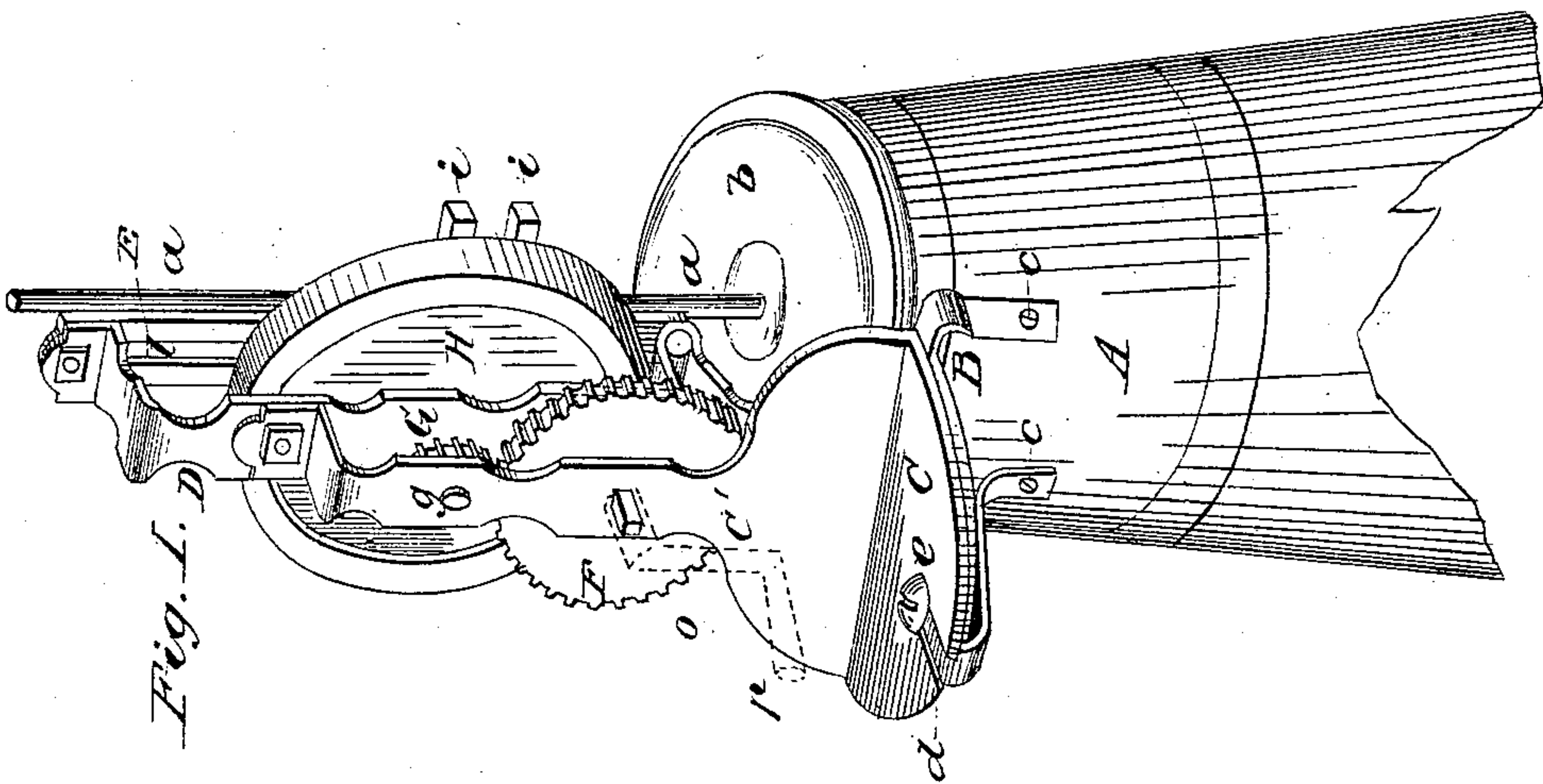
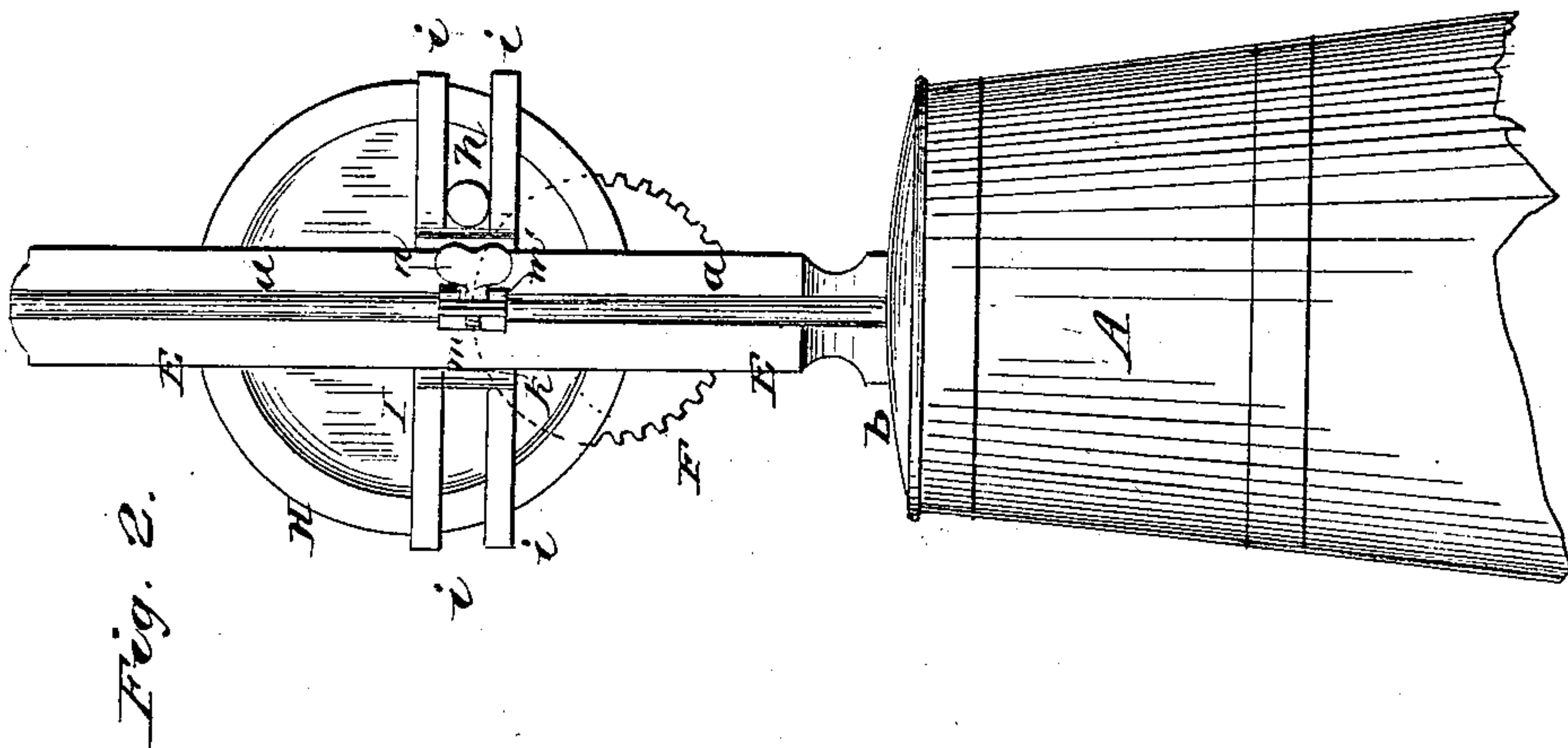
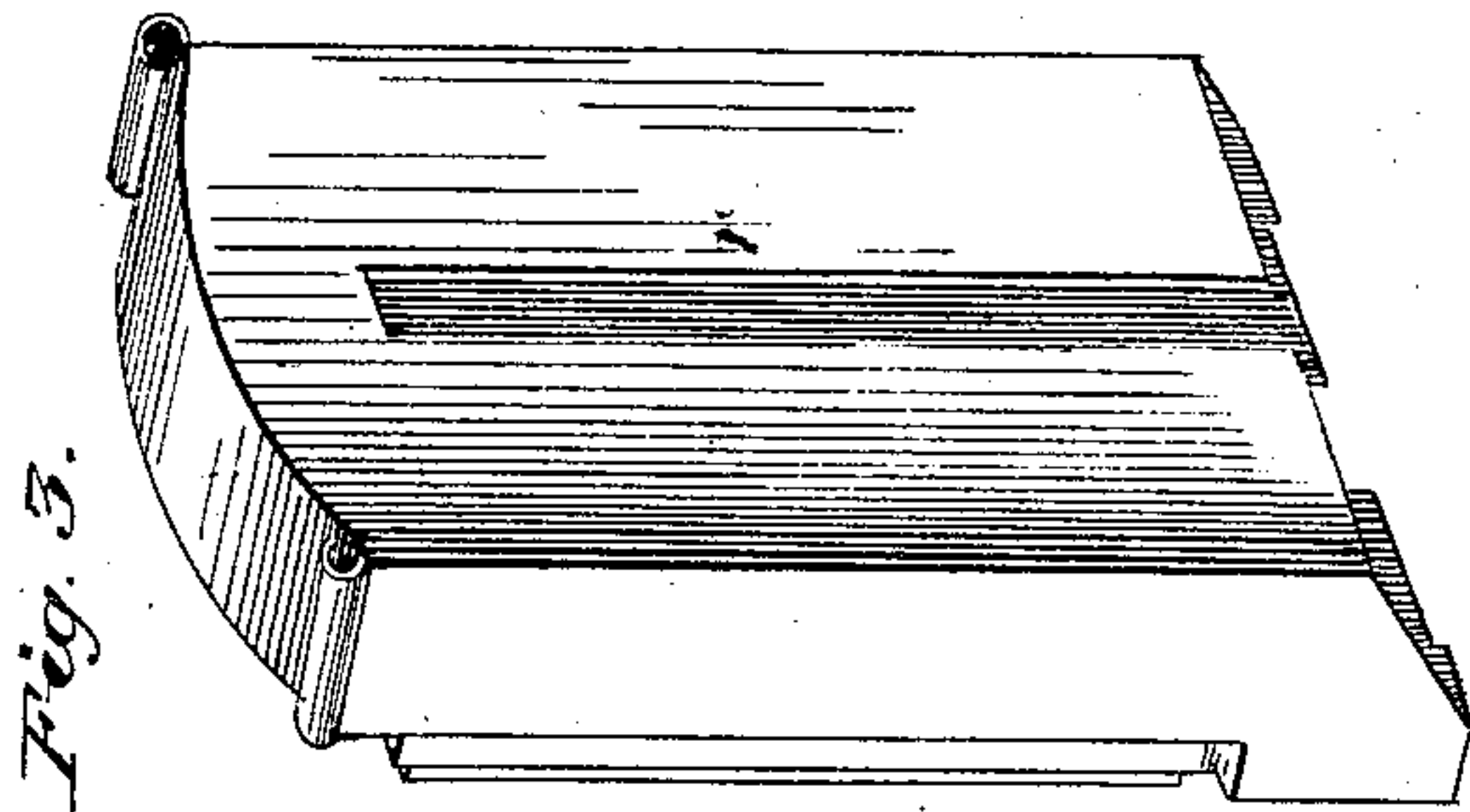


S. D. SAXBY.
 Reciprocating Churn Attachment.
 No. 205,687. Patented July 2, 1878.



Witnesses:
And L. Dutouch
Geo. W. Madigan

Inventor:
Stephen D. Saxby
 by *Louis Ruggen* & Co.
 his Attorney.

UNITED STATES PATENT OFFICE.

STEPHEN D. SAXBY, OF TRENTON, MISSOURI.

IMPROVEMENT IN RECIPROCATING-CHURN ATTACHMENTS.

Specification forming part of Letters Patent No. **205,687**, dated July 2, 1878; application filed May 7, 1878.

To all whom it may concern:

Be it known that I, STEPHEN D. SAXBY, of Trenton, in the county of Grundy and State of Missouri, have invented a certain new and useful Attachment to Reciprocating Churns; and I do hereby declare that the following is a clear and exact description of my invention, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figure 1 is a perspective rear view. Fig. 2 is a front view, and Fig. 3 is a perspective view of the case which covers my attachment detached from the churn.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to devices for operating reciprocating churns; and it consists in the construction and combination of parts of a removable and adjustable attachment which may be secured upon any reciprocating churn, and is connected with the dasher-staff for the purpose of imparting to this a regular, quick, and even up-and-down or reciprocating motion, substantially as hereinafter more fully described.

In the drawing, A is the churn, and *a* the dasher-staff, which projects up through a central perforation in the cover *b*, as usual. To one side of the churn A is secured a semicircular table or bracket, B, held in place by screws *c*.

Upon the bracket B is secured adjustably a plate, C, having a slot, *d*, through which passes a set-screw, *e*, by means of which plate C, which supports the operating mechanism, may be adjusted upon bracket B, so as to be brought nearer to or farther from the axis of the churn, according to the size, diameter, and capacity of this.

Made preferably in one piece with the bent part of plate C, at right angles to bracket B, is a standard, C', to one side of which is bolted, screwed, or riveted a frame consisting of the pieces D E.

F is a gear-wheel, the shaft of which is journaled in bearings in the frame-pieces C' D, and which meshes with a pinion, G, keyed upon the shaft *g* of the fly-wheel H, which is hung between the standards or frame-pieces D E, and has a pin, *h*, inserted into and projecting from its front face.

Pin *h* is inserted into and engages with a

casting, I, consisting of two parallel arms, *i i*, united by a vertical cross-piece, *k*, which has a vertical rib or flange projecting into a slot, *l*, in the frame-piece E, this slot serving as a vertical guide for the cam-piece I, to the clamp *m m'* of which the dasher-staff is secured. This clamp consists of a stationary leaf, *m*, and a hinged leaf, *m'*, which may be clamped together by a thumb-screw, *n*, so as to securely hold the dasher-staff *a* in any given position. By loosening screw *n* the staff may be adjusted in the clamp as circumstances may direct.

The gear-wheel F is operated by a crank, *o*, and handle *p*.

To keep the entire operating mechanism free from dirt or dust, a cover (represented in Fig. 3) is inserted upon the attachment, which is so constructed as to fit closely all parts thereof, and provided with a slot, *r*, in its front side, through which clamp *m m'* projects and reciprocates vertically.

This attachment is simple, strong, and durable in its construction, and by it the operation of churning is greatly facilitated. By the aid of a few wood-screws it may be secured upon any ordinary reciprocating churn, and may be adjusted so as to fit any length of dasher-staff or size and capacity of churn. It is compact, taking up but little room; and by providing the fly-wheel H with a series of holes at different distances from its center the pin *h* may be so adjusted in said holes (these being provided with a female and the pin with a male screw-thread) that the stroke of the dasher-staff may be easily regulated.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

In a reciprocating churn, the combination, with the frame C' D E, having the longitudinal or vertical slot *l* and the casting I *i i*, arranged crosswise to the slot *l*, and provided with a ribbed connecting-piece, *k*, fitting into the said slot, of the fly-wheel H, having the cam stud or projection *h*, pinions F G, and dasher-staff *a*, connected to the upright E of the above-mentioned frame, substantially as shown and described, for the purpose specified.

STEPHEN D. SAXBY.

Witnesses:

LIBANUS BALLINGER,
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