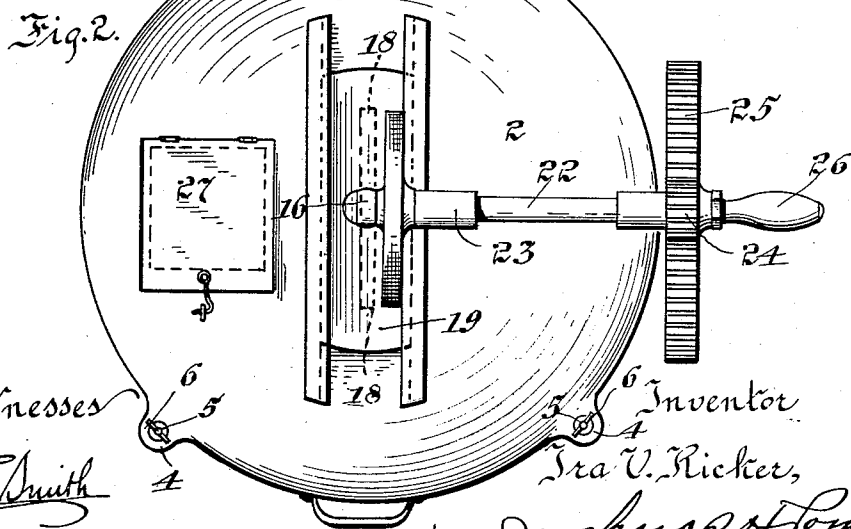
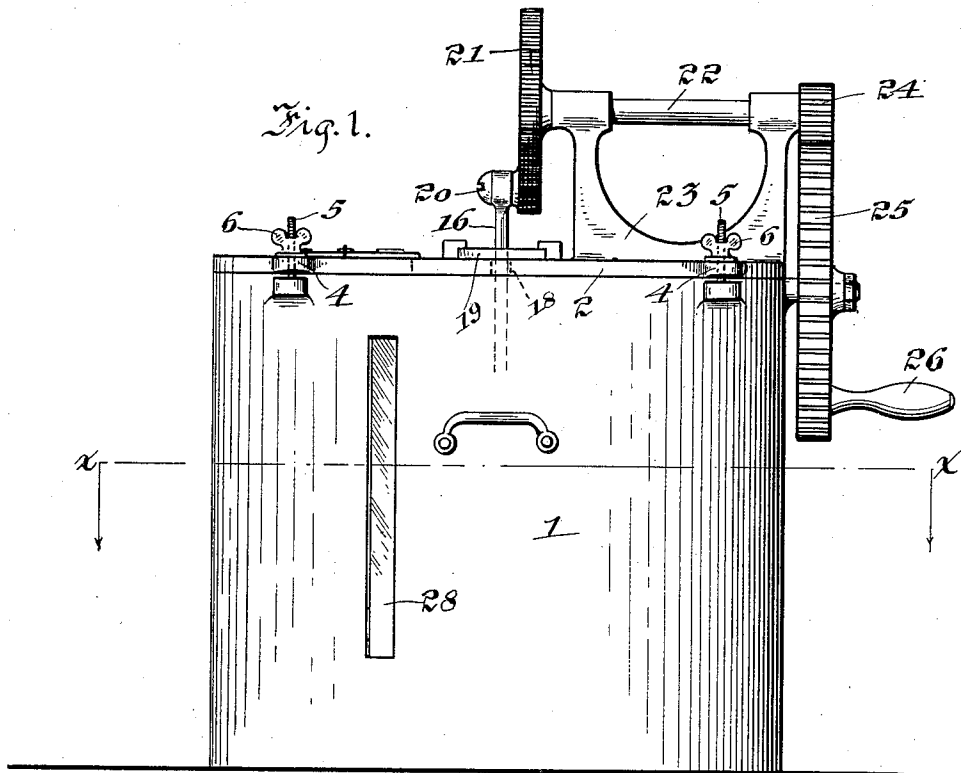


APPLICATION FILED APR. 12, 1911.

1,017,690.

Patented Feb. 20, 1912.

2 SHEETS—SHEET 1.



Witnesses
W. B. Smith
 B. G. Richards

5 6 Inventor
4
Ira V. Ricker,
by Joshua H. Lom
his Attorney.

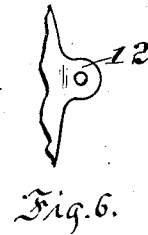
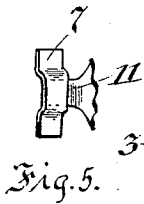
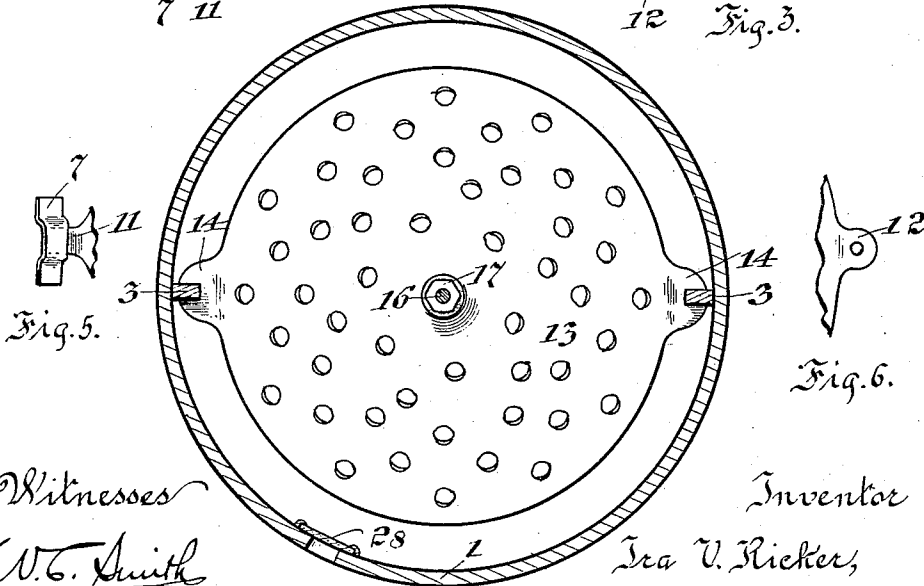
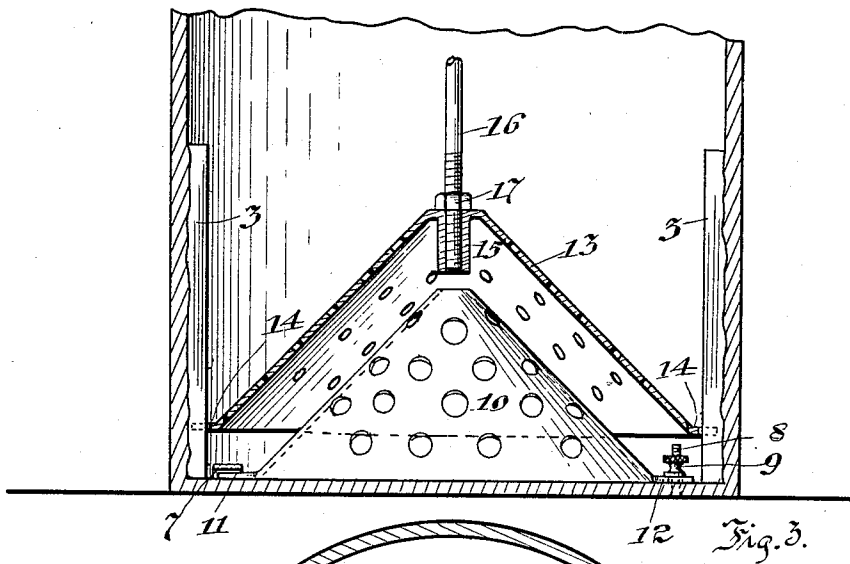
I. V. RICKER.
CHURN.

APPLICATION FILED APR. 12, 1911.

1,017,690.

Patented Feb. 20, 1912.

2 SHEETS—SHEET 2.



Witnesses
W. G. Smith
B. H. Richards

Fig. 4.

Inventor
Ira V. Ricker,
by Joshua R. Tom
his Attorney.

UNITED STATES PATENT OFFICE.

IRA V. RICKER, OF CHICAGO, ILLINOIS.

CHURN.

1,017,690.

Specification of Letters Patent.

Patented Feb. 20, 1912.

Application filed April 12, 1911. Serial No. 620,528.

To all whom it may concern:

Be it known that I, IRA V. RICKER, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Churns, of which the following is a specification.

My invention relates to improvements in churns and has for its object the provision of a churn which shall be of simple construction and efficient in operation.

The invention consists in the combination and arrangement of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a side elevation of a churn embodying my invention, Fig. 2, a top plan view of the churn, Fig. 3, a partial section through the lower portion of the churn, Fig. 4, a horizontal section of the churn taken on line *x-x* of Fig. 1, Fig. 5, a detail perspective view illustrating the loop socket employed in the churn, and Fig. 6, a fragmentary view illustrating a perforated projection employed in the churn.

The preferred form of construction as illustrated in the drawings comprises a cylindrical wooden receptacle 1 having a hinged top 2 and diametrically disposed vertical guides 3 arranged along its inner walls. The cover 2 is provided with perforated lugs 4 adapted to engage over stud bolts 5 which carry wing nuts 6 to be employed for securing said cover in closed position. A loop socket 7 is arranged upon the bottom of receptacle 1 at one side and a bolt stud 8 is arranged on the receptacle bottom at the opposite side and provided with a nut 9 as shown. An upwardly extending conical hollow perforated projection 10 is arranged centrally upon the bottom of receptacle 1 and is provided with a projection 11 at one side adapted to engage loop socket 7 and a perforated projection 12 at its opposite side adapted to take over bolt stud 8 and be secured in position by means of nut 9. This furnishes a simple and convenient means for removing the conical member 10 in the arrangement of the receptacle.

Arranged in receptacle 1 over member 10 is a hollow conical perforated dasher 13 provided with perforations somewhat smaller

than the perforations in member 10 and also provided with notched projections 14 engaging guides 3 as shown. At its upper end dasher 13 is provided with a threaded sleeve 15 adapted to receive the lower end of an operating rod 16 which carries a lock nut 17 for further securing the same in position in sleeve 15. Rod 16 projects upwardly through an elongated slot 18 in cover 2, said slot being covered by a reciprocatory slide 19 having a central perforation adapted to permit the free passage of rod 16. At its upper end rod 16 is connected with a crank pin 20 carried by a face plate 21 on the end of an operating shaft 22 mounted in a suitable bracket 23 secured to cover 2. At its outer end shaft 22 carries a pinion 24 meshing with a gear wheel 25 which is rotatably mounted on the side of receptacle 1 and is provided with an operating handle 26 as shown. With this arrangement it will be observed that the dasher 13 may be rapidly reciprocated in receptacle 1 over member 10 by turning wheel 25. Cover 2 is provided with a hinged door 27 to permit access to the interior of the receptacle and a sight glass 28 is provided in one side of receptacle 1 to permit a view of the interior thereof.

In use the cream to be churned is placed in receptacle 1 and the dasher 13 rapidly reciprocated. After a few minutes of such operation it will be found that the butter has formed, in which case a few moments of slower operation will cause the butter to collect in member 10 whence it may be readily removed.

While I have illustrated and described the preferred form of construction for carrying my invention into effect this is capable of variation and modification without departing from the spirit of my invention. I, therefore, do not wish to be limited to the exact details of construction set forth, but desire to avail myself of such variations and modifications as fall within the scope of the appended claims.

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

1. A churn comprising a receptacle; a hollow perforated convex upwardly extending projection in the bottom of said receptacle; a concave dasher; and means for reciprocating said dasher, substantially as described.

2. A churn comprising a receptacle; a hol-

low perforated convex upwardly extending projection in the bottom of said receptacle; a concave perforated dasher; and means for reciprocating said dasher, substantially as described.

3. A churn comprising a receptacle; a hollow perforated convex upwardly extending projection removably mounted in the bottom of said receptacle; a concave perforated dasher; and means for reciprocating said dasher, substantially as described.

4. A churn comprising a receptacle; a loop socket arranged on the bottom of said receptacle at one side; a threaded bolt stud arranged on the other side of the receptacle bottom; a hollow perforated cone having a projection at one side adapted to enter said loop socket and a perforated projection on its other side adapted to engage said bolt stud; vertical guides arranged on the inner walls of said receptacle; a perforated conical dasher arranged in said receptacle and provided with notched projections engaging said guides, the perforations in said dasher being smaller than those in the cone, and means for reciprocating said dasher, substantially as described.

5. A churn comprising a receptacle; a loop socket arranged on the bottom of said receptacle at one side; a threaded bolt stud

arranged on the other side of said receptacle bottom; a hollow perforated cone having a projection at one side adapted to enter said loop socket and a perforated projection on its other side adapted to engage said bolt stud; vertical guides arranged on the inner walls of said receptacle; a perforated conical dasher arranged in said receptacle and provided with notched projections engaging said guides, the perforations in said dasher being smaller than those in the cone; a perforated slide on the cover of said receptacle; an operating rod secured to the upper end of said dasher and projecting through the perforation in said slide; an operative shaft mounted on the cover of said receptacle and carrying a crank pinion connected with said rod; a pinion on said shaft; a gear wheel mounted on the side of said receptacle and meshing with said pinion; and an operating handle on said gear wheel, substantially as described.

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

IRA V. RICKER.

Witnesses:

ARTHUR A. OLSON,
JOSHUA R. H. POTTS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."