

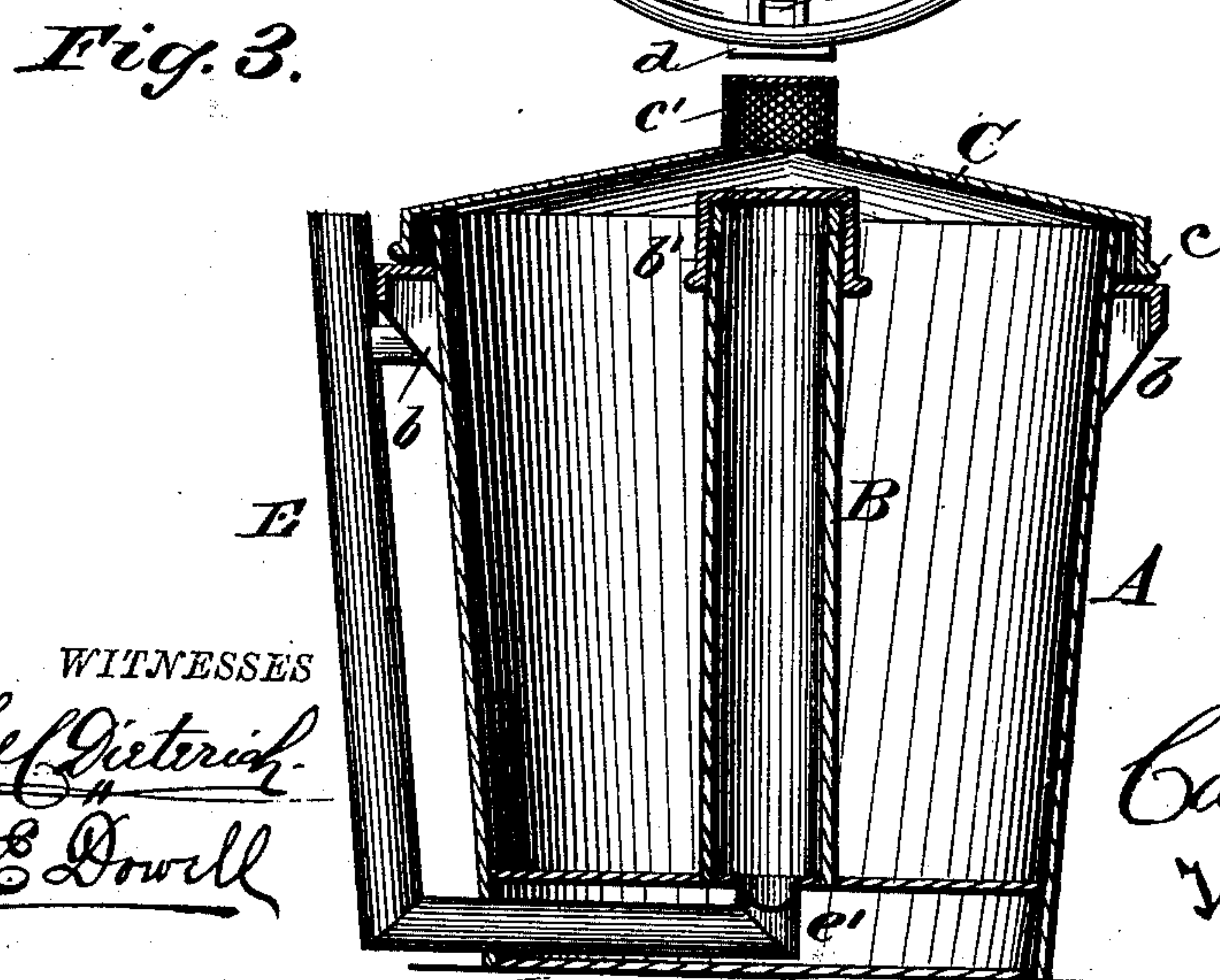
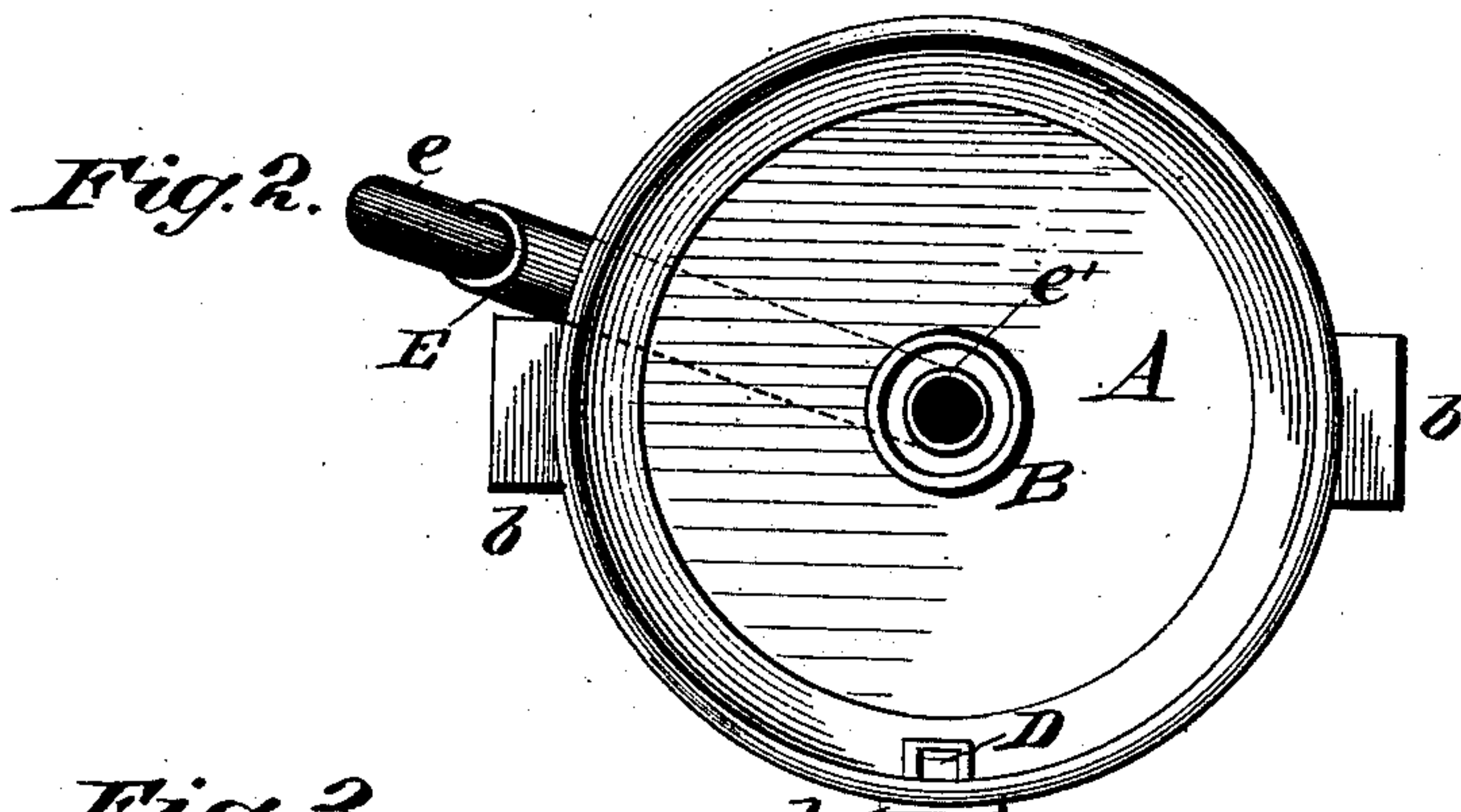
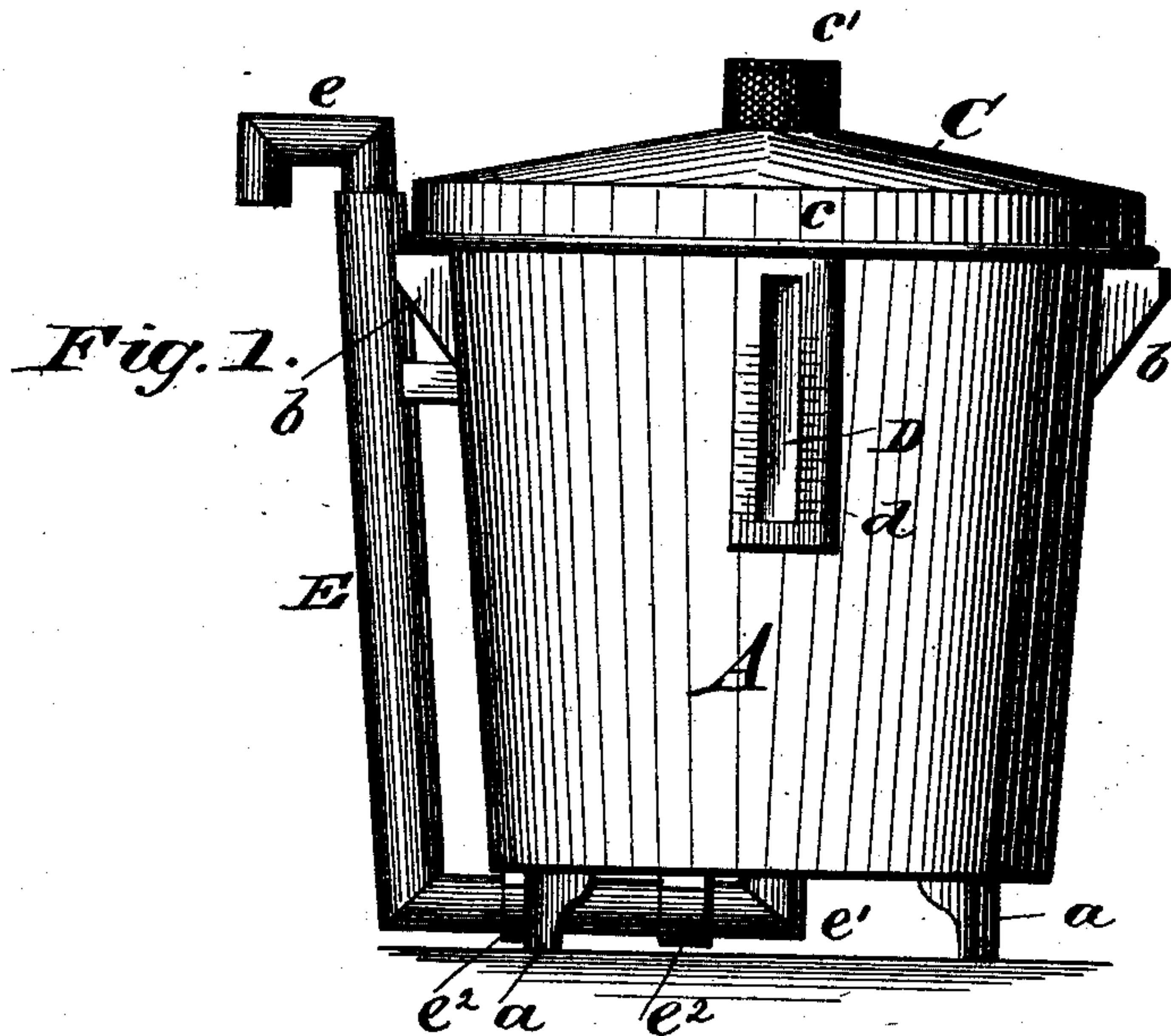
(No Model.)

C. L. HALL.

MILK CAN.

No. 347,174.

Patented Aug. 10, 1886.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

CASSIUS L. HALL, OF YPSILANTI, MICHIGAN.

## MILK-CAN.

SPECIFICATION forming part of Letters Patent No. 347,174, dated August 10, 1886.

Application filed December 19, 1885. Serial No. 186,177. (No model.)

*To all whom it may concern:*

Be it known that I, CASSIUS L. HALL, of the city of Ypsilanti, in the county of Washtenaw and State of Michigan, have invented certain new and useful Improvements in Milk-Cans; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a side view of my improved can. Fig. 2 is a plan view of the same with the cover removed. Fig. 3 is a vertical central section of the can.

The invention relates to improvements in milk-cans, the object being to cause a circulation of air through the can by means of the animal heat of the new milk, and, by means of the current thus produced, to aid in cooling the milk.

The invention consists, essentially, in a can provided with a central vertical air-tube running therethrough, and connected at its lower end with a similar tube which rises outside the can, so that the air in the first tube, being heated by the warm milk, will rise and cause an ascending air-current till the milk is cool.

Referring to the accompanying drawings, A designates a milk-can supported on the feet *a*, for convenience in fitting the necessary tubing.

B is a central vertical tube rising from the bottom of the can to a point above its upper edge, as shown.

*b b* are lugs on the outside of the can, adjacent to its upper edge, and arranged to support the rim or flange *c* of the cover C. The said cover rises and converges toward its center, and has secured to it there a cylindrical cap, *c'*, having an imperforate top, and sides made of perforated metal or wire-gauze. When the can is not in use, the top of the tube B may be covered by a cap, *b'*, as shown.

D is a vertical slot on the side of the can, covered by glass or mica, and having a graduated scale, *d*, on its side, so that the quantity of milk in the can may be easily ascertained. The top is made of larger diameter than the can, for a purpose hereinafter explained.

E is a tube rising along the side of the can to a point above the upper edge of the same, and having preferably a piece of tubing, *e*, bent into two elbows, slipped into its upper end. The object of this double elbow, which has its mouth downward when in place, is to prevent dirt or dust from entering the tube E. The lower part, *e'*, of the tube E is bent horizontally and passes beneath the can. Its end then is bent upward and communicates through the bottom of the can with the lower end of the tube B. The tube E is held to the body of the can by one or more stay-pieces, *e''*, as shown. The tube B is preferably of larger diameter than the tube E, to increase the cooling-surface, and so that a larger amount of cool air will be drawn in the can and upward therefrom; but, if desired, the tubing may all have the same caliber, so that a tube may be run through the bottom of and fitted to a can of ordinary construction.

If desired, the can may have two bottoms, and the bend of the pipe E run through its side between the same, as shown in Fig. 3.

The milk while warm is poured into the can and surrounds the tube B. The natural heat of the milk warms the air in said tube and causes an ascending current, which is kept up as long as the milk is warm by air flowing in through the tube E.

The perforations in the cap of the cover allow the air to pass out of the can, so that there is no interference with the circulation. The cover, having a larger diameter than the can, and being supported above the edge of the same, also permits an outflow of air. The cover is made of considerably larger diameter than the can, and is supported by the lugs, so that the outflow of air can go on, while the cover protects the milk. By these means not only is the milk more rapidly cooled, but all odors are conveyed away with the outflowing air, and the milk rendered more sweet and palatable. The outflowing current also prevents the milk from absorbing gases from the surrounding air and being spoiled thereby.

In practice the can sets in an ice-vessel of cold water, and all water condensed on the cover will flow down the sides thereof and drop into the ice-vessel or outside of the can, so that the milk is not diluted by the same.



Having described my invention, I claim—

1. The combination, with the milk-can A, provided with a cover, C, having a cap, *c'*, the sides of which are of perforated metal or wire-gauze, of the central vertical tube, B, and the tube E, opening into the lower end thereof, substantially as described.

2. In a milk-can, the combination of the cover C, provided with a perforated cap, *c'*, having a larger diameter than the body of the can and resting upon the lugs *b b*, secured to said body in such manner that air can pass between the cover and body, the tube B, rising vertically in the can to a point above the upper edge of the same, and the tubing E, rising on the outside of the can and communicating with the lower end of the tube B, substantially as specified.

3. As an article of manufacture, the milk-can composed of the body A, the cap C, of larger diameter than the same, and provided with the perforated cap *c'*, the lugs *b*, secured to the body A, the central vertical tube, B, the tube E, communicating therewith at its lower end, and the elbow-piece *e*, all constructed and arranged substantially as shown, and for the purposes specified.

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

CASSIUS L. HALL.

Witnesses:

E. P. ALLEN,

JOHN H. FOX.