

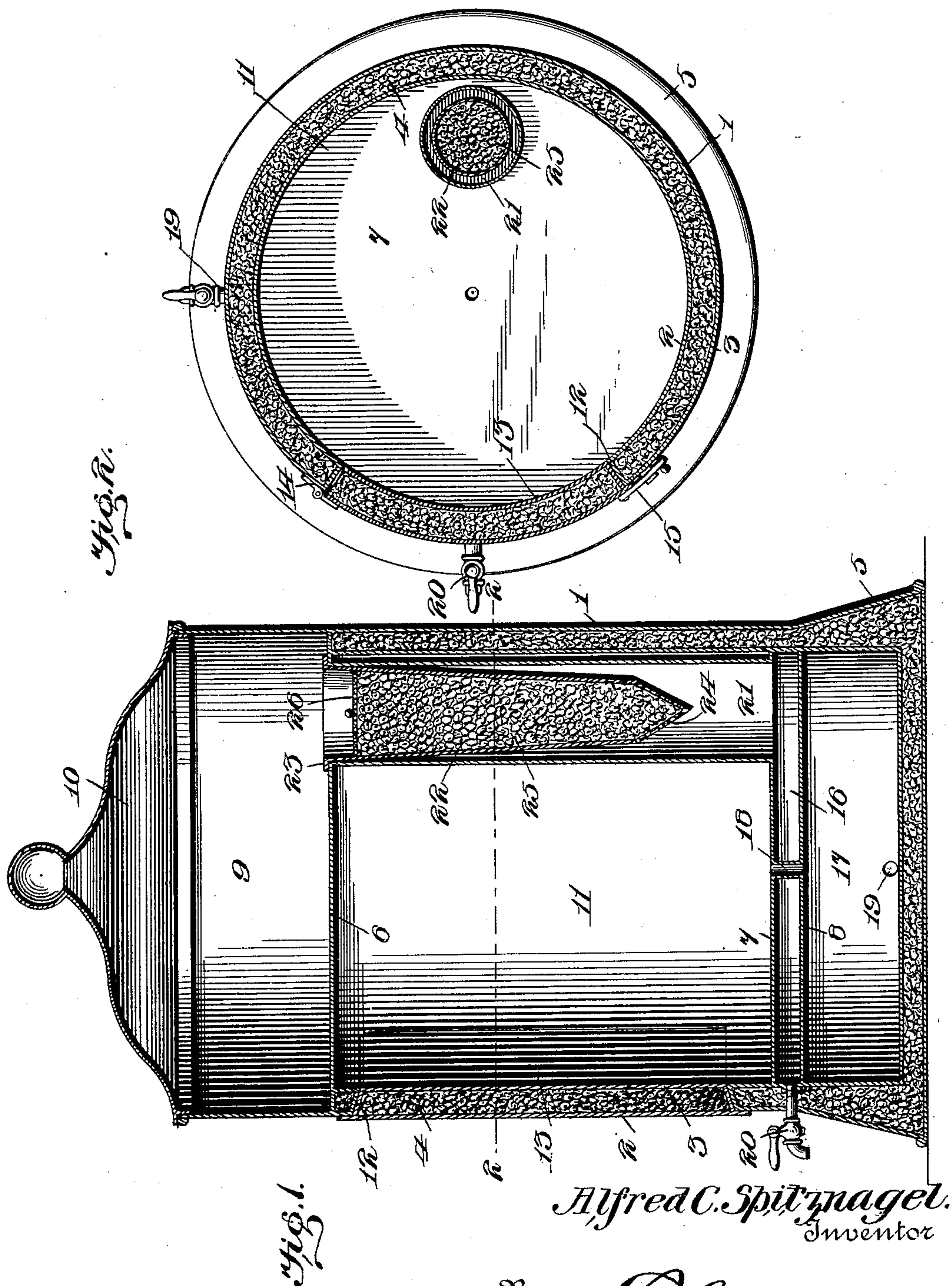
No. 669,127.

Patented Mar. 5, 1901.

A. C. SPITZNAGEL.
COMBINED FILTER AND REFRIGERATOR.

(Application filed Sept. 11, 1900.)

(No Model.)



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COMBINED FILTER AND REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 669,127, dated March 5, 1901.

Application filed September 11, 1900. Serial No. 29,724. (No model.)

To all whom it may concern:

Be it known that I, ALFRED C. SPITZNAGEL, a citizen of the United States, residing at Galena, in the county of Cherokee and State of Kansas, have invented a new and useful Combined Filter and Refrigerator, of which the following is a specification.

This invention relates to a combined filter and refrigerator designed for use as a water-cooler in which the water is thoroughly filtered and also as a refrigerator for the storage and preservation of food articles.

To this end the invention contemplates an improved structure, preferably in the form of a water-cooler, embodying means for completely isolating the filtered water from the chamber or compartment containing the food articles, so that the filtered water will be kept free from germ contamination and also free from taint.

A further object is to provide a novel disposition and arrangement of parts, whereby the ice may be used most effectively not only to refrigerate the food articles, but also cool both the filtered and unfiltered water.

A further object is to so construct and arrange the parts that the same may be readily removed for cleaning or repair.

With these and many other objects in view, which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

While the invention is necessarily susceptible to some modification without departing from the spirit or scope thereof, still the preferred embodiment of the improvements is shown in the accompanying drawings, in which—

Figure 1 is a vertical sectional view of a combined water-filter and refrigerator constructed in accordance with the present invention. Fig. 2 is a cross-sectional view on the line 2 2 of Fig. 1.

Like numerals of reference designate corresponding parts in both figures of the drawings.

In carrying out the invention the apparatus is constructed, preferably, in the form of an ordinary water-cooler, comprising an up-

right cylindrical casing 1, preferably constructed with a double wall consisting of the inner and outer shells 2 and 3, respectively, the space between which is filled with charcoal, sawdust, or equivalent non-conductive packing 4, which serves to better protect the apparatus from exterior temperature influences. The said casing is preferably constructed with a widened base portion 5, which is also preferably of a double-wall formation, and within the interior of the casing are arranged a plurality of horizontal or transverse partitions 6, 7, and 8, respectively, the partition 6 being the uppermost one and arranged above the horizontal center of the casing 1 to provide within the open-top portion thereof a water-reservoir 9, which when filled with water is designed to be covered by the cover 10, which is removably fitted in the open upper end of the casing and may be readily removed whenever it is necessary to replenish the water within the said reservoir 9. The other horizontal or transverse partitions 7 and 8 are spaced a material distance below the said upper partition 6 to provide in the interval between an enlarged refrigerating-compartment 11, which is formed at one side with a door-opening 12, adapted to be covered and uncovered by a door 13, preferably hinged to the casing-wall, as at 14, and secured in its closed position by a suitable fastening or latch 15, as plainly illustrated in Fig. 2 of the drawings. It will of course be understood that any suitable door may be fitted to the casing in connection with the refrigerating-compartment 11 to permit of ready access to the latter for the purpose of storing food articles therein, as well as for replenishing the ice, it being understood that any desired quantity of ice is designed to be placed within the main compartment 11 upon the floor thereof, said floor preferably consisting of the partition 7, which is paired with the adjacent parallel partition 8 to provide therebetween an intervening filtered water-chamber 16. The filtered-water chamber 16 extends transversely entirely across the interior of the casing within the bottom portion thereof, and by reason of the upper wall of said chamber constituting the bottom of the main refrigerating-compartment 11 the said

chamber is disposed directly beneath the refrigerating-compartment, and the filtered water within the chamber receives the direct cooling influence of the ice stored within the compartment 11.

The lowermost partition 8, which is paired with the partition 7 to close in the intervening filtered-water chamber 16, is spaced a sufficient distance above the main bottom of the casing to provide a bottom drain-chamber 17, which is in communication with the main refrigerating-compartment 11 through a drain-tube 18, extending across the chamber 16 and fitted at its ends in the partitions 7 and 8, respectively, and the drip from the refrigerating-compartment which accumulates within the chamber 17 may be drawn off from time to time through a draw-off cock 19, fitted to the base portion of the casing and arranged to communicate with the said drain-chamber 17. As for the filtered water which accumulates within the filtered-water chamber 16 the same may be drawn off for use from time to time through the medium of an ordinary faucet 20, fitted in the side of the casing and in communication with the said filtered-water chamber 16.

To provide for the circulation of water from the top reservoir 9 into the filtered-water chamber 16, as well as for the filtration of the water during the circulation, the said reservoir 9 and chamber 16 are connected by an open-ended filter-flue 21, which extends vertically through the main refrigerating-compartment 11, in proximity to the wall thereof, and fitted at its upper and lower ends, respectively, in the partitions 6 and 7, so as to communicate only with the reservoir 9 and the filtered-water chamber 16. The said open-ended filter-flue 21 is of a sufficient size to removably receive therein an elongated filter-cage 22. The said filter-cage 22 is preferably in the form of a tube, nearly equaling the length of the filter-flue 21, within which it is arranged, and provided with an open upper end having an annular peripheral hanger-flange 23, adapted to engage the upper end of the flue 21 where it connects with the partition 6 to provide for suspending the said cage 22 vertically within the flue 21. The tube constituting the flue-cage 22 preferably tapers downwardly and is provided with a perforated conical lower end 24, through which the filtered water is permitted to escape after passing through the strata of packing or filtering material 25, which is

filled into the cage or tube 22, substantially the entire length thereof.

A strainer or strainer-plate 26 is removably fitted within the open upper end portion of the filter cage or tube 22 on top of the filtering material 25 therein to secure an initial straining of the water before it enters into the strata of packing or filtering material. By removing the top cover 10 of the casing the filter-cage 22 may be removed and replaced whenever necessary for cleaning or recharging with the filtering material.

It will be observed that the relation of the different parts of the apparatus causes the water at all points within the casing or cooler to be exposed to the cooling influences of the ice, while at the same time the said water is completely isolated from the main refrigerating-compartment, and therefore cannot be contaminated or tainted by odors therefrom.

From the foregoing it is thought that the construction, use, and many advantages of the herein-described combined water-filter and refrigerator will be readily understood without further description, and I will have it understood that various changes in the form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

A combined refrigerator and filter comprising within a single casing a water-reservoir, and a filtered-water chamber spaced apart and forming an intervening refrigerating-compartment between their opposite adjacent walls, a filter-flue extending through the refrigerating-compartment and communicating at opposite ends with the water-reservoir and filtered-water chamber, said filter-flue being located at one side of the refrigerating-compartment, but inclosed on all sides thereby, a bottom drain-chamber located beneath the filtered-water chamber, and a drain-tube extending from the refrigerating-compartment through the filtered-water chamber to the drain-chamber, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ALFRED C. SPITZNAGEL.

Witnesses:

W. B. HOUD,
T. T. BURR.