June 9, 1931. H. C. BOARDMAN 1,809,013

CONTAINER

Filed April 12, 1929

Fig. 1

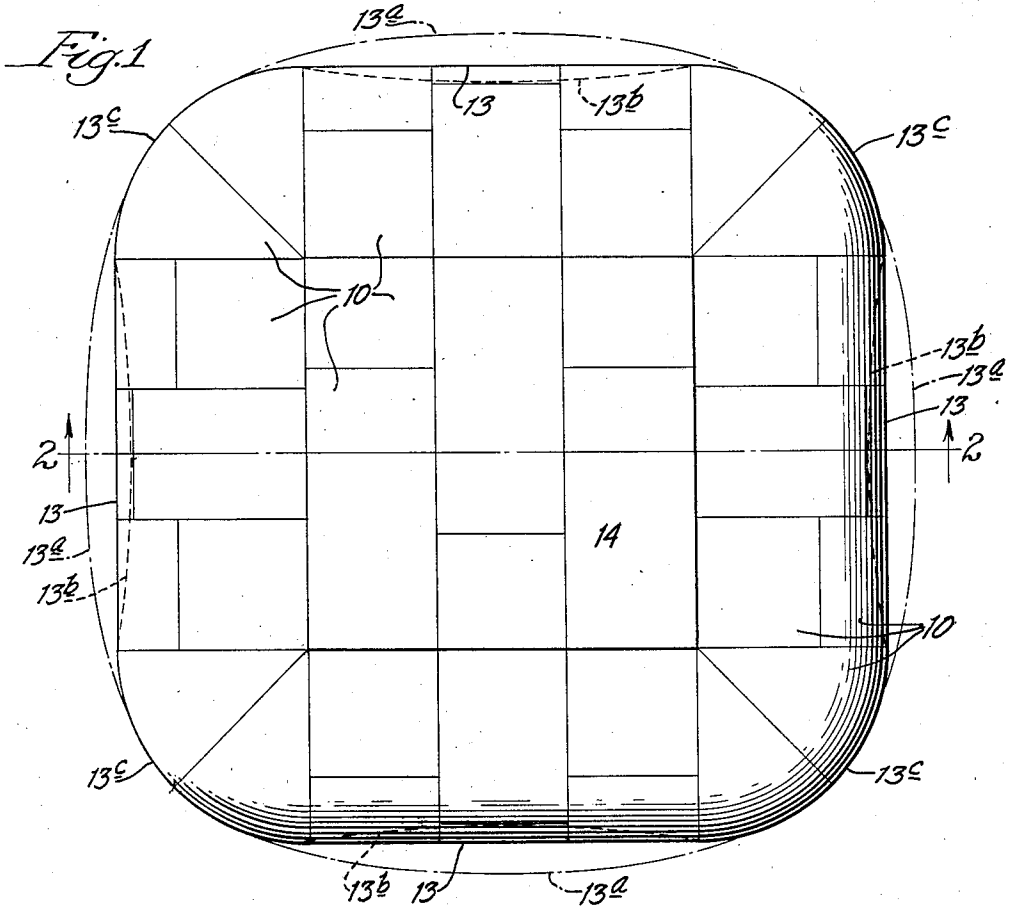
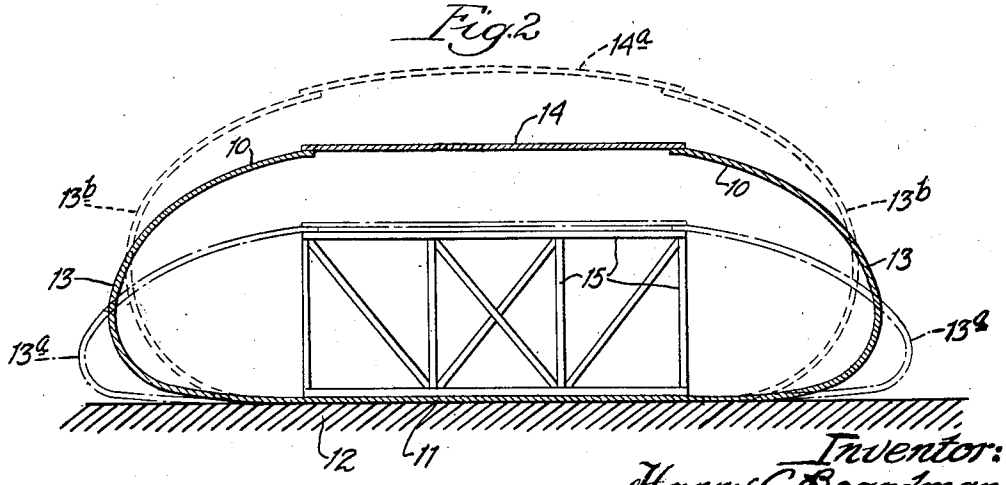


Fig. 2



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Patented June 9, 1931 1,809,013

UNITED STATES PATENT OFFICE

HARRY C. BOARDMAN, OF CHICAGO, ILLINOIS, ASSIGNOR TO CHICAGO BRIDGE & IRON COMPANY, A CORPORATION OF ILLINOIS

CONTAINER

Application filed April 12, 1929. Serial No. 354,587.

This invention relates to containers and, more especially, 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 that is adapted to change its shape and, consequently, its capacity with changes in such internal pressure.

My improved container is especially adapted, for example, for the storage of oil where it is desired to prevent or lessen vapor losses. Changes in pressure may be caused, for example, by changes in temperature from night to day. If these changes in pressure do not require the escape of gases, the losses by evaporation can be lessened. If the container or tank can "breathe" to accommodate itself to the different pressures within, the vapor losses can be lessened or eliminated.

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

In that form of device embodying the features of my invention—

Figure 1 is a top plan view; and Fig. 2 is a vertical central cross-section, taken as indicated by the line 2 of Fig. 1.

As shown in the drawings, the container may be made of sheet metal comprising the plates 10, 10, suitably fastened together as by welding or riveting.

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

The container is normally substantially rectangular (here shown as square) in plan view with straight sides 13 and rounded corners 13^c, as indicated by the solid lines in Fig. 1. These straight sides, however, are adapted to be flexed outwardly and inwardly beyond the normal straight line by changes in internal pressure, as indicated by the curved broken lines 13^a and 13^b in Fig. 1.

The container is substantially elliptical in shape in vertical central cross-section, as shown in Fig. 2 in solid lines. The top, as indicated by 14, is square and substantially flat, except when the same is flexed upwardly by an increase in internal pressure. In such case, the top is rounded upwardly somewhat, as indicated by 14^a in Fig. 2.

Numeral 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.

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 possible, in view of the prior art.

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

1. A closed container normally substantially rectangular in plan view with substantially straight sides and substantially elliptical in vertical central cross-section, the top of said container adapted to be flexed upwardly and downwardly and the sides thereof adapted to be flexed outwardly and inwardly by changes in internal pressure.

2. A closed container normally substantially rectangular in plan view with substantially straight sides and substantially elliptical in vertical central cross-section, the top of said container adapted to be flexed upwardly and downwardly and the sides thereof adapted to be flexed outwardly and inwardly beyond the normal straight line in plan view, by changes in internal pressure.

3. A closed container normally substantially rectangular in plan view, with substantially straight sides and rounded corners, and substantially elliptical in vertical central cross-section, the top of said container adapted to be flexed upwardly and downwardly and the sides thereof adapted to be flexed outwardly and inwardly, by changes in internal pressure.

4. A closed container normally substantially rectangular in plan view with substantially straight sides and rounded corners, and substantially elliptical in vertical central cross-section, the top of said container adapt-

ed to be flexed upwardly and downwardly and the sides thereof adapted to be flexed outwardly and inwardly beyond the normal straight line in plan view, by changes in internal pressure.

In witness whereof, I have hereunto set my hand and seal this 8th day of April, 1929.

HARRY C. BOARDMAN.