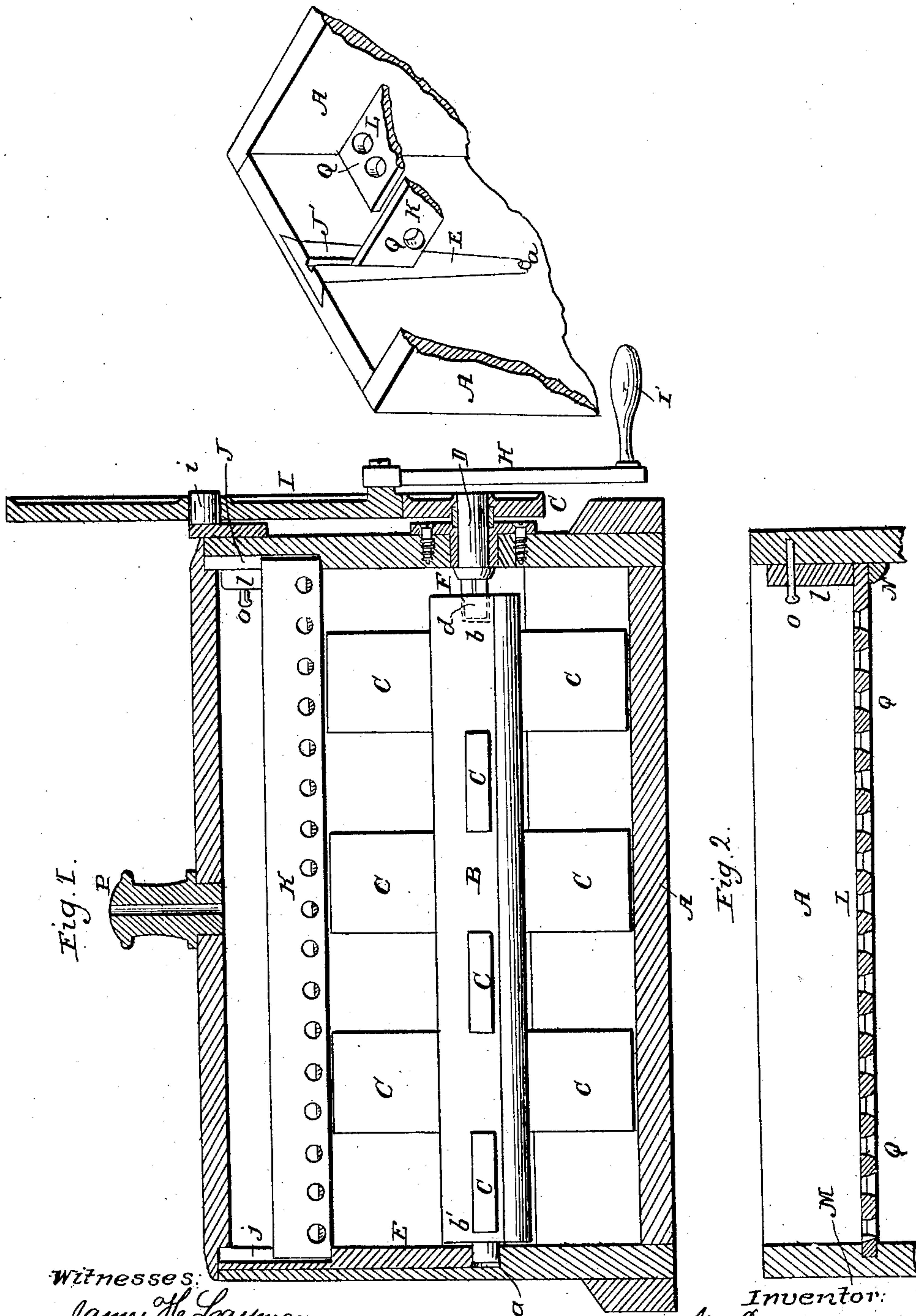


H. DOOLITTLE.

Churn.

No. 44,614.

Patented Oct. 11, 1864.



Witnesses:

James H. Layman
Jno. H. Woodward

Inventor:

H. Doolittle
per Knight Bros
Atty

UNITED STATES PATENT OFFICE.

HARRISON DOOLITTLE, OF AURORA, INDIANA.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. 44,614, dated October 11, 1864.

To all whom it may concern:

Be it known that I, HARRISON DOOLITTLE, of Aurora, county of Dearborn, and State of Indiana, have invented a new and useful Improvement in Churns; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification.

Figure 1 is a longitudinal section of my churn. Fig. 2 is a section parallel to the above, showing my side brake. Fig. 3 is a perspective view, exhibiting the wedge-key and other parts.

A is a long rectangular box, semi-octagonal or semi-cylindrical at the bottom of its interior. The dash may consist of a shaft, B, having blades C. One end of the shaft B has a square socket, *b*, to receive the square end *d* of the driving-arbor D. The other end of the shaft B has a gudgeon, *b'*, which rests in the rounded bottom of a recess, *a*, in the end of the box A, which, flaring upward and undercut in the manner shown, is adapted to receive the tapering dovetailed key E. This mode of securing the dash enables its withdrawal, whenever desired, by the simple removal of the tapering dovetailed key E.

The arbor D occupies a hub, F, which is let into and screwed fast to the end of the churn-box in the manner shown.

The outer extremity of the arbor D carries a pinion, G, which, being driven firmly onto the arbor, holds tightly compressed between it and the hub F one or more gaskets, H, of india-rubber or other suitable substance. The pinion G is driven by a spur-wheel, I, which rotates on stud *i*, which projects from the box, and is operated by means of a handle, I'.

A vertical groove, J, in the box-end and a similar one, J', in the tapering dovetailed key permit the insertion of a brake, K, immediately over and in the vertical plane of the dash. L is a similar brake, which extends horizontally from the box-side, and is secured in place by inserting one end in the cavity M, the other end resting on a ledge or cleat, N, and being further secured by a pin, O, which, being passed through a bracket, *l*, on the brake, enters the end of the box.

The knob P, by which the lid is handled, is perforated to permit the escape of air.

The dash-blades and brakes are transversed by flaring apertures such as seen at Q in Figs. 2 and 3.

It will be seen that the dash and the brakes can all be removed from the box and replaced with great facility.

The horizontal brake L, in addition to its office of increasing the agitation of the cream, acts to prevent its escape at the top of the box.

I claim herein as new and of my invention:—

1. The arrangement of horizontal dash B C *b b'*, driving-arbor D *d*, flaring undercut and grooved recess *a* J', and tapering dovetail key E, the whole being arranged and operating substantially as set forth.

2. The arrangement of the removable horizontal brake L *l*, cavity M, ledge N, and pin O, as described.

In testimony of which invention I hereunto set my hand.

HARRISON DOOLITTLE.

Witnesses:

GEO. A. KNIGHT,
JAMES H. LAYMAN.