

J. DOOLING.  
Improvement in Ice-Cream Freezers.

No. 129,326.

Patented July 16, 1872.

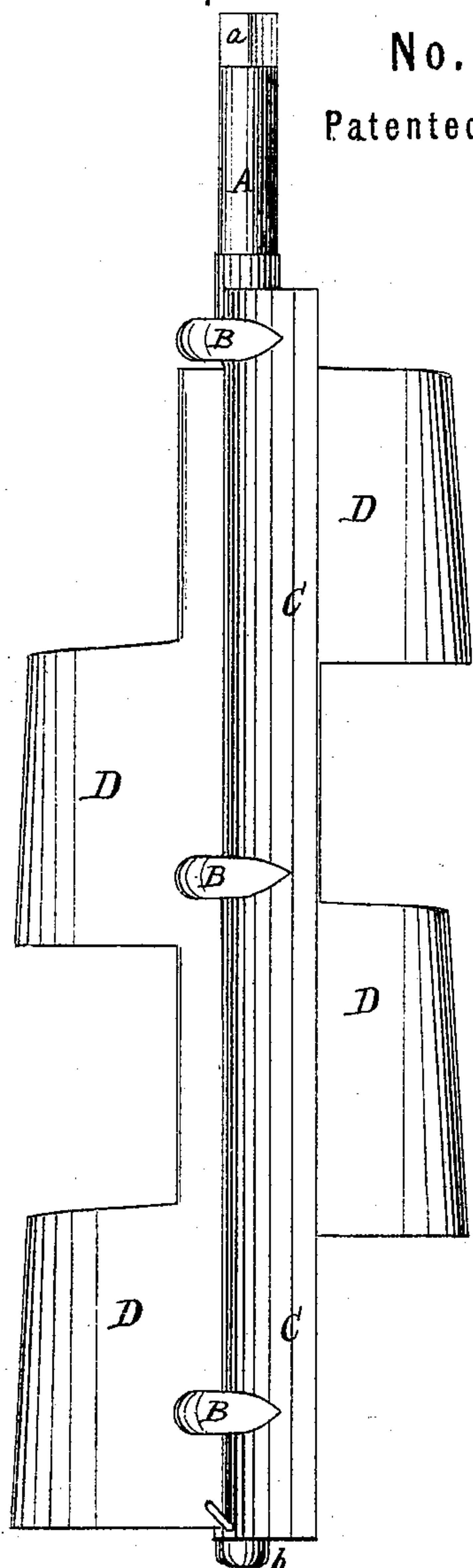


FIG. 2.

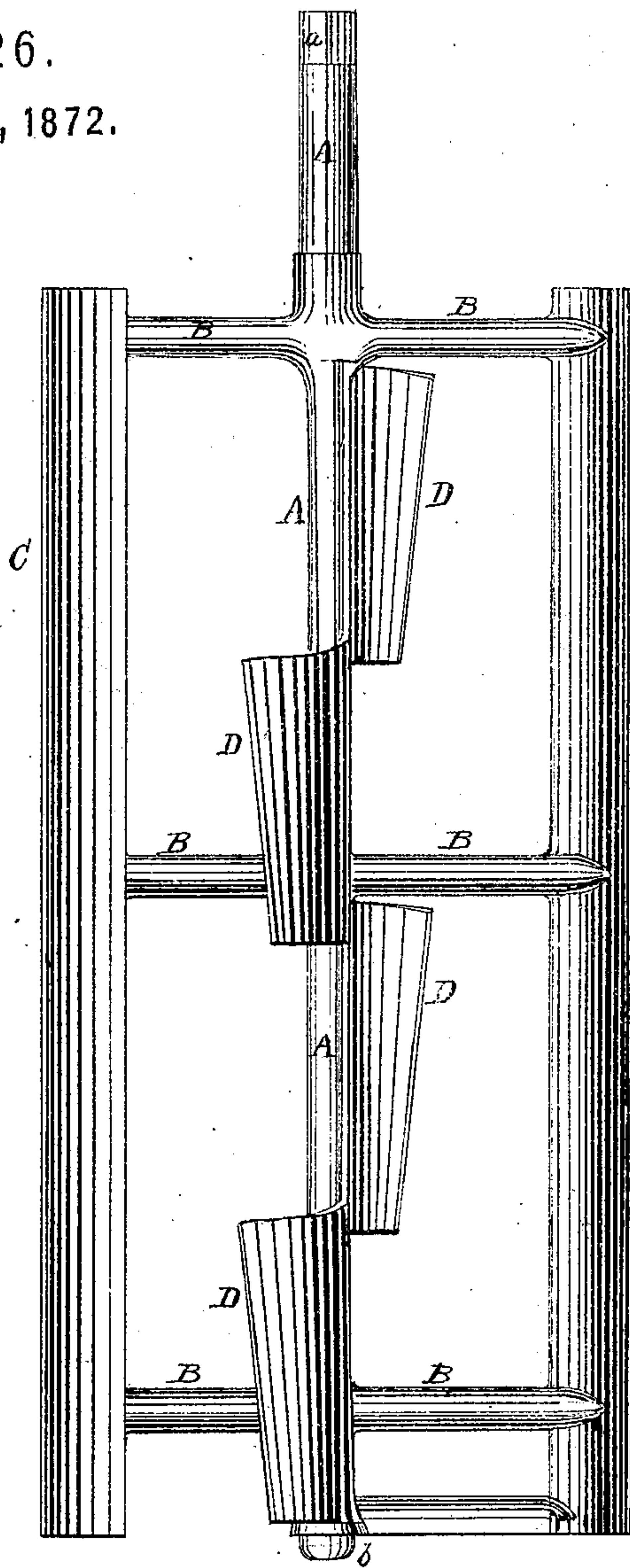


FIG. 1.

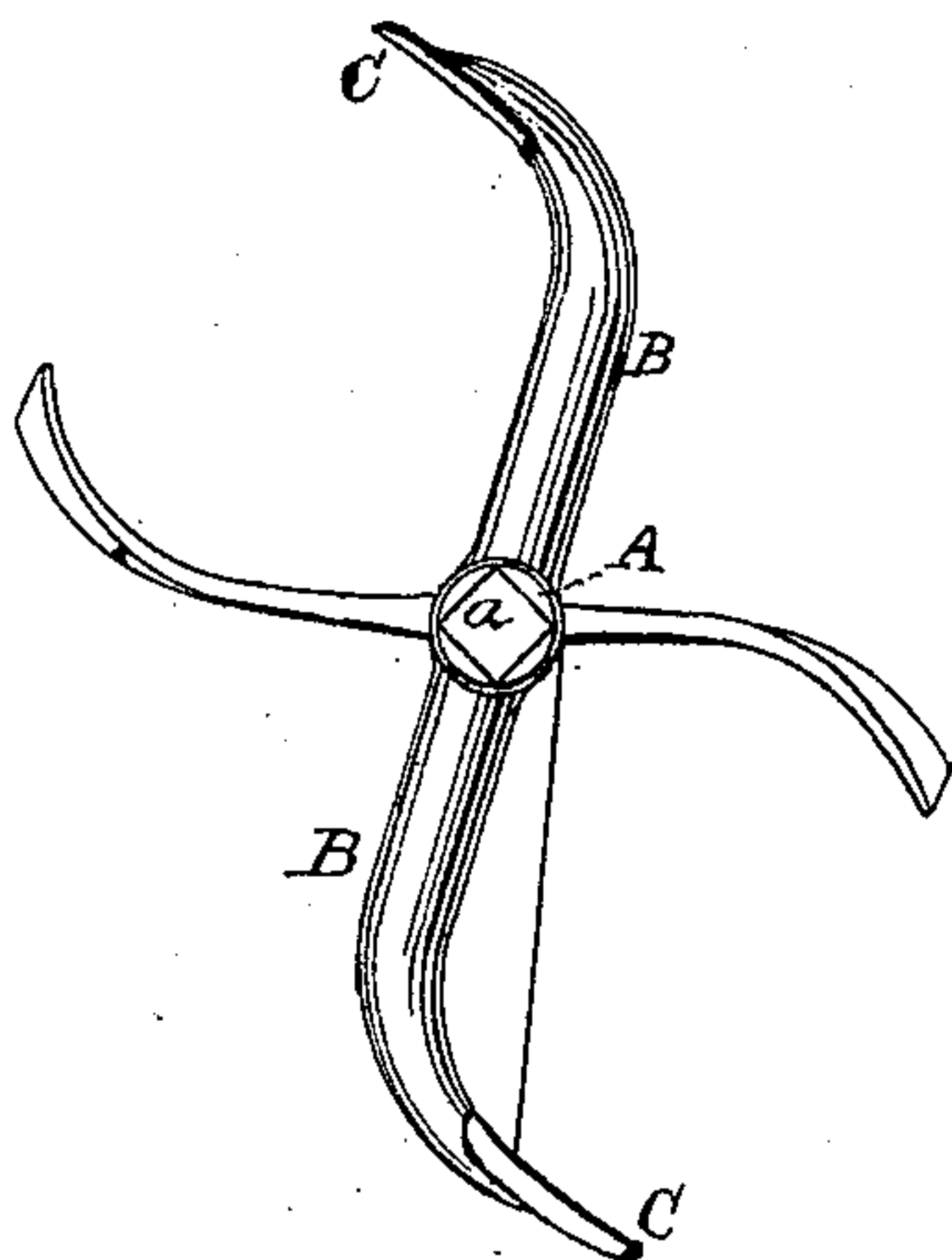


FIG. 3.

INVENTOR.

*James Dooling*

WITNESSES.

*N. C. Lombard*  
*David T. Pray.*

# UNITED STATES PATENT OFFICE.

JAMES DOOLING, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN ICE-CREAM FREEZERS.

Specification forming part of Letters Patent No. 129,326, dated July 16, 1872.

Specification describing a new and useful Improvement in Ice-Cream Freezers, invented by JAMES DOOLING, of Boston, in the county of Suffolk and State of Massachusetts.

My invention relates to the construction of the beaters or agitators for beating up the cream in the can; and it consists in the formation, on the shaft of the agitator, of beater wings or blades starting therefrom at points about ninety degrees from the arms which carry the scrapers for cleaning the cream from the walls of the churn, and curved so as to form a portion of a scroll around said shaft, the curve being in an opposite direction to the curve of the arms that carry the scrapers, the upper ends of each section of said wings being curved to a greater degree than the lower ends, so that the outer edge of said wings shall form a portion of a spiral of a very coarse pitch, said wings occupying about one-half of the length of the beater, more or less, as may be desired, though I have found that proportion to work well, and very much better than the curved beater extending the whole length of the beater, and parallel with the axis thereof, as exemplified in a patent granted to me the 20th day of October, 1868, upon which this invention is an improvement.

In the drawing, Figure 1 is an elevation of an agitator embodying my invention. Fig. 2 is also an elevation looking at right angles to Fig. 1; and Fig. 3 is a plan.

A is the shaft of the agitator, a section, *a*, of which is squared for the purpose of applying power thereto to revolve the same. It is also provided with a pivot, *b*, at the lower end to be stepped in a bearing in the bottom of the can in the usual manner. B B are arms radiating from said shaft, and curved at their outer ends, as shown in Fig. 3, and carrying the scraper-blades C C, all of which is con-

structed in a well-known manner. D D are the beater-wings radiating from the shaft A, nearly at right angles to the arms B B, and having their outer ends curved, as shown, in a direction opposite to the curve of the arms B B. The upper end of each of said wings is curved considerably more than the lower ends, so as to form a curved spiral blade for the purpose of beating up the cream, throwing it toward the outside of the can, and also tending to lift it toward the top thereof.

In the example shown two wings are used on each side of the shaft, the length of which is about one-fourth the length of the interior of the can, the wings upon one side of the shaft being placed opposite the spaces between the wings on the other, so that in the revolution of the agitator the wings on one side of the shaft will operate upon the cream not acted upon by the wings on the other side. The increased curvature of the upper ends of the wings causes the cream to be thrown upward by said wings as well as outward, which I have found in practice to be a great advantage.

The number of blades or wings may be increased, if desired.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

The curved spiral beater-wings D D, arranged to throw the cream outward and upward, in combination with the scrapers C C, arranged to remove the cream from the walls of the can and throw it inward, substantially as described.

Executed at Boston this 1st day of April, 1872.

JAMES DOOLING:

Witnesses:

N. C. LOMBARD,  
DAVID T. PRAY.