No. 805,960. PATENTED NOV. 28, 1905.

W. H. HULL.

CHURN.

APPLICATION FILED JUNE 1, 1905.

2 SHEETS—SHEET 1.

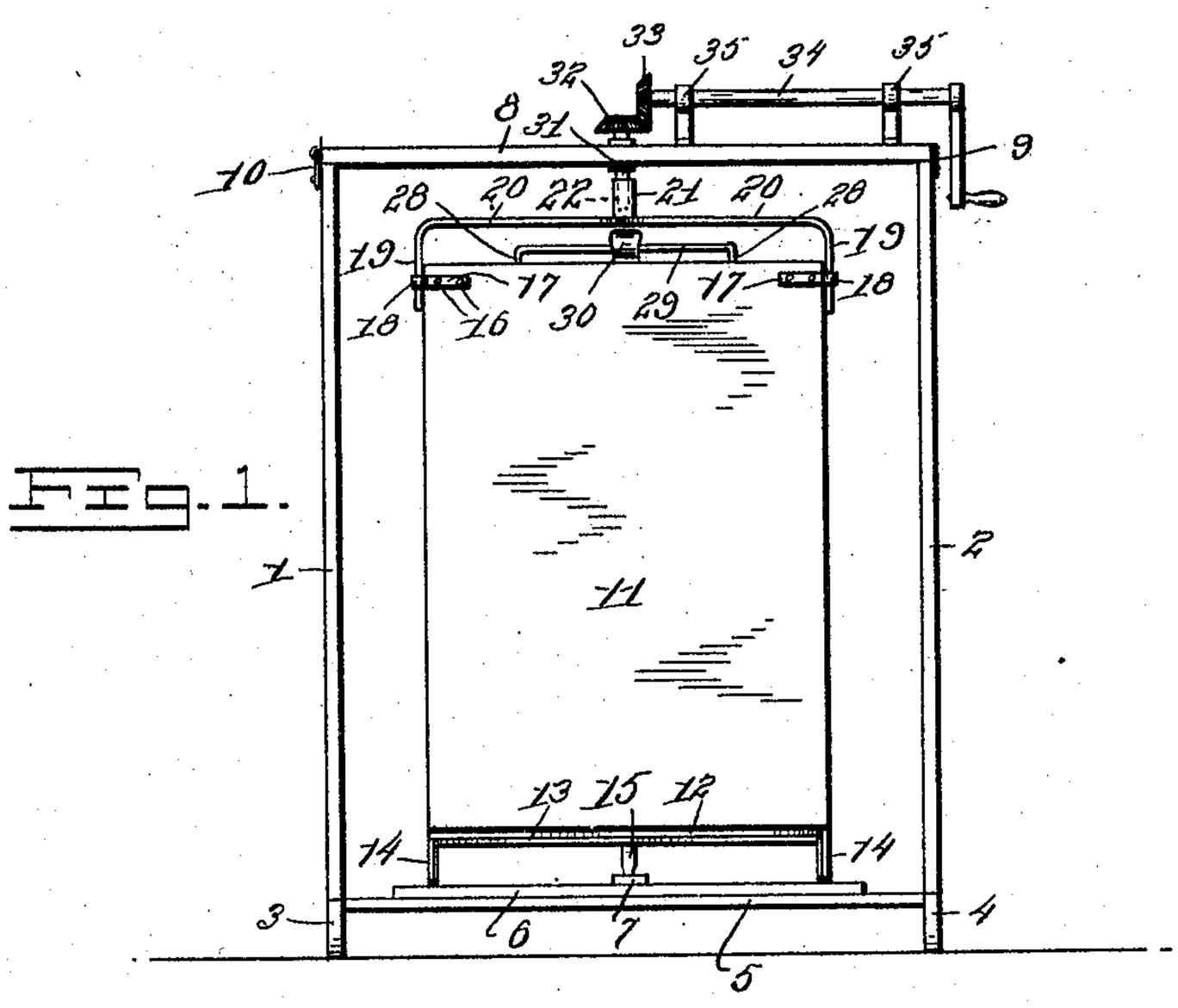


Fig. 1.

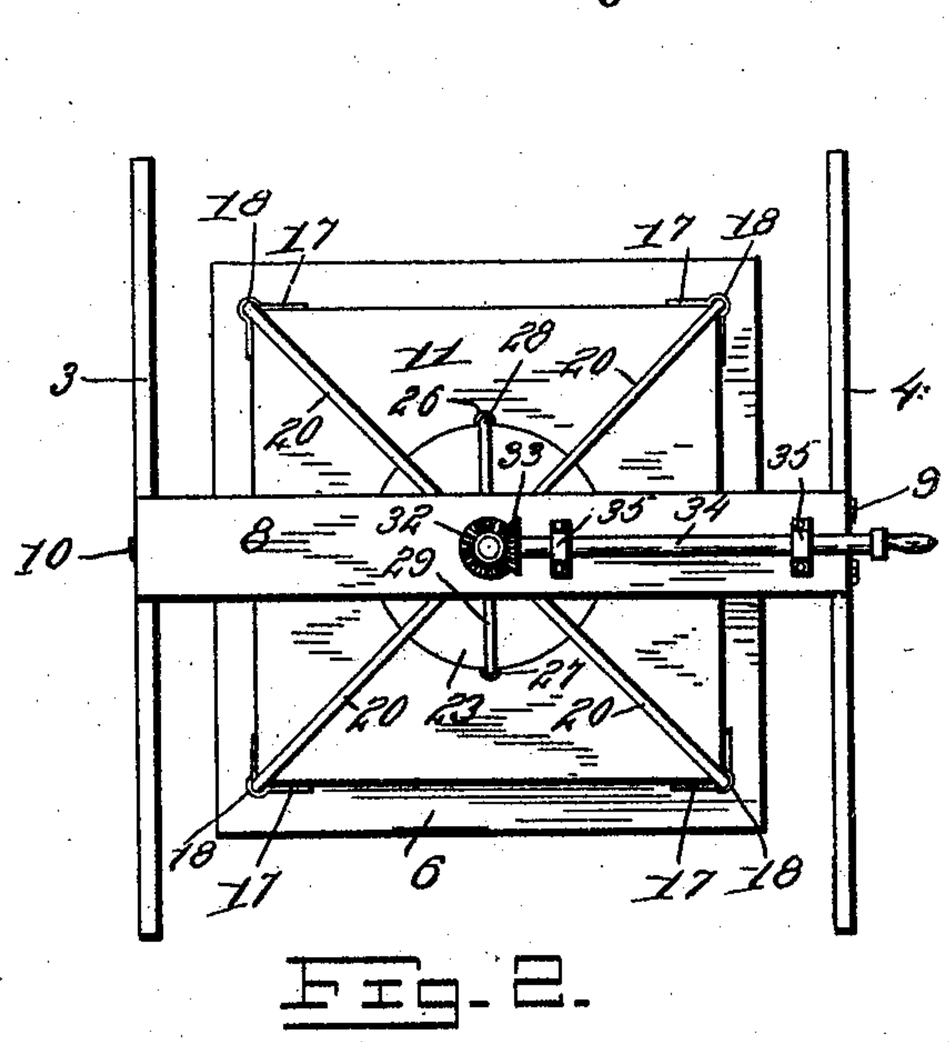


Fig. 2.

Witnesses
L. Cromatauq.
E. M. Dalford

Inventor
Wm H. Hull,
By Pugsley & Chandlee
Attorneys

No. 805,960. PATENTED NOV. 28, 1905.

W. H. HULL.

CHURN.

APPLICATION FILED JUNE 1, 1905.

2 SHEETS—SHEET 2.

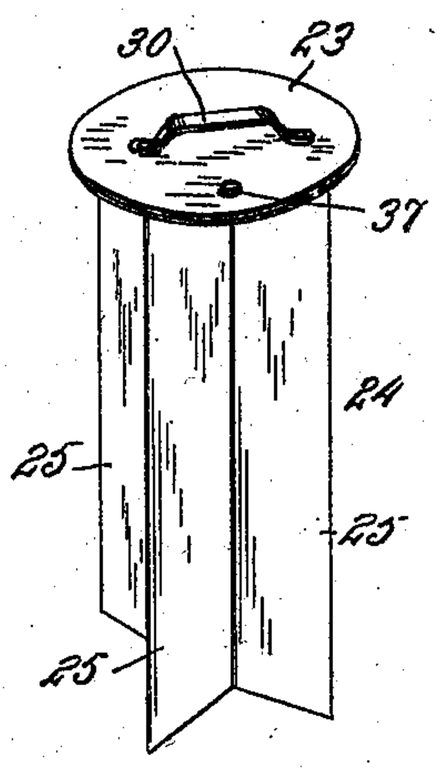


Fig. 3.

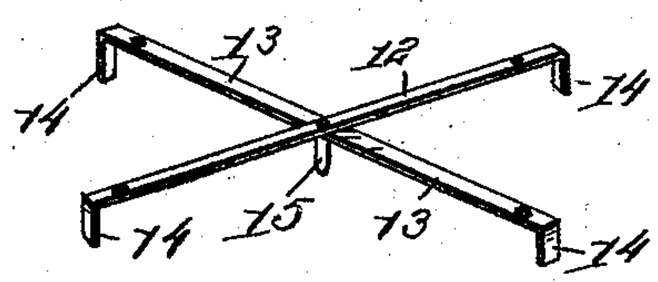
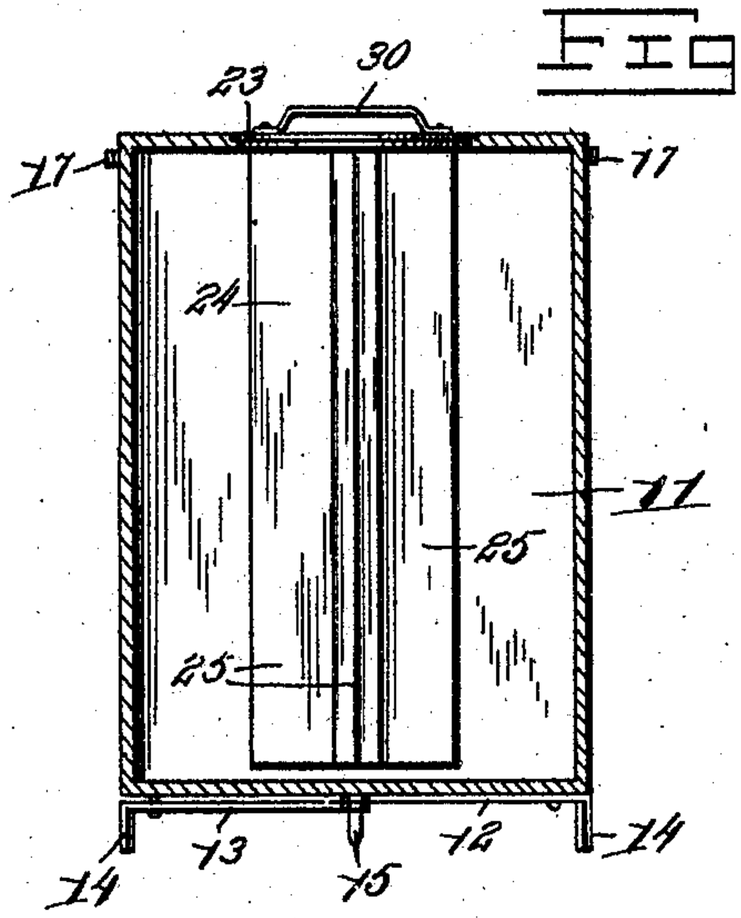


Fig. 4.

Fig. 5.



Witnesses
L. Cranitzky.
E. M. Dolford

Inventor
Wm H. Hull.
By Brandlee & Thendale
Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM H. HULL, OF ST. JOHN, WASHINGTON.

CHURN.

No. 805,960. Specification of Letters Patent. Patented Nov. 28, 1905.

Application filed June 1, 1905. Serial No. 263,227.

To all whom it may concern:

Be it known that I, WILLIAM H. HULL, a citizen of the United States, residing at St. John, in the county of Whitman, State of Washington, have invented certain new and useful Improvements in Churns; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to churns.

One object of the invention is to provide a simple, inexpensive, durable, and efficient device for churning purposes.

Another object of the invention is to provide a churn of such character that the dasher will oscillate with an oscillatory movement of the body of the churn.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claim, it being understood that changes may be made in the form, proportion, size, and minor details within the scope of the appended claim without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a side elevation of a churn embodying the present invention. Fig. 2 is a top plan view. Fig. 3 is a detail view of the dasher. Fig. 4 is a detail view of the cross-pieces. Fig. 5 is a vertical section through the churn-body with the dasher in elevation.

Referring now more particularly to the accompanying drawings, the reference characters 1 and 2 designate uprights mounted upon supporting members 3 and 4, respectively, there being a cross-piece 5 arranged between the uprights and the cross-pieces upon which is mounted a base-board 6, having a trunnion-bearing 7 arranged centrally thereof, the upper end of the upright 2 having a cross-piece 8 hingedly connected thereto, as at 9, the free end of the said cross-piece 8 being locked upon the upper end of the upright 1 through the instrumentality of a suitable catch 10. These elements comprise the frame in which my improved churn is mounted.

The reference character 11 designates the body of my improved churn, having cross members 12 and 13 secured to its bottom, the free ends of each of the cross members 12 and 13 having legs 14 designed to depend therefrom in a plane parallel with the plane of the outer faces of the body 11 of the churn, there being a trunnion 15 depending from the cross member 13 at its point of intersection with its companion cross member 12. The trunnion is designed to fit in the recess or trunnion-bearing 7 in the platform 6 for a purpose presently explained.

While not absolutely necessary, I prefer to use a churn-body of rectangular form, and at each of the upper corners thereof I secure, by means of rivets or other suitable elements 16, angular strap-arms 17, each having a bend 18 intermediate its ends and formed for the reception of the downwardly-turned free ends 19 of the yoke, which latter consists of the four legs 20 and the upright socket 21, which is provided with a rectangular-shaped bore 22 for a purpose presently explained.

The cover 23 of the churn-body 11 has fixedly secured to its under face a dasher 24, which is preferably star-shaped in cross-section, providing the radial wings 25, the bottom of the dasher resting upon the bottom of the body 11. This dasher is designed to be held stationary with respect to the cover 23, as stated, so that it may revolve or oscillate with a rotation or oscillation of the body 11 through a means to be presently explained. In order that this movement of the dasher with respect to the body portion 11 may be insured, notches 26 and 27 are formed in the periphery of the opening in which the cover 23 is designed to receive the free downwardly-turned ends 28 of the cover-locking element 29, whose body portion passes through the handle 30 of the cover. It will thus be seen that the cover is held fixedly with respect to the body and that consequently since the dasher is secured to the cover the dasher will be compelled to rotate or oscillate with a corresponding movement of the body of the churn.

Extending through the hinge member 8 of the frame of my improved churn is a stub-shaft 31, having its lower end rectangular in form for engagement in the rectangular socket 22 of the member 21 of the yoke, the upper end of the said short shaft 31 being provided with a beveled gear 32 for mesh with the bevel-gear 33, carried at the inner end of the crank-shaft 34, which latter is supported in suitable bearings 35, disposed upon the upper face of the hinge member 8. By manipulating the handle of the crank-shaft 34 the beveled gear 33, meshing with the beveled gear 32 of the short shaft 31, which latter fits

in the socket 22 of the upright member 21 of the aforesaid yoke, causes a complete or partial rotation of the churn-body 1 by reason of the fact that the legs of the yoke are engaged by the churn-body, as hereinbefore stated.

It will thus be seen that the churn-body 11 may be rotated or oscillated within the aforesaid frame upon the platform 6, the legs 14 of the cross members 12 and 13, secured to the bottom of the body, being not in contact with the corners of the platform 6, for the reason that the platform is of such size with respect to the bottom of the body 11 to prevent such contact of the said legs 14 with the corners of the said platform. However, when it is desired to remove the churn-body 1 from the frame the hinge member 8 is unfastened from the upright 1 and moved on its hinge 9 to disengage the short shaft 31 from the socket 22 of the yoke, and when this is done there may be a possibility of the churn slipping upon the platform; but in the event of such slipping of the churn-body the legs 14 of the bottom cross members 12 and 13 will be brought into engagement with the corresponding sides or corners of the platform to prevent upsetting of the body. Of course under certain conditions the trunnion 15 of the cross members fitting in the socket, recess, or trunnion-bearing 7 would tend to prevent a sliding movement of the churn-body upon the platform. However, the legs 14 will positively prevent a sliding movement of the churn-body upon the platform 6. It is apparent that the legs 14 of the cross members 12 and 13 will serve to support the bottom of the body out of contact with the floor or ground when the latter is removed from its frame.

From the foregoing it will be appreciated that the dasher may be readily removed from the trunnion for the removing of butter by simply unlocking the hinged member 8 and removing the yoke from the body, it being then simply necessary to lift up the handle 30 of the cover 23 to lift the latter and the dasher outwardly of the body of the churn.

During the churning operation gases may arise within the body 11, in which event they may pass out through the opening 37 of the cover 23, in which opening a cork, cap, or the like is placed when desired.

I now wish it understood that my improved churn may be rotated continuously through the instrumentality of the elements aforesaid or that it may be oscillated by the proper manipulation of the crank-shaft 34, which latter movement I prefer for churning purposes.

What is claimed is—

In a churn, the combination with a yoke having downwardly-turned ends and an upright socket provided with a rectangular-shaped bore, of a churn-body, and metallic traps mounted upon the said churn-body and adapted to receive the downturned ends of the said yoke.

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

WILLIAM H. HULL.

Witnesses:
W. W. Loomis,
Dan Brophy.