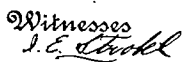


CHURN.

1,017,554.

2 SHEETS—SHEET 1.



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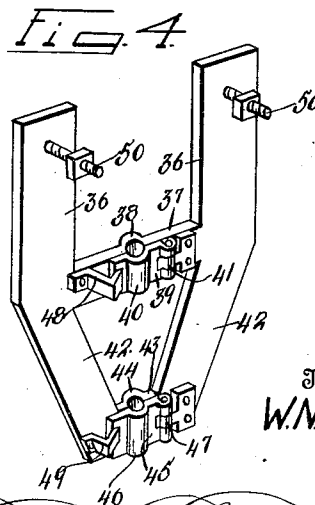
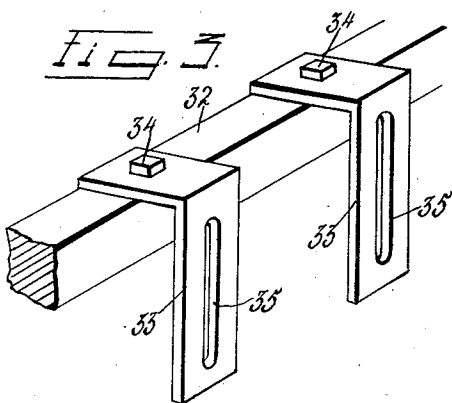
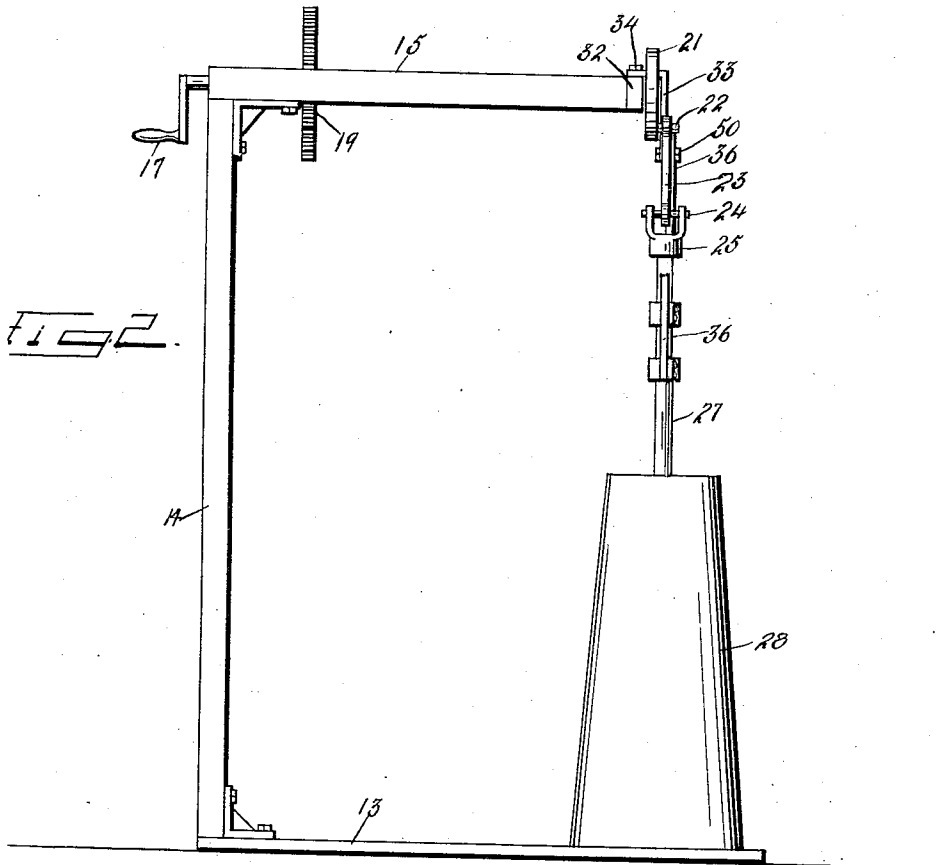
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CHURN.

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Patented Feb. 13, 1912.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

WILLIAM N. JONES, OF ACTON, ALABAMA.

CHURN.

1,017,554.

Specification of Letters Patent.

Patented Feb. 13, 1912.

Application filed November 4, 1910. Serial No. 590,746.

To all whom it may concern:

Be it known that I, WILLIAM N. JONES, a citizen of the United States, residing at Acton, in the county of Shelby, State of Alabama, 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 and has for its principal object to provide a mechanism for reciprocating the dasher that will be operated with less manual labor than usual.

The novelty of this invention resides in the adjustably mounted dasher bearings which will be hereinafter fully described and claimed.

In the accompanying drawing forming part of this specification, Figure 1 is a longitudinal sectional view through a churn constructed in accordance with my invention. Fig. 2 is a side elevation of the churn with parts broken away. Fig. 3 is an enlarged detail perspective view of the dasher bearings showing the bearing boxes open. Fig. 4 is a detail perspective view of one of the bearing hangers. Fig. 5 is a plan view of the churn.

It is well known that in churning, it is much harder to reciprocate the dasher during the latter part of the operation than during the first part. This is partly due to increased frictional resistance caused by heated bearings. To obviate as much as possible this heating of the dasher bearings in particular, I provide bearing boxes that may be moved from time to time along the dasher rod thereby causing a cool surface of the dasher rod to work in the bearing boxes at each new position of the bearing boxes.

Referring to the parts by their reference characters, 13 designates a platform from the rear corners of which rise spaced standards 14 that support upon their upper ends a rectangular frame 15 which supports the actuating mechanism.

The actuating mechanism consists of a driving shaft 16 journaled in suitable bearings formed in the ends of the rectangular frame, and having one extremity extended considerably beyond the rear end wall of the frame and equipped with a crank 17 or other means for rotating the shaft. Keyed

to the shaft is a spur gear 18 which meshes with a pinion 19 keyed to a shaft 20 that lies in the horizontal plane of the main shaft and has its extremities journaled in suitable bearings formed in the ends of the rectangular frame 15. One extremity of the shaft 20 extends considerably beyond the front end of the rectangular frame and has keyed thereto a disk 21 which is equipped with a laterally projecting wrist pin 22 adjacent its periphery. A link 23 is provided at one end with an eye to receive the wrist pin and at its opposite end with an eye to receive a pivot pin 24. A nut 25 is provided with a pair of parallel lips 26 which engage the lower end of the link and are provided with suitable bearings to receive the pivot pin 24 carried by the link. The nut 25 threads on to the extremity of a dasher rod 27 the lower end of which extends into a churn body 28 of the usual and well-known kind and is equipped with a dasher 29 the latter being secured in position by a set screw 30. A second dasher 31 is threaded on the dasher rod below the dasher 29 and serves to churn the milk in the churn bottom.

The adjustably mounted dasher rod bearings comprising the subject matter of this invention will now be described. A cross brace 32 is rigidly secured at its opposite ends to the sides of the rectangular frame 15 and forms a support for a pair of hangers 33. Each hanger consists of an L-shaped strap of metal one leg of which is rigidly secured by a bolt 34 or otherwise to the top face of the cross brace, and the other leg of which depends vertically from the brace and is provided with a longitudinal slot 35.

The dasher rod bearing boxes are secured in a frame the legs of which are provided with adjusting bolts which engage the slots 35 and permit of the bearing boxes being slid longitudinally upon the dasher rod. A convenient method of forming the bearing box frame is to connect the lower ends of a pair of parallel bars 36 by a cross bar 37 having its intermediate portion bowed outwardly as shown at 38 to form one-half of a bearing box. A strap of metal 39 having an outwardly bowed portion 40 is hinged to the bar 37 as shown at 41 and forms the mating half of the bearing box. Depending from the corners of the bars 36 are a pair of inclined bars 42 the lower ends of which are connected by a bar 43 having an out-

wardly bowed portion 44 which forms one-half of the lower bearing box. A strap 45 having an outwardly bowed portion 46 is hinged as shown at 47 to this bar and co-
5 operates to form the mating half of the lower bearing box. Spring catches 48 and 49 secure the free ends of the hinged halves of both bearing boxes. The hinged halves of the bearing boxes are rocked outwardly to
10 permit of the dasher rod being mounted and removed when desired.

The connecting bolts 50 which connect the upper ends of the above-described bars 36 of the bearing box frame to the hangers may
15 be loosened and the bearing box frame slid longitudinally upon the hangers to move the bearing boxes into engagement with a cool surface of the dasher rod. Thus the operation of churning is performed without in-
20 creased frictional resistance due to heated bearings.

It is obvious that the bearing box frame may be cast in a single piece if desired without departing from the spirit of this inven-
25 tion.

From the foregoing description taken in connection with the accompanying drawing, it is thought that the construction and operation of my invention will be easily under-
30 stood without a more extended explanation, it being understood that various changes

may be made in the form, proportion and minor details of construction within the scope of my invention.

What is claimed is:—

1. A churn dasher rod holder including a support, a pair of slotted hangers depending therefrom, a bracket having spaced up-
standing arms provided with adjusting bolts engaged in the slots of said hangers, said
40 bracket having cross arms connecting said upstanding arms, and bearings on said cross arms adapted to detachably engage a dasher rod.

2. In a churn, the combination of a re-
45 ceptacle, a dasher, a frame arranged above said receptacle carrying dasher actuating mechanism, a pair of angle iron slotted hangers depending from said frame, a
50 bracket having spaced upstanding arms provided with adjusting bolts engaged in the slots of said hangers, said bracket having cross arms connecting said upstanding arms and hinged bearings on said cross arms re-
55 movably engaging said dasher rod.

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

WILLIAM N. JONES.

Witnesses:

LUKE COLEY, Jr.,
OTTO WILBURN.