No. 669,116. Patented Mar. 5, 1901.

E. B. JONES.

CHURN.

(Application filed Jan. 31, 1900.)

(No Model.)

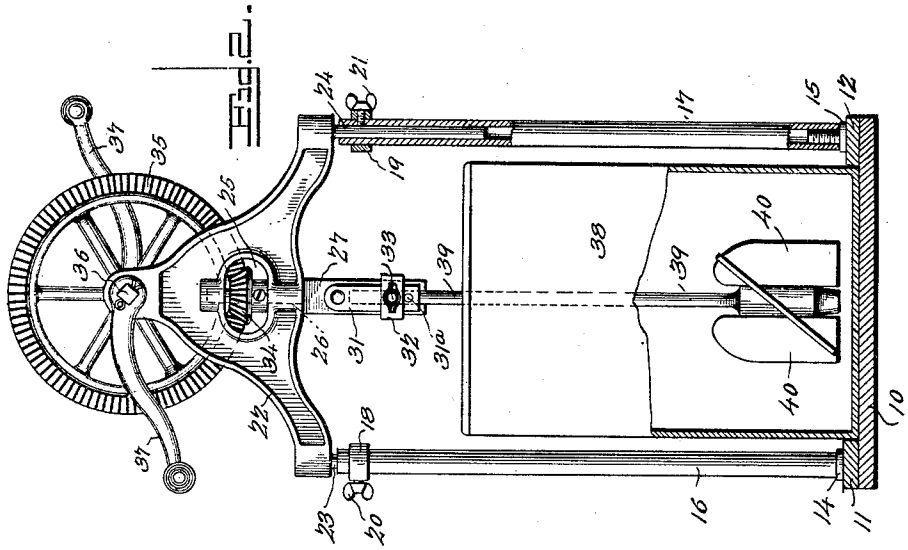


Fig. 2.

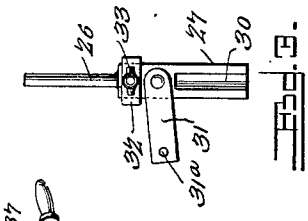


Fig. 3.

Fig. 1.

Witnesses
E. K. Stewart.
Geo. H. Chamblee.

E. B. Jones Inventor

By Its Attorneys.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ELISHA B. JONES, OF HEDRICK, IOWA, ASSIGNOR OF ONE-HALF TO JAMES HOOK, OF SAME PLACE.

CHURN.

SPECIFICATION forming part of Letters Patent No. 669,116, dated March 5, 1901.

Application filed January 31, 1900. Serial No. 3,479. (No model.)

To all whom it may concern:

Be it known that I, ELISHA B. JONES, a citizen of the United States, residing at Hedrick, in the county of Keokuk and State of Iowa, have invented a new and useful Churn, of which the following is a specification.

This invention relates to churns; and it has for one object to provide a stand in which the churn-body is received and which is provided with operating mechanism for connection with the churn-dasher, a further object of the invention being to provide a specific connection between the operating-shaft and the dasher which will permit of ready attachment and detachment of the dasher.

In the drawings forming a portion of this specification, and in which similar numerals of reference designate like and corresponding parts in the several views, Figure 1 is a perspective view showing the stand with the churn-operating mechanism thereon, the churn-body being omitted. Fig. 2 is an elevation of the stand with the churn-body and churn-operating mechanism in place, parts of the stand and churn being shown in section to more clearly illustrate the structure. Fig. 3 is a detail elevation showing the stub-shaft and illustrating the means for removably connecting the dasher-shaft therewith.

Referring now to the drawings, the present invention comprises a stand, including a base 10 in the form of a flat plate and upon the upper surface of which, adjacent the edges at the sides and one end, are thickened portions 11, 12, and 13, which may be in the form of integral flanges or may be separate strips attached to the base. At diametrically opposite points of the base and upon the thickened portions 11 and 12, midway of their ends, are secured socket-plates 14 and 15, with which are engaged the lower ends of tubular uprights 16 and 17, which lie parallel and are of substantially the same height. Upon the upper ends of the uprights 16 and 17 are disposed collars 18 and 19, having each a perforation in alinement with the perforation in the corresponding uprights, and these alining perforations are threaded and have thumb-screws 20 and 21 engaged therewith. In connection with this stand may be employed interchangeably churn-operating mechanism or other movable apparatus. The churn-operating mechanism comprises a cross-head 22, substantially triangular in outline and from the ends of the base of which depend pins or rods 23 and 24, which lie parallel and are adapted to slidably engage the uprights 16 and 17, these pins being held at different points of their slidable movement by the thumb-screws 20 and 21.

Centrally of the cross-head 22 is an opening 25, and in the upper and lower walls of this opening are formed bearings in mutual alinement, the bearing in the lower wall being continued through the plate, and in these bearings is disposed a short shaft 26, the lower portion of which is squared, as shown at 27, and has a cross-sectionally angular longitudinal recess 30 open at one side and at its lower end, the side opening being adapted to be closed by a pivoted cover 31, which may be held in its closed position through the medium of a collar 32, adapted for movement to encircle the cover and the adjacent portion of the squared part of the shaft 26. A set-screw 33 is provided for holding the collar 32 in place.

The shaft 26 is prevented from dropping from the bearings in the plate 22 by means of a gear 34, fixed thereon and lying in the opening 25, this bevel-gear meshing with a second and larger bevel-gear 35, fixed upon a shaft 36, journaled in the upper end of the cross-head. The shaft 36 is provided with cranks 37, and thus the gear 35 may be rotated to rotate the gear 34 and correspondingly move the shaft 26.

A churn-body 38 may be placed upon the plate 10, between the thickened portions 11 and 12 thereof and in axial alinement with the shaft 26, after which its dasher-shaft may be operatively connected with the shaft 26, the head 22 being adjusted to the proper height. This dasher-shaft (shown at 39) is provided with blades 40 at its lower end, disposed at an angle to the axis of the shaft, and the lower end of the dasher-shaft lies at all times above and free from the inner face of the bottom of the churn-body. The upper end of the dasher-shaft 39 is angular in cross-section to correspond to the recess 30 in the squared portion of the shaft 26, and in plac-

ing the dasher-shaft in operative position the lower end thereof is first engaged with the pin 42, after which the upper end is moved laterally and into the recess 30, and the cover 31 is then moved into its operative position and the collar 32 is engaged therewith, the thumb-screw being operated to clamp the cover against the dasher-shaft to hold it in the recess 30 and with the blades of the dasher at the proper elevation in the churn-body. The recess 30 is shown as straight, and its shape is such that any dasher-shaft that could be moved laterally into the recess, as set forth in the specification, would of course be capable of adjustment longitudinally therein. If the cranks 37 be then operated, the churn-dasher will then be rotated.

With this structure it will be seen that the churn may be quickly and easily removed from the stand and also that the head 22 may be raised and lowered with respect to the churn-body to properly position the dasher within the churn-body.

What is claimed is—

1. The combination with a base adapted to receive a churn-body and having uprights, of a cross-head connected with the uprights for vertical adjustment to compensate for different heights of churn-bodies, an operating-shaft mounted in the cross-head and having a cross-sectionally angular recess of constant transverse section formed longitudinally thereof and opening through a side of the shaft, a dasher having its end formed to lie in the recess, a pivoted cover for the recess adapted to lie against the dasher-shaft therein, a collar slidably disposed upon the operating-shaft and to engage the pivoted cover to hold it against displacement, and a thumb-screw engaged with the collar and adapted to impinge the cover and press it against the dasher-shaft to hold it at proper elevation irrespective of the position of the cross-head.

2. The combination with a churn comprising a dasher having a shaft, of an operating-shaft having a cross-sectionally angular recess of constant transverse section formed longitudinally thereof and opening through a side of the shaft, the dasher-shaft having its end formed to lie in the recess, a pivoted cover for the recess adapted to lie against the dasher-shaft therein, a collar slidably disposed upon the operating-shaft and to engage the pivoted cover to hold it against displacement, and a thumb-screw engaged with the collar and adapted to impinge the cover and press it against the dasher-shaft to hold it from sliding from the recess.

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

ELISHA B. JONES.

Witnesses:
J. N. MORGAN,
TOM KIRKPATRICK.