H. ROHRER.

Churn.

No. 26,377. Patented Dec. 6, 1859.

Fig: 1.

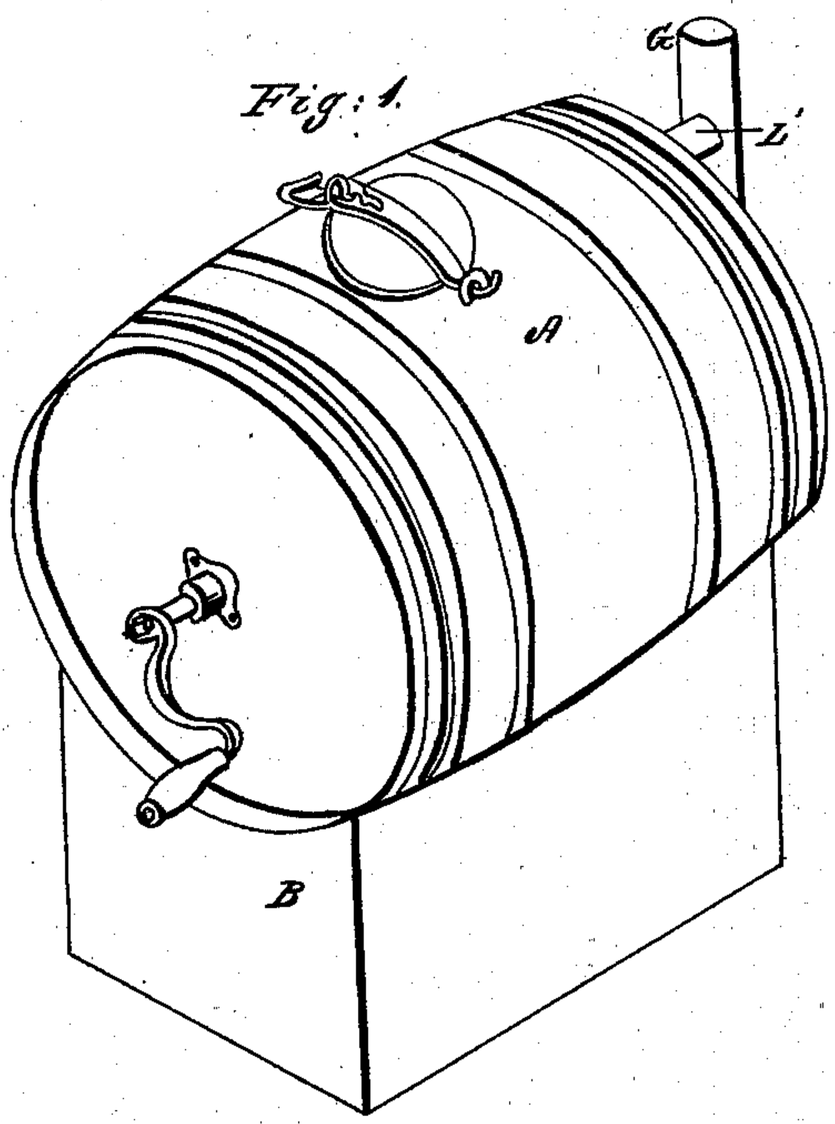


Fig: 2.

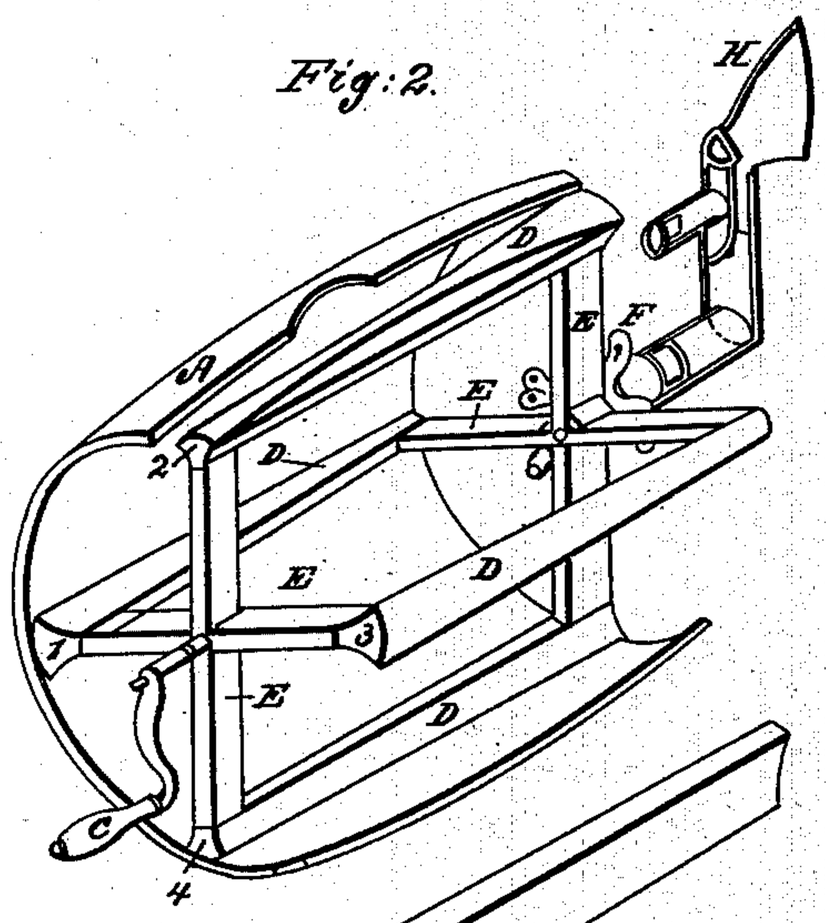


Fig: 3.

Fig: 5.

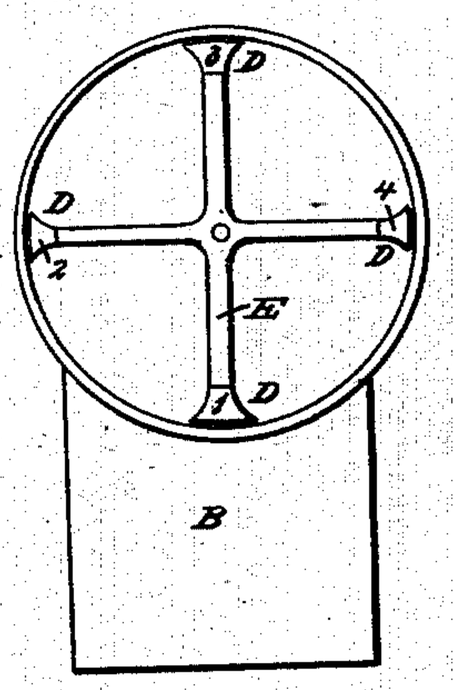


Fig: 4.

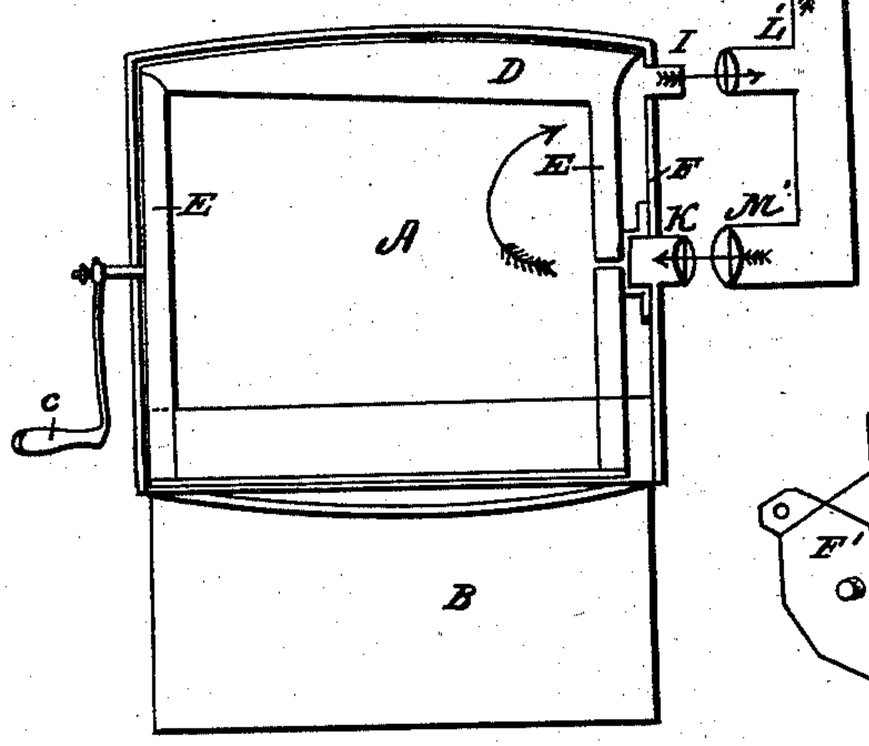


Fig: 6.

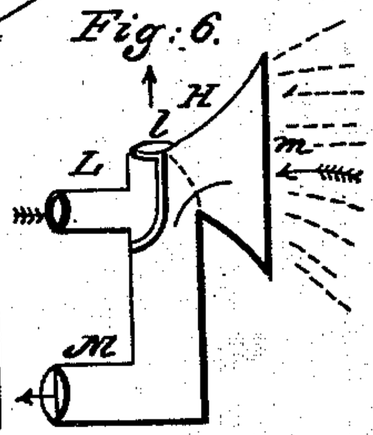
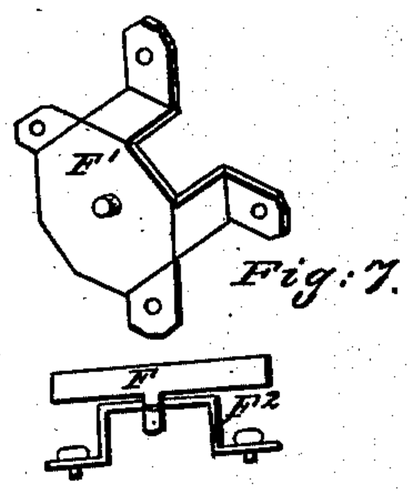


Fig: 7.



Witnesses:
S. G. Musser
Jacob Stauffer.

Inventor:
Henry Rohrer.

UNITED STATES PATENT OFFICE.

HENRY ROHRER, OF STRASBURG TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA.

CHURN.

Specification of Letters Patent No. 26,377, dated December 6, 1859.

To all whom it may concern:

Be it known that I, HENRY ROHRER, of Strasburg township, in the county of Lancaster and State of Pennsylvania, have invented new and useful Improvements in Churns, applicable to the common barrel-churn, so as to convert them into a "Champion atmospheric churn," as the name proposed to designate this improvement; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 represents a common barrel churn A, raised on its base B, with a pipe G, attached. Fig. 2 shows the interior of the same and position of the concave-sided, tapering, dashers D, the ends 1, 2, 3 and 4 alternately reversed on their cross supports E; Fig. 3 one of those dashers enlarged; Fig. 4, a longitudinal section of the churn, the upper edge or side of the dashers in close proximity with the inside of the churn along their entire length united by E, the pivot step F centrally on the head (inside), over the tube K. (This tube as well as the tube I may be placed higher or lower, over which the tubes L M of the pipes G H are made to fit.) Fig. 5, is a vertical section. Fig. 6, the atmospheric pipe G, with its attachment tubes L′ M′, and the heated-air inhaling pipe H, with its wide open funnel-mouth, *m*, partitioned vent pipe *l*, and attachment tubes L, M. Fig. 7 illustrates the raised step F in perspective and outline, in which the pivot of the arms E of the dashers D moves, as shown.

For the better mixing and agitating of the cream, the dashers D are brought as close as possible to the sides of the churn, since friction is as essential as beating. The concaved, tapering sides of the dashers with the wide end of the one followed by the narrow end of the other in its revolutions, produces side eddies as well as being beaten and partially retained by the concaved side; thus a thorough mixing is produced, while a constant supply of fresh air is admitted through the pipe G to the center of the churn, while there is ample space for the outlet of musty air, steam or the like, coming to the surface through the agitating of the cream. Cream requires a temperature of at least 58°, say, 60° to 65° on an average. To avoid the risk of scalding, by giving vent to the steam, through the partitioned tube *l*, of the funnel-mouthed-pipe H, Fig. 6, this mouth *m*, can be placed near a hot stove or heated plate, and thus heated air is readily conveyed to the cream through the tubes M K connected, and the temperature brought up in winter, so as to enable butter being made in ten minutes from rich cream.

I am aware of various devices employed for conveying air to the cream while churning, but of no plan substantially like the one proposed, applicable to ordinary barrel churns, also tested in my own buttery to my entire satisfaction.

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

The application of the tubes I, K, to enter the rear head of the churn, the connecting pipes G, and H, with its wide mouth *m*, partition *l*, and connecting tubes L, M, with the dashers D, elevated on an open step F, when combined in the manner and for the purpose specified.

HENRY ROHRER.

Witnesses:
S. G. MUSSER,
JACOB STAUFFER.