(No Model.)

F. A. & I. A. DODGE.

MILK COOLER.

No. 400,834. Patented Apr. 2, 1889.

Fig. 1

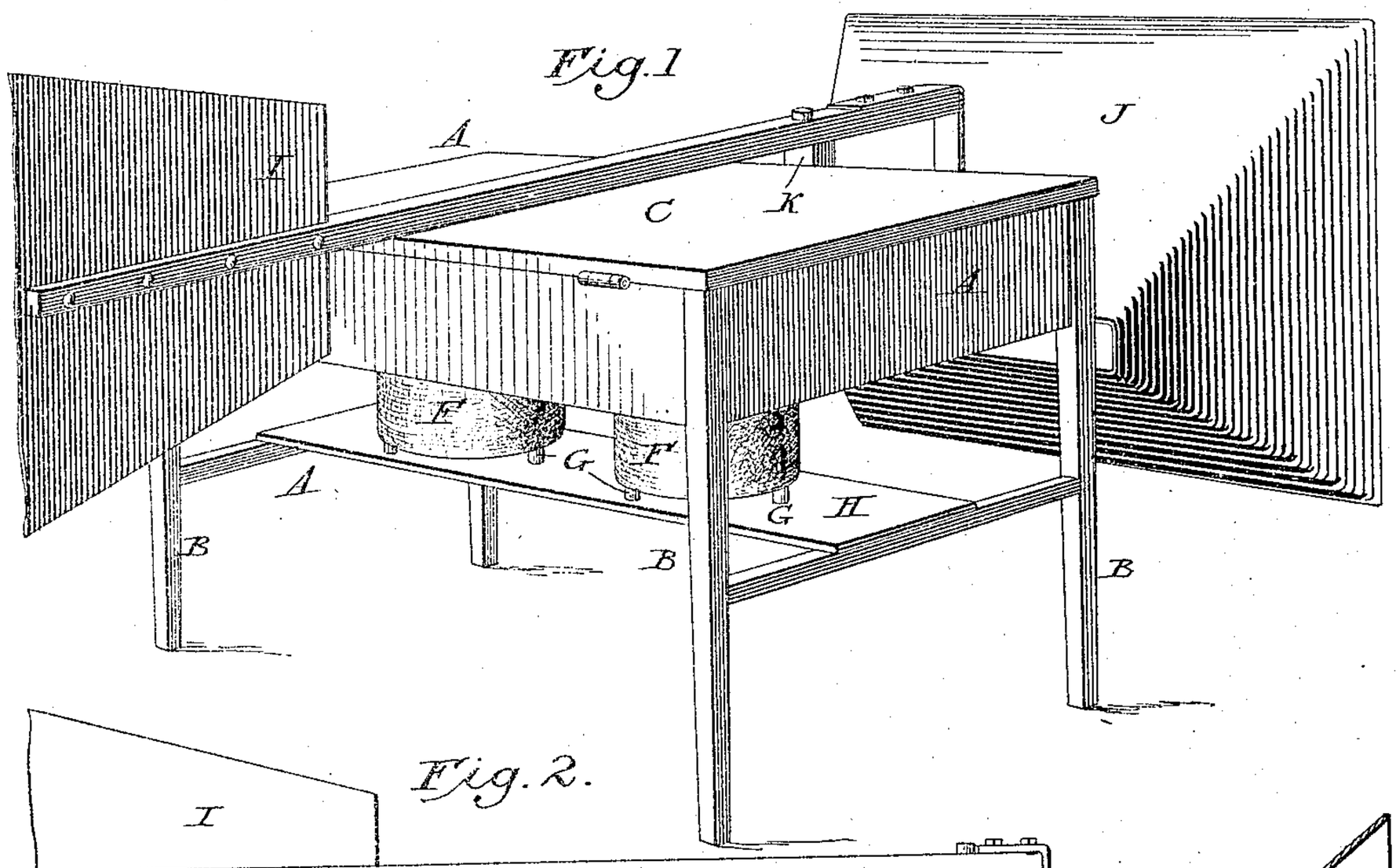


Fig. 2.

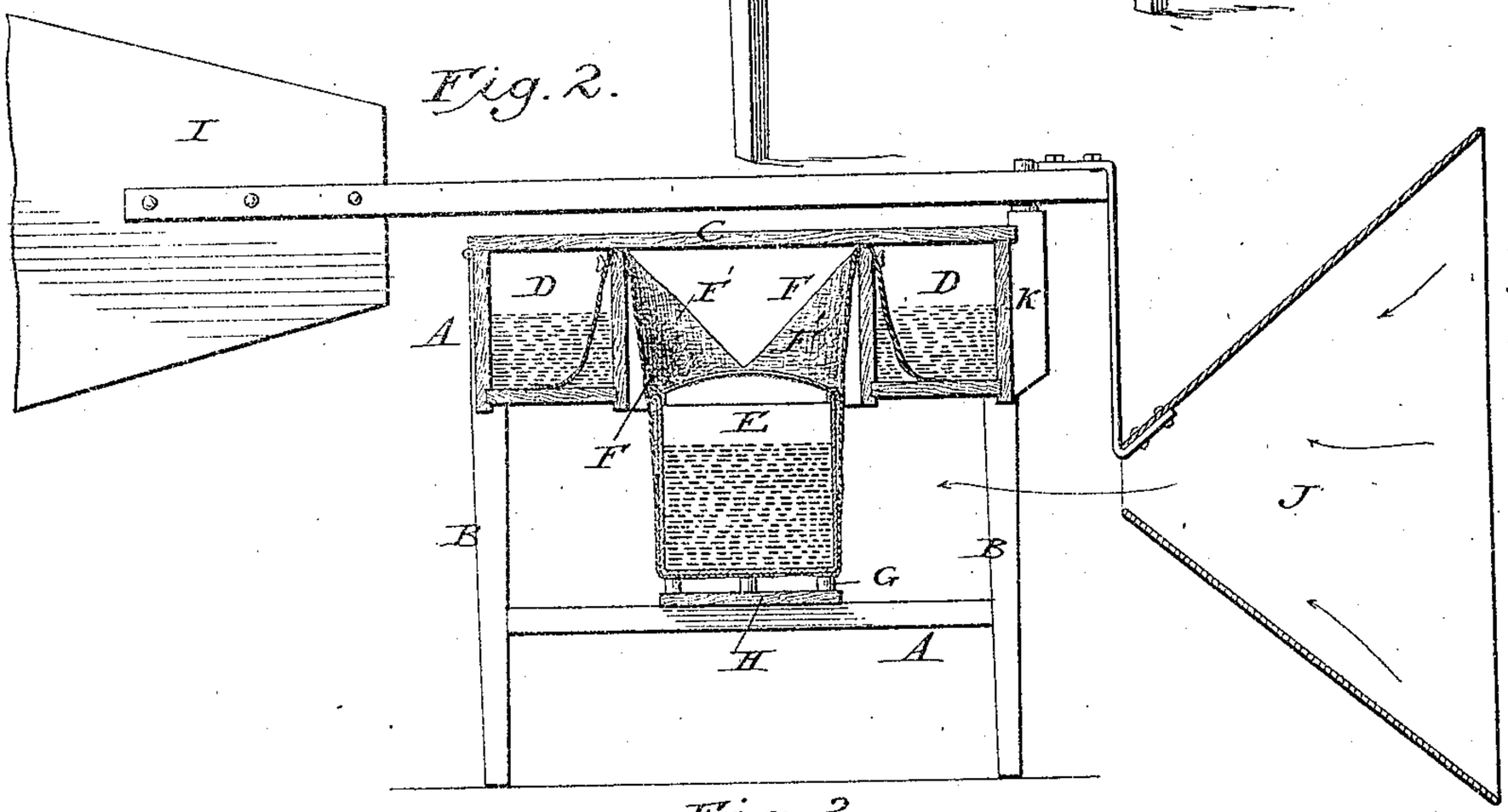
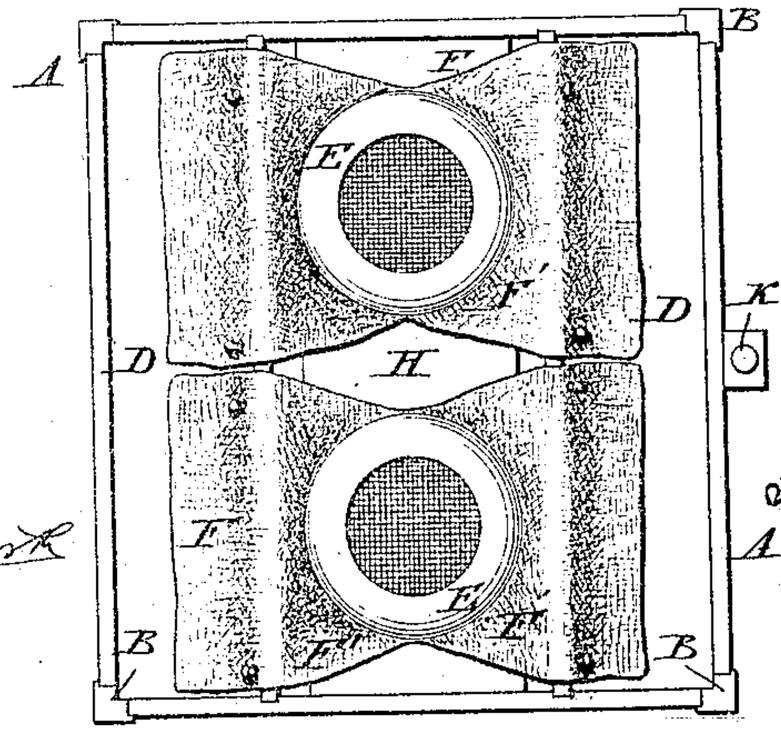


Fig. 3.



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UNITED STATES PATENT OFFICE.

FRANCES A. DODGE AND ISRAEL A. DODGE, OF BRADY, TEXAS.

MILK-COOLER.

SPECIFICATION forming part of Letters Patent No. 400,834, dated April 2, 1889.

Application filed October 18, 1888. Serial No. 288,498. (No model.)

To all whom it may concern:

Be it known that we, FRANCES A. DODGE and ISRAEL A. DODGE, of Brady, in the county of McCulloch and State of Texas, have invented certain new and useful Improvements in Milk-Coolers, of which the following is a specification.

Our invention relates to a novel apparatus for cooling milk and cream, and has reference more particularly to that class of coolers in which the cooling action is effected through or by means of the evaporation of water from a jacket surrounding the milk-can.

The invention consists in various features and details, hereinafter set forth and claimed.

The actual embodiment of this invention may be considerably varied; but for ordinary domestic use we prefer the form shown in the annexed drawings, in which—

Figure 1 is a perspective view of our improved milk-cooler; Fig. 2, a transverse sectional view through the same, and Fig. 3 a top plan view with the lid or cover removed.

A indicates the frame or body of the cooler supported upon legs B and provided with a hinged cover or covers, C. Two water-troughs, D D, extend lengthwise of the body A, as shown in Figs. 2 and 3, and are separated a distance from each other to form a space for the reception of the cans or vessels E and their jackets F. The form and size of these troughs are matters that may be varied considerably without in any way departing from the spirit of the present invention, the length and size of the troughs being varied according to the requirements of the dairyman. The lid C also covers the troughs and prevents any waste of water by evaporation.

The cans or vessels E which are employed will advisably be provided with perforated covers, as shown in Fig. 3, to permit the escape of the animal heat, and they will be supported by or rest upon pins G, secured to the upper face of a board, H, secured to the frame-work directly beneath the open space between the troughs, as shown in Fig. 2.

The jackets F, into which the cans E are placed, may be made of any suitable fibrous material, and while closed at the bottom and sides are open at the top and provided with extended or elongated ends or wings F', which, as shown in Figs. 2 and 3, extend upward into the troughs D and into the water therein.

When in proper position, the cans, enveloped or inclosed in their jackets, project downward into the space between the troughs and below the bottoms thereof, in order that they and their jackets may be subjected to the currents of air, and the water, conveyed by capillary attraction to the exterior of the cans by the jackets, evaporated. Of course as the water is thus evaporated it produces a cooling effect upon the milk within the cans, as is well understood.

In order to collect and direct the wind upon or against the jacketed cans, we employ in some cases (though not necessarily) a vane, I, carrying at one end a funnel, J, the mouth of which is below the troughs and in line with the cans or vessels.

The vane will be mounted upon a post or standard, K, secured to the cooler proper or to a post or standard set away a little distance from the latter.

The form and construction of the vane and funnel may be varied considerably, the essential requirement being that the funnel shall direct the currents of air upon the jacketed vessels.

While the invention is designed primarily for the cooling of milk, &c., it is obvious that it may be applied to the cooling of other materials.

The present invention is designed as an improvement upon that for which Letters Patent No. 291,166 of the United States were issued to us January 1, 1884, and of course no claim is made herein to anything shown in our said patent; neither do we wish to be understood as claiming, broadly, a device for collecting air, as we are aware that these have been in use for years.

Having thus described our invention, what we claim is—

1. In a milk-cooler, the combination, with a body having two water-troughs side by side, but separated from each other, substantially as shown, of cans or vessels and jackets surrounding the cans and extending into the water-troughs.

2. In a milk-cooler, the combination, with the frame or body having two water-troughs arranged side by side, but separated from one

another, of the jacketed cans located between the troughs, and having their jackets extending into the latter.

3. In a milk-cooler, the combination, with the frame or body having the two troughs arranged substantially as shown, of the jacketed cans located between and below the troughs, and having their jackets extending into the latter.

4. In a milk-cooler, the combination, with the body or frame A, having troughs D D, of jacketed cans E, board H, and pins G, secured to the board and supporting the cans.

5. In a milk-cooling apparatus, the combination, with the body or frame provided with water-troughs, of the jacketed cans having the upper ends of their jackets extending into the troughs, and an air-collecting device arranged, substantially as shown and described, to collect and direct the air against the exposed jackets.

In witness whereof we hereunto set our hands in the presence of two witnesses.

FRANCES A. DODGE.
ISRAEL A. DODGE.

Witnesses:
THEODORE EVANS,
L. BALLOU.