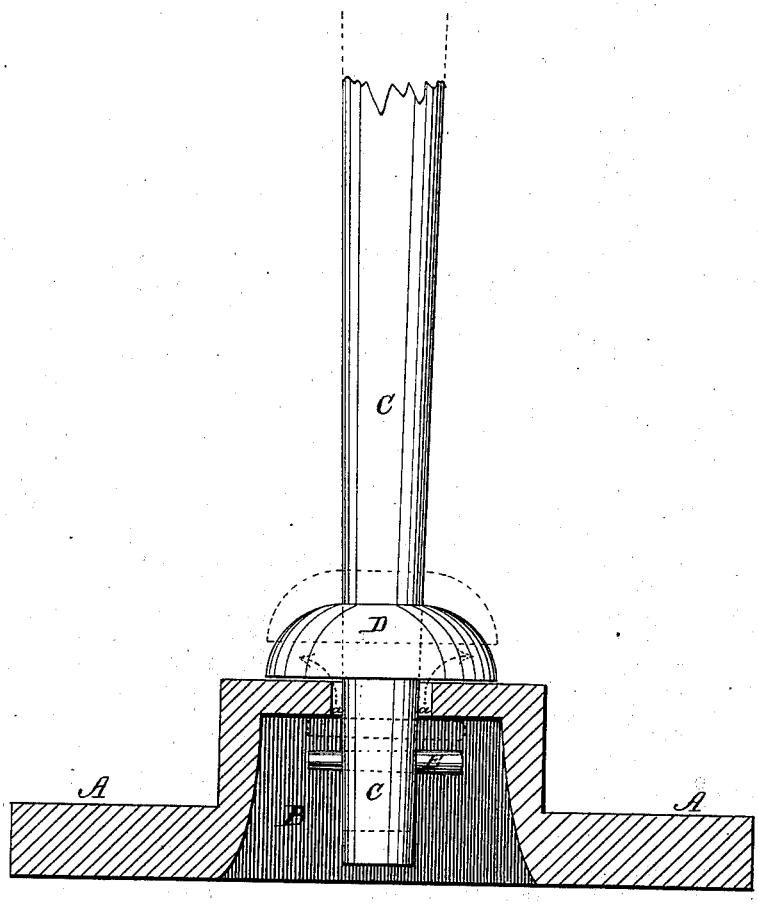
M. RAY.

Churn-Dasher.

No. 216,456. Patented June 10, 1879.



WITNESSES:

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UNITED STATES PATENT OFFICE.

MOSES RAY, OF VALLEY GROVE, WEST VIRGINIA.

IMPROVEMENT IN CHURN-DASHERS.

Specification forming part of Letters Patent No. **216,456**, dated June 10, 1879; application filed February 28, 1879.

To all whom it may concern:

Be it known that I, MOSES RAY, of Valley Grove, in the county of Ohio and State of West Virginia, have invented a new and Improved Churn-Dasher; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention is an improved atmospheric dasher, which is so constructed as to confine a quantity of air while descending, and to allow it to escape and pass through the cream upon beginning to ascend therein.

The improvement relates particularly to the construction of the lower end of the dash-rod or handle and its connection with the dasher, as hereinafter more fully described, and as illustrated in accompanying drawing, forming part of this specification, in which I have represented a vertical section of a dasher.

The dasher A may be rectangular, circular, or of such other form as required. An air-chamber, B, is formed in the raised central portion of the dasher, and the rod C is loosely attached to the latter. Said rod has a disk or flange, D, formed on or attached to it near the lower end, and the latter is inserted through a hole, *a*, in the center of the dasher, and fastened thereto by a cross-pin, E. The distance between the disk D and pin E is somewhat greater than the thickness of the contiguous portion of the dasher, and the end of the rod below said disk is also considerably less in thickness than the diameter of the hole *a;* hence the rod has a certain amount of free vertical and lateral movement, yet not sufficient to enable the dasher to assume more than a slight angle to the handle.

The operation of the dasher is as follows: When the dasher descends the pressure applied to the handle holds the disk D in contact with the upper side of the dasher, and thereby prevents the escape of the air which is confined in the chamber B; but when the dasher is being raised the tractive force applied to the handle separates the disk D from the dasher to the extent allowed by the pin E, thus permitting the previously-confined air to escape through the hole *a* into and up through the body of cream, as shown by arrows. The effect is to cause the very rapid and thorough separation of the butter-globules from the other portions of the cream.

I do not limit myself to the use of the pin E for connecting the dasher-rod and dasher, since various other devices may be employed; but I prefer the pin, since it may be easily inserted and removed, and offers no material obstruction to the passage of air through the dasher, and offers small area of surface for adhesion of the cream.

The lower end of the rod C may be grooved vertically in place of being reduced in diameter; but I prefer the latter construction, since it avoids friction and allows the disk a slight undulatory movement when beginning to rise, which facilitates the escape of the air.

It will be seen that my invention differs in principle of operation from those dashers which are provided with valves so constructed as to prevent escape of air during the ascending movement.

What I claim is—

1. The combination, with a dasher having an air-chamber and an opening in the top of the same, of the handle or rod provided with an enlargement or disk above the opening, which rod is secured to the dasher by a device which permits a certain vertical movement independent of the dasher, substantially as specified.

2. The combination, with the dasher having the air-chamber and opening *a*, of the dasher-rod provided with disk D, and fitted loosely in said opening, and the pin E, inserted in the rod a short distance below the edge of said opening, as shown and described.

MOSES RAY.

Witnesses:

JOHN FARIS,

JAMES M. FARIS.