

W. W. LANGHAM.

COOLER.

APPLICATION FILED MAY 9, 1910.

988,882.

Patented Apr. 4, 1911.

2 SHEETS—SHEET 1.

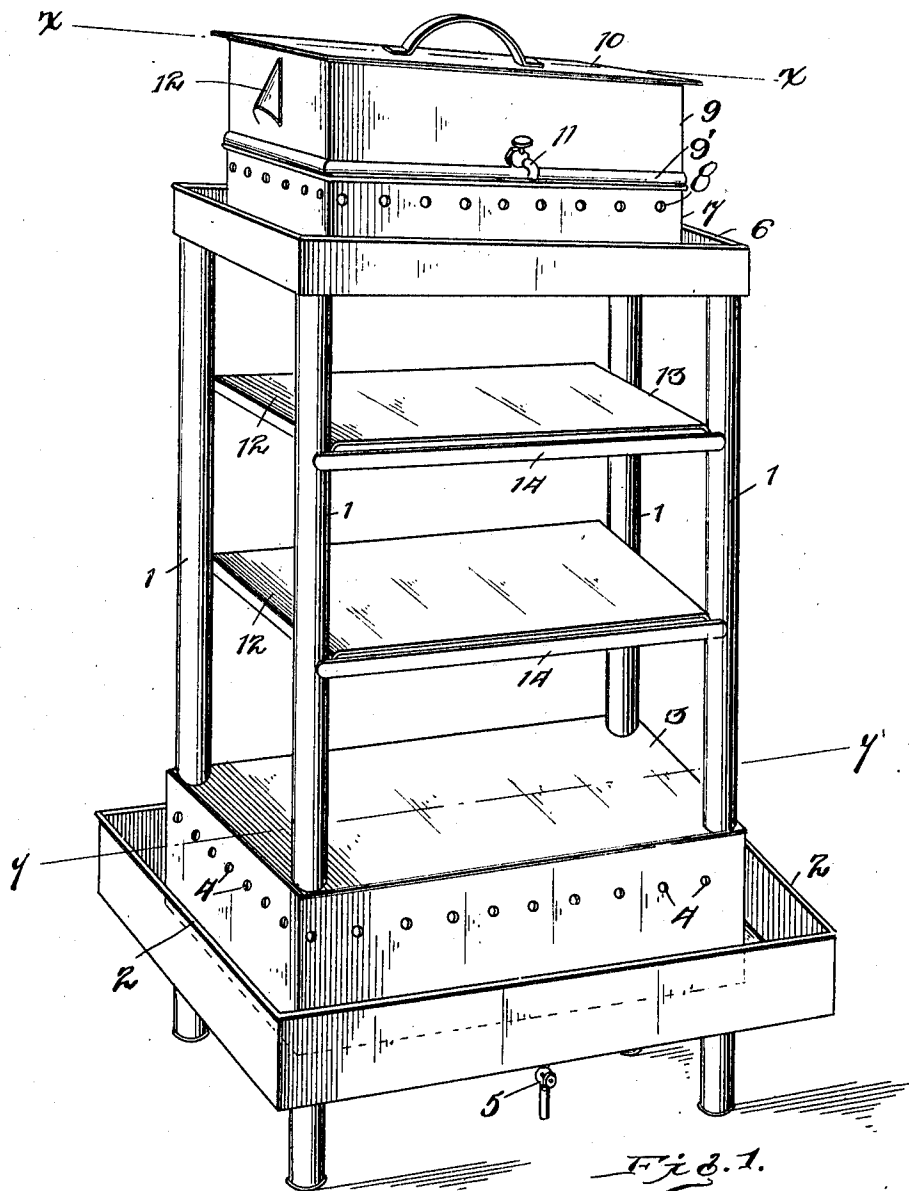


Fig. 1.

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Witnesses

J. Ware

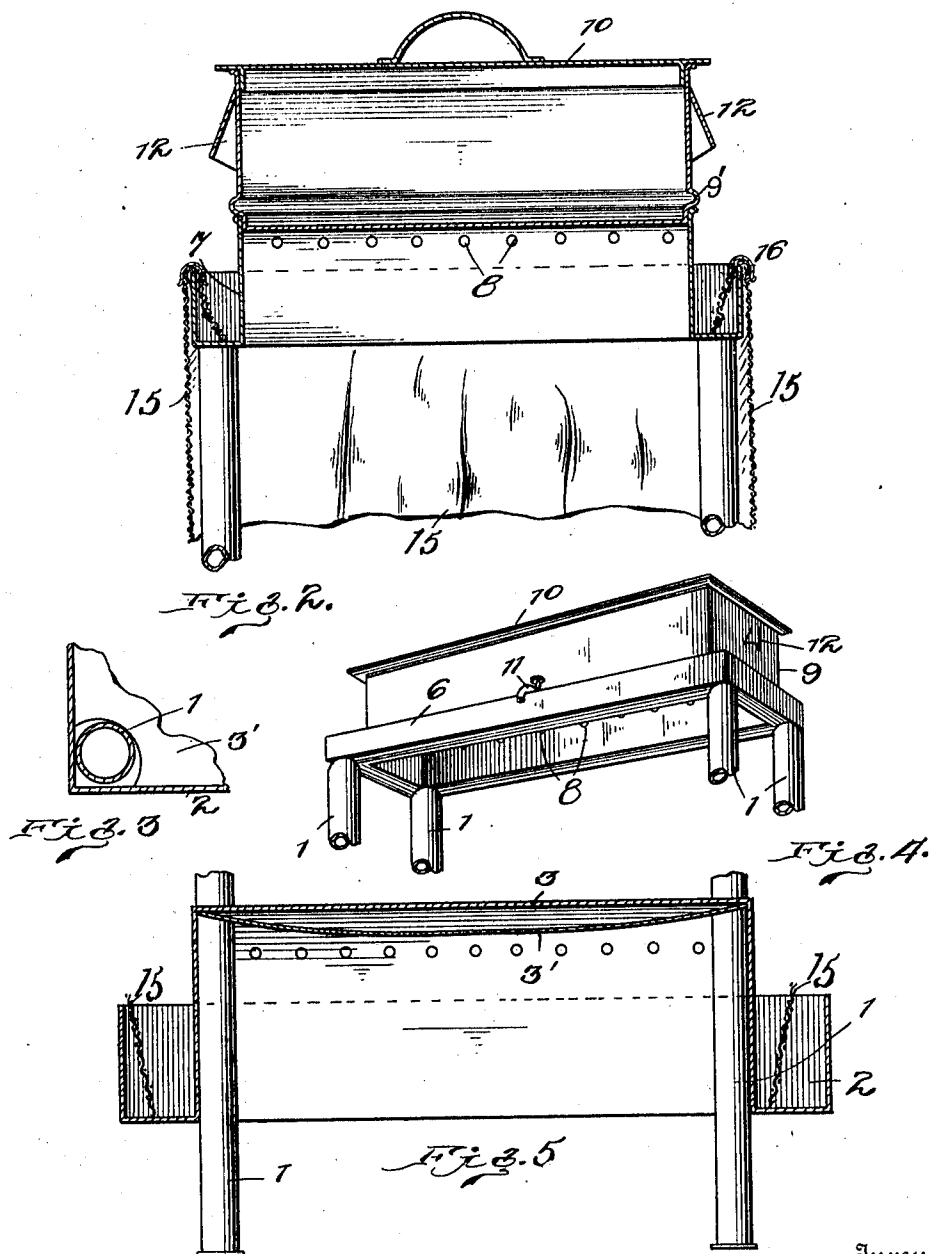
Jr. L. M. Cathran.

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UNITED STATES PATENT OFFICE.

WILLIAM WILEY LANGHAM, OF CALDWELL, TEXAS, ASSIGNOR OF ONE-HALF TO T. F. GILLEY, OF CALDWELL, TEXAS.

COOLER.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM WILEY LANGHAM, a citizen of the United States of America, residing at Caldwell, in the county of Burleson and State of Texas, have invented certain new and useful Improvements in Coolers, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to apparatus for keeping perishable articles cool, and has especial reference to apparatus for keeping milk and water cool in which the contents of the cooler are preserved by reducing the temperature by the evaporation of water.

The invention has for its object to provide an improved apparatus of this character by means of which perfect ventilation and air circulation will be obtained, and the articles to be preserved contained in the cooler kept cold and absolutely free from dampness.

Another object of the invention is to provide a cooler of this kind by means of which the entire surface of the water tank is in direct contact with the inside cold air, thereby automatically keeping the water in the tank cold.

The invention further has for its object to keep the cold water in a cooler from being exposed to the outside warm air.

The invention further has for its object to maintain a constant circulation of cool water through the cooler.

The invention further has for its object to prevent warm air from rising into the cooler.

With these and other objects in view, the invention consists in an improved cooling apparatus and in details thereof, constructed and arranged as hereinafter set forth and claimed.

Referring to the accompanying drawings: Figure 1 is a perspective view of a cooler constructed in accordance with this invention. Fig. 2 is a view of the upper portion of the cooler, partly broken away, and in vertical section on the line $x-x$ of Fig. 1. Fig. 3 is a detail view in horizontal section of a corner of the structure. Fig. 4 is a detail view in perspective, partly broken away, of a portion of the upper part of the cooler. Fig. 5 is a view in vertical section of the lower portion of the cooler on the line $y-y$ of Fig. 1.

The cooler, constructed in accordance with this invention, consists of an open upright

structure, formed with vertical posts or uprights 1, preferably of metal and hollow for the sake of lightness, and having its lower portion mounted on and elevated above the lower ends of the uprights 1, and preferably formed of sheet metal bent up to form an outside gutter 2, and an inner hollow elevated central portion, 3, open at its bottom and having its sides provided with air-ventilating holes, 4. The gutter portion 2 is provided with a suitable discharge pipe, 5, having a cork or valve, 5', by means of which water collected in the gutter 2 may be drawn therefrom. At the upper ends of the uprights 1 is mounted a gutter portion, 6, preferably formed of sheet metal, and having a hollow central elevated chamber 7, having its sides provided with air-circulating holes, 8, the top and bottom of the chamber 7 being open, and a water-cooler, 9, having a bead, 9', at its lower end, whereby the water tank 9 may be seated in the top of the chamber 7. The water tank 9 is provided with a removable cover, 10, and a faucet 11, and suitable handles 12, by means of which the tank 9 may be lifted out of the chamber 7.

Secured to the posts 1 at intervals between the upper and lower portions of the structure, are shelves 13 for supporting the things to be cooled, each shelf 13 being provided at its edge with a gutter 14 for carrying off any water or other liquid from the shelf. The entire structure from the top gutter to the bottom gutter is covered with a curtain 15, of suitable material which is a good conductor of water, the upper edge of said curtain extending over the edge of the top gutter and depending in the same and suitably secured thereto by clamps 16, or other suitable means. The upper gutter contains only enough water at one time to keep the curtain around the cooler wet, so there will be only a very small body of water exposed in the upper gutter to the open air. The curtain will draw by capillary attraction the water out of the upper gutter to the lower gutter and keep the water constantly circulating. The lower central portion 3, the top of which forms a shelf, is preferably covered with pasteboard, 3', to keep it cool and prevent it from becoming warmed by the outside warm air.

It will be seen that by means of a cooler constructed as hereinbefore described, the circulation of water over the curtain will

keep the interior of the structure cool, and by means of the ventilating air holes 4 and 8 in the bottom and top hollow portions of the structure, in conjunction with the circulation of water over the curtain, a constant circulation of cooled air will be maintained and warm air prevented from rising in the cooler, the cold air descending in the cooler.

It will be seen that by means of this invention perfect ventilation and circulation of air is maintained, keeping the contents cold and free from dampness, and keeping the contents of the water tank cold.

By means of this invention, also, the possibility of warm air rising from warm water in the lower gutter to the inside of the cooler is prevented. By discharging water from the lower gutter, the flow of water over the curtain is aided and prevented from becoming blocked.

Having described the invention, I claim:
In a cooler of the character described, an

elevated openwork structure, consisting of posts, a series of shelves mounted on said posts, the lowest shelf formed of a hollow air box having an open bottom and air holes in its sides, and a gutter outside of said air box, said box and gutter being elevated above the lower ends of said posts, a hollow air box, open at top and bottom, with air holes in its sides and an outside gutter, mounted on the top of said posts, a water tank seated in the top of said air box, means for feeding water from the tank to the upper trough and a curtain inclosing said structure and serving to cause a circulation of water from the top gutter to the lower gutter.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

WILLIAM WILEY LANGHAM.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."