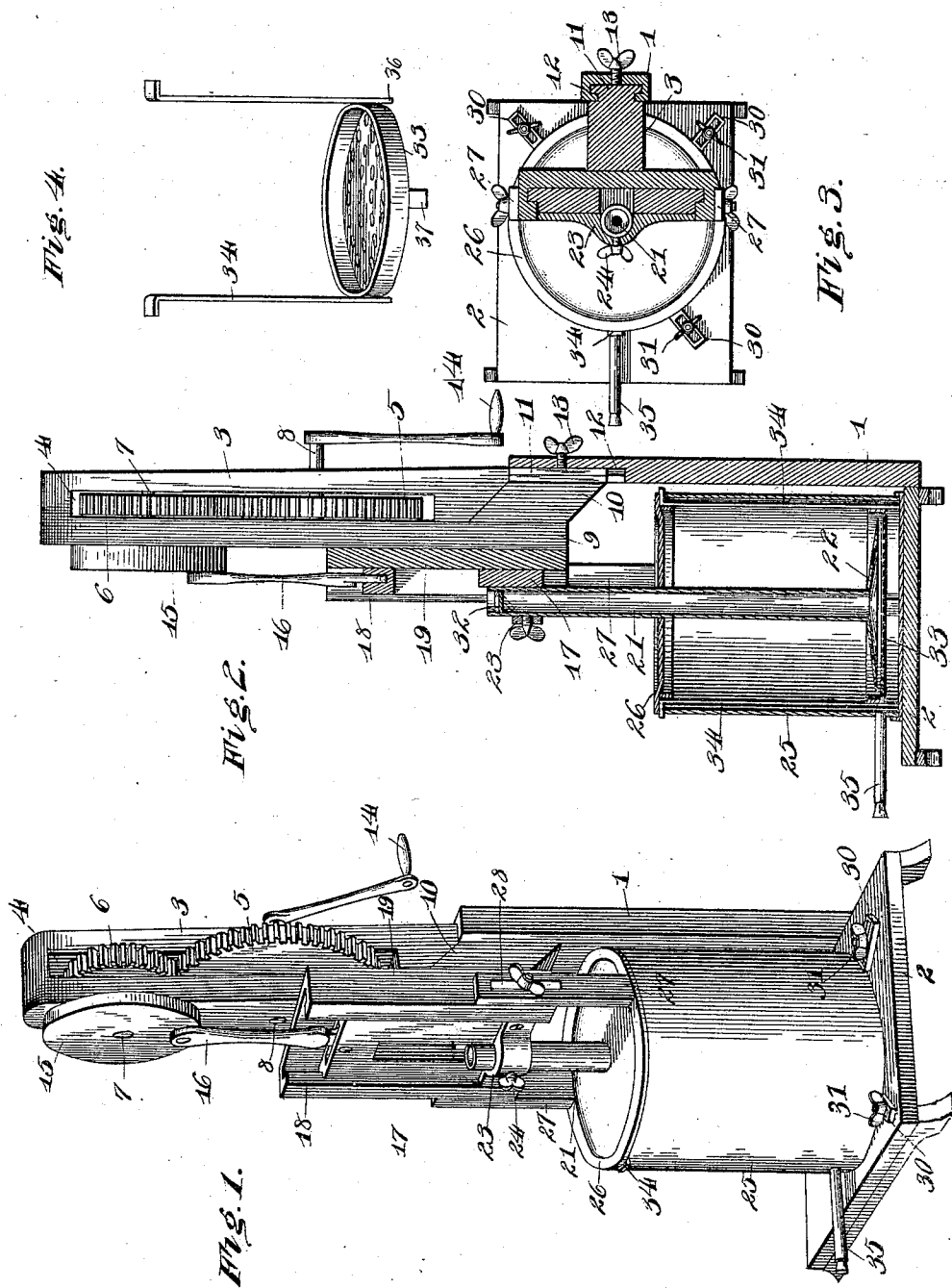


(No Model.)

R. R. WAYLAND.
CHURN.

No. 513,375.

Patented Jan. 23, 1894.



Witnesses

Chas Ford
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UNITED STATES PATENT OFFICE.

ROBERT R. WAYLAND, OF HALLSVILLE, MISSOURI.

CHURN.

SPECIFICATION forming part of Letters Patent No. 513,375, dated January 23, 1894.

Application filed December 8, 1892. Serial No. 454,491. (No model.)

To all whom it may concern:

Be it known that I, ROBERT R. WAYLAND, a citizen of the United States, residing at Hallsville, in the county of Boone and State of Missouri, have invented a new and useful Churn, of which the following is a specification.

The invention relates to improvements in churns.

10 The object of the present invention is to improve the construction of churns, and to increase their efficiency, and to enable butter to be quickly produced and readily removed from a churn body.

15 The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings and pointed out in the claims hereto appended.

20 In the drawings—Figure 1 is a perspective view of a churn embodying the invention. Fig. 2 is a vertical sectional view. Fig. 3 is a horizontal sectional view. Fig. 4 is a detail perspective view of the strainer.

25 Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a standard rising from a base 2 and supporting a vertically adjustable head 3 which carries the operative mechanism and which is adapted to be raised and lowered to readily adapt the mechanism to a churn body to enable the operation to be carried on to the greatest advantage whether the churn body 35 be full or only partially filled. The head is provided with a vertical longitudinal opening 4 in which are located a cog wheel 5 in a pinion 6, and which are mounted on upper and lower shafts 7 and 8; and the lower end of 40 the head is provided with an extension 9, having secured to it a block 10 which is provided at its rear edge with a T-shaped flange 11. The T-shaped flange is arranged in a similarly shaped groove 12 of the standard 1 and 45 is secured at any desired adjustment, the groove forming a way, by a clamping screw 13. The lower shaft 8 has secured to it a crank handle 14 by means of which the churn is operated; and the upper shaft has secured 50 to it a crank wheel 15 to a wrist pin of which is connected a pitman 16 which has its lower

end pivoted in a recess or a vertical slide 17. The slide 17 is provided at opposite sides with flanges 18, and is arranged within opposite ways of a guide 19 secured to and carried by the head 3 in the vertical adjustment 55 of the latter. The ways of the guide are formed by recessed cleats 20 and they cause the slide to reciprocate vertically, and to similarly operate a dasher rod 21. The dasher rod 60 21 is provided at its lower end with a dasher 22, and its upper end is secured adjustably in a keeper or clamp 23 of the slide by a set screw 24. The dasher reciprocates vertically in a churn body 25, and the latter has its cover 26 65 firmly held in place by vertically adjustable clamping pieces 27 arranged at opposite sides of the guide 19 and provided with vertical and longitudinal slots 28 and having clamping screws arranged therein. The churn 70 body is prevented from slipping off the base, which is mounted on feet, by adjustable blocks 30 which are slotted and provided with clamping screws 31. The dasher rod is tubular and is provided at its upper end with an 75 inwardly opening valve 32, whereby at each upward stroke of the dasher rod air will be taken in at the upper end, and at the downward stroke the air will be forced through the cream, thereby greatly facilitating and 80 hastening the production of butter. The butter may be readily withdrawn by means of a strainer 33 arranged within the churn body a short distance above the bottom thereof and supported in that position by suspension bars 85 or hooks 34 which engage the upper edge of the body, and are secured to the sides of the strainer at diametrically opposite points. The churn body is provided with a discharge 90 tube 35 by means of which the liquid may be withdrawn leaving the butter in the strainer. The suspension bars are extended below the bottom of the strainer to form feet 36, and the strainer is provided between the feet 36 95 with feet 37; and these feet serve to support the strainer above the bottom of the churn body, thereby enabling it to co-operate with the dasher and to have the cream forced through its perforations to assist the operation of churning. 100

It will readily be seen that the churn is simple and efficient, that butter may be

quickly produced by it, and that butter may be readily removed from the churn body.

Heretofore strainers have been arranged within churn bodies, but they have not assisted in the operation of churning as they have been either located on the bottom of the churn body, which would prevent the cream being forced through their openings, or they have been employed in connection with rotary dashers, which would not force the cream through the openings. It will be apparent that by arranging the strainer above the bottom of the churn body and employing it in connection with a vertically movable dasher, it will perform the double function of dasher and strainer.

I desire it to be understood that changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What I claim is—

1. In a churn, the combination of a base, a standard rising therefrom, a vertically adjustable head mounted on the standard and provided with a vertically arranged guide having opposite ways, a churn body mounted on the base and having a cover, a dasher rod provided with a dasher at its lower end and having its upper end extending above the body, a vertically reciprocating slide arranged in the ways of the guide and provided at its lower end with a clamp for securing the dasher rod to it, vertically adjustable clamping pieces secured to the guides at opposite sides thereof and engaging the cover of the body, and gear-

ing for operating the slide mounted on the head, substantially as described.

2. In a churn, the combination of a base, a standard rising therefrom and provided at its upper end with a vertically disposed T-shaped groove, a head mounted on the standard and having a block secured to its lower end and provided with a T-shaped flange arranged in said groove, a clamping screw for securing the block in its adjustment, a guide secured to the head and provided with opposite ways, a churn body, a dasher rod carrying a dasher and secured to the slide, the upper and lower shafts journaled in the head, gear wheels mounted on the shafts and meshing with each other, a crank disk secured to the upper shaft, a pitman connecting the crank disk with the slide, and a crank handle arranged on the lower shaft, substantially as described.

3. In a churn, the combination of a churn body, a horizontally disposed strainer provided with suspension bars forming handles and supporting it above the bottom of the churn body, said strainer having a marginal flange, and a vertically reciprocating churn dasher of a shape and size to fit within the marginal flange of the strainer, substantially as described.

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

ROBERT R. WAYLAND.

Witnesses:

MARION GORDON,
JOSIAH HALL.