June 7, 1938. H. C. BOARDMAN 2,119,518

CONTAINER

Filed May 6, 1937 2 Sheets-Sheet 1

Fig. 1.

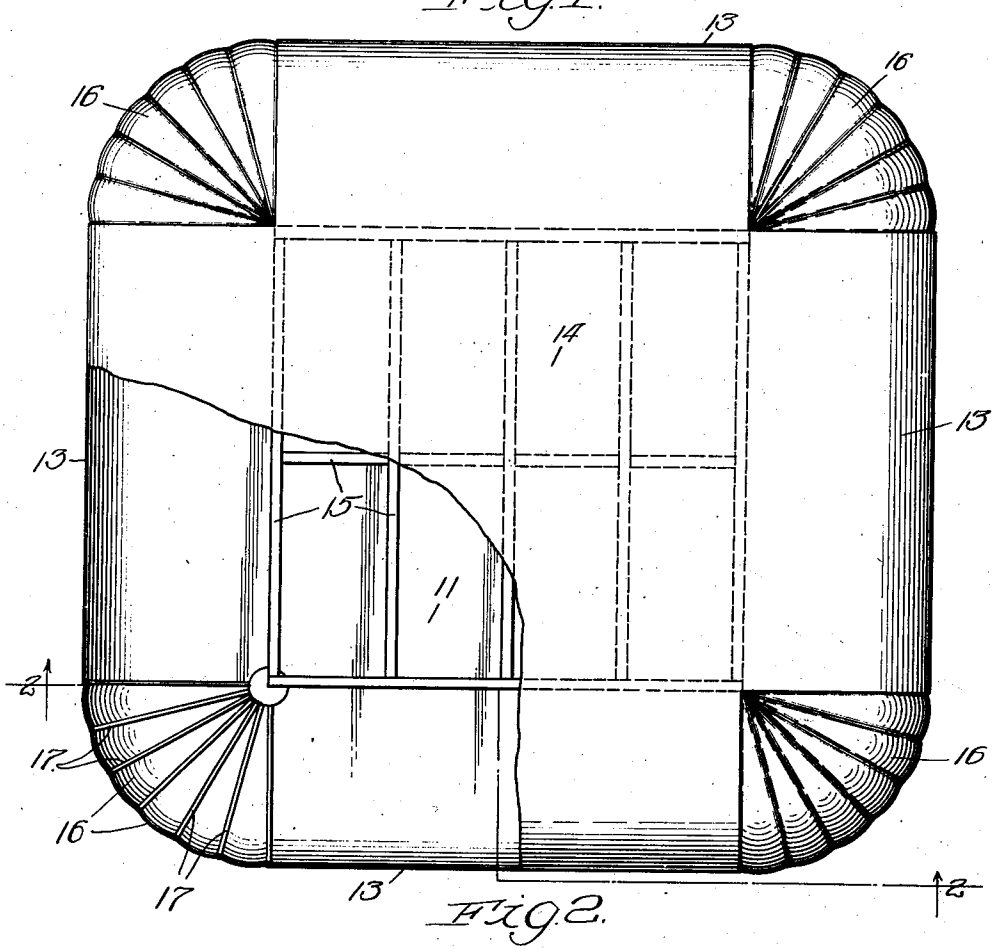
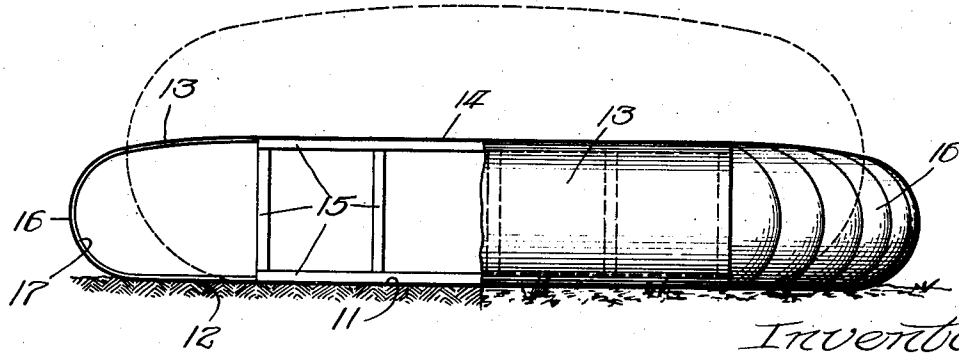


Fig. 2.



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Fig. 3.

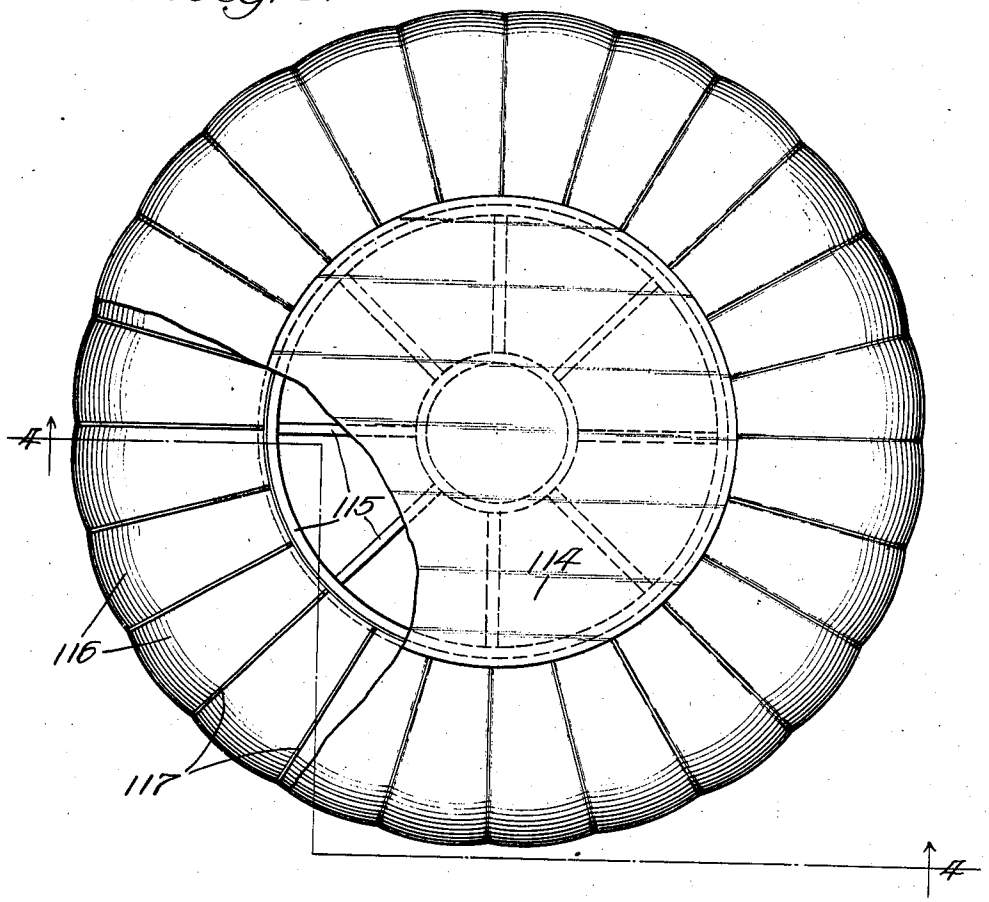
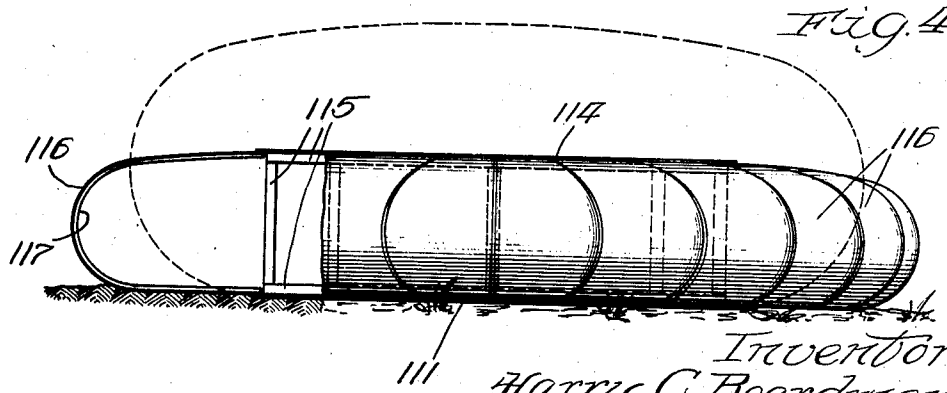


Fig. 4.



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Patented June 7, 1938 2,119,518

UNITED STATES PATENT OFFICE

2,119,518

CONTAINER

Harry C. Boardman, Chicago, Ill., assignor to Chicago Bridge & Iron Company, Chicago, Ill., a corporation of Illinois

Application May 6, 1937, Serial No. 141,167

3 Claims. (Cl. 220—1)

This invention relates to improvements in containers and more especially to a closed container of the "breather type".

One of the features of my invention is the designing of such a container that is closed so that it will hold internal pressure and one that is adapted to change its shape, and consequently its capacity with changes in such pressure.

One form of my improved container may be considered as an improvement on the container shown in my earlier Patent 1,809,013 issued June 9th, 1931. The improvement consists primarily in another way of making the corner construction. A modified form of the invention, however, in which the container is made circular, constitutes an entirely new invention.

In general, my invention contemplates the construction of the corners of the square tank, and the entire periphery of the circular tank, of impervious flexible fabric sheeting suitably stiffened by flexible bars or ribs acting as retainers to hold the material in position.

The use of my invention will greatly facilitate the construction and operation of both square and circular containers of the type mentioned.

Other features and advantages 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 top plan view partly in section; Fig. 2 is a view taken as indicated by the line 2 of Fig. 1; Fig. 3 is a top plan view of a modified form partly in section; and Fig. 4 is a view taken as indicated by the line 4 of Fig. 3.

As shown in the drawings, the square container of Figs. 1 and 2 with the rounded corners resembles in general the construction and operation of the container shown in my prior Patent 1,809,013 except for the corner construction which will be described more in detail hereinafter.

The container may be made principally of sheet metal comprising plates of suitable size and shape joined in any proper manner, as, for example, by welding or riveting.

The bottom of the container is flat, rectangular (here shown as square) sheet metal, as indicated by 11 which may rest upon any suitable support as the ground 12.

The top, as here shown, is a square piece of sheet metal as indicated by 14. 15 indicates suitable framing or supports inside of the container which may be provided for the top to rest on when in its lowermost position.

At the four sides the edges of the top sheet 14 are joined to the bottom sheet 11 by the side sheets 13. These side sheets are cut off square at the ends, leaving the corners open except as the same are closed by means hereinafter to be described.

The corners are closed by pieces of flexible fabric 16 impervious to gas. Fabric of this sort is well known in the art and need not be described herein in detail. The fabric is held in position by radially extending flexible bowed ribs 17 with their upper ends attached to one corner of the top member and their lower ends attached to the adjacent corner of the bottom member. These ribs, for example, may be of flexible metal, wood or other suitable material. The flexible fabric is attached to the ribs in any suitable manner as by gluing, riveting, or the like.

In the operation of the device under increased pressure the top member 14 can rise as shown by the broken line in Fig. 2. This increases the capacity. In the lowermost position the top member 14 rests on the framing 15 as shown by the solid lines in Fig. 2.

The device of Figs. 3 and 4 is similar to that just described except that it is made circular and the bottom is formed by the circular member 111 and the top by the circular top member 114. 115 indicates the framing upon which the top member rests when in its lowermost position. Since the device is circular it has no straight sides but instead has a continuous curved or circular periphery. The construction of this resembles the corner construction of the other form which corner construction it will be noted is also curved or circular. That is, each corner of the other form embraces an arc of substantially 90°. The periphery of the square form of Figs. 1 and 2 has four straight portions and four portions (the corners) which are curved or circular. The circular form of Figs. 3 and 4 has its entire periphery circular.

In the form of Figs. 3 and 4 therefore, the entire periphery of the container is closed by the fabric 116 which is held in position by the ribs 117 resembling in construction and operation the fabric 16 and ribs 17 at the corners of the square container.

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 inven-

tion as broadly as permissible, in view of the prior art.

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

1. A closed sheet metal container having a portion of its periphery circular, said container comprising: a top member; a bottom member; and means closing the circular portion of its periphery, said means including flexible fabric held in position by radially extending flexible bowed ribs with their upper ends attached to the top member and their lower ends attached to the bottom member.

2. A closed sheet metal container comprising: a rectangular top member; a rectangular bottom member; flexible plates joining the edges of said members to close the four sides of the periphery of the container; and flexible fabric sheets closing the corners, said sheets held in position by radially extending, flexible bowed ribs with their upper ends attached to the corners of the top member and their lower ends attached to the corners of the bottom member.

3. A closed sheet metal container including: a circular top member; a circular bottom member; and flexible fabric closing the periphery of said container, said fabric held in position by radially extending, flexible bowed ribs with their upper ends attached to the top member and their lower ends attached to the bottom member.

HARRY C. BOARDMAN.