

(No Model.)

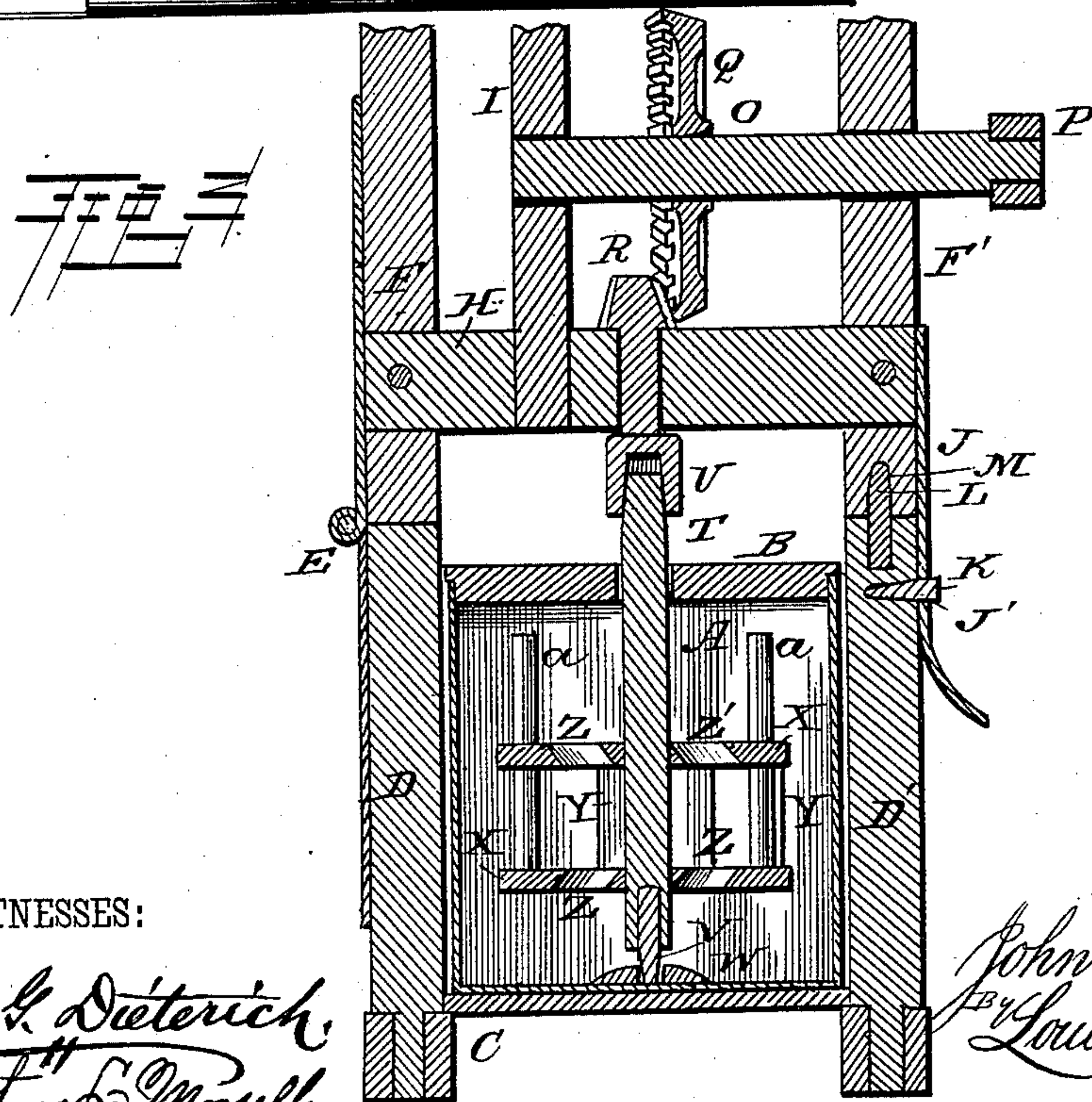
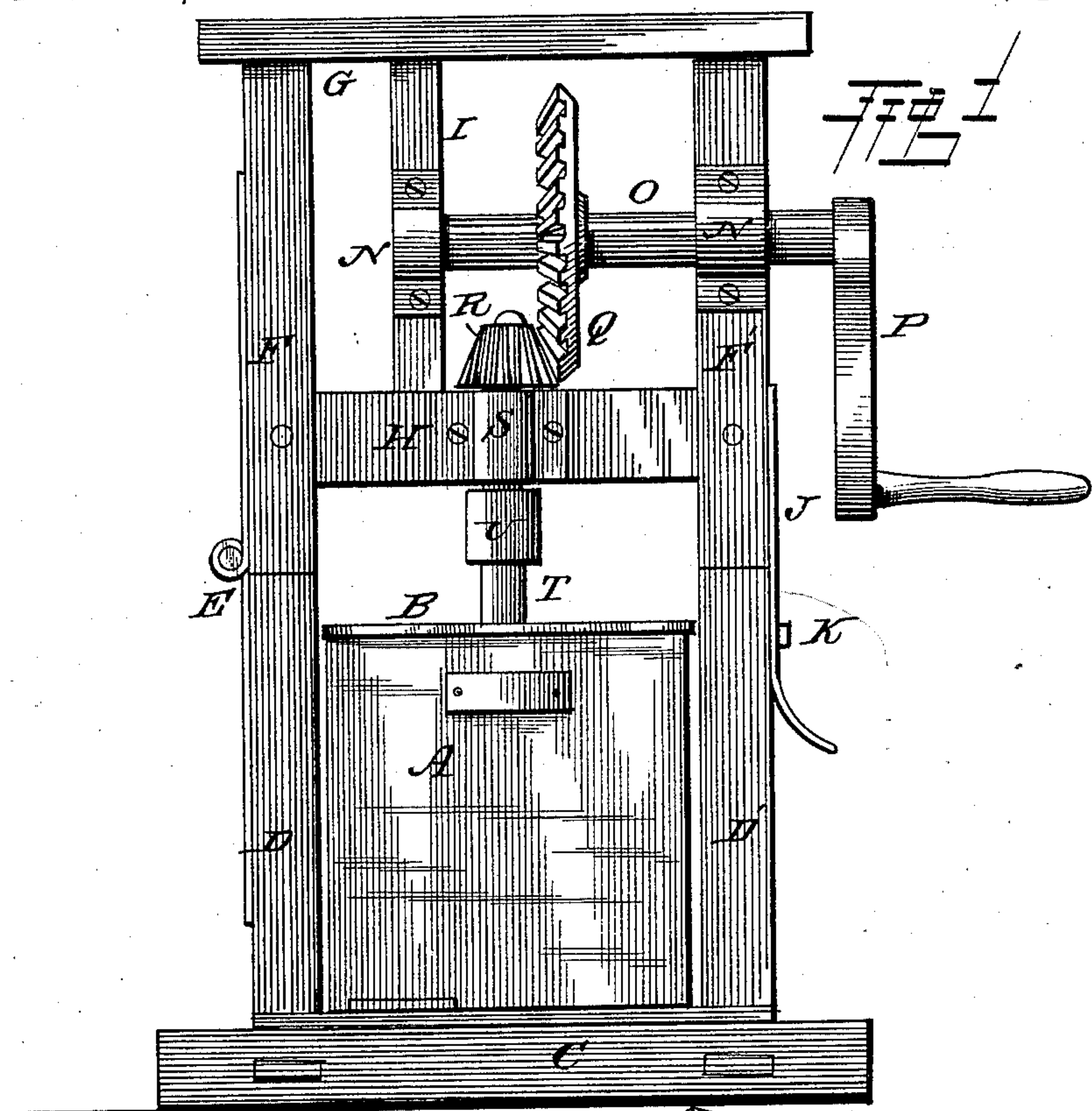
2 Sheets—Sheet 1.

J. H. EDENS.

CHURN.

No. 304,921.

Patented Sept. 9, 1884.



WITNESSES:

Ad. L. Dieterich
Arthur L. Morell

INVENTOR.

John H. Edens
By Louis Baggett & Co.
ATTORNEYS.

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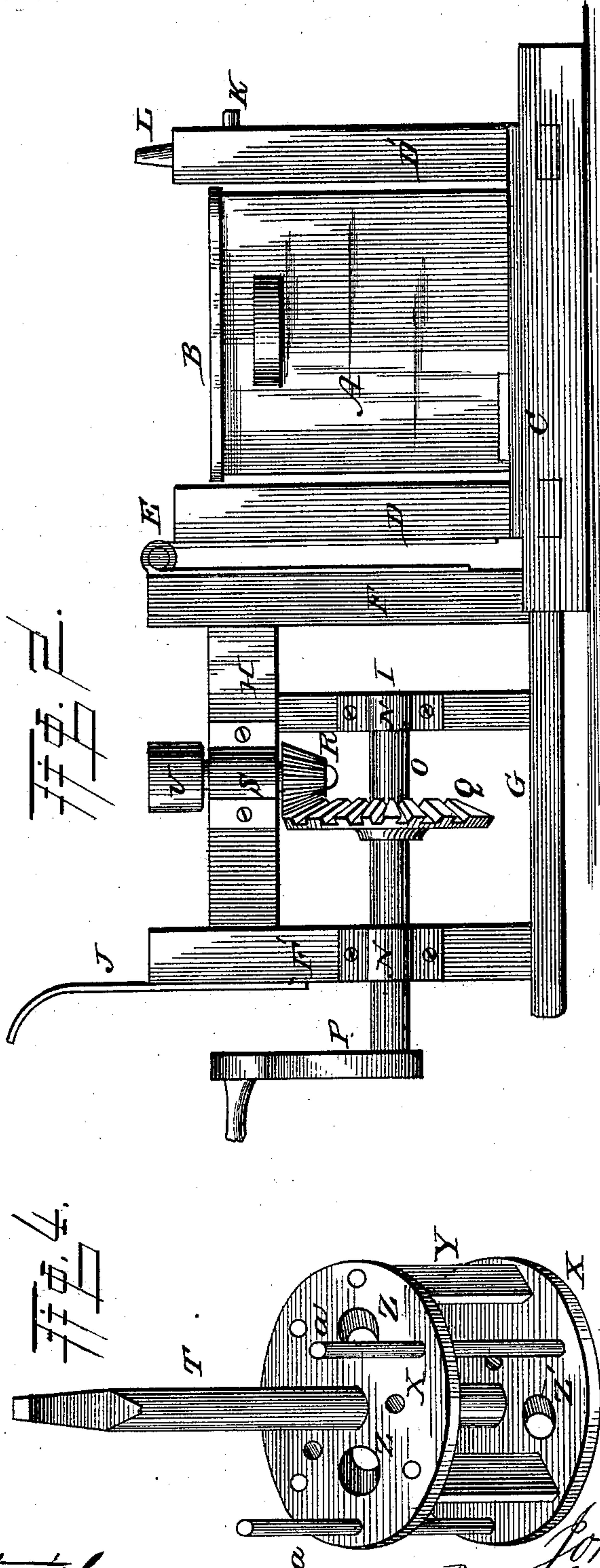
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WITNESSES:

Frederick S. Dietrich.
Arthur L. Morell.

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UNITED STATES PATENT OFFICE.

JOHN HAMPTON EDENS, OF JOHNSON CITY, TENNESSEE.

CHURN.

SPECIFICATION forming part of Letters Patent No. 304,921, dated September 9, 1884.

Application filed February 28, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. EDENS, a citizen of the United States, and a resident of Johnson City, in the county of Washington and State of Tennessee, have invented certain new and useful Improvements in Churns; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a front view of my improved churn. Fig. 2 is a similar view showing the upper frame thrown to one side and resting against the base of the churn. Fig. 3 is a vertical sectional view; and Fig. 4 is a detail view, in perspective, of the rotary dasher.

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

My invention has relation to churns having a vertically-rotating dasher; and it consists in the improved construction and combination of parts of a dasher, in which the milk or cream is agitated by means of disks having inclined apertures, and connected by means of wings and bars, as hereinafter more fully described and claimed.

Referring to the drawings, A designates the body of my improved churn, which is provided with a cover, B. This churn-body rests upon a platform or base, C, of any desired construction, that shown, however, in the drawings being preferred, which is provided with two uprights or standards, D D'—one on each side—the upright D being connected to an upper frame by a hinge, E. This upper frame consists of two vertical pieces, F F', which are connected by means of cross-pieces G H, which in turn are united by a brace, I.

Attached to the standard F' is a flat steel spring, J, curved at its lower end, and having a hole, J', adapted to engage a pin, K, extending laterally from the upright D'. By means of a tenon, L, in the upper end of the standard D' fitting in a socket, M, in the standard F' of the upper frame, I am enabled to fasten the two frames firmly together, and in such a manner as to prevent any liability of their becoming loose when the churn is being operated.

By the use of the hinge-connection E, in conjunction with the locking mechanism above described, I am enabled to readily remove the contents of the body A, after the operation of churning has been completed, by simply releasing the spring-hasps J, and allowing the gear-frame to fall to one side, as indicated in Fig. 2.

Working in suitable bearings, N N, attached to the front of the vertical pieces F' and I, is a shaft, O, actuated by a crank, P. This shaft O carries a bevel-wheel, Q, the cogs of which mesh with a pinion, R, at right angles thereto, and working within a bearing, S, on the front of the cross-piece H.

T is the dasher-staff, which works through an opening in the cover B, the squared upper end of which fits into a socket, U, in the lower end of the pinion R, and is rotated by means of the said pinion R, which itself is actuated by the bevel-wheel Q. The lower end of the dasher-staff is provided with a pintle, V, turning in a bearing, W, in the bottom of the churn-body A.

Arranged at suitable distances apart on the lower extremity of the dasher-staff T are circular disks X X, which are connected by a series of wings, Y. The circular disks X X are provided with slanting perforations Z Z'. Three rods or bars, a, extend vertically from the lower disk through the upper disk and to some distance above. These bars tend to keep the butter globules together as they are formed, so as to form a compact mass, and thereby assist in the removal of the butter after the churning has been completed.

From the foregoing description, taken in connection with the drawings, the advantages of my improved churn will be readily comprehended.

Motion is imparted to the operating mechanism by means of the crank P, and as the dasher is then necessarily made to rotate the cream to be churned is put in motion and is forced through the apertures Z Z', after which it strikes against the wings Y, and then tends toward the center, and at this point, owing to the constant revolution of the dasher, it is forced out of the dasher between the wings Y. Inasmuch as the rotation is made continuous and in one direction, the stream of cream is

constantly passing in through the perforations Z and Z', respectively, of the upper and lower disks, and forced against the wings Y toward the center of the dasher, and is constantly passing out between the wings Y. By this means the cream is thoroughly agitated, and the process of churning thus speedily completed.

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

In a rotary churn, the improved dasher,

consisting of the dasher-staff T, circular disks X X, having inclined perforations Z Z', wings Y, and vertical rods a, substantially as and for the purpose shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

JOHN HAMPTON EDENS.

Witnesses:

F. N. HASH,
J. B. HASH.