

C. GUYER.

Churn.

No. 206,559.

Patented July 30, 1878.

FIG. I.

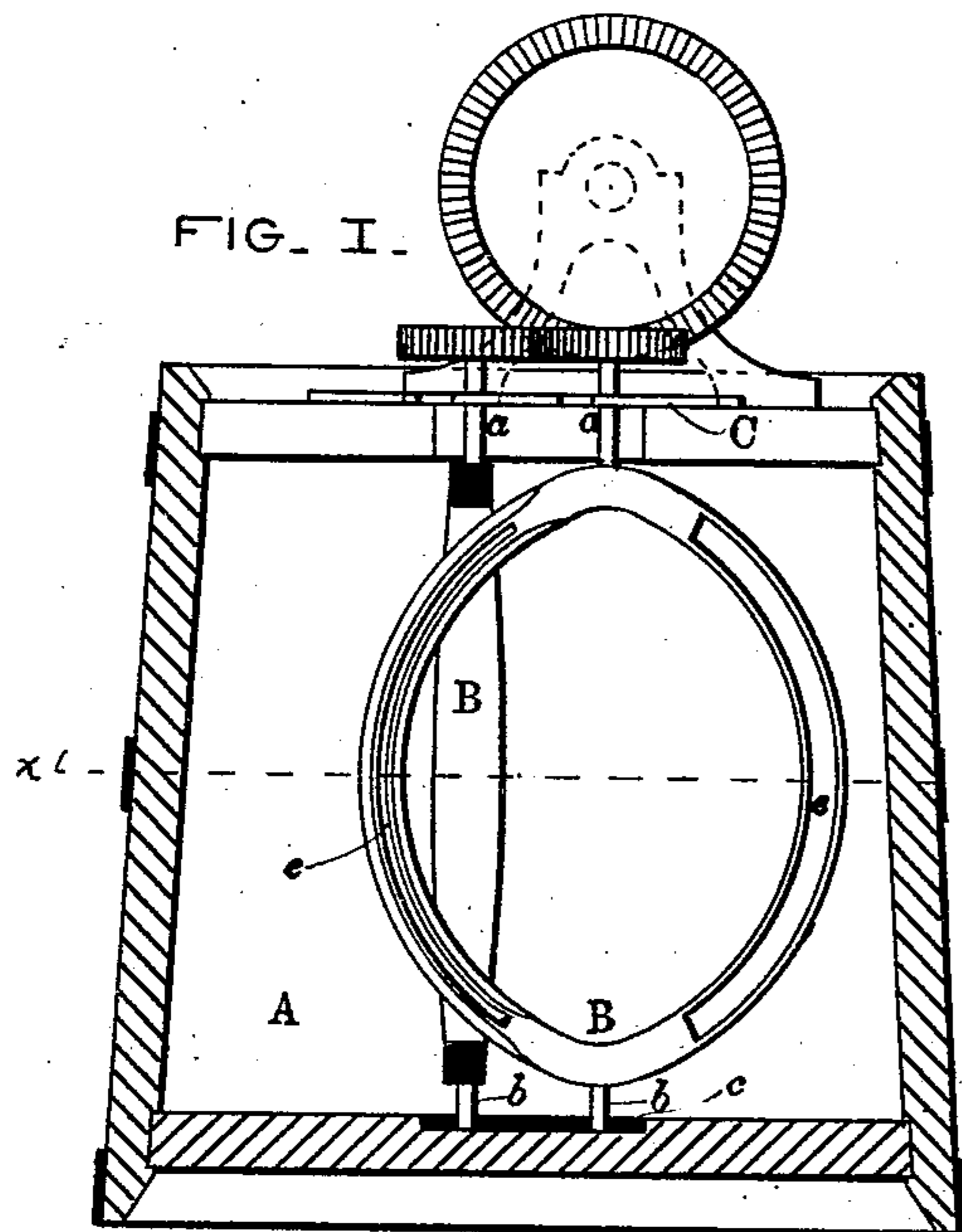


FIG. II.

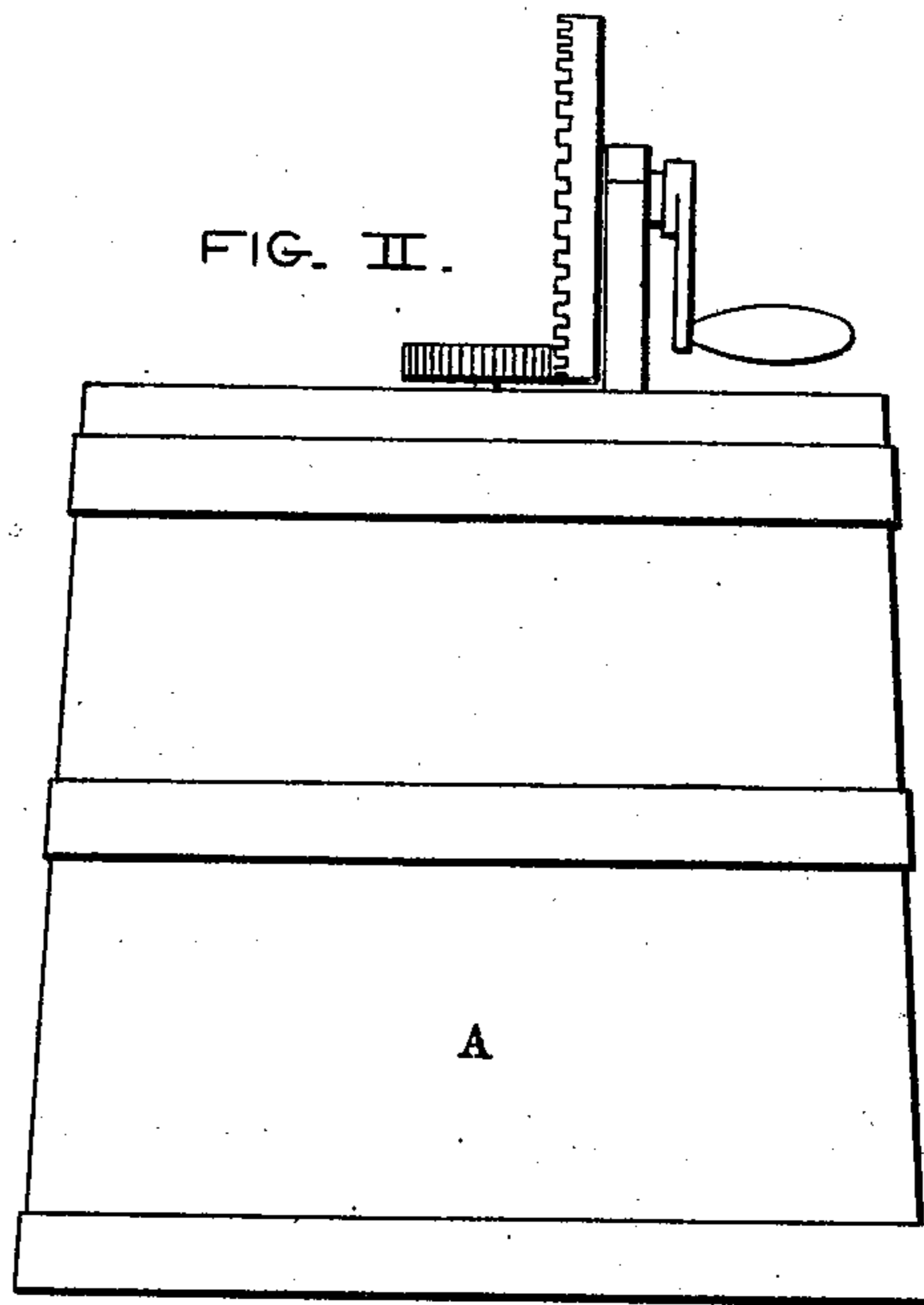


FIG. III.

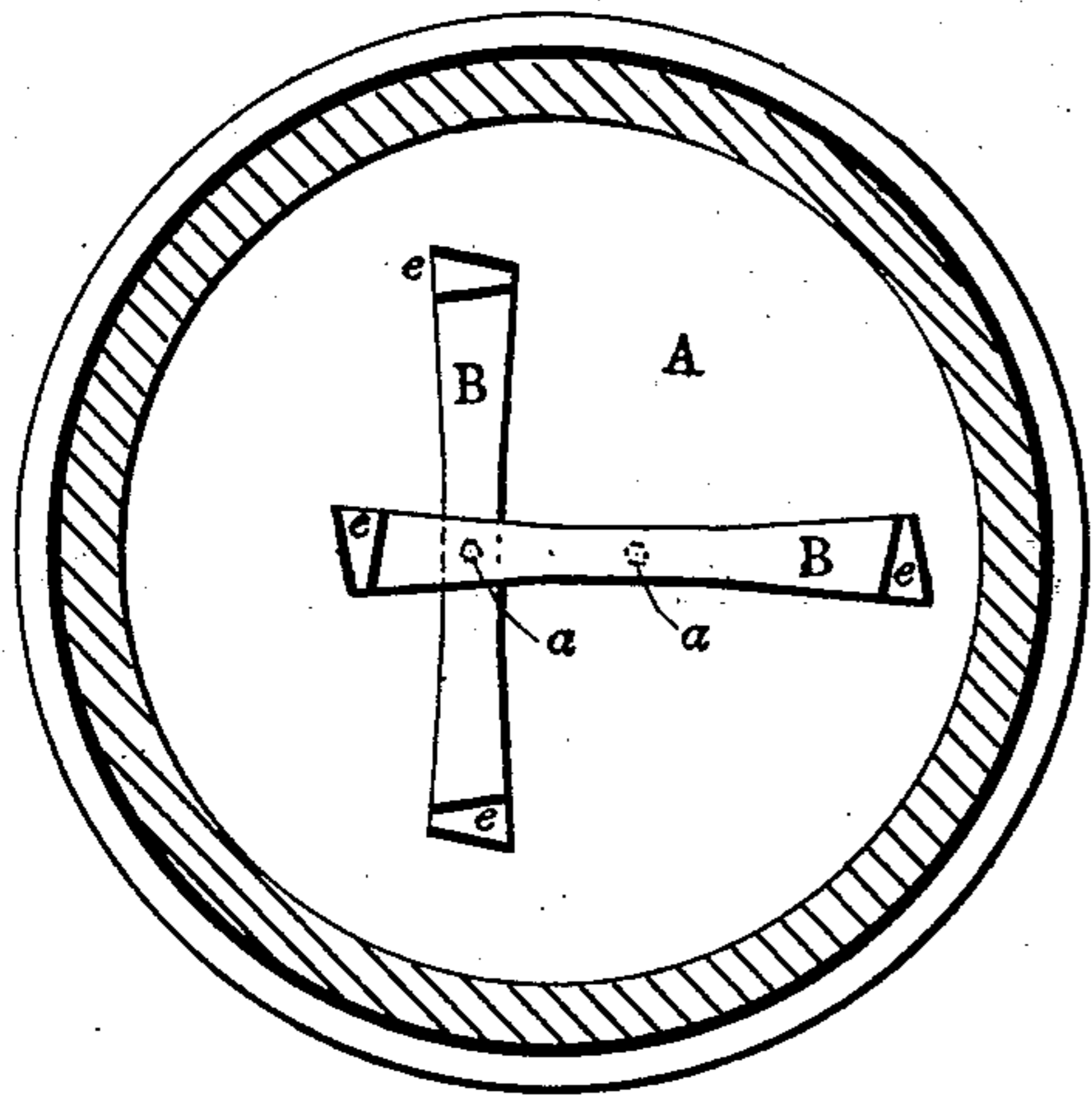


FIG. IV.

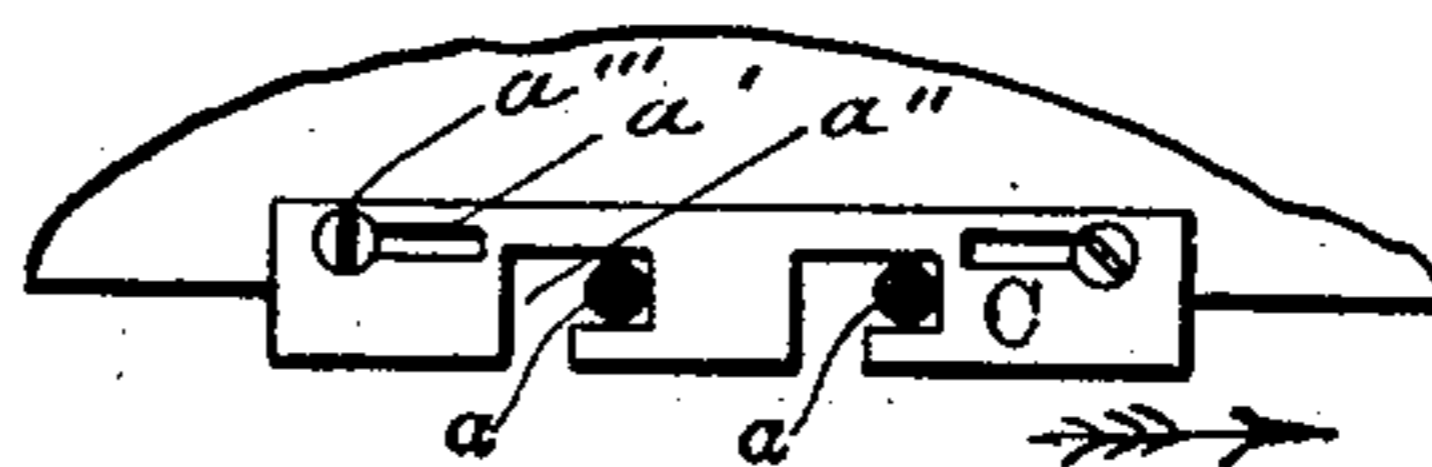
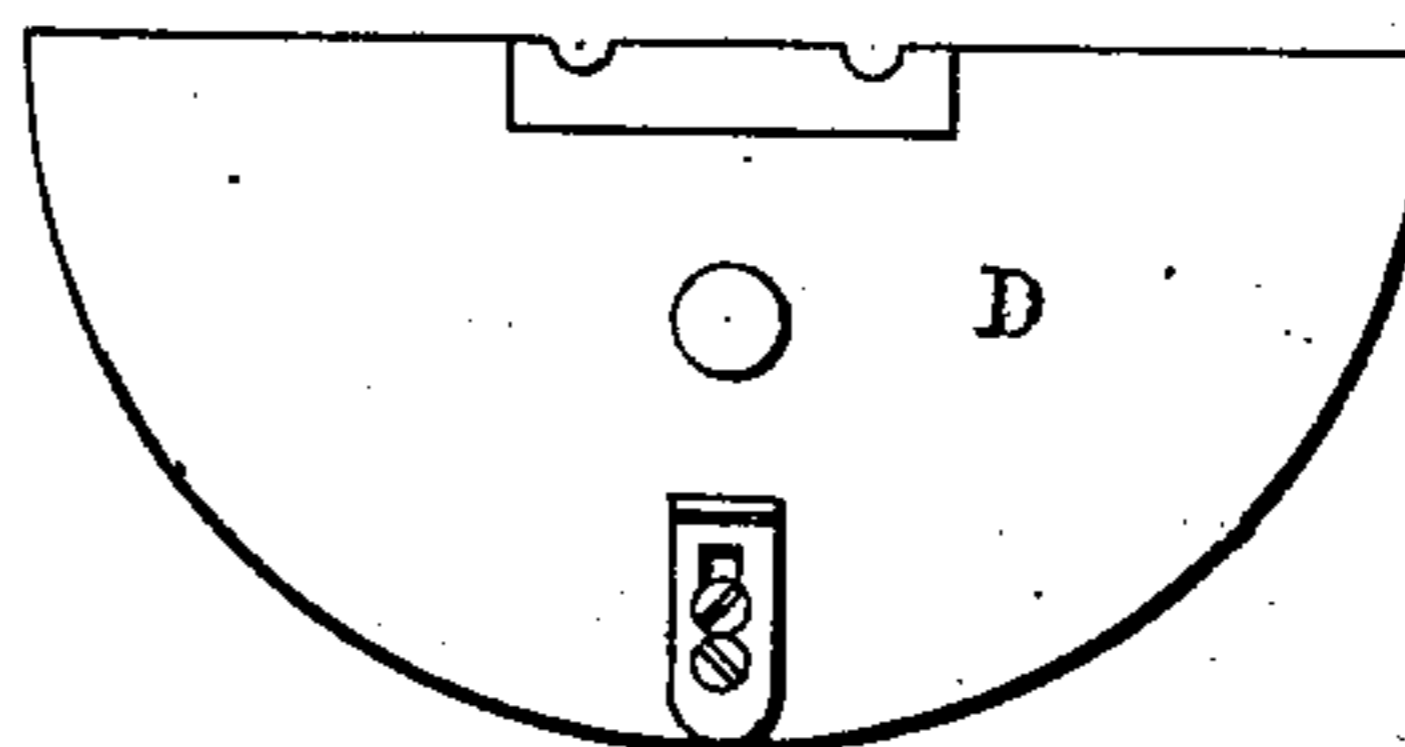


FIG. V.



—WITNESSES—

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J. B. Buckingham

—INVENTOR—

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Att'y

UNITED STATES PATENT OFFICE.

CALEB GUYER, OF TYRONE, PENNSYLVANIA.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. **206,559**, dated July 30, 1878; application filed May 31, 1878.

To all whom it may concern:

Be it known that I, CALEB GUYER, of Tyrone, in the county of Blair and State of Pennsylvania, have invented certain Improvements in Churns, of which the following is a specification; and I do hereby declare that in the same is contained a full, clear, and exact description of my said invention, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

This invention relates specially to the dashers, which are of novel construction, and to the manner of combining the same with the bucket, as will hereinafter fully appear.

In the description of the said invention which follows reference is made to the drawing, forming a part hereof, and in which—

Figure 1 is a vertical section of the improved churn. Fig. 2 is an exterior elevation of the same, as seen from a different point of view. Fig. 3 is a transverse section of Fig. 1 on the dotted line *x y*; and Figs. 4 and 5 are top views of parts of the invention.

Similar letters of reference indicate similar parts in all the views.

A is a bucket, which is of the description usually employed in churns; and B B are rotary dashers, adapted to be revolved in opposite directions within the said bucket by means of gearing, substantially as shown.

The dashers consist of elliptic or circular slotted or skeleton frames, having driving-shafts *a*, supported in bearings in the top of the bucket, and pins *b*, which rest in a plate, *c*, at the bottom of the same.

The slots in the dashers, before referred to, and which are represented by *e*, have a tapering cross-section, as will be seen by referring to Fig. 3 of the drawing.

The dashers are placed near each other; but in virtue of their annular construction, and their arrangement in relation to the gearing and each other, both freely revolve, each crossing the path of the other without interference.

In the operation of the dashers the cream is forced through the tapering slots *e*, and the particles of butter contained in the cream brought

into contact and united, which greatly facilitates the butter-making process. The dashers are held in place by means of a sliding locking device, C, which admits of the dashers being easily removed.

The said locking device consists of a plate having slots *a'* and rectangular bearing-openings *a''*, which, when the plate is adjusted with reference to the shafts *a*, as shown in Fig. 4, hold the shafts in the proper relation to the bucket and each other, but when the plate is slid back on the screws *a'''* in the direction of the arrow, admit of the releasing of the shafts from their bearings and their removal from the lower bearings and the bucket. One half of the bucket-top is fixed, and carries the gearing and supporting devices for the upper end of the dashers, and the other half is removable, and used as a lid. A plan of the lid, which is represented by D, is shown in Fig. 5 of the drawing.

Having thus described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

1. In combination with the bucket A, the revoluble dashers B, connected by gearing in such manner as to permit their movement of rotation to be reversed, the said dashers being provided with tapering slots *e*, and relatively arranged in the manner described, whereby each dasher is caused to pass within or across the circuit of rotation of the other, substantially as and for the purposes set forth.

2. In combination with the driving-shafts *a* of the dashers and the fixed half of the bucket-top, the locking device C, consisting of a sliding plate provided with rectangular bearing-openings *a''*, substantially as and for the purpose herein specified.

In testimony whereof I have hereunto subscribed my name this 14th day of May, A. D. 1878.

CALEB GUYER.

Witnesses:

W. GUYER,
J. M. CALDERWOOD.