Jan. 13, 1942. L. B. SPERRY 2,269,994

COOLER CONSTRUCTION

Filed Dec. 8, 1939

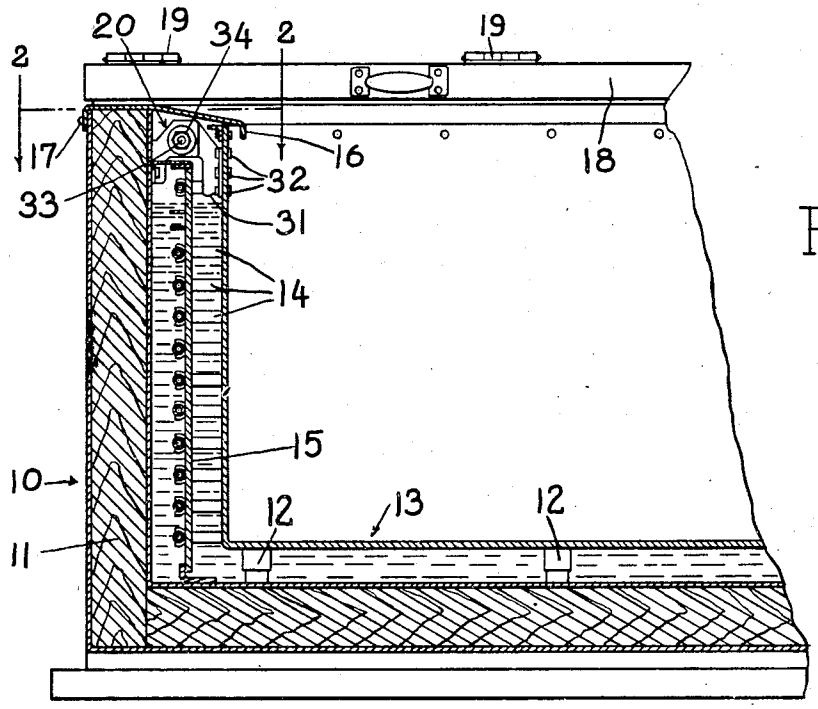


FIG. 1

FIG. 2

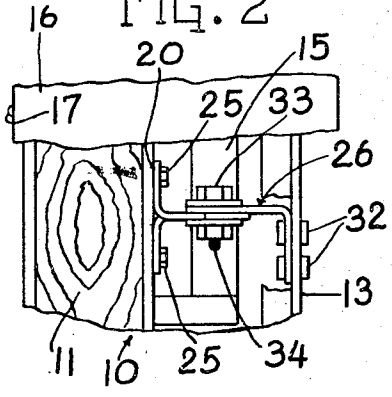


FIG. 3

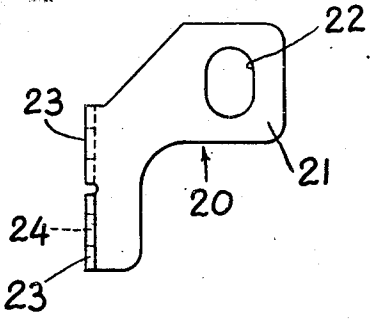


FIG. 4

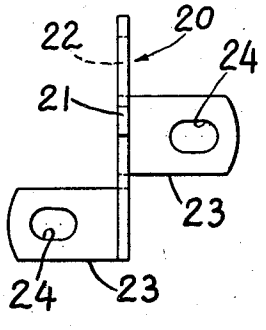


FIG. 5

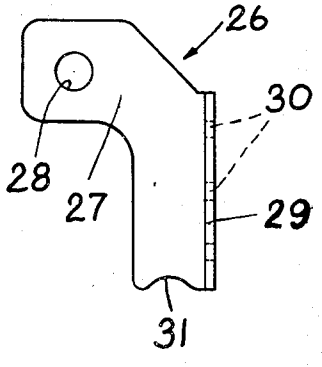
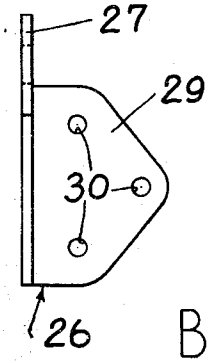


FIG. 6



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Patented Jan. 13, 1942 2,269,994

UNITED STATES PATENT OFFICE

2,269,994

COOLER CONSTRUCTION

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Application December 8, 1939, Serial No. 308,263

2 Claims. (Cl. 257—192)

This invention relates to a cooler construction. More particularly it relates to an arrangement by which a dry storage tank is held within another tank containing a cooling fluid, which dry storage tank is preferably easily removed for a variety of requirements.

In certain types of cooler construction it is the custom to place a dry storage tank adapted to contain articles to be cooled within another tank, cooling fluid and cooling coils occupying the space between the tanks. With such construction, the buoyant force of the cooling fluid tends to push the dry tank up out of the tank, and some means for holding the dry tank in place is required when this tank is not completely filled so that the weight of the material being cooled will hold the tank in place.

An object of the present invention is to provide an improved cooler construction.

A further object is the provision of a construction by which a dry storage tank is removably held within an outer tank containing a cooling fluid against the buoyant force of the cooling fluid.

According to the present invention a dry storage tank is positioned within an outer tank containing a cooling medium. The dry tank is held within the outer tank by means of bracket members which extend respectively from the two tanks and are secured to one another.

In the drawing:

Figure 1 is a view partially in section, showing the improved cooler construction;

Figure 2 is a view taken along the lines 2—2 of Figure 1 with parts removed;

Figure 3 is a side elevation of a bracket adapted to be connected with the outer tank of the cooler;

Figure 4 is an end elevation of the same;

Figure 5 is a side elevation of a bracket adapted to be connected to the inner dry tank of the cooler; and,

Figure 6 is an end elevation of the same.

The cooler of the present invention includes an outer tank or container 10 having a filler of suitable insulation 11. Resting within the outer tank on supports 12 is an inner dry tank or container 13. A plurality of refrigerating tubes 14 secured to a supporting element 15 is positioned in the space between the sides of the containers 10 and 13. A shield 16 secured to the container 10, as at 17, covers the space between the containers. A cover 18 is hinged, as at 19, on the container 10 so as to close it and the dry tank 13. During use of the cooler, a cooling fluid occupies the space between the container 10 and the tank 13 along with the coils 14. The buoyant force of the fluid tends to push the tank 13 up out of the container 10, and, consequently, some means for holding the tank within the container is required.

This means includes a bracket 20 formed desirably of sheet metal and having a main portion 21 provided with an elongated slot 22 and base portions 23 extending from opposite sides of the portion 21 and provided with slots 24. This bracket 20 is secured, as shown in Figures 1 and 2, by means of its base portions 23 to the inner side of the tank 10 by means of bolts 25 extending through the slots 24. The point of securement of the bracket 20 to the tank 10 by means of the bolts 25 is immediately below the top of the support 15 carrying the cooling coils 14, and the portion 21 of the bracket extends up over the support 15. There is also provided a bracket 26, which has a main portion 27 provided with a circular opening 28 and a base portion 29 provided with openings 30. The main portion 27 has a groove 31 at its lower edge. The bracket 26 is attached to the outer side of the tank 13 by means of bolts or rivets 32 extending through the openings 30, at least some of the rivets 32 being below the top of the support 15 for the coils 14. The portion 27 of the bracket 26 extends out over the support 15 in overlapping relationship with the portion 21 of the bracket 20, and a bolt 33 and nut 34 secure the brackets 20 and 26 to one another. Similar brackets are provided at other points between the tank 13 and the container 10. These brackets with their bolt and nut connections serve to hold the tank 13 within the container 10 against the buoyant force of the cooling fluid in the space between the tank 13 and the container 10.

When it is desired to remove the tank 13 from the container 10 for any reason, the cover 18 is opened, the shield 16 is removed, and the bolt and nut connections are removed from the brackets. Then, lifting hooks are placed under the brackets 26 in the grooves 31, and the tank 13 is removed. The elongated slots 24 in the base portion 23 of the bracket 20 allow a lateral adjustment of the tank 13 within the container 10. The elongated slot 22 in the bracket 20 allows some vertical adjustment of the tank 13 within the container 10.

It will be seen from the foregoing description, that a novel construction has been provided, by which an inner dry tank is held within an outer tank containing a cooling medium against the buoyant force of the cooling medium. The simple

construction permits a firm and dependable securement of the one tank within the other and yet allows an easy removal of the other tank.

The intention is to limit the invention only within the scope of the appended claims.

What is claimed is:

1. In an assembly comprising a first open container adapted to contain a cooling fluid, a second open container positioned within the first container and adapted to contain articles to be cooled, and a device for cooling the cooling fluid positioned between the containers and extending to a point near the open end of the containers, the combination therewith of means for holding the second container within the first container against the buoyant force of the cooling fluid, said means comprising a bracket secured to the inside of the first container adjacent its open end alongside the device and extending up over the device toward the second container, a second bracket secured to the outside of the second container adjacent its open end and extending toward the first container up over the device toward the first container in overlapping relationship with the first bracket, and a member passing through the overlapping portions of the brackets.

2. The combination specified in claim 1, the second bracket having a groove on its under side by means of which the securement of lifting means to the second bracket for removal of the second container from the first container is facilitated.

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