F. C. PRAY.
Lard-Cooler.

No. 161,703. Patented April 6, 1875.

Fig: 1.

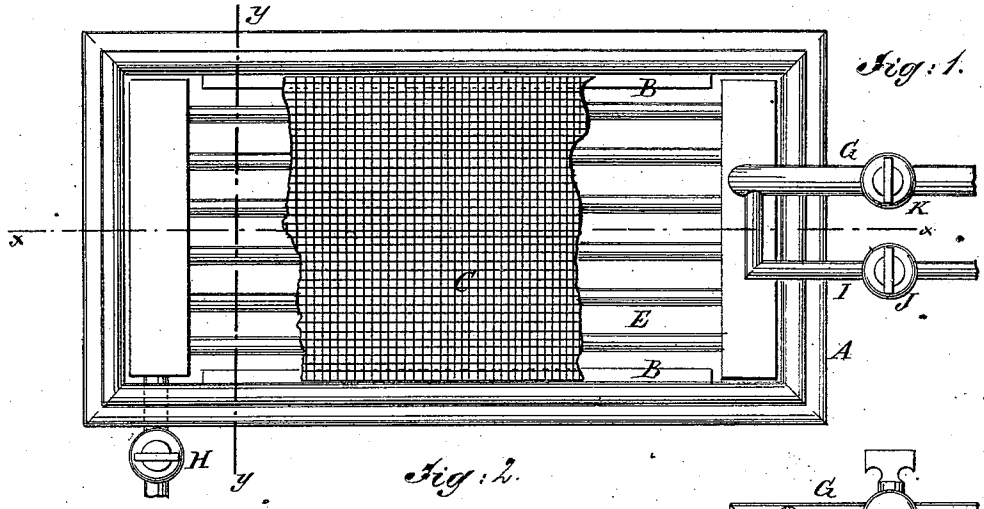


Fig: 2.

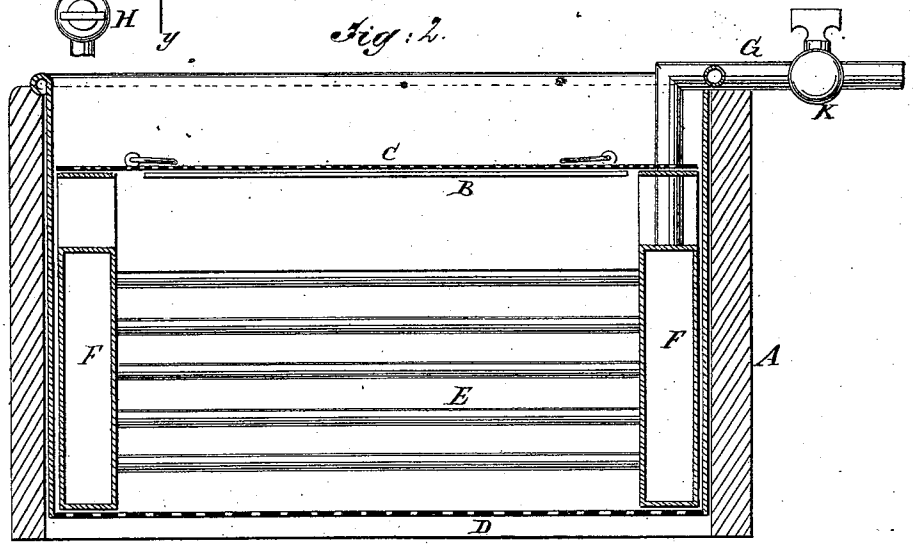
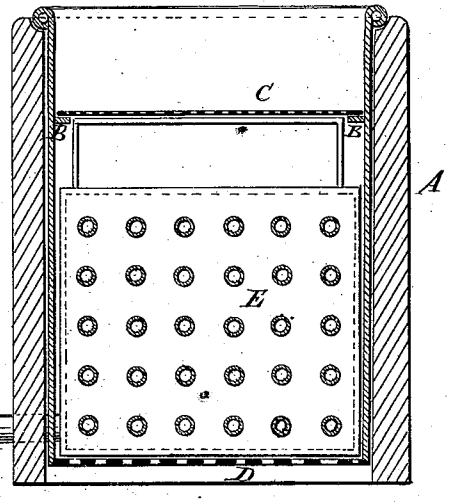


Fig: 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FRANK C. PRAY, OF NEW YORK, N. Y.

IMPROVEMENT IN LARD-COOLERS.

Specification forming part of Letters Patent No. **161,703**, dated April 6, 1875; application filed February 5, 1875.

To all whom it may concern:

Be it known that I, FRANK C. PRAY, of the city, county, and State of New York, have invented a new and useful Improvement in Coolers for Lard and other similar articles, of which the following is a specification:

The invention will first be fully described, and then pointed out in the claim.

In the accompanying drawing, Figure 1 is a top view, partly in section. Fig. 2 is a vertical section of Fig. 1, taken on the line *x x*. Fig. 3 is a vertical cross-section of Fig. 1, taken on the line *y y*.

Similar letters of reference indicate corresponding parts.

A is a vessel of any suitable shape and proportions, made of either wood or metal, but preferably lined with sheet metal if made of wood. On the opposite sides of this vessel are ledges B, which support a removable sieve, C. This sieve is made of perforated tin or other material, and is made to fill the interior of the vessel, and is placed about one-fourth the distance (more or less) from the upper rim of the vessel to the bottom. D is the bottom, which is perforated with holes, through which the lard or other material, while yet in a melted state, is discharged. In this vessel I place a removable section of tubes, E, connected with a chamber, F, at each end, to one of which chambers the cold-water pipe G is attached. The chambers of this tube-section fit the size of the vessel, the upper edges of which are flush with the sieve C, so that they support the sieve, the ledges B being shortened to allow the chambers or tube-section to slip down, as shown in the drawing. The tubes E may be of any desired size, and any suitable number may be used. The tubes, as well as the chambers, are preferably made of sheet metal. A current of cold water or other cooling liquid or fluid is forced through the pipe G and into one of the chambers F, from which the tubes E and the other chamber are filled. The water or other cooling medium may be forced through the chambers and tubes, or the water or other liquid may be taken from an elevated reservoir, as may be most convenient. Cold air may be forced through the chambers and tubes when that is deemed sufficient to cool the contents of the vessel.

The lard, in a highly-heated state, is, in the first place, poured into the vessel, onto the sieve C, and percolates down among and through the tubes E, from which it falls onto and passes through the perforated bottom D into a proper receptacle to receive it.

The water, air, or other cooling medium, after passing through the tube-section, is discharged through cock H, at the bottom of one of the chambers. This cock passes through the vessel and lining, and screws into the chamber, as seen in Fig. 1. I is a pipe connected with the pipe G and with a steam generator. J is a cock in this pipe, and K is a cock in the pipe G.

By closing the cock K a current of steam may be conducted into the tube-section and chambers, to clean off the lard which may adhere after the cooling process has been completed. The cock J is closed when the cock K is opened, and vice versa.

This apparatus saves much valuable time, as where large quantities of melted lard are discharged into open vessels, waiting for it to cool sufficiently to be packed for market is slow and tedious, whereas by this cooler the operation is performed in a few minutes.

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

The combination, with vessel A, spreading-sieve, C, and cooling-tubes E, of a bottom sieve, D, as shown and described, whereby the lard is bleached, after having been cooled, by being separated through the perforations of bottom sieve and caused to drop in small globules through the air.

FRANK C. PRAY.

Witnesses:

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ALEX. F. ROBERTS.