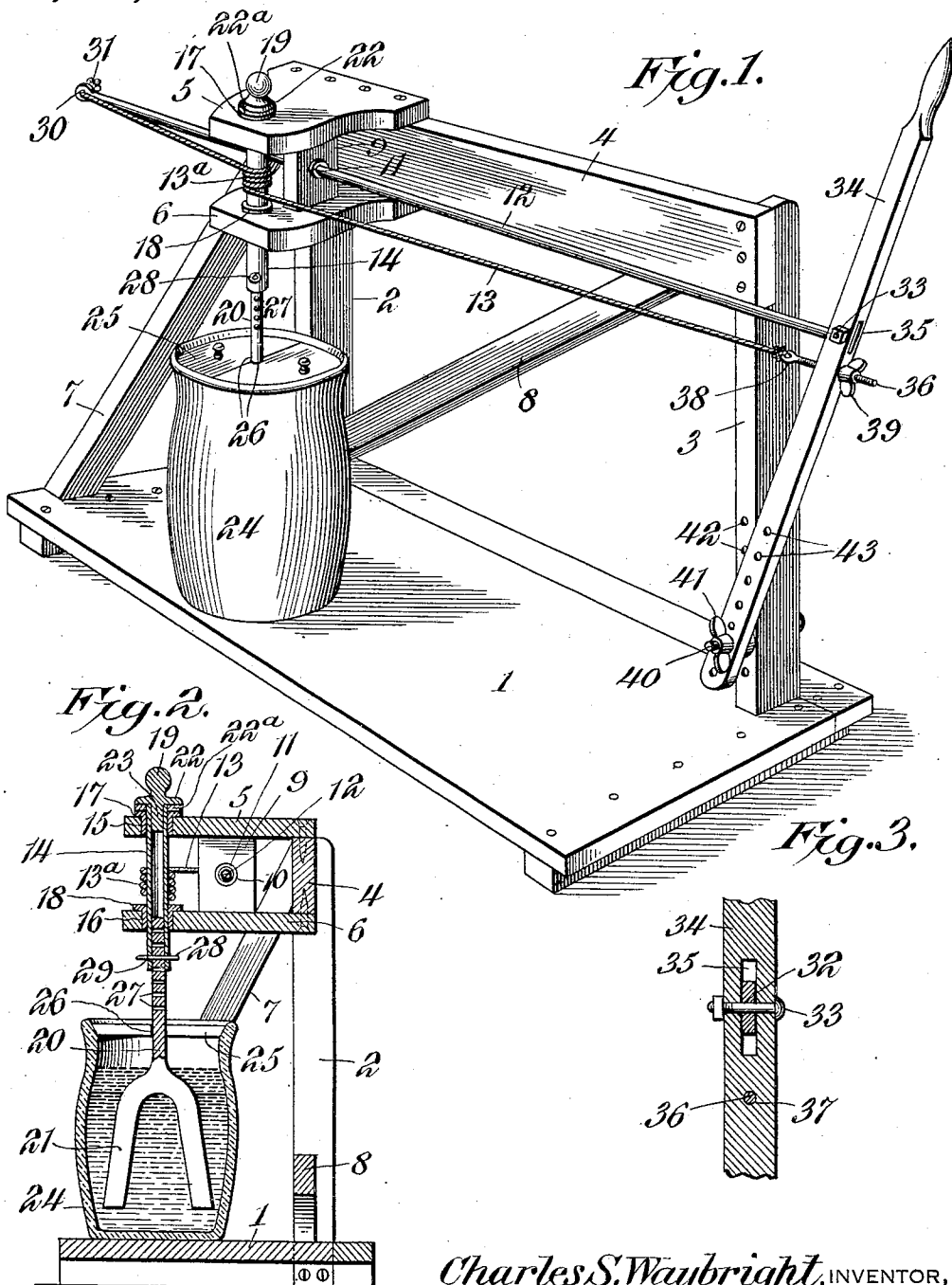


C. S. WAYBRIGHT.
CHURN.

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1,042,628.

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WITNESSES

Howard D. Ott.
H. F. Riley

Charles S. Waybright, INVENTOR,

BY

C. G. Siggers.

ATTORNEY

UNITED STATES PATENT OFFICE.

CHARLES S. WAYBRIGHT, OF STAUNTON, VIRGINIA.

CHURN.

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To all whom it may concern:

Be it known that I, CHARLES S. WAYBRIGHT, a citizen of the United States, residing at Staunton, in the county of Augusta and State of Virginia, have invented a new and useful Churn, of which the following is a specification.

The invention relates to improvements in churns.

The object of the present invention is to improve the construction of churns, more especially the means for operating the same, and to provide a simple, inexpensive, easily operated light running churn in which it will be unnecessary to detach any of the parts of the operating mechanism when it is desired to remove the dasher and the churn body.

A further object of the invention is to provide a churn of this character, adapted to permit a ready vertical adjustment of the dasher to arrange the same at the proper elevation for churning and also for gathering the butter after the operation of churning has been completed.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claim hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claim, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a perspective view of a churn, constructed in accordance with this invention. Fig. 2 is a transverse sectional view of the same. Fig. 3 is a detail sectional view, taken longitudinally of the lever and illustrating the manner of connecting the reciprocatory rod or bow and the cord thereof to the lever.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

In the accompanying drawing in which is illustrated the preferred embodiment of the invention, the churn is equipped with a supporting frame comprising a base 1, spaced upright standards 2 and 3, and a top connecting bar 4 from which projects spaced upper and lower horizontal bearing arms 5 and 6. The upright portion of the frame formed by the standards 2 and 3 and the

horizontal top bar 4 is supported by inclined side and rear braces 7 and 8, but the supporting frame may be of any other preferred construction. The standards 2 and 3 are preferably arranged at the rear face of the horizontal top bar, and the horizontal bearing arms are braced by a combined spacing and guiding block or piece 9, arranged in a vertical position between the upper and lower horizontal bearing arms 5 and 6 secured to the same in spaced relation with the top connecting bar 4. The vertical block or piece 9 is provided with a central guide opening 10 in which is secured a metallic thimble 11, and through which passes a reciprocatory rod or bow 12, carrying a cord 13 spirally wound around a vertical shaft 14. The vertical shaft 14 is arranged in vertically alined bearing openings 15 and 16 of the upper and lower horizontal arms, which may be provided with thimbles 17 and 18, secured in the openings 15 and 16 to form bearings for the shaft 14, but the thimbles, which are flanged at their upper ends to rest upon the upper faces of the horizontal bearing arms may, of course, be omitted. The upper end of the shaft is equipped with a combined head and handle 19, and the lower portion of the shaft receives the upper portion of the stem 20 of a dasher 21. The shaft is vertically movable in the openings of the bearing arms in inserting the stem of the dasher into the lower portion of the vertical shaft and in removing it therefrom. The combined head and handle 19 enables the vertical shaft to be readily grasped by the operator when raising and lowering the said shaft, and it forms a cap or closure for the upper end of the tubular shaft, and is provided with a horizontal flange 22, and it has a depending shank 23. The shank is rounded to conform to the interior of the bore of the tubular shaft and is of a size to fit the same, and it is secured within the same by welding, brazing, or any other suitable means, whereby the combined head and handle is rigidly connected to the upper end of the shaft. Instead, however, of securing the combined head and handle to the shaft by means of the shank, it may be formed integral with the upper end of the shaft. The horizontal flange 22, which is annular, extends outwardly from the handle at the juncture of the same and the shank, and it presents a flat lower bearing face to the upper horizontal arm. The horizontal sup-

porting flange is arranged upon and fits against a washer 22^a interposed between the supporting flange 22 and the flange of the thimble, but when the thimble is not employed, the washer 22^a will be interposed between the supporting flange and the upper face of the upper bearing arm to provide a metallic bearing surface for the supporting portion of the shaft.

10 The dasher 21, which may be of any preferred construction, is arranged within a suitable churn body 24, preferably consisting of an enameled jar, or other sanitary vessel and having a cover or lid 25 composed of two sections, having opposite central recesses 26 to form an opening through which the stem of the dasher passes. The stem of the dasher is provided in its upper portion with a plurality of perforations 27, arranged at suitable intervals and adapted to receive a cotter pin 28, which also passes through opposite perforations 29 in the walls of the lower tubular portion of the dasher is adapted to be raised and lowered to arrange it at the proper elevation for churning and also for gathering the butter after the operation of churning has been completed. Also the connection between the stem of the dasher and the vertical shaft permits the churn body and the dasher to be removed from the operating mechanism without detaching any of the parts thereof. When it is desired to remove the churn body, the cotter pin 28, or other fastening device is withdrawn and the dasher is lowered to the bottom of the churn body, and the vertical shaft is raised sufficiently to disengage its tubular portion from the stem of the dasher. The space between the upper and lower horizontal bearing arms is sufficient to permit this operation without removing the cord 13, which is preferably loosened by the means hereinafter described to remove the tension from the cord after the operation of churning has been completed.

One end of the reciprocatory rod or bow 12 is provided with an opening 30, and the upper portion of the cord extending from the top of the coils 13^a is passed through the opening and is knotted as shown at 31 to secure it to the rod or bow, which is also provided at its other end with an opening 32 through which passes a bolt 33 for securing the rod or bow to an operating lever 34. The operating lever 34 is provided at a point intermediate of its ends with a slot or opening 35 in which the rod or bow 12 is pivoted by the bolt 33. The adjacent end of the cord 13 is connected to the lever at a point below the rod by means of an adjusting screw 36, extending through

a perforation 37 of the lever and provided at its inner end with an eye 38 to receive the cord 13 and equipped at its outer end with a thumb nut 39 by means of which the screw is adjusted to tighten the cord. When the rod or bow 12 is reciprocated, the cord, which is spirally wound around the vertical shaft, reversely rotates the same and the dasher connected therewith. The attachment of the lower portion of the cord 13 to the lever at a point below the rod or bow 12 serves to keep the coils 13^a of the cord slightly separated and prevents them from running together and rubbing against one another, and the durability of the cord is thereby materially increased, and at the same time there is no liability of lint from the cord dropping into the churn body.

The operating lever 34 is adjustably fulcrumed at its lower portion on the standard 3 by means of a bolt 40, having a thumb nut 41 and adapted to be arranged in any of the perforations 42 and 43 of the standard and the operating lever. The perforations 42 and 43 are arranged at intervals, and the lever is adapted to be fulcrumed at the desired point on the supporting frame without raising or lowering the lever thereon. By adjusting the lever its effective length is varied and the desired throw or movement of the lever is thereby secured.

What is claimed is:—

A churn of the class described including a supporting frame provided with spaced upper and lower horizontal bearing arms having vertically alined bearing openings, a vertical shaft having a longitudinal bore and arranged in the bearing openings and adapted to be raised and lowered, said shaft being also provided at its upper end with a combined head and handle having an outwardly extending supporting flange arranged at the upper face of the upper horizontal bearing arm, a reciprocatory rod or bow guided in the frame, a cord spirally wound around the vertical shaft and connected with the rod or bow, on operating lever for reciprocating the rod or bow, a dasher having a stem extending into the lower end of the vertical shaft, and a fastening device adjustably and detachably securing the stem of the dasher in the bore of the vertical shaft, the latter having a limited vertical movement to permit the stem of the dasher to be removed from the bore of the shaft without detaching the cord.

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

CHARLES S. WAYBRIGHT.

Witnesses:

JOHN H. SIGGERS,
H. T. RILEY.