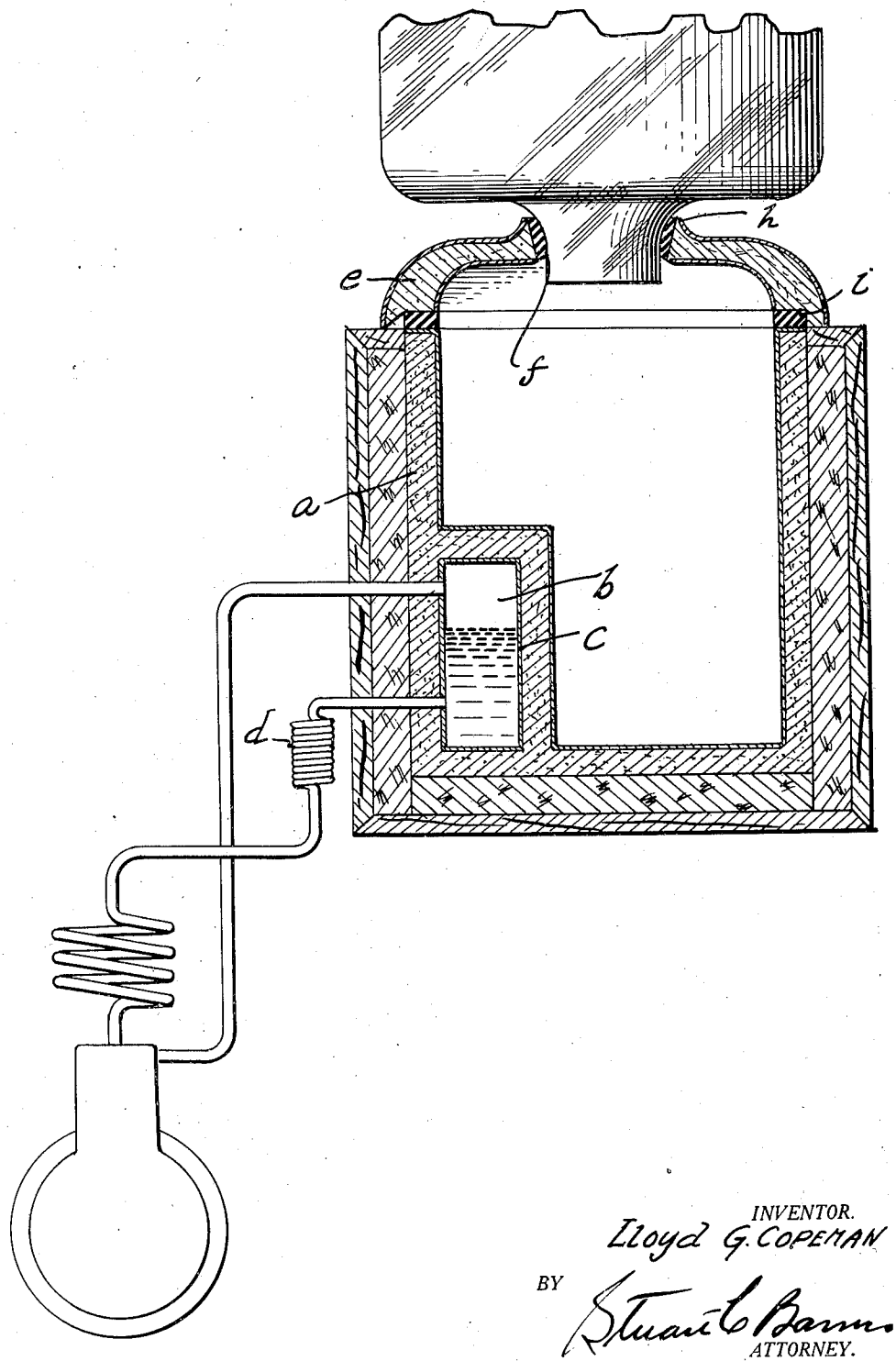
July 29, 1930. L. G. COPEMAN 1,771,433

WATER COOLER

Filed Jan. 21, 1928



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Patented July 29, 1930

1,771,433

UNITED STATES PATENT OFFICE

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WATER COOLER

Application filed January 21, 1928. Serial No. 248,313.

This invention relates to water coolers. It has for its object a water cooler which can be cast out of a ceramic material, particularly clay. However, I do not care to limit myself to a ceramic material, except where so specified in the claims, as the invention has broader phases in some connections.

The water cooler is cast in one piece for the body of the cooler and provided with an expansion chamber which, by reason of being cast as a unit with the body of the cooler, will not give the difficulties that would otherwise be present due to a great deal of the water freezing around the expansion chamber. This is due to the fact that the lowside or expansion unit is in good conductive relation with the walls of the water-containing chamber. This enables the expansion chamber to abstract heat more uniformly from the entire body of water, so that there is not the tendency to freeze over the expansion chamber as is the case in many water coolers where the temperature is fairly low.

Referring to the drawing:

The figure is a vertical section of the water cooler.

The body of the water cooler comprises a crock *a* in which is formed a lowside or expansion chamber *b* by means of interposing a metal lining *c* as a core. This lining forms a container, which is preferably the boiling chamber of a flooded system of refrigeration. The level in this chamber, inasmuch as it is cast directly in the crock, can be best controlled by a capillary tube or pigtail *d*. These are now in commercial use for controlling the levels in flooded types of systems and need no further description.

The crock is preferably cylindrical except for the protruding part in the interior of the crock, which forms the expansion chamber or lowside. The top of the crock is formed by a cover member *e*, which fits over the top of the crock and is provided with a bottle seat opening *f*. Suitable sealing gaskets *i* and *h* may be employed where the cover fits on the top of the crock and at the bottle seat opening.

This crock, together with the cover on the top, may be made of oxy-chloride cement such as I have described in my prior Patents No. 1,644,987 and 1,644,988, but preferably I intend to use a fired ceramic material. Suitable clay can be molded to provide the crock and the cover and also the lowside included in the crock. This clay is then put in a suitable kiln and fired to provide a glaze on the outside. This may be done in the customary way and this will provide a waterproof layer on the clay so as to make the same impervious to water, and hence very suitable to act as a water container.

It will be understood that the outer portion of the container or crock member may be formed of artificial stone, such as oxy-chloride cement, and an inner crock formed of fired ceramic material, as indicated in the drawing. Whether the entire crock is formed of an artificial stone, adapted to set without firing, or a combination of the two, is not particularly important in the present invention, the main point being that the walls of the crock are formed of material having good conductivity and positioned in heat conducting relation with the refrigerant circulating unit, and that a portion of the wall of said crock or crocks is intended to receive the refrigerant circulating unit whereby the material of the crock is interposed between the cooling unit and the liquid to be cooled.

What I claim is:

1. A water cooler, comprising a crock of stone-like material containing an inwardly projecting portion enclosing a gas tight expansion chamber for containing a refrigerating medium, and means for conveying refrigerating medium to and from said chamber.

2. A water cooler, comprising a crock of ceramic material provided with a suitable glaze on the interior and including a portion projecting inside and forming a gas tight boiling chamber, and means for conveying refrigerant to and from said chamber.

3. A water cooler of the type utilizing mechanical refrigeration, comprising a unitary container for receiving the liquid to be dispensed, the walls of said container being of a relatively high heat conducting material and relatively thick to form a holdover unit, and

a relatively small portion of the wall of said container being provided with an inwardly extending projection for receiving a cooling unit of the flooded type for receiving and circulating the refrigerant, said walls tending to absorb the heat units from said isolated cooling unit whereby to abstract heat substantially uniformly from the entire body of water.

4. Refrigerating mechanism of the liquid dispensing type, comprising a container having interial walls formed of a fired ceramic material, a portion of the wall of said container projecting inwardly and shaped corresponding to a cooling unit for receiving and circulating a volatile refrigerant, and a heat conducting material surrounding said cooling unit for separating the same from the internal walls of the container.

5. Refrigerating mechanism of the liquid dispensing type, comprising a container for receiving the liquid to be dispensed, the walls of said container being of a heat conducting material and relatively thick, and a relatively small portion of the wall adjacent a lower corner of the container, extending inwardly, a cooling unit for receiving a mass of liquid volatile refrigerant positioned in heat conducting relation with said inwardly extending portion of said wall and being separated from the contents of the container by said wall.

In testimony whereof I have affixed my signature.

LLOYD G. COPEMAN.