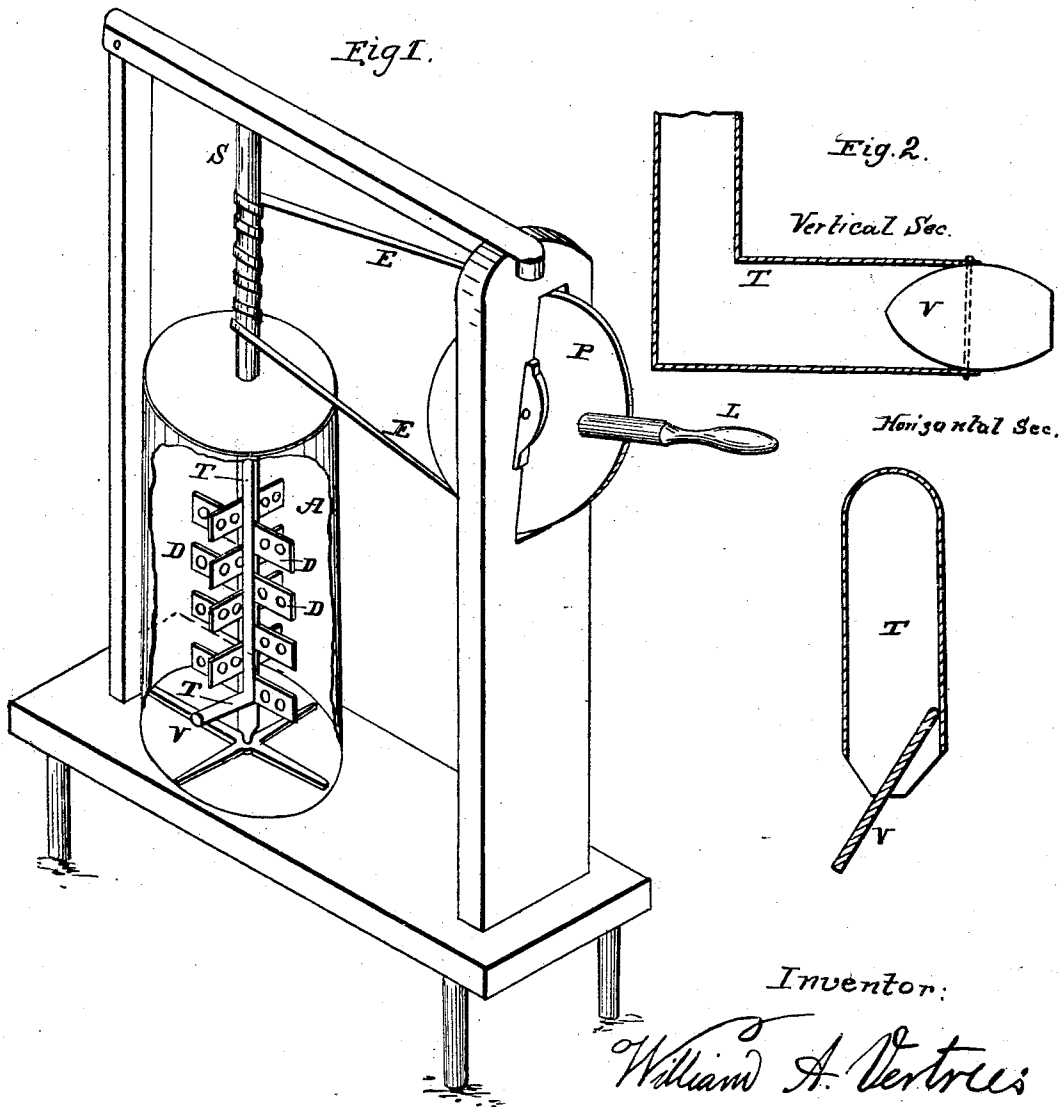


W. A. VERTREES.

Churn.

No. 16,203.

Patented Dec. 9, 1856.



Inventor:

William A. Vertrees

# UNITED STATES PATENT OFFICE.

WILLIAM A. VERTREES, OF WINCHESTER, MISSOURI.

## CHURN.

Specification of Letters Patent No. 16,203, dated December 9, 1856.

*To all whom it may concern:*

Be it known that I, WILLIAM A. VERTREES, of Winchester, in the county of Clark, in the State of Missouri, have invented certain  
5 new and useful Improvements in Churns; and I hereby declare the following to be a true and full description of the same, reference being had to the drawings herewith presented, which drawings constitute a part  
10 of said description.

Figure 1 is an isometrical representation of the whole. The body (A) is here shown as transparent in order to describe the internal arrangement of the dashers and the  
15 air tube (T,) with its valve (V).

Similar letters refer to similar parts in each figure.

The dashers (D D) are arranged as arms on an upright shaft (S,); this stands in a  
20 cross piece which is laid loosely in the bottom of the churn so as to be easily removed when it is requisite to wash the apparatus, and yet by reaching against the sides of the vessel it affords a firm step to the shaft.  
25 The air tube (T,) extends from near the top of (A) nearly to the bottom where it is bent into a horizontal position, see Fig. 2. The lower end of the tube is furnished with a double-acting valve (V) so fitted as to have  
30 one of its ends extend outward forming a wing pressing against the fluid while the other end extends inward and closes one side of the tube to prevent the cream from entering the tube while the valve is open to let

the air pass behind the valve, as the valve is  
35 jointed to the pin in the center of the orifice and swings back by the resistance of the fluid as the shaft is revolved back and forward by the strap (E E,) secured to the  
40 shaft (S).

Fig. 2 shows a horizontal section of the lower end of the tube enlarged to show the position of the valve and its action as the tube is made to revolve alternately to the  
45 right and left by raising and depressing the handle or lever (L) in the pulley (P) as connected by the strap (E). It may be seen that as the pipe revolves to the right the inner end of the valve (V,) will be  
50 pressed against the right side closing the right side of the aperture and allowing the air to pass out on the left side behind the wing of the valve by centrifugal force and when it revolves in the contrary direction  
55 the valve acts on the contrary side with similar effect.

What I claim as my invention and desire to secure by Letters Patent is—

The air tube with its double acting valve arranged in the manner and for the purpose  
60 as above set forth.

In testimony whereof I hereto subscribe in presence of two witnesses.

WILLIAM A. VERTREES.

Witnesses:

J. H. GODDARD,  
F. I. MURPHEY.