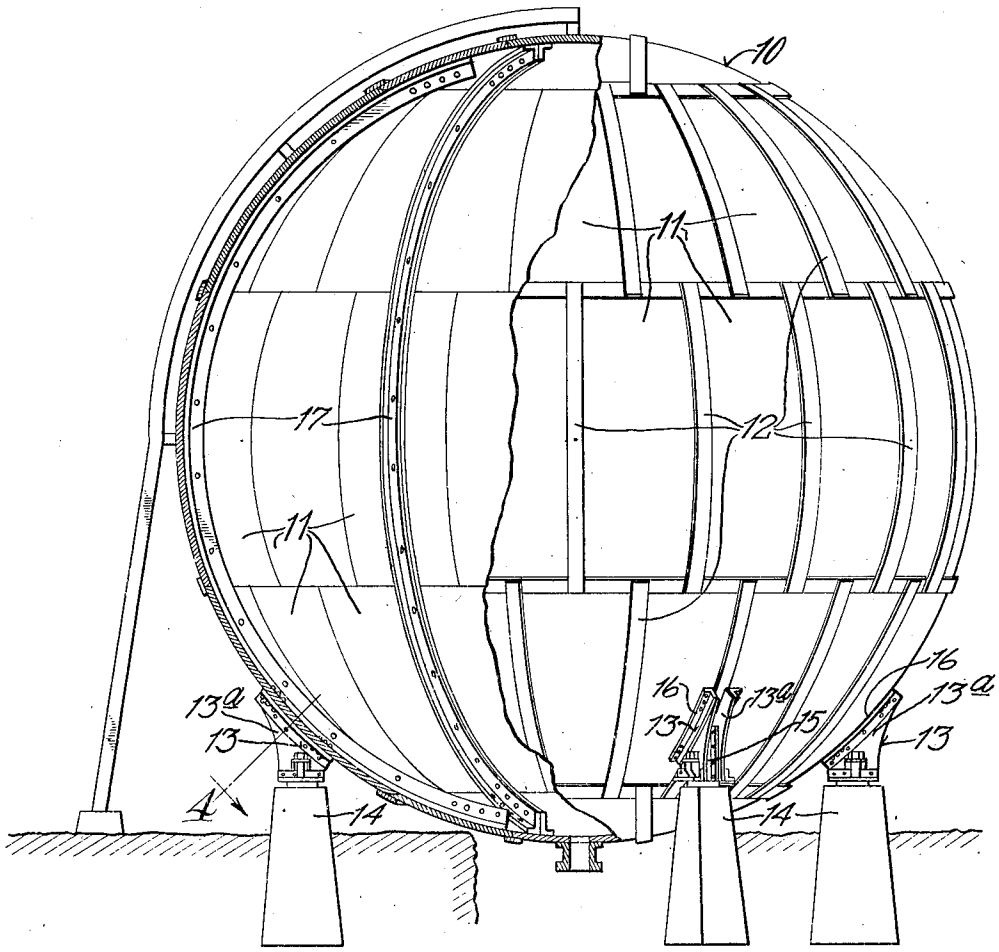
Oct. 23, 1928. 1,688,868

G. T. HORTON

GAS HOLDER

Filed June 11, 1927 3 Sheets-Sheet 1

Fig. 1



Inventor,
George T. Horton,
By Dyrenforth, Lee, Chrisman & Miles,
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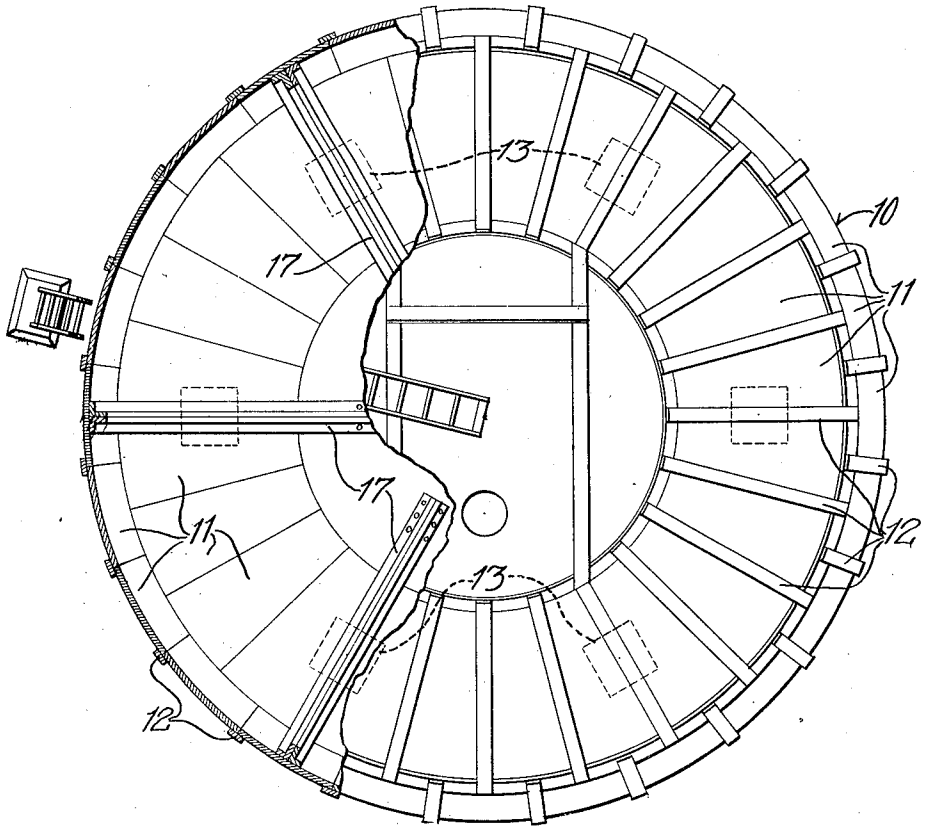
Oct. 23, 1928. 1,688,868

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Fig. 2.



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Oct. 23, 1928. 1,688,868

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GAS HOLDER

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Fig. 3

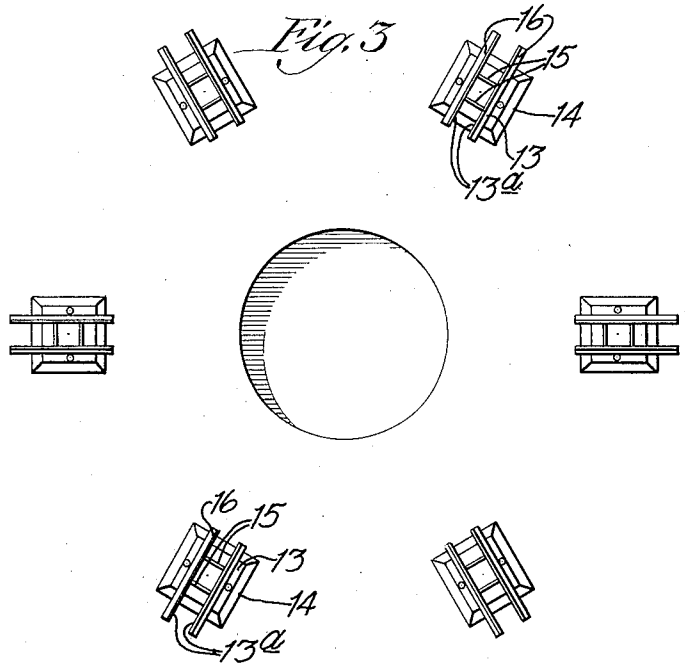
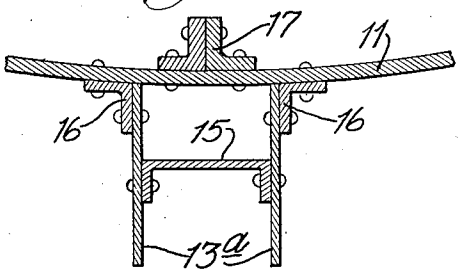


Fig. 4



Inventor,
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Patented Oct. 23, 1928. 1,688,868

UNITED STATES PATENT OFFICE.

GEORGE T. HORTON, OF CHICAGO, ILLINOIS.

GAS HOLDER.

Application filed June 11, 1927. Serial No. 198,245.

This invention relates to improvements in gas holders, and more especially to such a device adapted for use in storing relatively large quantities of gas; for example, my improved gas holder may take the place of the common telescoping water sealed gas holders now commonly used by gas companies.

My improved gas holder is similar to those shown in my prior Patents Nos. 1,621,929 and 1,621,984, both of March 22, 1927, and has all of the advantages of the gas holders there shown.

Among the features of this invention is the provision of such a gas holder as can be economically and easily built, and which is durable, strong and rigid. My improved gas holder as here shown, is adapted to hold a considerable amount of internal gas pressure; and is so constructed and braced that variations in such pressure, or entire absence thereof, will not cause undue distortion, bending, or warping of the holder.

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

In that form of the device embodying the features of my invention shown in the accompanying drawings, Figure 1 is a view partly in side elevation and partly in section, Fig. 2 is a view partly in top plan and partly in section, Fig. 3 is a top view of the foundations and legs, and Fig. 4 is a view taken as indicated by the line 4 of Fig. 1.

As shown in the drawings, the gas holder comprises a spherical shell 10 made up of plates 11 properly curved and shaped to form a sphere when fastened together. The plates 11 are here shown as joined at their edges by butt-straps 12 on the outside. Similar straps (not shown) may be provided on the inside if desired. The shell plates may be joined to the straps in any suitable manner, as for example by riveting or welding.

The shell 10 is entirely supported by six supporting legs 13 set on the concrete piers or foundations 14. The legs 13 may be of any suitable construction. For example, they are here shown as including a pair of side plates 13^a joined by two plates 15, 15 spaced from each other and arranged at right angles to the side plates 13^a. The upper edges of the side plates 13^a are curved to conform to the curvature of the shell and attached to the shell by the angle irons 16.

I shall now describe the means for stiffening, and bracing the shell in order to make it more rigid and prevent distortion from variations in pressure. Such stiffening means include curved beams or girders 17, 17 here shown as formed of two angle irons placed back to back. There may be any number of these girders as desired; but I prefer to place one adjacent each of the legs 13. These girders are attached to the inner wall of the shell and preferably extend from substantially the top of the shell to substantially the bottom. In the particular embodiment here shown, I have provided the shell with six legs and with six of such curved stiffening braces 17. Each of these extends through an arc of substantially 180° When these stiffening braces 17 are placed adjacent the points of attachment of the legs 13, they not only serve to brace and stiffen the shell against distortion but also serve to prevent the shell from buckling or being pressed in where the legs are attached. Since the beams 17 thus prevent the shell from being pressed in by the legs where they are attached, such legs may be attached on the line of a circle considerably smaller upon a great circle of the shell, that is, the legs may be brought in a considerable distance from the "equator" thus making the legs shorter, and conserving space in the vicinity of the gas holder.

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 disclosed in the appended claims, in which it is my intention to claim all novelty in my invention as broadly as possible in view of the prior art.

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

1. A gas holder comprising a substantially spherical shell substantially supported by supporting legs resting on foundations and attached at their upper ends to the shell on the line of a circle lying in a horizontal plane and having a diameter substantially less than the diameter of a great circle of said shell, and vertically arranged curved stiffening members attached to the inner wall of said shell extending from substantially the top of the shell to substantially the bottom of the same,

one of said stiffening members being arranged adjacent each supporting leg.

2. A gas holder comprising a substantially spherical shell supported on legs, and a plurality of vertically arranged curved stiffening members attached to the inner wall of said shell and extending from substantially the top of said shell to substantially the bottom thereof, one of said stiffening members being arranged adjacent each of said supporting legs.

In testimony whereof, I have hereunto set my hand this 9 day of June A. D. 1927.

GEORGE T. HORTON.