

M. J. Mikoff,

Churn.

No. 105,151.

Patented July 26, 1870.

Fig. 1.

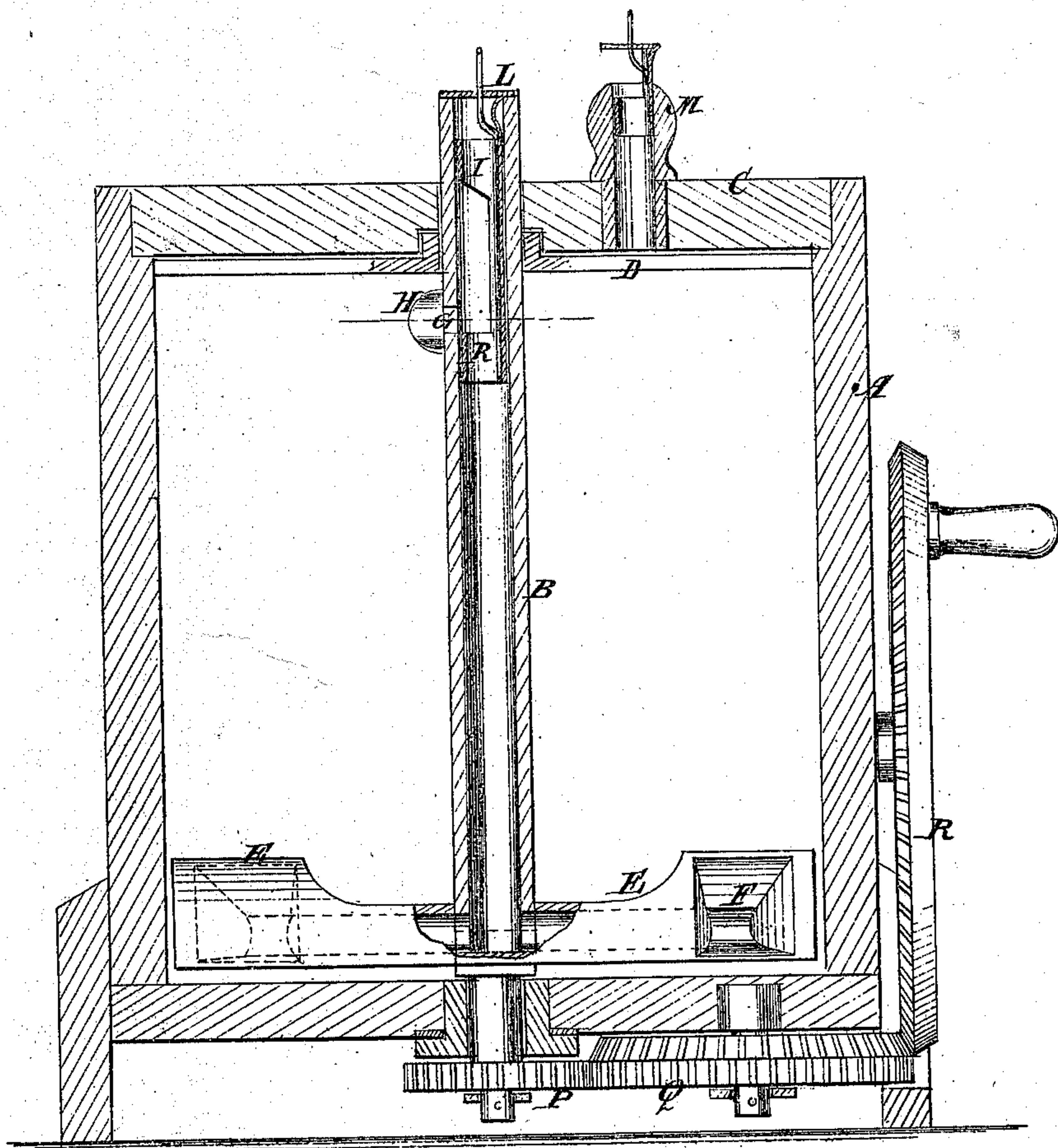


Fig. 2.



Witnesses:

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Witness

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PER

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United States Patent Office.

MILTON JONES WIKOFF, OF STOUT'S POST-OFFICE, OHIO.

Letters Patent No. 105,751, dated July 26, 1870.

IMPROVEMENT IN CHURNS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, MILTON JONES WIKOFF, of Stout's Post-Office, in the county of Adams and State of Ohio, have invented a new and useful Improvement in Churns; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to a new and improved arrangement of the shaft and arms of a churn-dasher, for introducing air into the cream from the space in the case above the cream, all as hereinafter more fully specified.

Figure 1 represents a sectional elevation of my improved churn, and

Figure 2 is a plan view of the dasher.

A is the case or vessel, which may be of any approved form.

B is the shaft of the dasher.

It is made hollow and extends above the top or lid C, which is removable, and is supported in a transverse bar, D, let into notches in the upper end of the case, so that it may be readily taken out to remove the dasher when required, for cleaning or other purposes.

E represents the arms of the dasher.

They are also made hollow with large bell-mouths, F, opening at the ends, at the receding sides, where a vacuum is created in the cream by the enlarged ends of the arms moving rapidly through it.

These hollow arms receive the air from a hollow shaft, which has an opening at the upper end for the admission of the air from the exterior.

It also has an opening at G below the lid, and a band, H, at one side for directing the air into it.

It is also provided with a tubular valve, I, for closing or opening the passage G, for admitting or stopping the air thereat by lowering the said tubular valve so that the cylindrical part, K, falls below the orifice

G, or raising it to cause the said part K to cover the orifice.

M is an air-pipe, having the cap N attached to a slide to close its aperture.

The shaft B of the dasher projects through a stuffing-box in the bottom of the case, and is turned by gear-wheels, P Q, connecting with the large driving-wheel R, attached to a stud on the side of the case, but it may be operated by wheels applied to the top of the case, and gearing with the top of the shaft.

The mode of operation is as follows:

The top caps, M and N, are firmly closed and the valve-slide R graduated so as to force a continuous current of air from the upper part of the churn through the cream. The friction of the dasher-arms against the liquid raises its temperature, while the aeration, which it is constantly receiving through B and E E, maintains an equalization thereof throughout the mass. This desideratum is obtained by a rapid and thorough intermixture of air and milk, whereby the whole rises in temperature evenly and simultaneously. Under these circumstances the conditions required for the formation of butter are obtained in three minutes, or slightly less. The butter having come, both caps are raised, when the cold air is drawn in by the revolving dasher, the warm air quickly expelled through the pipe M, and the butter made hard and readily separable from the buttermilk.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

The combination of hollow revolving arms E E with a hollow dasher-rod, B L, opened at the top to draw in cold air, and the outlet-pipe M N, opened at the same time for the discharge of warm air, whereby, after the butter has "come," it may be suddenly cooled and hardened, as set forth.

Witnesses:

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