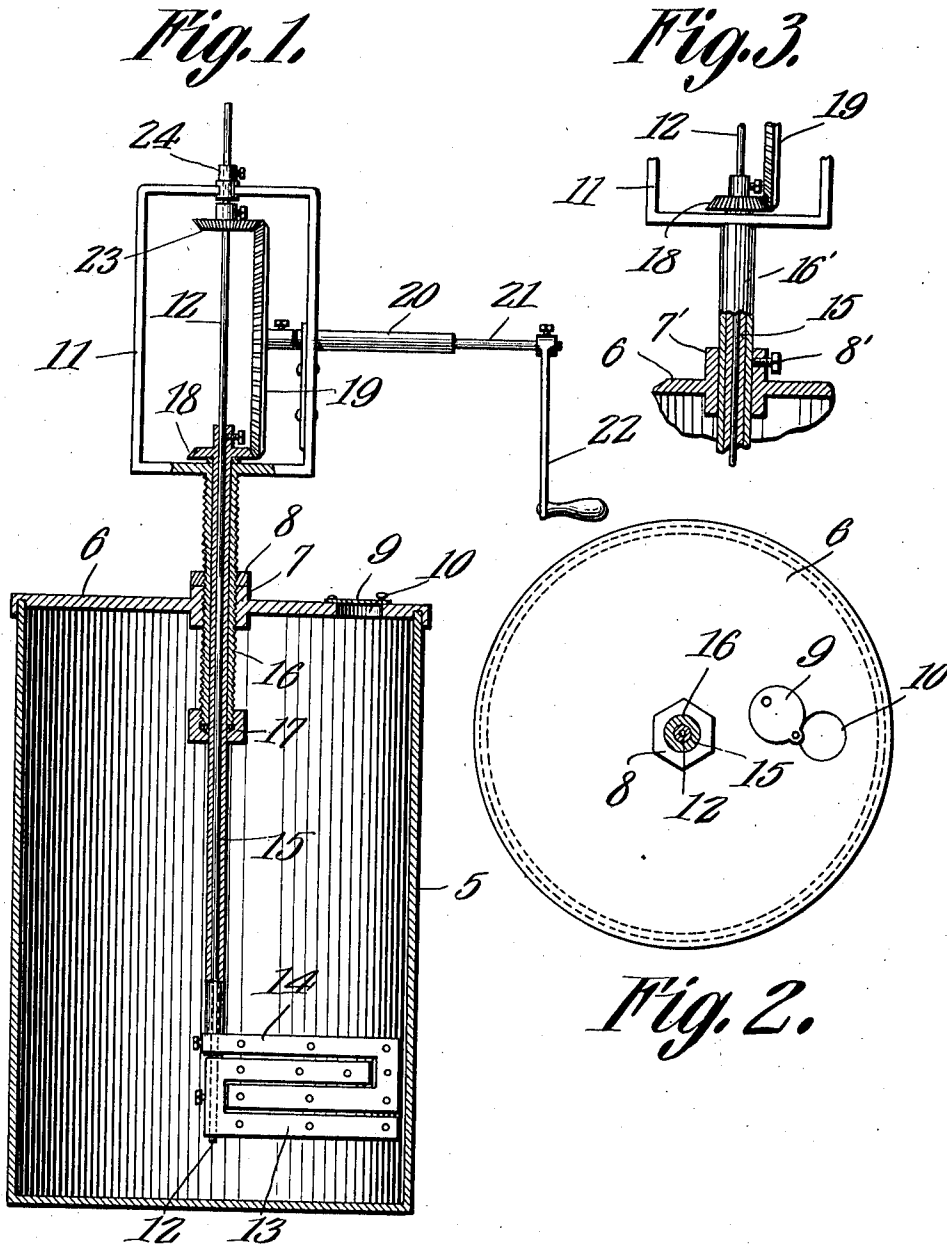


W. B. WOODRUFF.
CHURN.

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1,026,970.

Patented May 21, 1912.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIS BYRON WOODRUFF, OF CADIZ, KENTUCKY.

CHURN.

1,026,970.

Specification of Letters Patent.

Patented May 21, 1912.

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To all whom it may concern:

Be it known that I, WILLIS BYRON WOODRUFF, a citizen of the United States, residing at Cadiz, in the county of Trigg and State of Kentucky, have invented a new and useful Churn, of which the following is a specification.

This invention relates to churns, and has for its object to provide means for adjusting the dashers within the churn body upward and downward, and to permit such adjustment to be made externally of the churn body and without interference with the action of the dashers.

With the above object in view this invention is embodied essentially in a gear frame having a depending threaded sleeve which is screw-threaded through the cover or top of the churn body and through it the oppositely revolving dasher rods pass from the frame into the churn body, thus upon rotating the frame the sleeve in screwing into the cover of the churn body may be raised or depressed to correspondingly raise or depress the dasher rods which have the usual dashers secured to their lower ends.

This invention is also embodied in certain novel details which will be apparent from the hereinafter description.

The invention is illustrated in the accompanying drawings, wherein similar reference characters indicate similar parts, and wherein,—

Figure 1 is a vertical sectional view of the churn embodying the present invention. Fig. 2 is a horizontal section taken above the churn body and through the depending sleeve of the gear frame. Fig. 3 is a fragmental portion of a modified form, parts shown in section.

Referring in detail to the drawings, the churn body is indicated at 5, it being of the usual cylindrical type, and having beneath the top or cover 6 for the churn body. The cover 6 is provided with a central integral nut 7 and an opening 10 therein for which opening there is provided a suitable cover 9.

The gear frame is indicated at 11 and comprises a substantially rectangular frame having the depending sleeve 16 which is externally screw-threaded and engages the nut 7 of the cover 6 to pass through the cover. At one side the frame has an elongated bearing 20 in which is journaled the driving shaft 21 having a crank 22 on the outer end

thereof and having a beveled gear 19 on the inner end thereof. A tubular or hollow dasher rod 15 is journaled in the sleeve 16 and has a beveled gear 18 on the upper end thereof within the frame 11 meshing with the beveled gear 19 and on the lower end thereof is secured a suitable dasher 14. A second dasher rod 12 passes through the tubular dasher rod 15, having the ends thereof protruding beyond the ends of the dasher rod 15 and having on the upper end thereof a beveled gear 23 meshing with the beveled gear 19 opposite the beveled gear 18 whereupon the dasher rods 12 and 15 are given an opposite rotation upon the crank 22 being turned. The upper end of the dasher rod 12 is journaled in the upper end of the frame 11 and on the lower end thereof is secured a dasher 13 which coöperates with the dasher 14. It is understood that the dashers 13 and 14 which are of approximately U-shape and which pass through each other may be reversed, it being immaterial which arrangement is used. A jam nut 8 is screw-threaded on the sleeve 16 above the cover 6 and is adapted to bind against the nut 7 to retain the sleeve 16 in its adjusted position, and on the lower end of the sleeve is provided a gland nut 17 forming a stuffing box to prevent the contents of the churn body from entering the sleeve 16.

This churn is used in the customary manner, and affords the adjustment of the dashers by rotating the frame 11 which will cause the sleeves 16 to screw through the cover 6 thus raising the dashers or depressing the same as may be desired or necessary. The proper adjustment of the dashers is facilitated by opening the cover 9 which will permit the operator to observe when the dashers are adjusted to the proper positions. The opening 10 may also be used for the purpose of inserting a thermometer to determine the temperature of the contents of the churn body whenever desired.

In the modified form shown in Fig. 3, the depending sleeve 16' of the frame 11 is smooth and slides through the collar 7' at the center of the cover 6. A set screw 8' which is carried by the collar 7' is arranged to engage the sleeve 16' to retain the same in its adjusted position. By loosening the set screw the frame 11 may be readily moved upward or downward to adjust the dashers as may be desired or necessary. The modi-

fied form is adapted especially for larger churns wherein it is essential to more rapidly adjust the dashers.

The cover 6 of the churn body may be secured to the body in any suitable manner as is customary, and on the upper end of the dasher rod 12 is provided a set collar 24 arranged to seat on the upper end of the frame 11 to support the said dasher rod.

10 What is claimed is:—

In a churn, the combination of a churn body, a cover therefor, a frame having a depending sleeve adjustably mounted

through the said cover, a pair of oppositely rotating dasher rods passing through the said sleeve, dashers secured to the lower ends of the said rods, and means carried by the said frame for rotating the said dasher rods. 15

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses. 20

WILLIS BYRON WOODRUFF.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."