(No Model.)

W. H. THOMAS.

CHURN.

No. 519,746. Patented May 15, 1894.

Fig. 1.

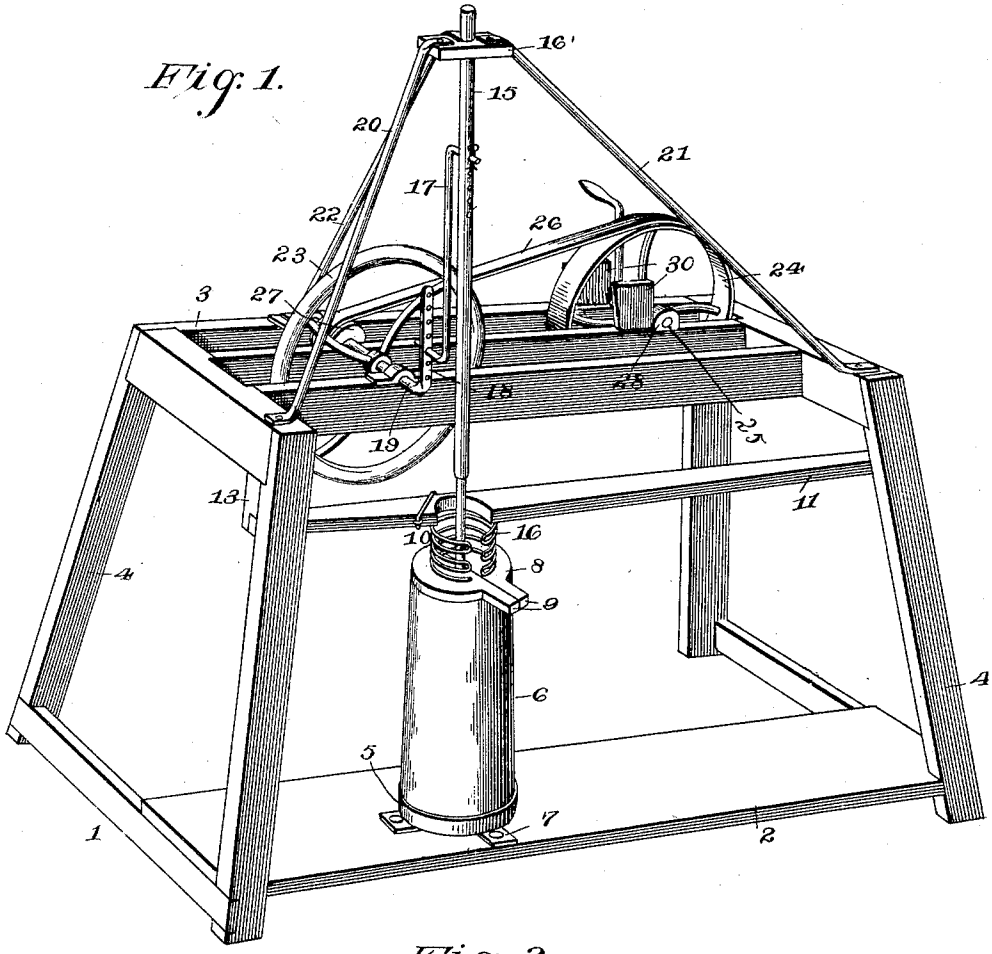


Fig. 2.

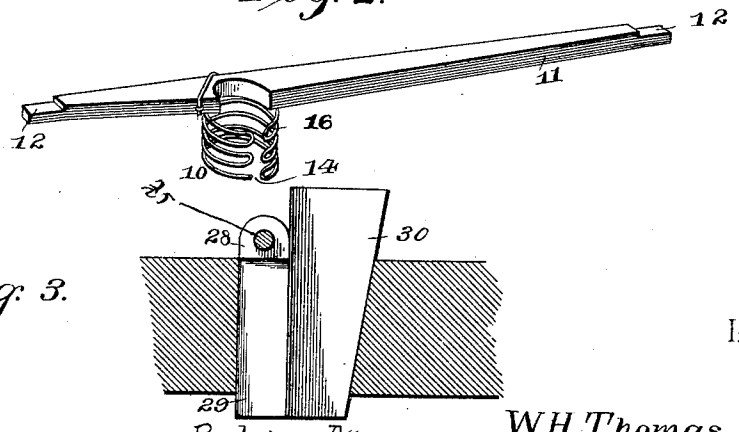


Fig. 3.

Witnesses

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WILLIAM H. THOMAS, OF TAYLORSBURG, VIRGINIA.

CHURN.

SPECIFICATION forming part of Letters Patent No. 519,746, dated May 15, 1894.

Application filed December 26, 1893. Serial No. 494,790. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. THOMAS, a citizen of the United States, residing at Taylorsburg, in the county of Henry 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, and to provide one which will be simple and comparatively inexpensive in construction, and which will be capable of effecting a rapid production of butter, and in which any kind of churn body or receptacle may be employed.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings—Figure 1 is a perspective view of a churn constructed in accordance with this invention. Fig. 2 is a detail perspective view of the spring and bar for securing the churn cover in place. Fig. 3 is a detail sectional view of one of the adjustable bearings.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a frame, comprising a base or platform 2, a top 3 and legs 4, which support the top and which are slightly inwardly and upwardly inclined. The base or platform 2 is provided with a socket 5, which is preferably circular, and in which is seated a churn body or receptacle 6. The socket 5 consists of a vertical flange provided at intervals with feet 7, which are secured to the frame.

The churn body is provided with a cover 8 composed of two separable sections, which are provided with opposite recesses to form a dasher rod opening, and which have contiguous extensions 9 forming handles. The cover is secured on the churn body or receptacle during the operation of the churn by means of a spiral spring 10, and a removable bar 11 having its ends 12 recessed and engaging correspondingly recessed blocks 13 of the frame. The spiral spring 10, which bears against the cover, and which is interposed between the same and the removable bar, and which holds the latter in position, is provided at its outer side with a vertical opening 14 forming an entrance to its interior for a dasher rod 15. The opening 14 is formed by a series of segmental or incomplete loops 16, constructed of a single piece of resilient wire, which is bent to form an incomplete or segmental loop and is then bent backward and returned to form another loop and so on leaving the ends separated to form openings one above another to provide the vertical entrance opening. This construction greatly facilities the removal of the cover and the replacement of the same. The upper end of the spring is secured to the removable bar 11, which is provided with a curved recess registering with the interior of the spring.

The dasher rod 15 has its upper end arranged in and guided by a block 16'; it is provided near its upper end with a series of adjusting perforations, any one of which is adapted to receive the upper end of a pitman 17, which has its lower end detachably and adjustably secured to a crank arm 18. The crank arm 18 is provided with a series of perforations, and is rotated by a shaft 19, with which it may be formed integral or be otherwise fixed thereto. By these adjustments the reciprocation of the dasher at the lower end of the dasher rod may be readily regulated to suit any receptacle, and the contents thereof. The guide block 16' is supported by three upwardly and inwardly inclined rods 20, 21, and 22, which have their upper ends secured to the block 16, and their lower ends attached to the top of the frame at the ends thereof and at one side adjacent to the shaft 19. The top of the frame is provided with two longitudinal openings, in one of which is mounted a fly wheel 23, and in the other rotates a drive wheel 24, mounted on a shaft 25 and connected by a belt 26 with a pulley 27 of the shaft 19. The shaft 25 is provided with a crank handle by means of which the churn is operated.

In order that the belt may be held at the proper tension the shaft 25 is journaled in adjustable bearings 28, which have shanks 29; the shanks are arranged in openings of the frame, and the bearings are secured at the desired adjustment by wedges 30.

It will be readily apparent that the churn is simple and comparatively inexpensive in construction, that it is adapted to receive various sizes of receptacles to serve as a churn body, and to regulate its stroke to agree with such receptacle and the contents thereof, and that it is capable of rapidly producing butter.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What I claim is—

1. In a churn, the combination of a frame, a churn body provided with a removable cover, a dasher rod passing through the cover, and a spring connected with the frame and bearing against the cover and securing the same in place, and provided at one side with a vertical opening forming an entrance to its interior and enabling it to be readily placed on and removed from the cover without removing the dasher rod, substantially as described.

2. In a churn, the combination of a frame, a churn body mounted thereon and provided with a removable cover, a dasher rod passing through the cover, and a spring bearing against the cover and connected with the frame, and provided at one side with a vertical opening forming an entrance to its interior, said spring being composed of a series of segmental loops, having their ends separated, and constructed of a single piece of resilient material and having their openings or the spaces between their ends arranged one above another, substantially as and for the purpose described.

3. In a churn, the combination of a frame provided with recessed blocks arranged at opposite ends thereof, a socket arranged at the bottom of the frame and consisting of a vertical flange, a churn body mounted in the socket and provided with a removable cover, a dasher rod passing through the cover, a removable bar having recessed ends engaging said blocks, and a spiral spring secured to the bar and bearing against the cover and provided with a vertical opening forming an entrance to its interior, substantially as described.

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

WILLIAM H. THOMAS.

Witnesses:
D. P. REID,
J. W. OAKLEY.