Sept. 18, 1945. J. R. MacDONALD 2,385,146

LIFE BOAT BREAKER

Filed April 1, 1942

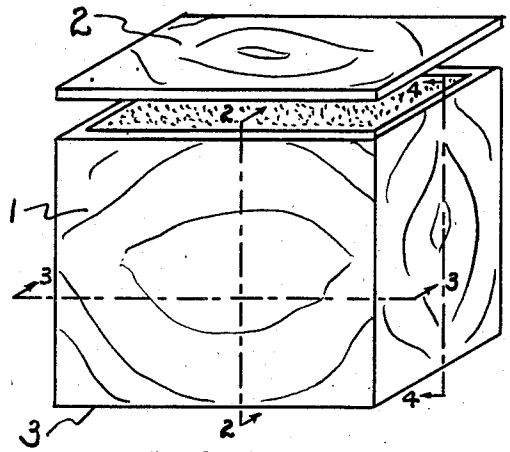


FIG. 1

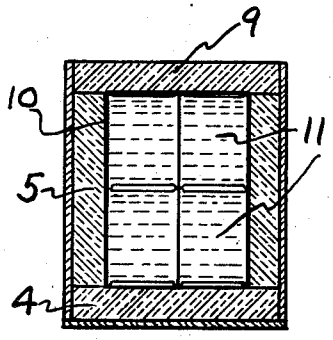


FIG. 2

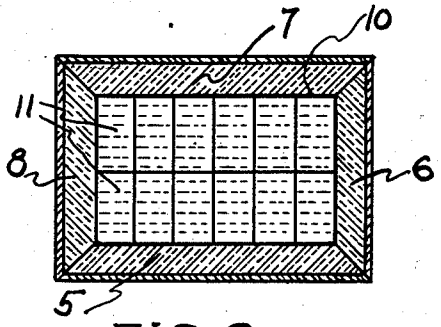


FIG. 3

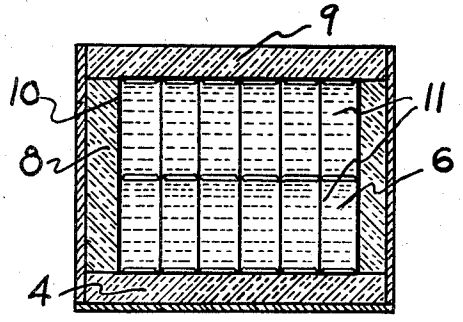


FIG. 4

INVENTOR.
Joseph R. MacDonald

BY A. Feinberg
ATTORNEY.

Patented Sept. 18, 1945 2,385,146

UNITED STATES PATENT OFFICE

2,385,146

LIFEBOAT BREAKER

Joseph R. MacDonald, Medford, Mass., assignor to The Multiple Breaker Company, New London, Conn., a corporation

Application April 1, 1942, Serial No. 437,262

5 Claims. (Cl. 206—46)

This invention relates to portable breakers for carrying and storing water or other fluids or foods and more particularly to breakers which are used in lifeboats.

The most common type of water breaker now used consists of a wooden cask or barrel equipped with a protruding spigot used for dispensing water only.

Most life boats are thus permanently equipped, but sometimes, in cases of emergency, the casks are filled with water and tossed into the boat where they occupy valuable space and are subject to damage and injury due to the rough handling.

As the casks are preloaded and stored in the life boats in anticipation of an emergency, the contents may become brackish and sickening after a certain length of time. This might render them useless when they were most needed.

With the vessel at sea and with the life boat in use, the cask and its spigot must be protected from mechanical damage due to the shifting and rolling and also from high and low temperatures.

High temperatures cause the staves to dry up and warp, causing the cask to crack open and leak and allowing the contents to be lost, evaporated or spoiled. Low temperatures cause the contents to solidify so that they cannot flow from the spigot. Lower temperatures further solidify the contents and sometimes cause the cask to rupture.

During certain emergencies, the cask must also be carefully protected from an enfilade of bullets as one bullet puncturing the cask might result in the loss of all the contents.

Great care must also be taken to prevent salt water washed into the life boat from contaminating the contents of the cask by penetration through disrupted spigots, bungholes, or cracks.

During the emergency when a life boat is at sea, the amount of available water should be readily known at all times so that it can be equitably rationed and dispensed to the occupants of the boat.

A separate breaker would be required for each fluid if anything in addition to water were to be stored.

A primary object of my invention is to provide an improved multiple pack fluid breaker which will not exceed the weight of present breakers or the storage space now required, as it will easily fit under the thwart of the life boat to which it may readily be fastened. It will contain a multiple pack of pure sterilized water or other sustaining fluids and maintain them in a safe and satisfactory manner for long periods of time, protecting them from extremes of heat and cold, from mechanical injuries, and from complete loss due to bullet penetration. The contents will be divided into a multiplicity of separate individual specially prepared units. The size of unit should be a standard size or multiple thereof.

In accordance with my invention, there is produced a fluid breaker for emergency use on life boats. It occupies a minimum of space and weight which are vitally important factors on a life boat. It can be precharged with sterilized contents and will maintain these contents in usable condition for 15 months or longer without refill. It will withstand temperatures of from 15 to 20 degrees F. below zero for two weeks before contents solidify. Due to the packing of those containers holding water, solidification will cause no material damage or loss. Contents cannot leak out, dry up or evaporate as a result of high temperatures. It is impossible for salt water in the life boat to contaminate the contents. It has no protruding parts to interfere with handling or to cause possible damage or leakage. The possible puncture of receptacle by a bullet is substantially eliminated and in any event cannot result in total loss. As the amount of the contents is always known due to the fact that it is stored in containers which are of a standard size or multiple thereof, it can be readily and conveniently rationed and dispensed in known amounts.

If required, a single multiple pack breaker may also be charged with water plus a balanced variety of nourishing sustaining fluids and solid foods. If occupants of lifeboat must separate, contents may be divided between several parties. Each unit of the charge may be hermetically sealed after its contents have been sterilized or vacuum packed.

Further objects of the invention will hereinafter appear from the following description of a preferred embodiment illustrative of the invention and shown in the accompanying drawing in which,

Fig. 1 is a perspective view of my device with cover removed,

Fig. 2 is a vertical transverse sectional view taken on line 2—2 of Fig. 1,

Fig. 3 is a horizontal, longitudinal sectional view taken on line 3—3 of Fig. 1,

Fig. 4 is a vertical, longitudinal sectional view taken on line 4—4 of Fig. 1.

The device consists of a rectangular enclosing receptacle or case with parallel sides constructed from any suitable material but preferably of ½ inch seasoned wood and furnished with a detachable or hinged cover.

The walls of the case may be insulated or the interior surfaces of the case and cover may be lined with high grade rectangular blocks of any insulation which will retard temperatures of from 15 to 20 degrees F. below zero for a period of two weeks from solidifying the contents of the case. "Fiberglas," two inches in thickness will fill this

requirement and also assist in resisting bullets.

"Fiberglas" coated with asphalt renders it impervious to water. This type of insulation is particularly applicable as rats cannot gnaw it, bugs will not crawl into it, and it will not rot or decay because fungus cannot live on glass.

The space enclosed within this complete rectangular enclosure of block insulation is designed to be of such a size as to be completely filled by a rectangular carton. The interior of the carton is designed to be of such a size as to be substantially filled by a multiple arrangement of contiguous rows and a multiple arrangement of adjacent layers of individual, airtight cans of cubical or rectangular parallelepiped design, each holding preferably one quart or a multiple thereof. For greater protection from temperature changes, the interior of the carton may also be filled with thin sheets of insulation between rows or layers of cans or even between individual cans.

If filled with water, generally distilled, each can has a minimum ullage sufficient to allow ultimate solidification of its contents without distortion or rupture of the can. The contents of the can are then raised to approximately 190 degrees when the can is hermetically sealed or it may be vacuum packed and sealed. It is allowed to cool before packing.

Referring to the drawing, the device therein shown, as illustrative of one embodiment of my invention comprises a receptacle 1, with a cover 2. Completely covering the bottom 3 of the receptacle 1 is a block of insulation 4. Resting on the bottom block of insulation 4 are the vertical blocks of similar insulation 5, 6, 7, and 8, preferably with miter joints between them. Adapted to rest on the top faces of the blocks 5, 6, 7, and 8 and completely covering them is the top block of insulation 9, similar to the bottom block 4.

The cardboard carton 10 is designed to snugly fit the space enclosed by the insulation blocks 4, 5, 6, 7, 8, and 9.

A multiplicity of fluid holding containing units 11 are designed of such a size that when filled and sealed, they may be arranged in a close multiple formation of adjacent rows and contiguous layers so as to completely fill the interior of the carton 10. There may or may not be sheets of insulation between complete series of cans, rows, and layers of the multiple pack.

The block of insulation 4 is placed on the bottom 3 of the receptacle 1. The vertical blocks 5, 6, 7, and 8, with their miter joints contiguous, are placed on block 3 against the vertical walls of the receptacle 1. The unit cans 11 of water or other fluid or food are properly prepared, cans are hermetically sealed and packed into the carton 10 which they completely fill. The carton 10 is slipped into the enclosure formed by the insulation blocks already in place. The insulation block 9 is placed on top of the exposed surfaces of blocks 5, 6, 7, and 8 and carton 10. The cover 2 is securely fastened on or firmly hinged and the improved multiple pack breaker is ready to be fastened preferably into the limited space underneath the thwart of the life boat. Due to the snugness of the pack, the top of one can in each row and one can in each layer may be provided with a loop so that they may more readily be removed.

It is to be understood that changes may be made in the construction and in the combination and arrangements of the several parts, provided that such changes fall within the scope of the appended claims.

Having described the preferred embodiment illustrative of my invention, I claim:

1. A multiple pack fluid breaker comprising in combination an enclosing receptacle, removable self supporting waterproof blocks of insulation and a multiplicity of fluid holding containing units said units being enclosed in a carton, each of the interior surfaces of said receptacle being lined with a removable block of said insulation, one removable block completely covering the interior of the base of said receptacle said block supporting vertically disposed blocks adjacent to each of the walls of said receptacle and one block resting on the top of the said wall blocks, said block completely covering the interior of the top of said receptacle, the space completely enclosed by said insulation enclosing said carton, the outer surfaces of said carton being contiguous to the inner exposed surfaces of said blocks of insulation.

2. A multiple pack fluid breaker comprising in combination an enclosing receptacle, a sectional removable lining of waterproof insulating blocks for the interior of said receptacle and a multiplicity of fluid holding containers enclosed in a carton, the outer surfaces of said carton being contiguous to the inner exposed surfaces of said blocks of insulation and the outer exposed surfaces of said blocks of insulation being contiguous to the inner surfaces of said receptacle.

3. A dismantlable multiple pack fluid breaker assembly combining a rectangular enclosing receptacle with parallel sides, removable rectangular waterproof self supporting insulation blocks and a multiplicity of rectangular parallelepiped fluid holding, air tight containing units enclosed in a removable rectangular carton, each of the interior surfaces of said receptacle being lined with a removable block of said insulation, and the space completely enclosed by said insulation enclosing said carton, the outer surfaces of said carton being contiguous to the inner surfaces of said insulation.

4. A multiple pack fluid breaker assembly combining a rectangular enclosing receptacle with parallel sides, a similarly proportional carton with parallel sides, a sectional removable lining of waterproof insulating blocks for the interior of said receptacle, and a multiplicity of similar rectangular parallelepiped fluid holding, air tight containing units, the size and shape of the multiple pack of said units being suitable to completely fill said carton, said blocks when assembled forming a uniform layer of insulation between the outer surfaces of said carton and the inner surfaces of said receptacle.

5. A knock-down multiple pack breaker combining a rectangular enclosing receptacle with parallel sides, removable waterproof insulation blocks of uniform thickness and a multiplicity of rectangular parallelepiped, air tight containing units, each of the interior surfaces of said receptacle being lined with a removable block of said insulation, and the space completely enclosed by said insulation enclosing a carton, said carton holding a multiple formation of said containing units, said carton completely filling said space, said carton being separated from said receptacle by a uniform thickness of said insulation.

JOSEPH R. MacDONALD.