

(No Model.)

D. H. LOGAN.

COMBINED LIQUID COOLER AND WATER FILTER.

No. 305,523.

Patented Sept. 23, 1884.

FIG. 1.

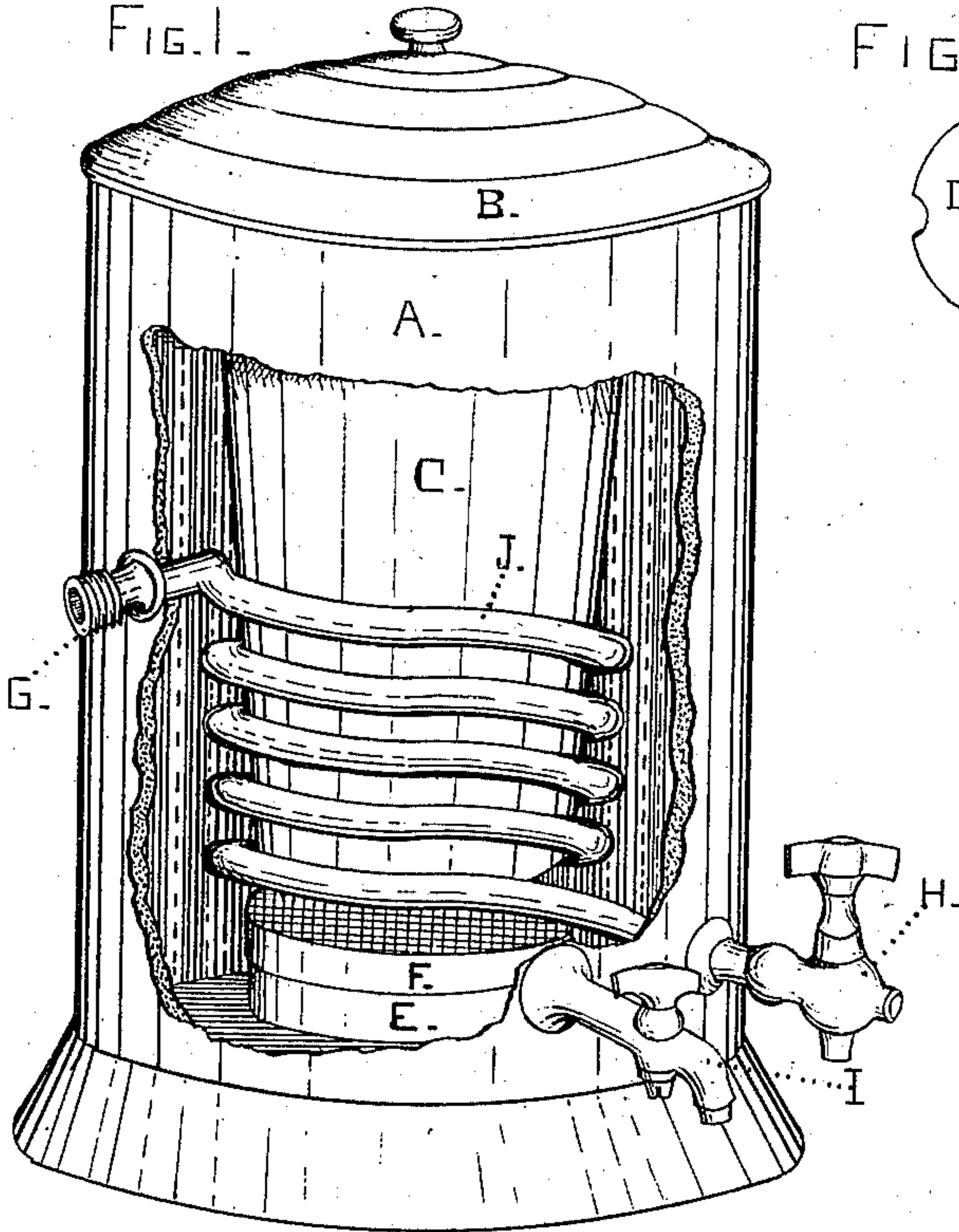


FIG. 3.

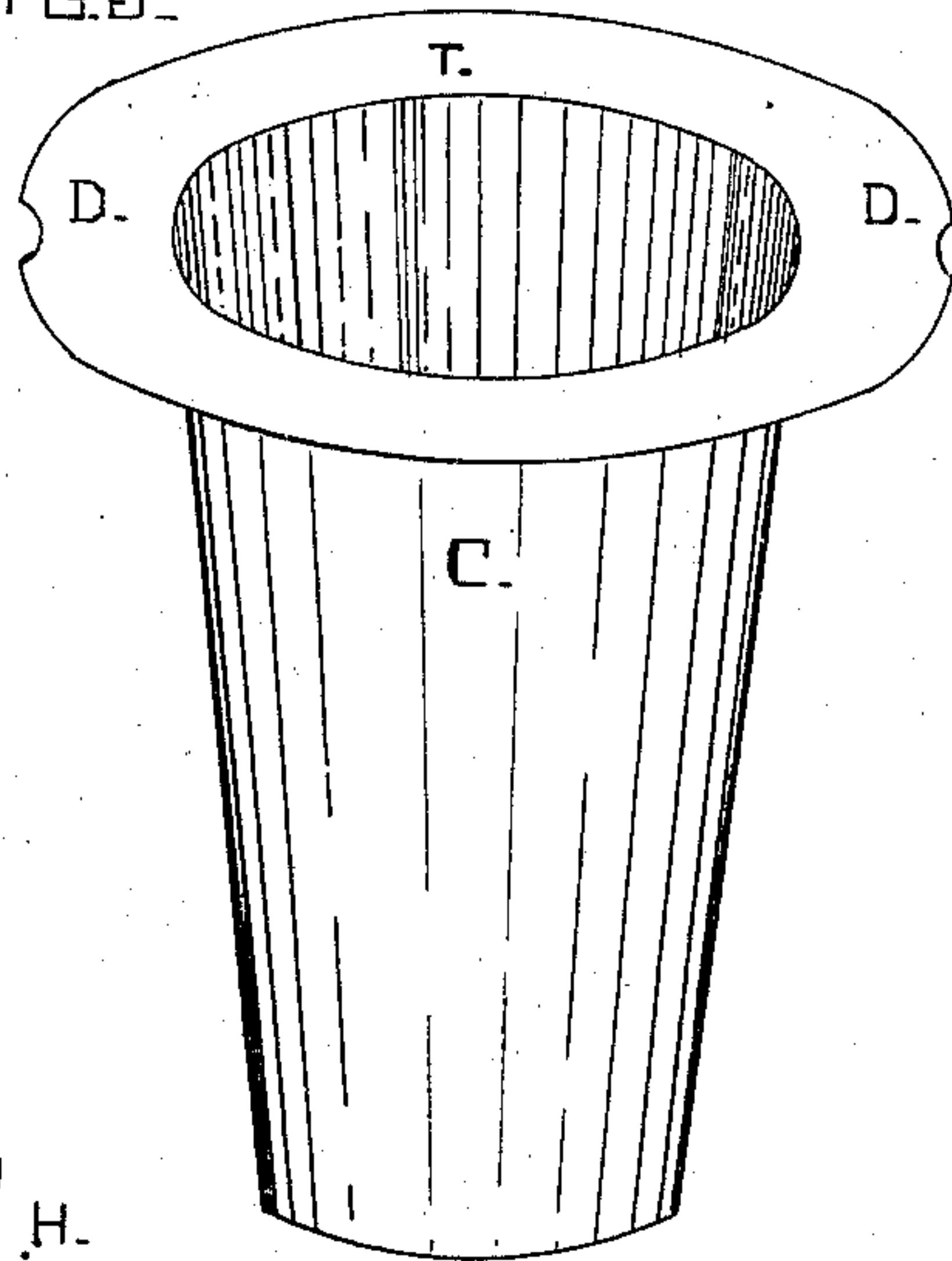


FIG. 2.

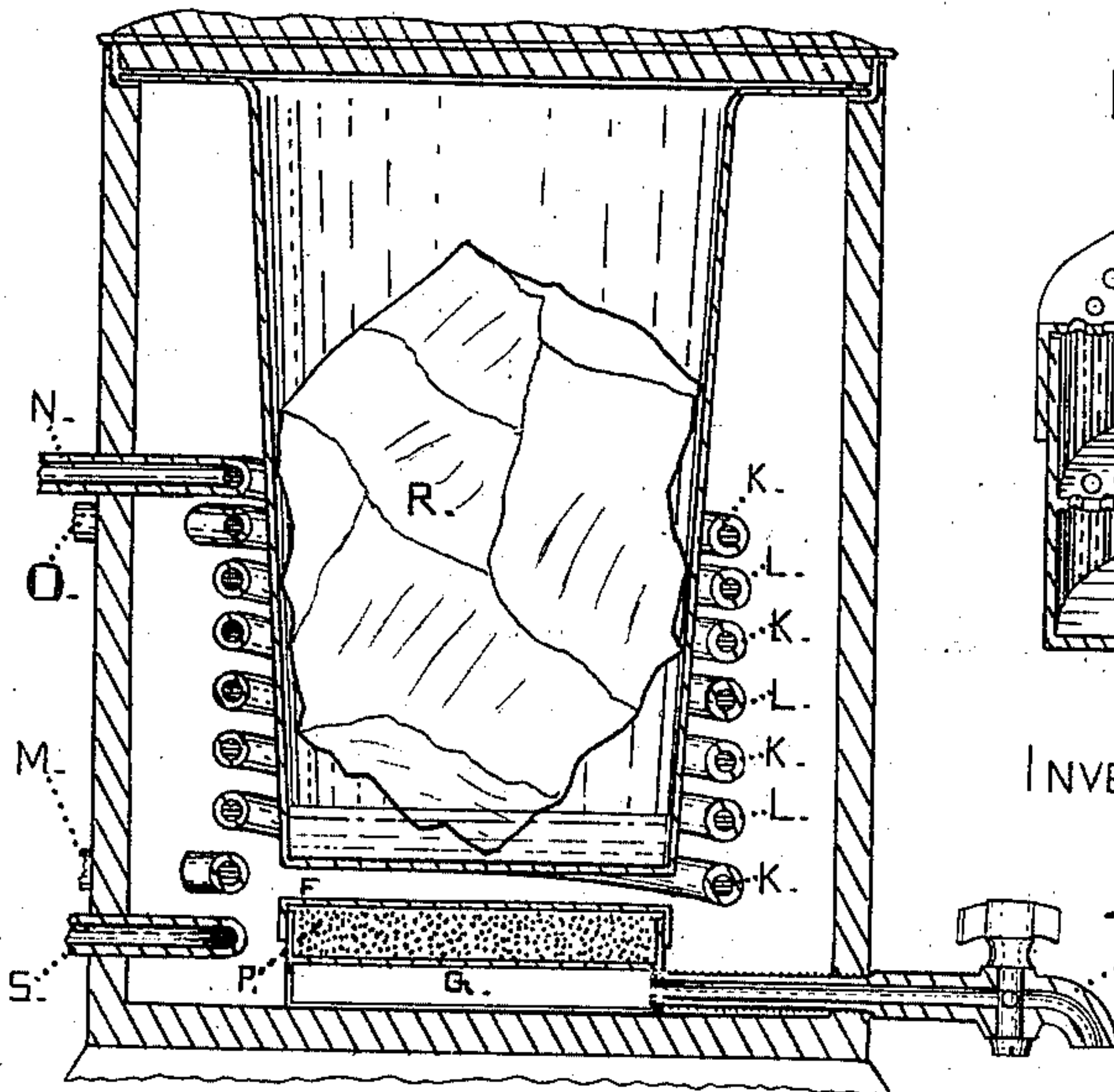
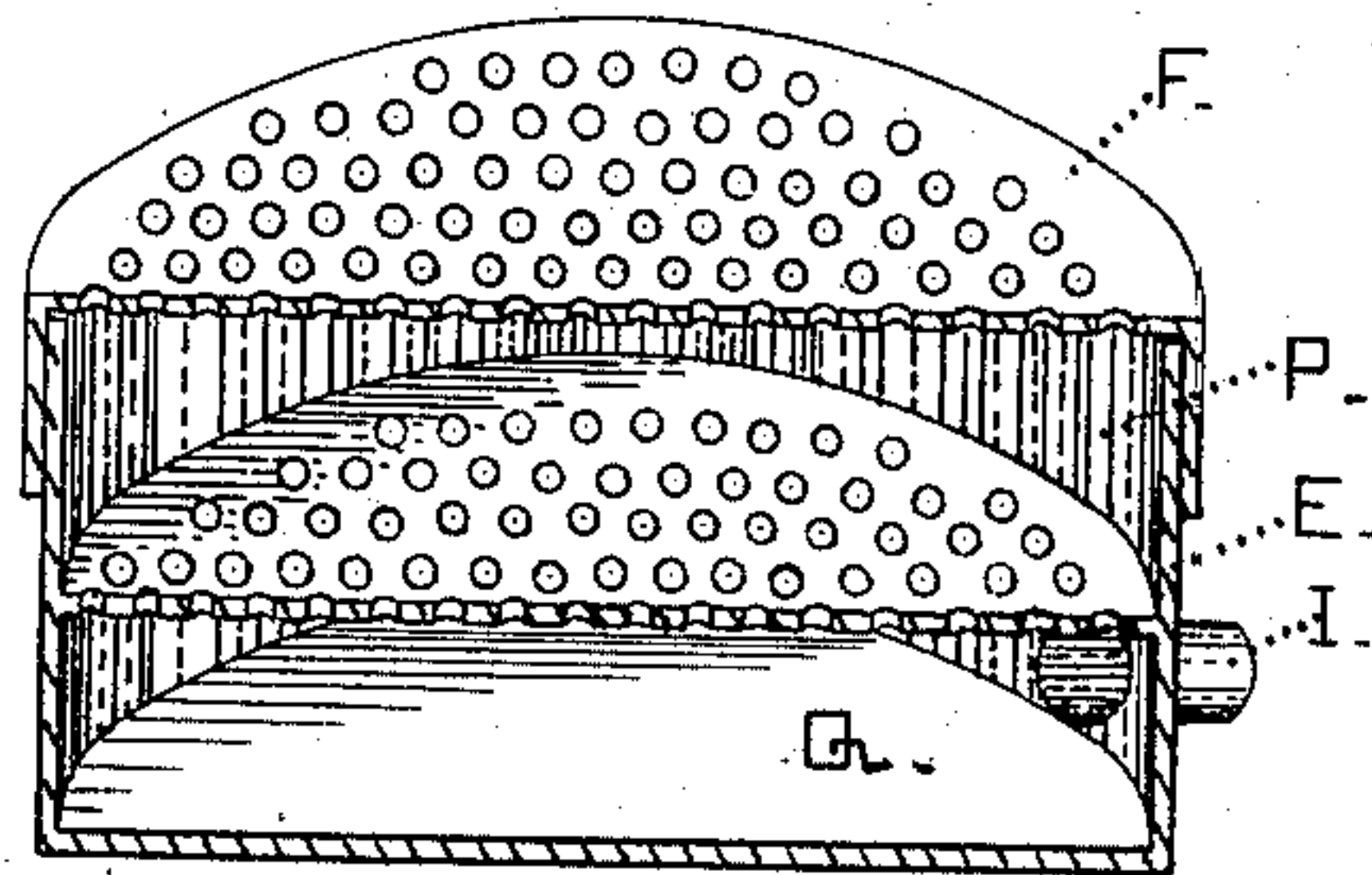


FIG. 4.



INVENTOR,

Daniel H. Logan.

WITNESSES,

John H. Redstone.

L. E. Redstone.

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:

JOHN H. REDSTONE,
L. E. REDSTONE.