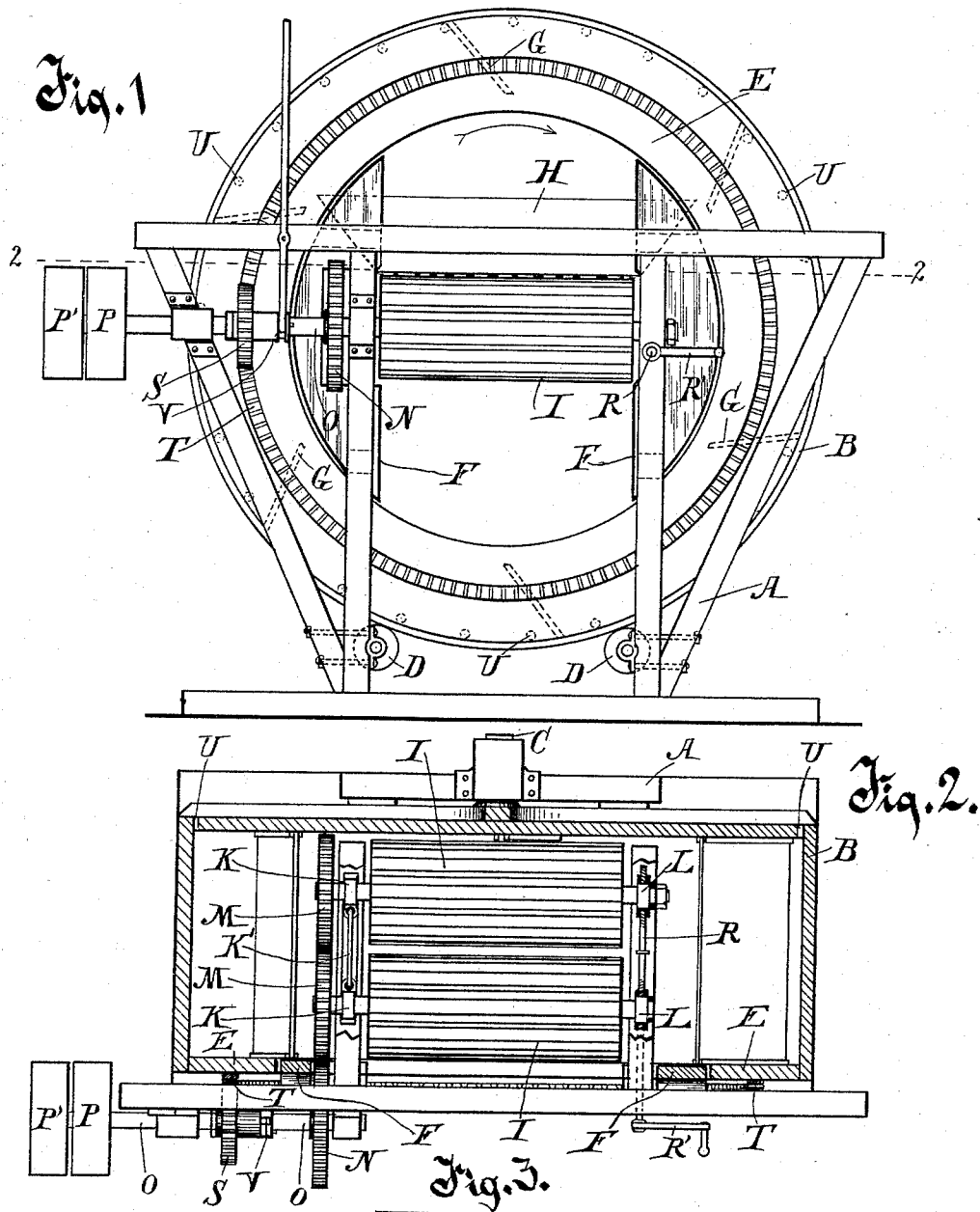


(No Model.)

H. J. ANDERSON.
BUTTER WORKER.

No. 483,201.

Patented Sept. 27, 1892.



Witnesses.
Richardson
W. Keeney,

Inventor.

H. J. Anderson
By C. T. Benedict
Attorney

UNITED STATES PATENT OFFICE.

HANS J. ANDERSON, OF LAKE MILLS, WISCONSIN.

BUTTER-WORKER.

SPECIFICATION forming part of Letters Patent No. 483,201, dated September 27, 1892.

Application filed September 4, 1891. Serial No. 404,699. (No model.)

To all whom it may concern:

Be it known that I, HANS J. ANDERSON, of Lake Mills, in the county of Jefferson and State of Wisconsin, have invented new and useful Improvements in Butter-Workers, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention relates to improvements in the butter-worker for which Letters Patent No. 444,270 were issued to me on January 6, 1891; and it consists in the reconstruction and rearrangement of operative parts of the butter-worker whereby a more simple, effective, and enduring mechanism is produced than that contained in the device heretofore patented to me.

In the drawings, Figure 1 is a front elevation of the complete butter-worker. Fig. 2 is a top plan view, partly in section, on line 2 2 of Fig. 1, of the device, parts being broken away to show otherwise hidden construction. Fig. 3 is a detail of the roller-bearings at the right-hand in Fig. 2.

A is a frame of suitable form and size for supporting the operative mechanism.

B is a hollow cylindrical drum partially open centrally at the front end. The rear end of the drum is closed, and is provided with a gudgeon, by which it is journaled at that end on the frame. At the front end the drum is supported and rotates on idle-wheels D D, journaled in suitable boxes therefor secured to the frame. The front end of the drum is partially closed by an annular partial end or flange E, leaving a central opening into the drum. This circular opening to the drum is further partially closed by the side boards F F, secured detachably to the frame in the plane of the partial end E. These side boards at their outer edges are fitted loosely to the inner circular edge of the partial end E, and the drum revolves around them. Buckets G G, each consisting of a piece of board extending from one end to the other of the drum, project inwardly from its periphery obliquely to the radii, being inclined inwardly forwardly in the line of motion of the drum. These shelves or buckets serve to catch and carry the butter to and above the hopper H, into which it falls from

the buckets and is carried by gravity and guided by the hopper between the corrugated rollers I I. The hopper H is supported on the frame within the drum, and the rollers I I are journaled in boxes K K and L L at their respective ends. The rollers are provided with gears M M, meshing with each other, and one of which meshes with the gear N on the driving-shaft O. The driving-shaft is provided with a fast pulley P and a loose pulley P' for connecting it by a belt with the power-supply. The shaft is journaled on the frame.

It is desirable to so arrange the rollers, which are located opposite each other, that they can be adjusted toward and from each other, and for this purpose the boxes L L are made movable toward and from each other in ways therefor in the frame, and the boxes are connected by a right and left hand screw R, secured to the frame against endwise movement and provided with a detachable crank-handle R', whereby by the rotation of the screw the journal-boxes may be adjusted toward or from each other, the journal-boxes K K being sufficiently loose therefor in the frame. In the construction shown the journal-boxes K are connected together by a link K' to prevent their movement away from each other, while permitting a limited amount of movement to accommodate the adjustment of the boxes L L.

For revolving the drum a pinion S, splined on the driving-shaft O, meshes with an annular rack T, fixed on the front end of the drum. A shifting-lever V, pivoted on the frame, rides at one end in a groove therefor in the hub of the pinion S and is adapted for shifting the pinion into and out of gear with the rack T, so that the drum may or may not be revolved by the driving-shaft, as desired. A series of apertures U in the rear end of the drum near the periphery provide for the escape of buttermilk from the drum.

It will be understood that in using this butter-worker butter is placed in the drum and by the rotation of the drum in the direction indicated it is carried up to the top and falls into the hopper, by which it is directed onto and between the corrugated rollers, whereby the milk is forced out of it, the butter falling from the rollers upon the bottom of the drum

to be again carried up and passed between the rollers until the butter is entirely free of buttermilk, the milk in the meantime falling on the bottom of the drum and escaping therefrom through the apertures therefor in the rear end.

What I claim as new, and desire to secure by Letters Patent, is—

1. A butter-worker consisting of a frame, a cylindrical drum open centrally at one end, a gudgeon fixed centrally to the drum on its closed end, and wheels axled on the frame under the open end of the drum, whereby the drum is supported revolubly, a driving-shaft arranged at right angles to the axis of the drum, having a pinion gearing with an annular rack on the partially-open end of the drum, buckets on the inner peripheral wall of the drum, projecting inwardly therefrom and extending intact from one end wall to the other end wall of the drum, a plurality of corrugated rollers in the drum, centrally arranged parallel and near to each other at right angles to the axis of the drum, journaled in arms fixed on the frame and projecting into the drum through its open end, and gear-wheels on the axles of the rollers, meshing with each other, the outer one meshing, also, with a pinion on the driving-shaft, substantially as described.

2. In a butter-worker, the combination of a cylindrical revoluble drum, one end of which is open partially centrally, the drum being also provided with apertures at its periphery for the escape of buttermilk therefrom, flat buckets projecting inwardly from the peripheral wall of the drum and forwardly at oblique angles to the radii and extending in-

tact from end to end of the drum, adapted by the revolution of the drum to elevate the butter therein, two corrugated pressure-rollers near to and parallel with each other, geared together, supported centrally in the drum at right angles to its axis on a frame therefor, an annular-toothed rack on the front end of the drum, and a driving-shaft geared independently to the rack on the drum and to one of the rollers in the drum, substantially as described.

3. In a butter-worker, the combination of a cylindrical revoluble drum partially open at one end and provided with means about its periphery for elevating butter therein, butter-working rollers near to and substantially parallel with each other, located horizontally and centrally in the drum at right angles to its axis on a suitable frame therefor, wheels on the rollers at one end, meshing with each other, journal-boxes adjacent to the wheels, movable slightly on the supporting frame and connected together by a link, and other journal-boxes movable on the frame, in which other boxes the other extremities of the rollers are journaled, and a right and left hand screw secured to the frame against endwise movement, turning into and connecting the latter journal-boxes, whereby the rollers may be moved toward and from each other, substantially as described.

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

HANS J. ANDERSON.

Witnesses:

H. A. KYPKE,
B. F. NEWTON.