E. E. FLOYD.

CHURN.

APPLICATION FILED NOV. 26, 1907.

944,129.

Patented Dec. 21, 1909.

Fig 1.

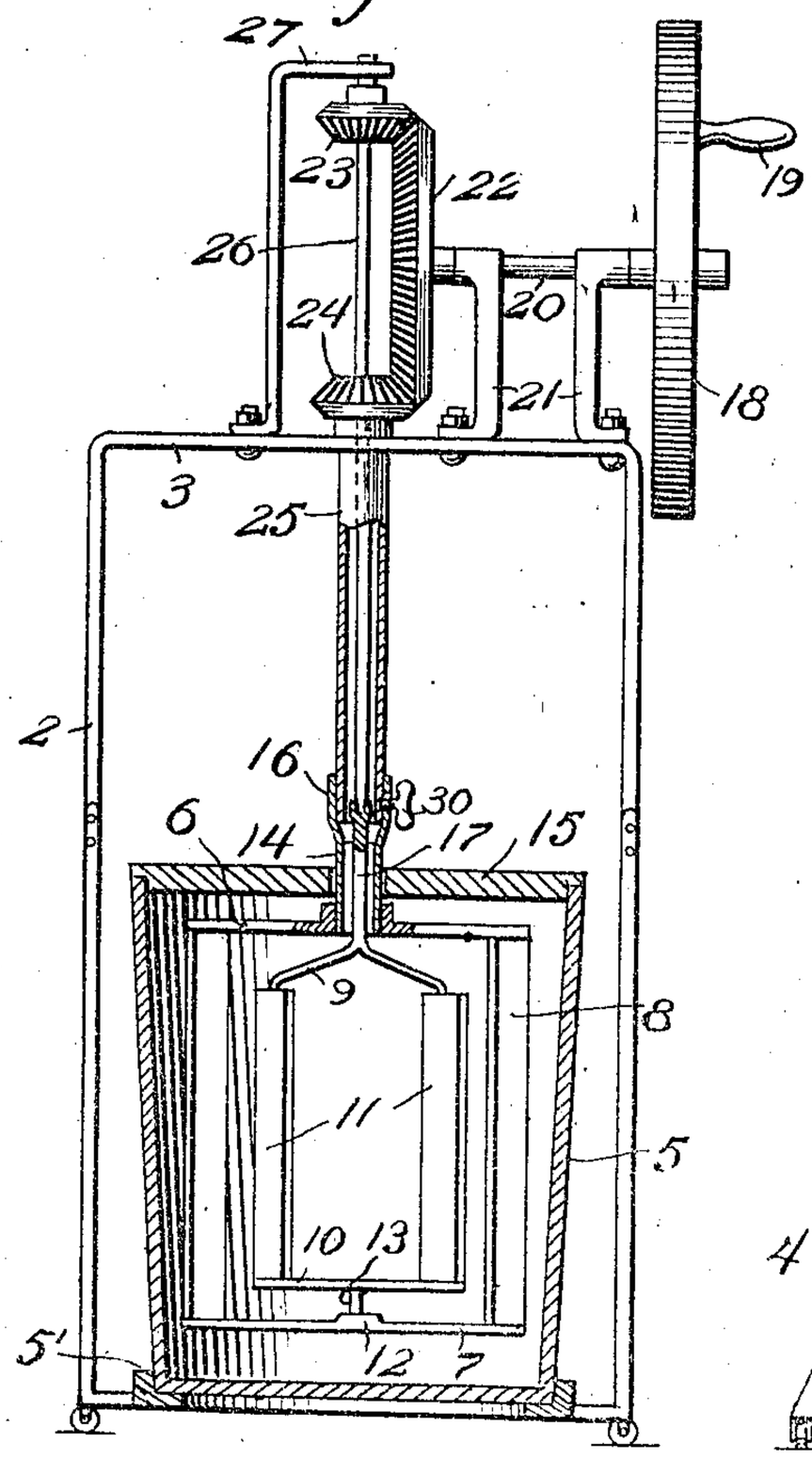


Fig 2.

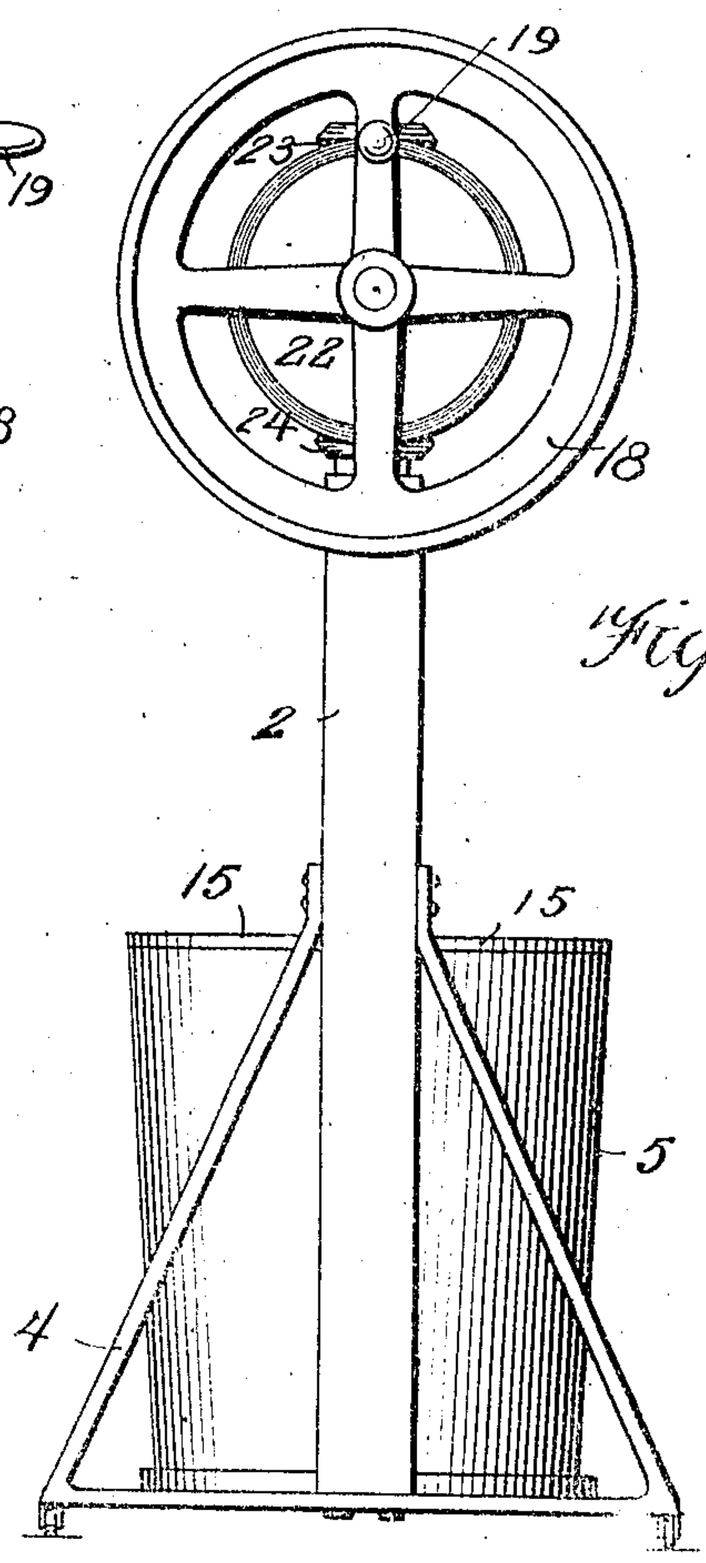


Fig 5.

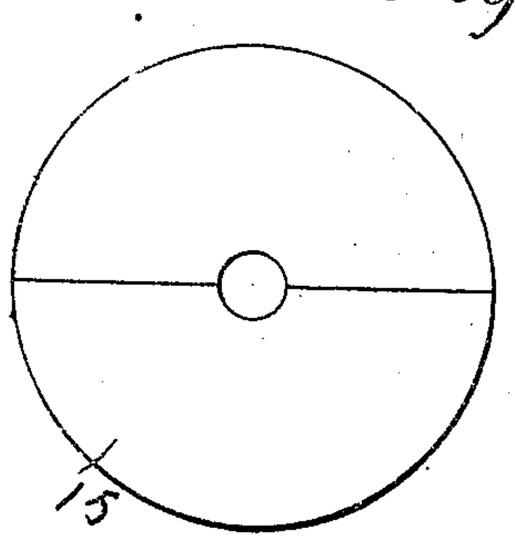


Fig 4.

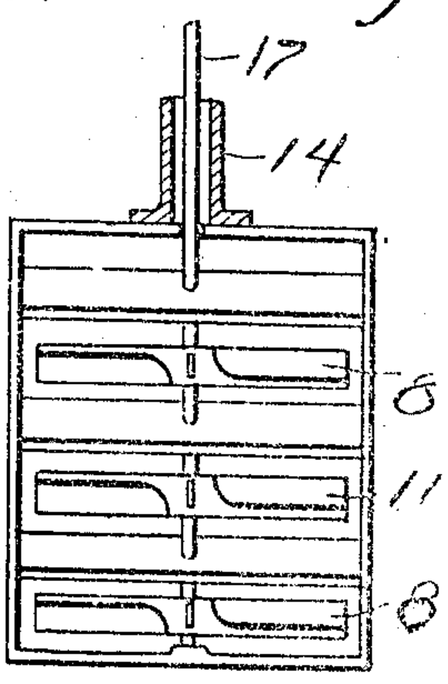
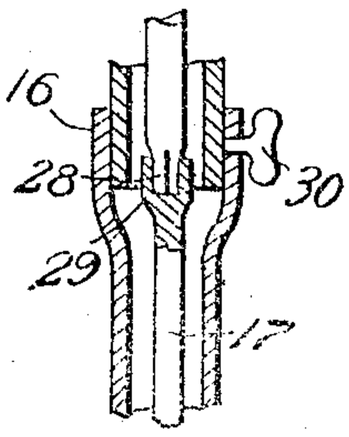


Fig 3.



Witnesses

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ELLIS E. FLOYD, OF CELESTE, TEXAS.

CHURN.

944,129. Specification of Letters Patent. Patented Dec. 21, 1909.

Application filed November 26, 1907. Serial No. 403,915.

To all whom it may concern:

Be it known that I, ELLIS E. FLOYD, a citizen of the United States, residing at Celeste, in the county of Hunt and State of Texas, have invented new and useful Improvements in Churns, of which the following is a specification.

This invention relates to churns, the object of the invention being to provide a machine embodying a plurality of oppositely moving dashers and driving mechanism therefor, combined with a novel form of coupling which will permit the dashers to be readily coupled or uncoupled from the actuating elements immediately associated therewith by the operation of a single clamping device thereby enabling a ready access to be had to the body and contents of the churn without disarranging the frame and driving mechanism.

With the above and other objects in view, the invention consists in the novel arrangement, construction and combination of parts hereinafter fully described, illustrated and claimed.

In the accompanying drawings:—Figure 1 is a sectional elevation of the churn embodying the present invention, Fig. 2 is a side view of the same taken at right angles to Fig. 1. Fig. 3 is an enlarged sectional view of the joint between the driving mechanism and the dashers. Fig. 4 illustrates a modified construction of multiple dashers. Fig. 5 is a plan view of the sectional or divided top or lid of the churn.

Referring to the drawing, 1 designates a base frame extending upward from which are arranged opposite uprights 2 connected at the top by a cross bar 3 and reinforced by inclined braces 4, which connect the base 1 with the uprights 2, the construction permitting the churn body 5 to be set in a rabbeted step 5′ on the base of the frame and removed therefrom with ease.

The preferred embodiment of the invention is illustrated in Fig. 1 wherein the churn mechanism is seen to comprise two oppositely moving dashers, the outer dasher embodying upper and lower cross bars 6 and 7 connected by beaters or blades 8. The inner and smaller dashers embody upper and lower cross bars 9 and 10 and beaters or blades connecting the same.

In carrying out the present invention, the cross bar 7 is provided with a step 12 located centrally thereof and receiving a pintle 13 at the center of the bottom cross bar of the smaller dasher, whereby the outer or larger dasher forms a support for the inner or smaller dasher. The outer dasher is provided with a hollow stem 14 which extends upward through an opening in the sectional or divided top or lid 15 of the churn body and has its upper end enlarged or expanded as shown at 16 while the inner dasher has also a stem 17 which extends upward through the hollow stem 14. The driving mechanism for the churn dashers embodies a drive wheel 18 having a suitable handle 19 and mounted on the shaft 20 which is journaled in one or more brackets 21 secured to the top of the main frame.

The shaft 20 has fast therein a beveled wheel 22 which meshes at its top and bottom with upper and lower pinions 23 and 24, the lower pinion 24 being mounted fast on an outer tubular shaft 25. This shaft 25 has its bearing in its cross bar 3 and is adapted at its lower end to enter the extended portion 16 of the hollow stem 14, above described. The other pinion 23 is fast on an inner shaft 26 which has its bearing in a bracket or arm 27 secured to the top of the machine frame, as shown in Fig. 1, said shaft extending downward through the tubular shaft 25 and having its lower extremity squared as shown at 28 to enter a corresponding socket 29 in the upper extremity of the stem 17 whereby the shafts 26 and the stem 17 are interlocked so as to turn together. In the act of inserting the squared end 28 in the squared socket 29, the lower end of the tubular shaft 25 is simultaneously inserted in the extended upper portion 16 of the hollow stem 14.

When the parts are properly associated with each other in the manner illustrated in Fig. 3 they are held by means of a set screw 30 which is carried by the extended portion 16 of the hollow stem 14 and against the lower extremity of the hollow shaft 25. By simply loosening the screw 30 a separation may be effected between the driving mechanism and the dashers and the churn body with its contents may be moved away from the mechanism and the supporting frame therefor.

I claim:—

A churn comprising a supporting frame for the churn body and for the operating mechanism, a churn body supported by and removable from said frame, reversely rota-

table dashers one of which is formed at its bottom with a step, a pintle projecting from the other dasher to seat in the said step, a hollow stem projecting from one dasher and terminally enlarged at its upper end to form a socketed head, a stem projecting from the other dasher and housed within the said hollow stem, said stem terminating at its upper end below the upper end of the said hollow stem and being formed in said terminal to provide a square socket, two actuating shafts contained one within the other, the outer shaft fitting into the socketed head of the hollow stem, the inner shaft being terminally squared to fit within the socket of the other stem, means for supporting the said actuating shaft, means for operating the said shafts to revolve them in opposite directions, and means upon the socketed head of the hollow stem adapted to be engaged with the said outer actuating shaft whereby the said shaft and stem and the said inner shaft and inner stem can be operatively connected.

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

ELLIS E. FLOYD.

Witnesses:
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