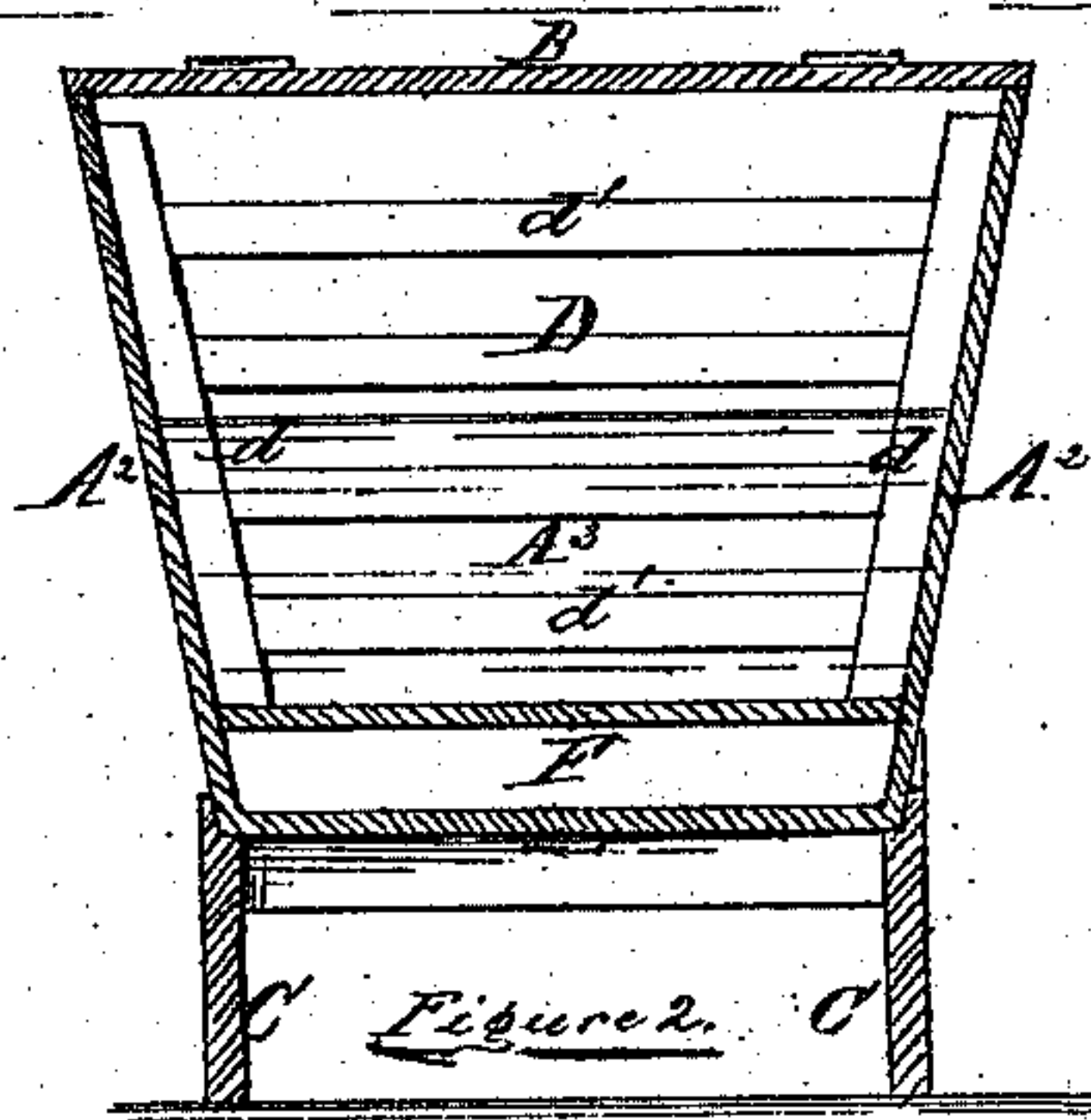
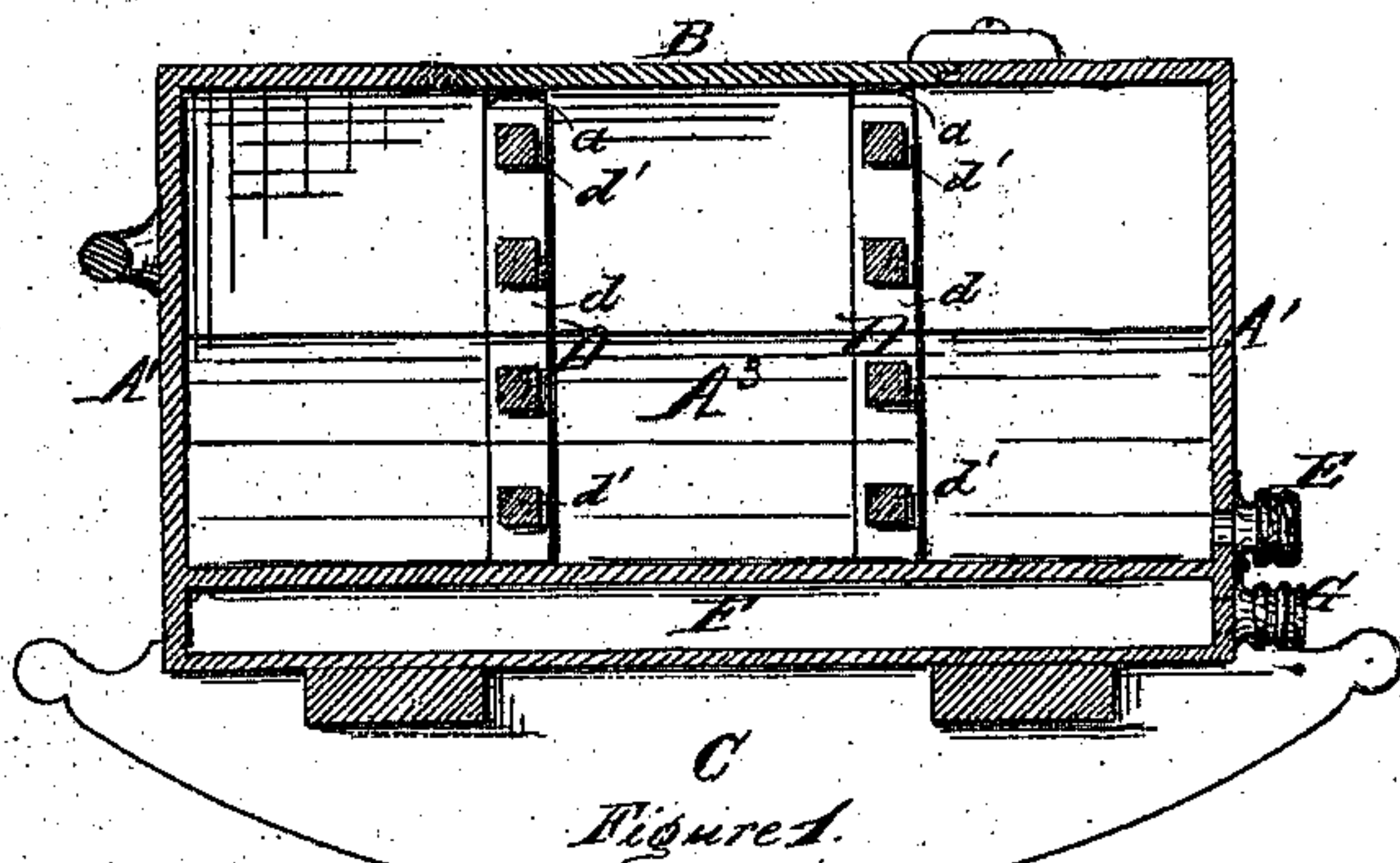


Curtin & Lammers,

Churn.

No. 105652.

Patented July 26. 1870.



Witnesses:

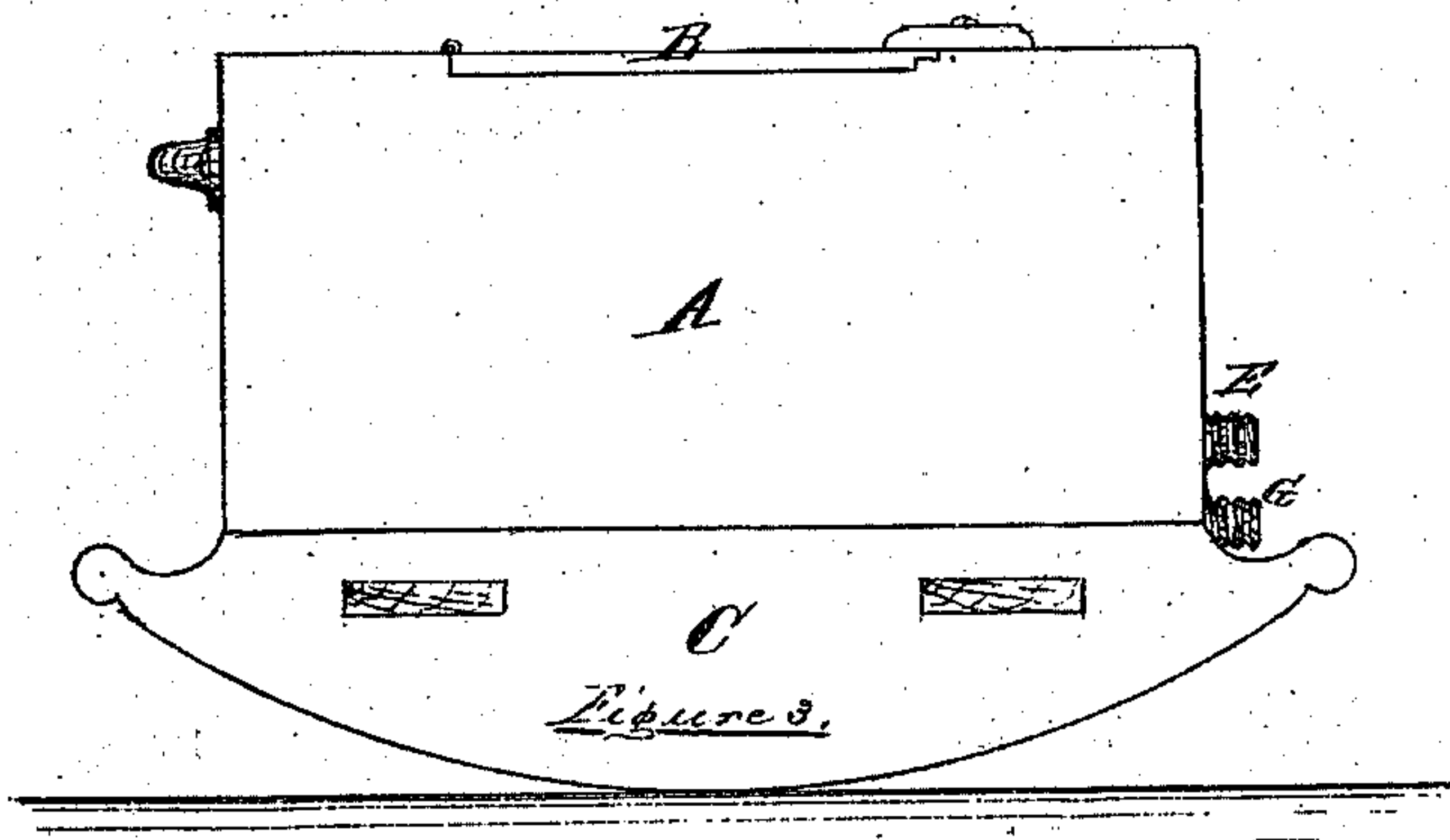
William W. Heithel

Robert. Burns.

Inventors:

W. A. Curtin and W. Lammers

by their attys
Heithel and Co.



United States Patent Office.

WILLIAM H. CURTIN, OF CLEMENT, AND WILLIAM LAMMERS, OF BREESE,
ILLINOIS.

Letters Patent No. 105,652, 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 we, WILLIAM H. CURTIN and WILLIAM LAMMERS, of Clement and Breese, respectively, in the county of Clinton and State of Illinois, have made certain new and useful Improvements in Churns; and we do hereby declare that the following is a full and true description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

This invention relates to the arrangement of the churn-body or vessel on rockers, so that an oscillatory movement may readily be imparted to the churn by propelling it similarly to a cradle.

Said invention relates, furthermore, to the arrangement of suitable breakers or dash-boards within the churn-vessel whereon the globules of milk are broken to liberate the fats and oils which afterward collect and form butter.

Lastly, in connection with the churn-vessel proper we arrange a sub-chamber, and the object thereof is to employ in said sub-chamber warm or cold water, or ice, as the season may be, to properly temper the churn-vessel above and its contents.

To enable those herein skilled to make and use our said improved churn, we will now more fully describe the same, referring herein to the accompanying—

Figure 1 as a longitudinal sectional elevation; to Figure 2 as a transverse sectional elevation; and Figure 3 as a longitudinal elevation.

The churn is constructed of the usual materials, chiefly wood, and may be varied greatly in form, and still the features of this invention may be applied.

Ordinarily the churn-body A will be a square tub or vessel, of which, by preference, the ends A¹ will be vertical and the sides A² will be somewhat inclined, causing the vessel to be narrower at bottom than at top.

The body A will have a suitable cover, B, hinged to the top boards, so as to perfectly inclose the inner churn-vessel A³.

The churn-body will rest upon rockers C; these may be of any suitable material not subject to ready wear, especially upon the rocking surfaces.

As the churn A is thus oscillated upon the rockers C the milk within the vessel A³ surges back and forth, striking the ends of the churn; but to cause a greater disintegration of the milk-globules than thus to be achieved, we arrange the breakers D in the grooves a of the sides A² of the churn-body.

The breakers consist of end-pieces, d, suitably inclined to fit the grooves a and joined by horizontal bars, d', which are made of a rectangular section.

The breakers D may readily be removed if it is desired to cleanse them or the churn-vessel; the water used heretofore, and the watery residues, after churning, will be drawn off at the cock or screw-plug E.

It is known that it is of importance to give the churn-vessel A³ the proper temperature. While this may prevent coagulation, it will generally advance and hasten the formation of butter. We have, therefore, constructed under the churn-vessel A³ a sub-chamber, F, the churn-bottom proper being, therefore, a false bottom.

Said chamber has the supply and discharge-valve or cock G.

By filling hot or cold water, or ice, into the sub-chamber, the required effect upon the superpoised churn-vessel is achieved.

If it be desirable to transmit heat more readily, the churn-bottom separating the compartments A³ and F may be metallic.

We do not claim that any of the specific parts of our churn are new, or that in their use they produce any new results; but

Having thus fully described our said invention,

What we claim is—

The arrangement of the vessel A A¹ A² A³, sub-chamber F, dashers D, when combined with rockers C, substantially as and for the purposes set forth.

In testimony of said invention we have hereunto set our hands, in presence of—

W. H. CURTIN.

WILLIAM LAMMERS.

Witnesses:

WILLIAM W. HERTHEL,

ROBERT BURNS.