(No Model.)

R. A. PRESTON.

CHURN.

No. 267,368. Patented Nov. 14, 1882.

Fig. 1.

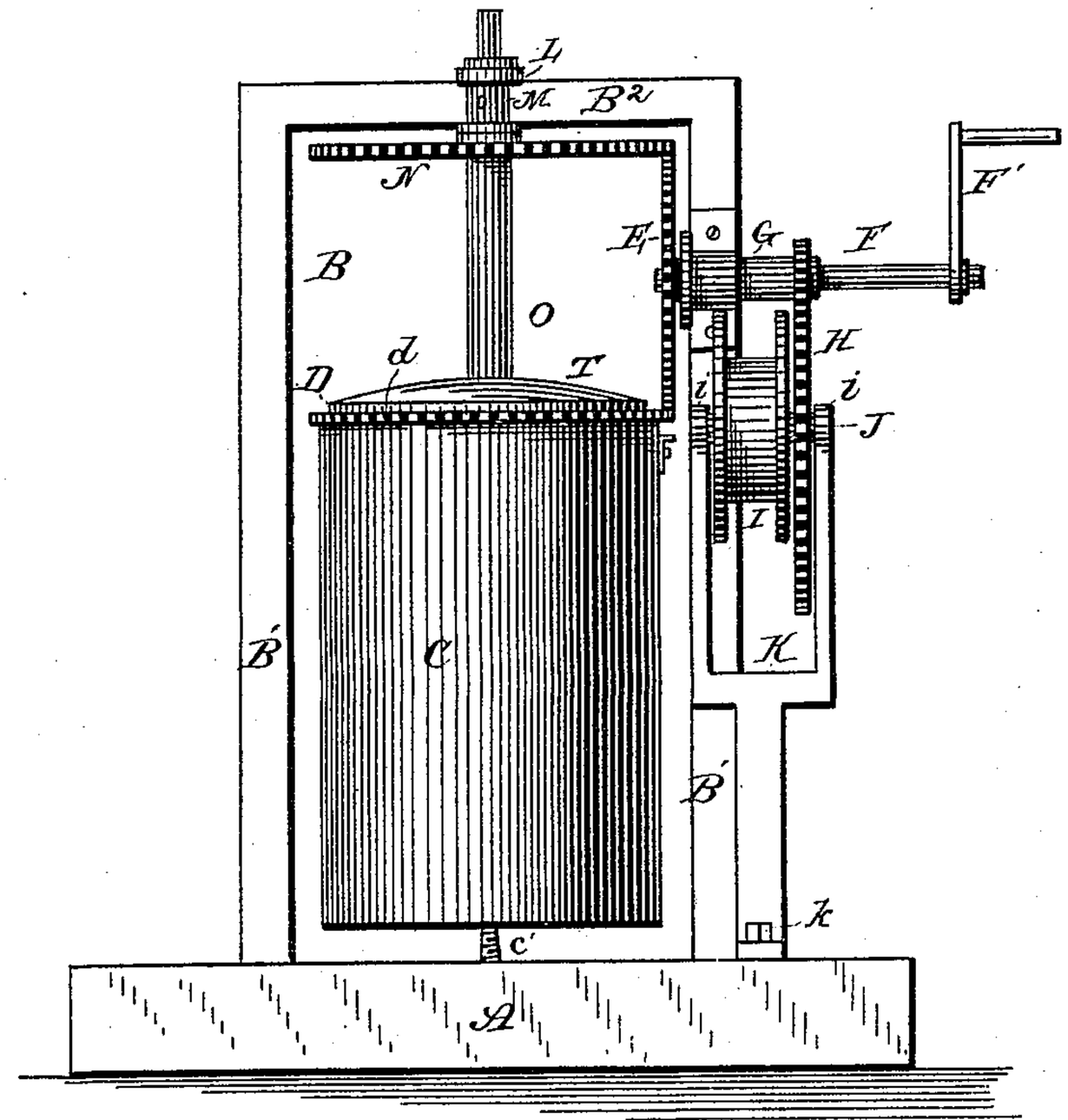
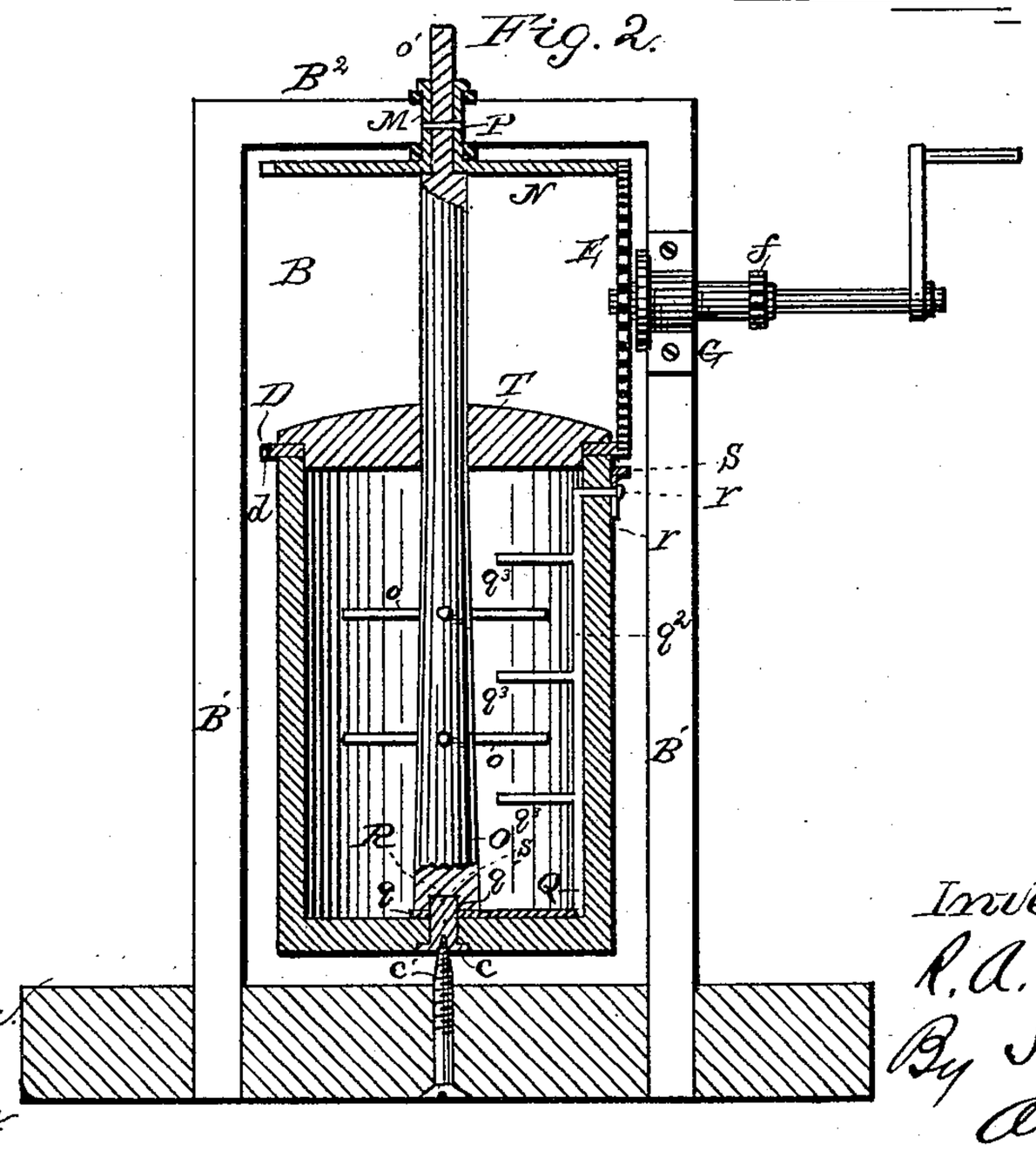


Fig. 2.



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UNITED STATES PATENT OFFICE.

RUSSELL A. PRESTON, OF SWAN, INDIANA.

CHURN.

SPECIFICATION forming part of Letters Patent No. 267,368, dated November 14, 1882.

Application filed March 16, 1882. (No model.)

To all whom it may concern:

Be it known that I, RUSSELL A. PRESTON, a citizen of the United States, residing at Swan, in the county of Noble and State of Indiana, have invented certain new and useful Improvements in Churns; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to churns, the object being to provide a churn of such construction that it may be easily operated, and adapted to produce butter in a short time and with little labor.

The invention consists in the improved construction and combinations of parts hereinafter described, and pointed out in the claim.

In the drawings, Figure 1 is a side elevation of a churn constructed in accordance with my invention, and Fig. 2 is a vertical central section of the same.

A represents the base or stand of the churn, upon which is supported a frame or standard, B, consisting of the two parallel vertical posts B′ B′ and the top cross-bar, B^2.

C represents the churn-body, provided on the under side of its bottom with a socket-bearing, *c*, adapted to receive a pivot, *c′*, secured to the base A at a point equidistant from the posts B′ B′. To the upper edge of the churn-body is secured an annular band or ring, D, whose outer periphery is provided with gear-teeth *d*, adapted to mesh with the teeth of a gear-wheel, E, mounted on the inner end of a horizontal crank-shaft, F, supported in a combined sleeve and bracket-bearing, G, and provided with a crank, F′. The shaft F is also provided at about its center with a pinion, *f*, adapted to mesh with a gear-wheel, H, the latter being mounted, together with a belt or chain wheel, I, upon a horizontal shaft, J, journaled in bearings *i* of a forked or bifurcated standard, K, the lower end of the latter being bent at a right angle to the standard, and adapted to be adjustably secured to the base A by a thumb-screw, *k*.

L represents a strip of metal bent around the cross-bar B^2 at the center of the latter, and having its opposite ends perforated to form a bracket-bearing to receive a hollow arbor or sleeve, M, of a crown-wheel, N, said arbor being flanged at its upper end to retain it in position in its bearing. This crown gear-wheel is also adapted to gear with the wheel E.

A revolving dasher, O, provided with dash arms or blades *o*, arranged at right angles to one another, and perforated at its upper end, *o′*, is adapted to be secured to the crown N by a detachable locking-pin, P, adapted to be inserted through the hollow arbor of said crown-wheel and into the perforated end *o′* of the dasher.

Within the churn-body is arranged an L-shaped bracket, Q. The outer end of the short arm *q* of this bracket is perforated, as shown at *q′*, to fit over a stud or pivot, R, while the long arm q^2 of said bracket is provided with dash-arms q^3, so arranged relative to the arms of the dasher O that the latter will pass between said arms q^3 without contact therewith. The upper end of the bracket Q is bent at a right angle to said arm, and projects through a perforation, *r*, of the churn-body, near the top of the latter, and is provided with a head, *r′*, adapted to receive a key, S, the latter being constructed to slide over and securely hold the end of the bracket. The lower end of the dasher O is formed with a socket, *s*, adapted to receive or fit upon the pivotal stud R of the churn-bottom and to freely turn thereon.

T represents the churn-cover, adapted to fit tightly upon the churn, and perforated centrally to admit of the passage through it of the dasher O.

The operation of the churn as thus constructed will be readily understood. Either hand-power, steam, or other motive power may be used to operate the crank-shaft F. If other than hand-power is to be used, the crank F′ may be removed and a belt secured around the wheel I to revolve the latter and the wheel H, which will mesh with the pinion *f* on the crank-shaft and operate the churn. On the other hand, if hand-power only is desired, the forked standard K, with its wheels H and I, may be removed by merely turning the thumb-screw *k*. Upon turning the shaft F the churn-body will be revolved in one direction by means of its gearing D meshing with the wheel E

of the crank-shaft, while the dasher O, being rigidly secured to the crown-wheel N, will be revolved in an opposite direction. It will be apparent that by this means a most thorough agitation of the cream within the churn is secured, and consequently a speedy separation of the butter from the cream attained.

The bracket Q, with its dash-arms, serves an important function in the operation of the churn, since it increases the resisting points and facilitates the agitating of the cream. By the construction described the bracket may be readily removed from the churn for cleansing or other purposes, and restored to its position.

I make no claim in this application to the forked standard and the gear-wheels arranged thereon, but reserve to myself the right to file a separate application for Letters Patent therefor.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a churn, the combination, with the churn-body and dasher, of the L-shaped bracket Q, adapted to be secured at one end to a pivot within the churn, while its opposite end projects through the churn-body, and is adapted to receive a locking-key, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

RUSSELL A. PRESTON.

Witnesses:
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