(No Model.)

D. H. LOGAN.

COMBINED LIQUID COOLER AND WATER FILTER.

No. 305,523. Patented Sept. 23, 1884.

FIG. 1.

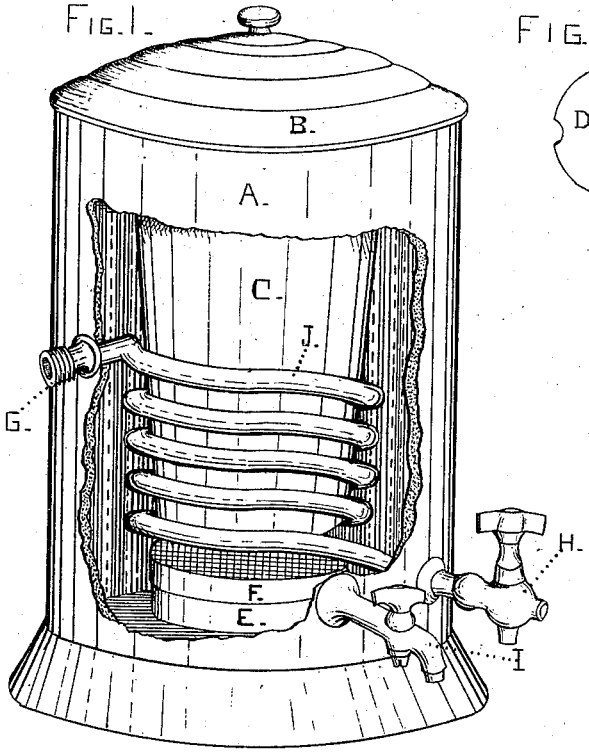


FIG. 3.

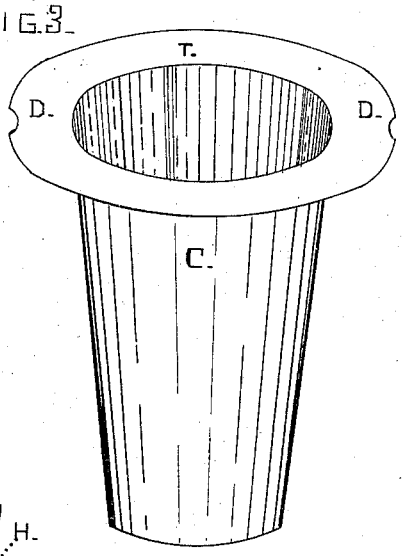


FIG. 2.

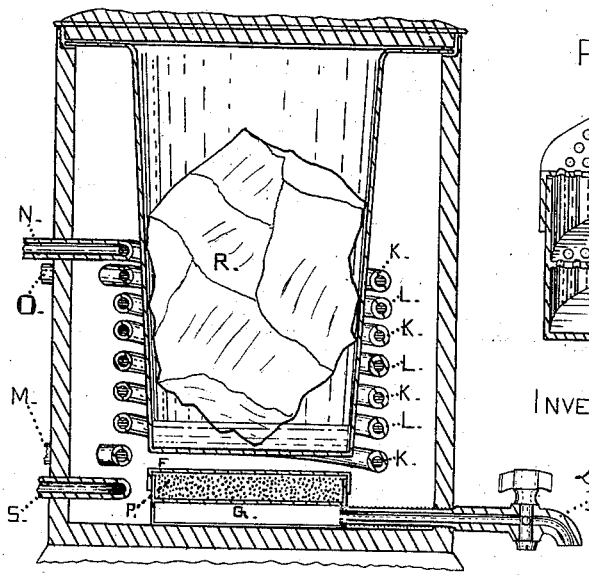
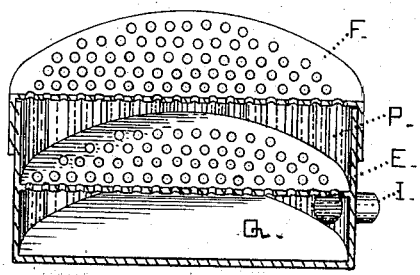


FIG. 4.



INVENTOR,

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WITNESSES,

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UNITED STATES PATENT OFFICE.

DANIEL HUGENS LOGAN, OF SAN FRANCISCO, CALIFORNIA.

COMBINED LIQUID-COOLER AND WATER-FILTER.

SPECIFICATION forming part of Letters Patent No. 305,523, dated September 23, 1884.

Application filed September 10, 1883. (No model.)

To all whom it may concern:

Be it known that I, DANIEL HUGENS LOGAN, a citizen of the United States, residing in the city and county of San Francisco, and State of California, have invented a new and useful Combined Liquid-Cooler and Water-Filter, of which the following is a specification.

My invention relates to improvements in "combined liquid-coolers and water-filters," where the ice is placed in a central receiver and the ice-water chamber surrounds the same, and any suitable coil for conveying liquids is placed so as to receive the ice-chamber. It will be more readily understood by reference to the accompanying drawings and the letters marked thereon.

Figure 1 is a perspective view with a portion of the outside wall broken out to show the arrangement of the ice-chamber, coil of pipe and filter, and the connections of the pipes. Fig. 2 is a transverse sectional view of the same cut vertically through the center. Fig. 3 is a perspective view of the ice-receiver shown separately from the other parts, and Fig. 4 shows one mode of constructing the filter. The following is the construction of the same.

A represents the outside of my combined liquid-cooler and water-filter; B, the top or cover of the same; C, the ice-receiver; D, the catch-notches in the ice-receiver rim; E, the filter; F, the cover of the filter; G, the outer end of the coil or pipe, with screw to connect with the beer-barrel or other supply; H, the coil discharge-faucet; I, the ice-water-discharge faucet, leading from the filter. J represents the single coil in Fig. 1. K and L represent two coils shown in Fig. 2. M and S represent the discharge of the pipes or coils K and L shown in Fig. 2. N and O represent the receiving ends of the coils K and L, also shown in Fig. 2. P represents the sponge or other filtering material. Q represents the supply-chamber. R represents the lump of ice in the ice-receiver. T represents the upper rim of the ice-receiver.

The following is the construction and operation of the same. I construct the main tank or can of sheet metal or any suitable material, leaving sufficient space between the outer and inner wall to form a non-conducting chamber, of charcoal or other suitable material, and surrounding the whole to prevent the absorption of heat. The cover B is also filled with a non-conducting material, as is also the bottom of the can, forming complete insulation. I form the ice-receiver C, as shown in Fig. 3, tapering toward the bottom, so that the ice as it melts and settles down conforms to the sides of the same. I place the coiled pipe so as to allow the free insertion of the ice-receiver in the center and upon the bottom or floor of the tank. I place the filter E, F, P, Q, and I a short space below the bottom of the ice-receiver C, which is suspended by the rim. It is held down in the water by means of any suitable catches, although I generally employ a small sheet-metal catch attached to the top of the outer can, and the catch-notches D allow the rim to drop in, and by a slight turn the rim is thrown under the same and the receiver is held firmly down. The taper of the ice-receiver holds the ice up out of the water.

In Fig. 2 two separate coils of pipe are shown for allowing two different liquids to pass through the cooler at the same time. Thus beer, cider, lemonade, ice-water, or any required number of different fluids may be passing through the cooler at the same time.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In combined liquid-coolers and water-filters, the water-tight tapering ice-holder C, in combination with the surrounding tank or barrel A, or other suitable tank or barrel, having the filter E, F, P, Q, and I arranged at the bottom, for the purpose of keeping the water resulting from the melting ice from contact with the drinking-water in the surrounding chamber, while the ice in the holder conforms to the sides of the ice-holder C and absorbs the heat from the water directly through the thin sheet metal comprising the wall of the ice-holder, constructed and operated substantially as and for the purposes set forth.

DANIEL HUGENS LOGAN.

Witnesses:

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