

# UNITED STATES PATENT OFFICE.

ROBERT B. BANCROFT, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN PROCESSES FOR COOLING LARD, TALLOW, &c.

Specification forming part of Letters Patent No. **152,208**, dated June 23, 1874; application filed April 28, 1874.

*To all whom it may concern:*

Be it known that I, ROBERT B. BANCROFT, of the city of Boston, in the State of Massachusetts, have invented an Improved Process for Cooling Tallow, Lard, &c.; and I do hereby declare the following to be a full and correct description of the same.

This invention relates to that class of processes employed for cooling, purifying, and bleaching tallow and lard while in process of rendering, or while in a melted condition; and it consists in passing condensed air through these substances.

It is well known that in the process of compressing air much of its heat is thrown off, but when the compressed air assumes its original volume it rapidly absorbs heat from the medium with which it is in contact, and lowers its temperature in a degree corresponding to the amount of condensation.

To utilize this property of compressed air in the cooling of fatty substances, I introduce into the bottom of the clarifying and cooling tank, otherwise constructed in the usual manner, one or more pipes perforated with holes from one-eighth to one-fourth of an inch in diameter, and connect these pipes with a condensed-air tank, of a size proportionate to the size of the clarifying-tank. I cause the air to be forced into the condensed-air tank by an ordinary air-pump, and when it is sufficiently cooled I cause the condensed air to be gradually discharged through a proper faucet into a pipe connected with the clarifying-tank, and, through the perforated pipes before mentioned,

into and through the mass of melted tallow, lard, &c. As soon as the compressed air is discharged into the melted mass it begins to expand to its original volume, and in so doing abstracts heat from the liquefied material, and rapidly cools it.

The utility of my invention consists in this: The constituent elements of lard and tallow (oleine and stearine) have a strong tendency to separate when allowed to cool gradually. When the oleine separates, it makes the tallow oily and difficult to handle, and very sensitive to the influence of heat, and the oil, by penetrating the substances in which it is packed, considerably impairs the commercial value of the article. Rapid cooling arrests this tendency to separate, and a device for effectually attaining this result has been a desideratum. My invention meets that want.

I do not claim passing air of ordinary density through the melted tallow or other fatty matters, as that has been done before; but

What I claim is—

The process of passing condensed air through melted tallow, lard, and other fatty substances, for the purpose of cooling, bleaching, and purifying the same, as set forth.

The above specification of my said invention signed and witnessed, at Boston, this 25th day of April, 1874.

ROBT. B. BANCROFT.

Witnesses:

J. A. STOCKWELL,  
SAM. W. WINSLOW.