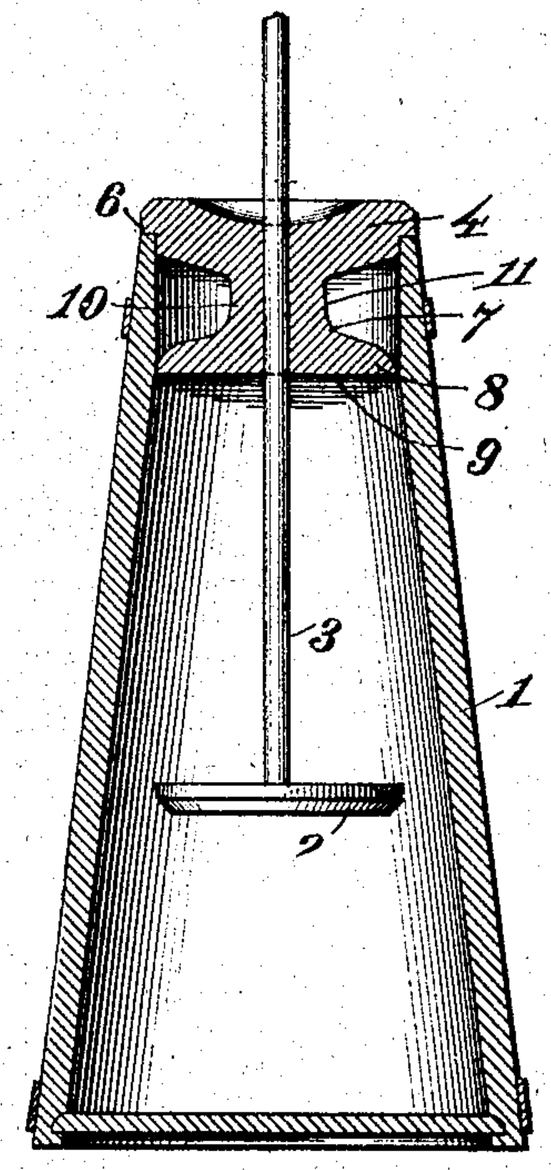
No. 791,870. PATENTED JUNE 6, 1905.

W. P. BOONE.

CHURN.

APPLICATION FILED MAR. 16, 1904.

Fig. I.



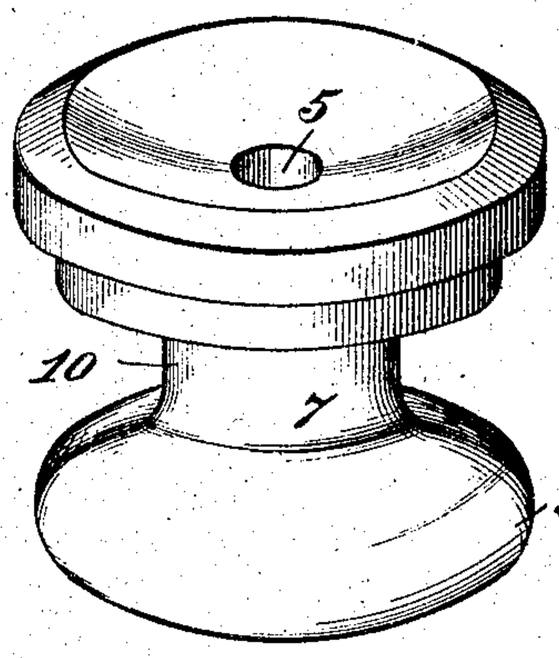


Fig. II.

WITNESSES:

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No. 791,870. Patented June 6, 1905.

UNITED STATES PATENT OFFICE.

WILLIAM P. BOONE, OF SANDERSVILLE, GEORGIA.

CHURN.

SPECIFICATION forming part of Letters Patent No. 791,870, dated June 6, 1905.

Application filed March 16, 1904. Serial No. 198,342.

To all whom it may concern:

Be it known that I, WILLIAM P. BOONE, of Sandersville, in the county of Washington, State of Georgia, have invented certain new and useful Improvements in Churns, of which the following is a complete specification, reference being had to the accompanying drawings.

The object of my invention is to produce improvements in churns of the ordinary vertical reciprocating dasher type whereby leakage in use through or around the cover may be practically prevented without diminishing the available capacity of the churn.

In the accompanying drawings, Figure I is a central vertical section of a familiar form of rod-and-dasher churn embodying in preferred form my invention. Fig. II is a perspective view of my churn-cover detached in a preferred form of embodiment.

Referring to the numerals on the drawings, 1 indicates, by way of example, the barrel of any ordinary or preferred type of churn to which my invention may be applied; 2, a dasher, and 3 a dasher-rod.

4 indicates a cover provided with an aperture 5 for the reciprocation of the dasher-rod and with a peripheral flange 6.

Thus far, without reference to the special cover 4 illustrated, I have described a well-known type of churn. An objection to such a churn is that in operation the liquid within it tends to escape from under its cover and around the dasher-rod. In practice heretofore it has been necessary either to permit this waste of liquid or to greatly limit the supply of liquid. By employment of my invention a churn may be substantially filled without waste. This end I accomplish by providing the cover 4 with an integral depending member 7, whose lower extremity 8 fits snugly within the barrel 1 and whose plane face 9 constitutes a baffle. The employment of this device prevents escape of liquid through or around the cover, because the force with which it is splashed by the reciprocation of the dasher 2 is spent before the liquid can be expelled through the relatively long passages through and around the cover. In this connection let it be observed that the passage through the cover—to wit, the dasher-rod aperture 5—is preferably a continuous and an elongated one, extending from top of the cover through the plane face 9 thereof. If the member 7 be made throughout its length to fit closely against the wall of the churn, though leakage would be thereby practically minimized, there might be some escape of liquid by presence of capillarity between the wall of the churn and the surface of the member 7. Besides, close-fitting walls would tend to work any butter entrapped between them to the consistency of a lubricant and to discolor it offensively. To avoid these objectionable results, I prefer to provide the member 7 with a waist or attenuated intermediate portion 10, the wall 11 of which should be inclined to drain freely toward the interior of the barrel.

It should be understood that my invention is applicable to any stationary vertically-disposed churn from which it is desirable to prevent the escape of liquid under agitation and that I do not intend to limit myself to mere details of form and construction.

What I claim is—

A churn-cover consisting of a solid integral unit, adapted to closely fit the barrel of a churn and combining a peripheral flange adapted to support it upon the top of such barrel, a depending member provided with a waist, adapted also to fit snugly into the barrel and a plane-face baffle upon said depending member, said cover being provided with a dasher-rod aperture extending from its top through the plane face of its depending member.

In testimony of all which I have hereunto subscribed my name.

WILLIAM P. BOONE.

Witnesses:
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H. B. MASSEY.