Sept. 28, 1937. J. A. CASE 2,094,230

CONTAINER

Filed July 17, 1936

Fig. 1.

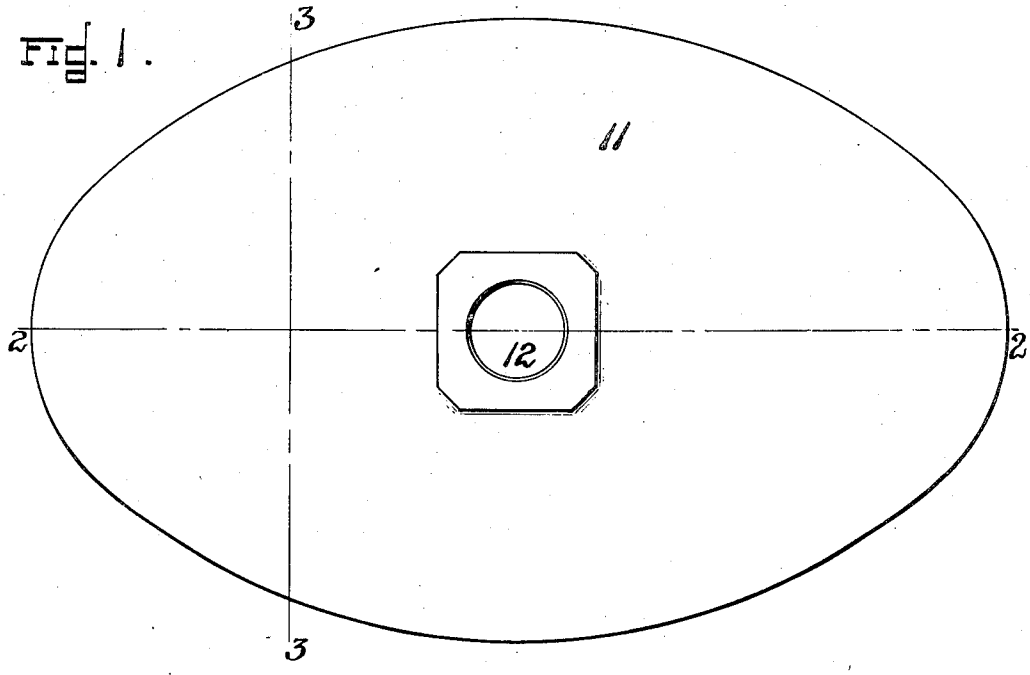


Fig. 2.

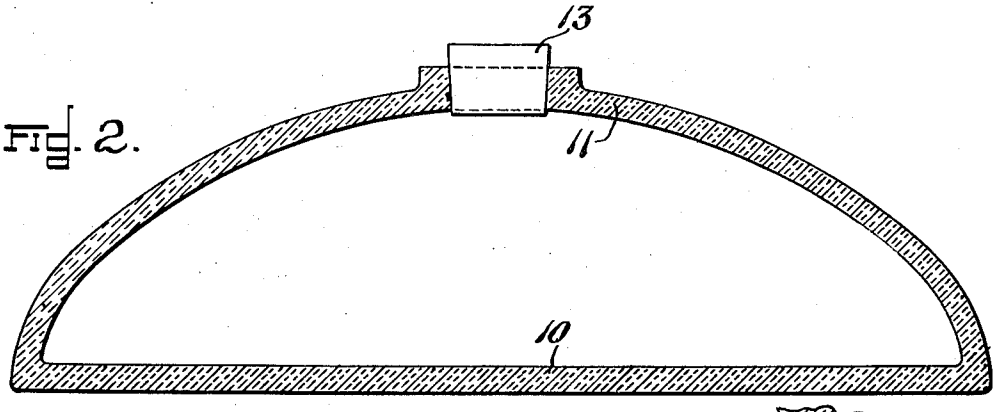


Fig. 3.

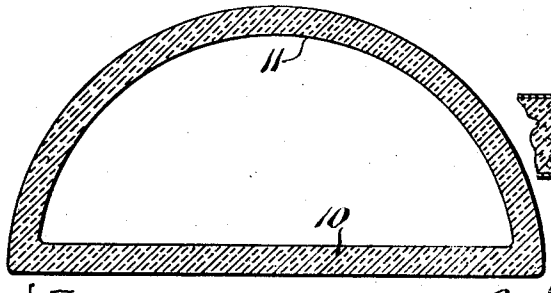
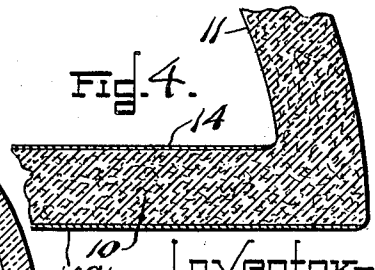


Fig. 4.



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2,094,230

CONTAINER

Jesse A. Case, Brockton, Mass.

Application July 17, 1936, Serial No. 91,168

5 Claims. (Cl. 215—1)

My invention relates to improvements in containers for holding a heat emanating or a heat absorbing medium and more especially to containers such as are loaded with either a hot or a cold medium and applied to the human body in the treatment of certain ailments or placed in a bed to warm or cool the same.

The invention has for its object to provide an improved container of the class referred to which will transmit heat either from or to its contents, according to the nature of the latter, in a predetermined and particularly retarded and uniform manner for a longer period of time without replenishment of its contents than has been possible with devices of this class as heretofore constructed.

To this end I have provided an improved container of the character described having the peculiar construction and mode of operation set forth in the following description, the several novel features of the invention being separately pointed out and defined in the claims at the close thereof.

In the accompanying drawing:

Figure 1 is a top plan view of a container constructed in accordance with my invention.

Figure 2 is a section on line 2—2 of Fig. 1.

Figure 3 is a section on line 3—3 of Fig. 1.

Figure 4 is an enlarged sectional detail hereinafter referred to.

The illustrated embodiment of my invention is a bottle-like structure comprising a flat bottom wall 10, a hemiellipsoidal top wall or dome 11 made at its top with a circular aperture 12, and a cork or stopper 13 frictionally and removably fitted into said opening.

It is a feature of this invention that the top and bottom walls of the container are molded to shape from a plastic composition consisting of clay and asbestos flour, five to twenty percent in volume of the latter being employed according to the kind of clay used.

Usually these two parts are molded to shape separately after which the dome is placed upon the bottom wall, and after applying glazing to the interior and exterior surfaces as desired the vessel is baked in a kiln.

It is also a feature of this invention that after assembling and baking as described, a thin layer or film of heat-reflecting metal 14, Fig. 4, such as mercury or aluminum, preferably the latter, is applied to and throughout the inner top surface of the bottom wall 10.

The main function of the asbestos flour element which impregnates the clay is to reduce and in a sense regulate the heat transmitting capacity of the walls so that if the container is filled with hot water the transmission of heat outwardly will be gradual and continued or extended for two or three hours more than would be the case in the absence of the asbestos. Therefore, the device will supply heat more uniformly and for a greater length of time than heretofore.

Also, the asbestos not only serves to provide a structure which is substantially less in weight than would be the case if made from clay alone, but it controls the expansion and contraction of the walls so as to prevent breakage thereof when the vessel is loaded with very hot water.

To coat the inner top surface of the bottom wall 10 with a metallic film of mercury, said top surface may be dusted with refined powdered copper after which the separately molded dome 11, coated inside and out with glazing, is placed in position upon the bottom wall and then the structure is baked in a kiln. After baking, the interior copper covered surface of the bottom wall is painted with re-distilled mercury and the container is completed.

When the container thus constructed is filled with hot water the heat reflecting film 14, together with the asbestos of the bottom wall, provide an efficient barrier to the transmission of heat downwardly from the body of water within the vessel.

Or if desired, the film 14 may be applied to the top inner surface of the bottom wall after glazing all surfaces of the structure, inside and out, and baking in a kiln, by first cleaning the top surface of the bottom wall with turpentine and then painting said top surface with a mixture of equal parts of powdered aluminum and powdered tin combined with a suitable vehicle such as banana oil.

The flat bottom wall associated with the hemiellipsoidal top wall or dome provides a very stable structure whose center of gravity is adjacent to the bottom wall and which is not easily tipped or pushed over and this is a desirable feature at all times but more especially when the vessel is used in a bed.

The rounded top wall or dome is also a feature of advantage in that it tends to deflect upwardly and over the device an object that is struck or pressed against a side thereof so that it is not readily displaced while being used within a bed.

Another method of applying the heat reflecting coating 14 to the bottom wall 10 consists in merely washing the glazed top surface thereof and then applying the mercury. Or, I may simply

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apply ordinary aluminum paint alone to said top surface after glazing and baking the structure.

As shown in Fig. 4 the bottom surface of the bottom wall may also be coated with a metallic heat-reflecting layer or film 14a.

What I claim is:

1. A container for a liquid material of the character described consisting of a molded and baked bottle-like structure made from an originally plastic composition including a major proportion of clay and a minor proportion of asbestos flour, said structure having a bottom wall including as a fixed part thereof a coating of heat reflecting metal covering one face of said bottom wall which cooperates with the asbestos flour incorporated within the latter to provide a barrier to the transmission of heat through said bottom wall and said structure having the portion thereof above said bottom wall uncoated so that it has a heat transmitting capacity that is controlled by the proportion of asbestos flour incorporated therein.

2. A container for a liquid material of the character described consisting of a molded and baked bottle-like structure made from an originally plastic composition including clay and asbestos, said structure having a bottom wall and an exteriorly rounded dome-like top wall directly united therewith, one of said walls being formed with an aperture through which access is had to the interior of the structure, and a removable closure for said aperture.

3. A container for a liquid material of the character described consisting of a molded and baked bottle-like structure made from an originally plastic composition including clay and asbestos, said structure having a flat elliptical bottom wall and a hemiellipsoidal top wall directly united therewith, one of said walls being formed with an aperture through which access is had to the interior of the structure, and a removable closure for said aperture.

4. A ceramic product made from a composition including clay and asbestos flour, said product consisting of a bottle-like container structure having a flat elliptical bottom wall including as a fixed part thereof a coating of heat-reflecting metal covering a face thereof and a hemiellipsoidal top wall directly united therewith, one of said walls being formed with an aperture through which access is had to the interior of the structure, and a removable closure for said aperture.

5. A ceramic product made from a composition including clay and asbestos, said product consisting of a bottle-like container structure having a flat elliptical bottom wall including as a fixed part thereof a heat-reflecting metallic coat covering one face of said bottom wall which co-operates with the asbestos of said bottom wall to prevent the transmission of heat through the latter and a hemiellipsoidal dome-like top wall, directly united with said bottom wall formed with an aperture through which access is had to the interior of the structure, and a removable closure for said aperture, said dome-like top wall serving as a deflector to prevent the structure from being capsized through external lateral pressure applied thereto.

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