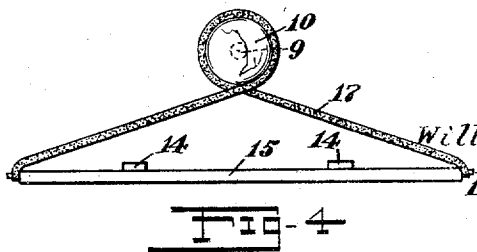
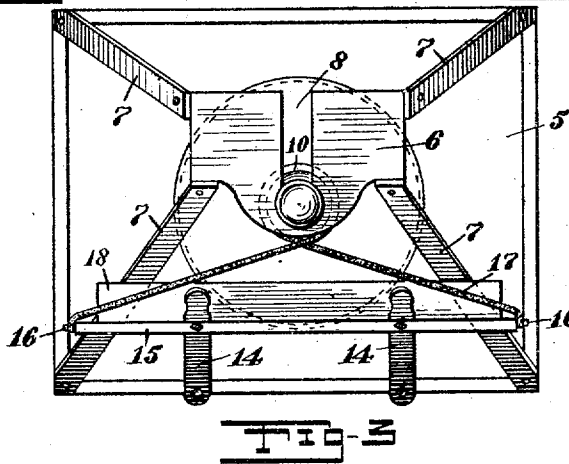
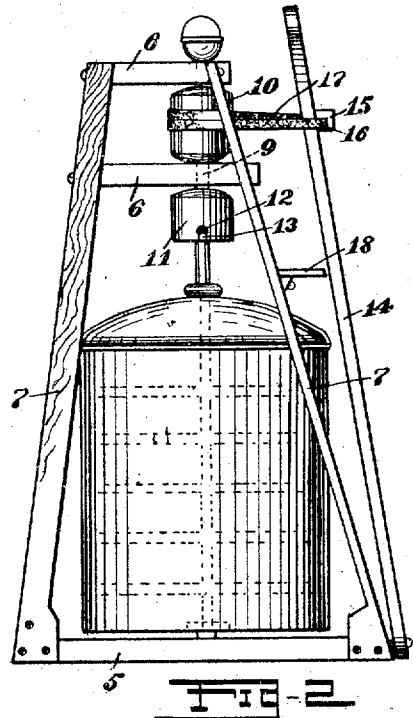
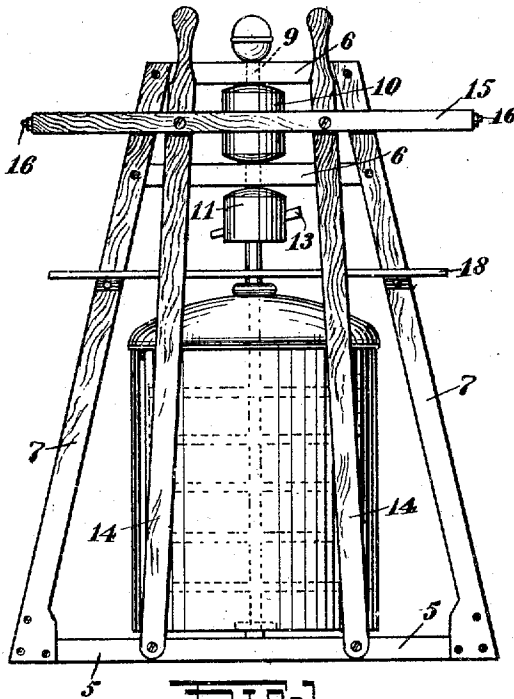


W. F. SMITHDEAL.
CHURN.
APPLICATION FILED APR. 30, 1909.

956,833.

Patented May 3, 1910.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM FRANKLIN SMITHDEAL, OF SALISBURY, NORTH CAROLINA.

CHURN.

956,833.

Specification of Letters Patent.

Patented May 3, 1910.

Application filed April 30, 1909. Serial No. 493,123.

To all whom it may concern:

Be it known that I, WILLIAM FRANKLIN SMITHDEAL, a citizen of the United States, and a resident of Salisbury, in the county of Rowan and State of North Carolina, have invented a new and Improved Churn, of which the following is a full, clear, and exact description.

The invention is an improvement in churns, and has in view a comparatively simple and inexpensive construction which may be shipped or stowed in knock-down form and easily set up for use without particular skill.

The invention in general may be defined as consisting of a pyramidal frame having head-blocks spaced apart, the head-blocks having slots in vertical alinement entering the edges from one side of the frame, a hand-lever fulcrumed at the opposite side of the frame and having a cross-arm, a dasher shaft removably journaled in the slots and having a belt wheel, and a belt detachably connected to the cross-arm and passing around the wheel.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a front elevation of a churn constructed in accordance with my invention; Fig. 2 is a side elevation of the same; Fig. 3 is a plan of the churn; and Fig. 4 is an upper edge view of the cross-arm and connected parts.

The frame of the churn for supporting the several operating parts is preferably constructed in pyramidal form to insure strength and stability, the frame consisting of a base 5, spaced head-blocks 6, 6 elevated a substantial distance above the base, and downwardly and outwardly-inclined standards 7 supporting the head-blocks from the base and arranged at the corners of the frame. The head-blocks have slots 8 in approximate vertical alinement, the slots entering the edges of the blocks from one side of the frame and terminating a substantial distance from the opposite side of the frame. Removably journaled in these slots is a dasher operating shaft 9 having a belt wheel

10 fixed thereto intermediate the length of the shaft, and a socket 11 fixed to the lower end of the shaft, the socket having a vertical slot 12 entering its bottom edge, which is for the purpose of engaging a key 13 carried by the dasher stem and locking the stem and shaft against relative rotation. When the shaft 9 is operatively placed in the slots 8, the belt wheel 10 is arranged between the blocks 6 and bears on the upper face of the lower block and thus supports the shaft in place. In order that the friction between the block and the ends of the belt wheel 10 may be greatly reduced, the ends of the block are rounded, as clearly shown in Figs. 1 and 2.

At that side of the churn frame opposite the slots 8, two levers 14, spaced apart, are fulcrumed to the base 5, and at the height of the belt wheel are provided with a cross-arm 15, the cross-arm being fulcrumed to the levers in order that the latter may be freely swung back and forth in operating the churn. The ends of the cross-arms have projecting pins 16, to which is detachably connected a belt 17 passing around and crossing at the pulley, this arrangement of the levers, belt, etc. obviously drawing the dasher operating shaft to the inner ends of the slots and thus maintaining the shaft in proper operative position during the operation of the churn. The levers as they are oscillated are guided and held outwardly from the belt wheel by a guide-bar 18, extending crosswise and secured to the adjacent standards 7.

The several parts of the frame and hand-levers, etc. are detachably connected by screws or other suitable devices, which enables the entire churn to be packed in a small space for shipment and stowage and easily set up for use without requiring particular skill.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

The combination in a churn, of an open pyramidal churn frame adapted to inclose the churn receptacle and having head-blocks, a vertical dasher operating shaft removably journaled in the head-blocks and having a belt-wheel arranged therebetween, an operating lever fulcrumed at its inner

end to the frame and projecting upwardly
at one side thereof, a cross-bar attached to
the lever, and a guide for the lever, arranged
on one side of the frame, a belt passing
5 about the pulley and connected to the oppo-
site ends of the cross-bar, drawing the lever
to the guide.

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

WILLIAM FRANKLIN SMITHDEAL.

Witnesses:

W. T. KLUTTZ,

WILLIAM BRITTINGHAM SMOOT.