(No Model.) 2 Sheets—Sheet 1.

# J. A. ROBERTS & W. E. C. VERMILLION.

## CHURN.

No. 567,726. Patented Sept. 15, 1896.

Fig. 1.

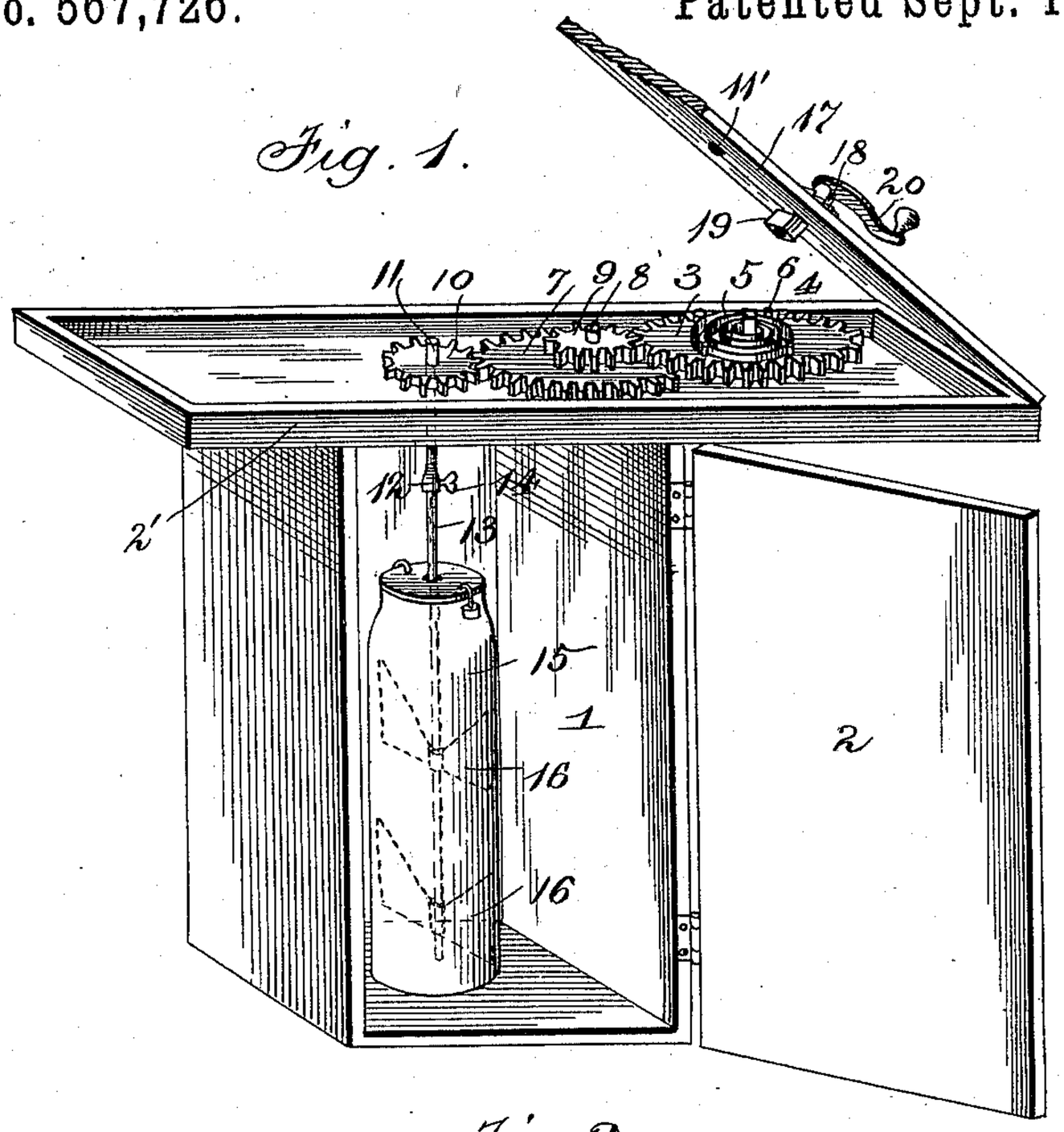
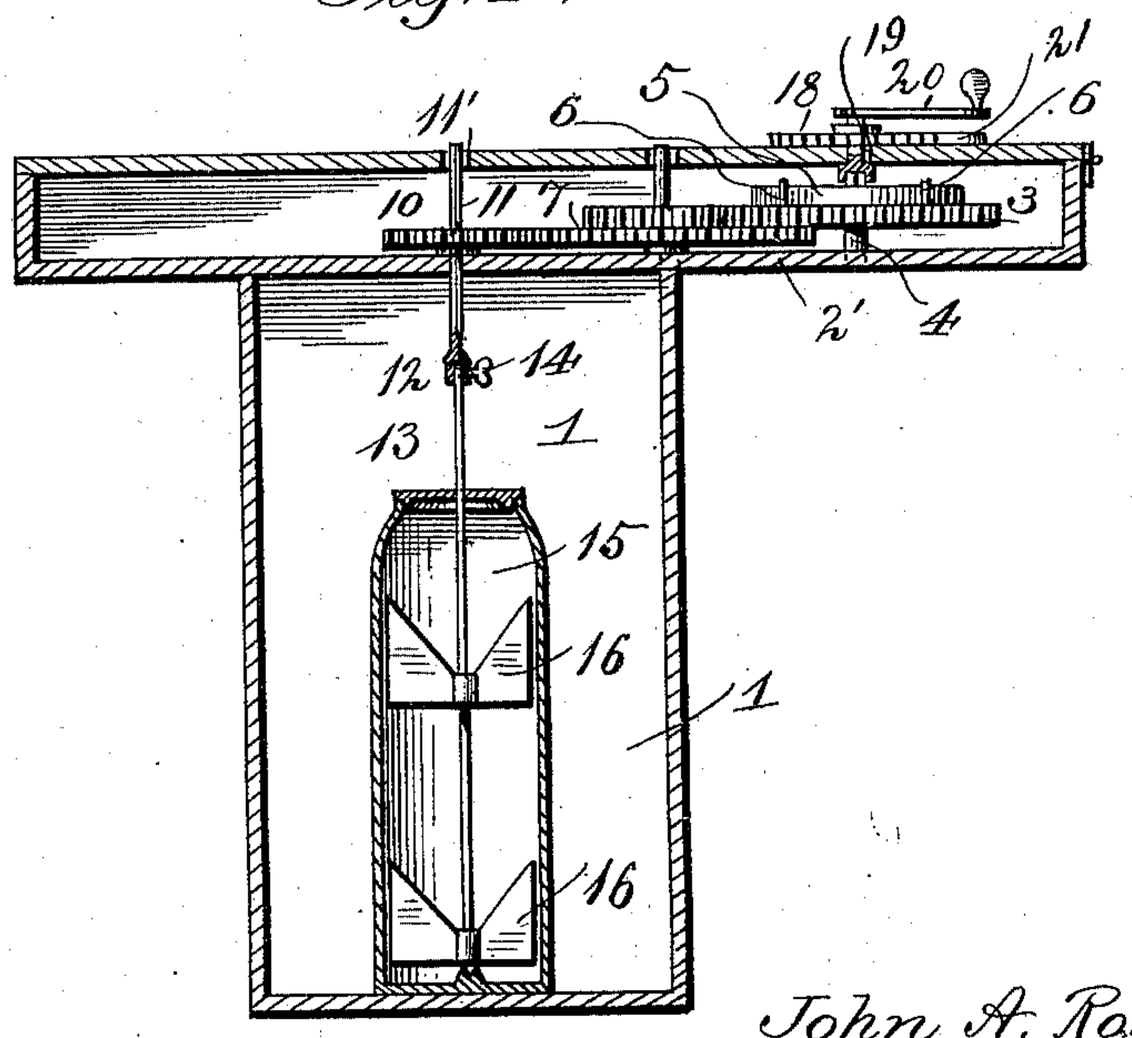



Fig. 2.




Witnesses
F. L. Ozrand.
A. D. Smith.

Inventors
John A. Roberts,
Wm E. C. Vermillion
By H. Dewitt
Attorney

(No Model.) 2 Sheets—Sheet 2.

# J. A. ROBERTS & W. E. C. VERMILLION.

## CHURN.

No. 567,726. Patented Sept. 15, 1896.

Fig. 3

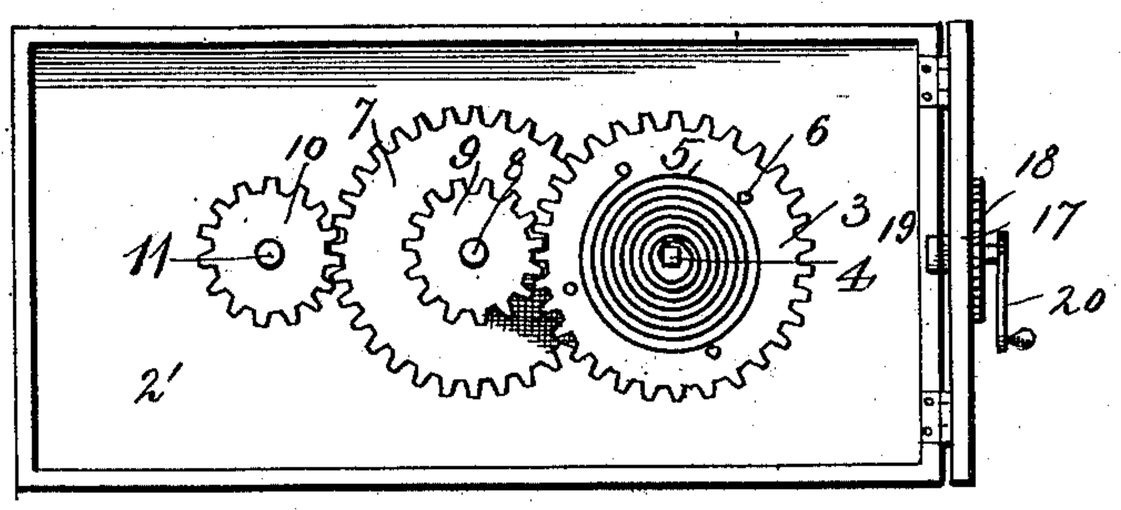
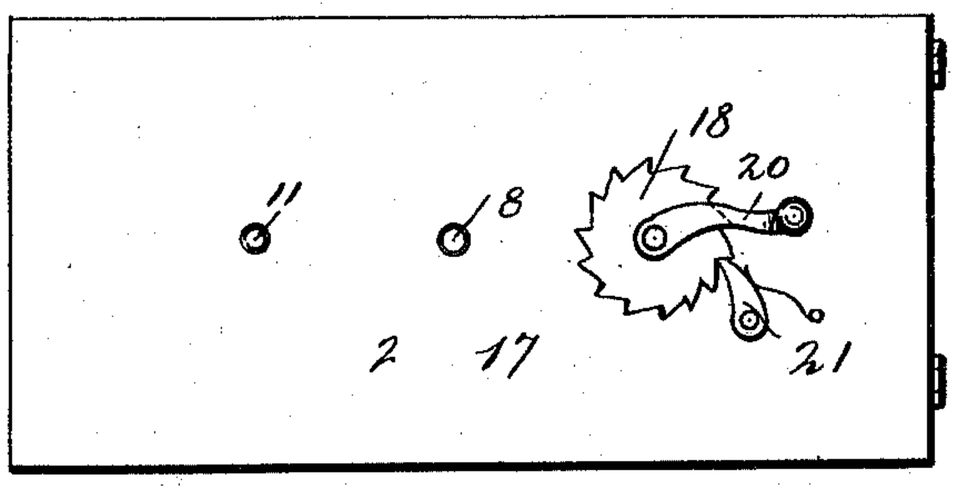



Fig. 4




Witnesses
F. L. Oyrand.
A. B. Smith

Inventors
John A. Roberts,
Wm E. C. Vermillion
By A. B. Wilson.
Attorney

# UNITED STATES PATENT OFFICE.

JOHN A. ROBERTS AND WILLIAM E. C. VERMILLION, OF BURLESON, TEXAS.

## CHURN.

SPECIFICATION forming part of Letters Patent No. 567,726, dated September 15, 1896.

Application filed August 1, 1895. Serial No. 557,887. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN A. ROBERTS and WILLIAM E. C. VERMILLION, citizens of the United States, residing at Burleson, in the county of Johnson and State of Texas, have invented certain new and useful Improvements in Churns; and we do 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.

Our invention has relation to churns, and the object is to produce a simple device of this kind that will be automatic in its action, and it is an improvement in that class of self-operating churns of which the patent to Taylor, No. 39,532, August 11, 1863, is a type, and to this end the novelty consists in the construction, combination, and arrangement of parts of the same, as will be hereinafter more fully described, and particularly pointed out in the claim.

In the accompanying drawings the same figures of reference indicate the same parts of the invention.

Figure 1 is a perspective view illustrating our invention, showing the top cover or plate swung back in order to illustrate more clearly the gearing supported by the lower plate. Fig. 2 is a vertical longitudinal sectional view. Fig. 3 is a top plan view of the top of the cabinet with the hinged cover or plate raised vertically, and Fig. 4 is a top plan view of the cover or plate of the cabinet.

In the drawings, 1 denotes the cabinet, having a swinging door 2, through which the churn may be placed and removed from the cabinet.

2′ denotes the top of the cabinet, which supports the operating mechanism of the churn. This mechanism consists of a toothed gear 3, loosely mounted upon the winding-shaft 4. A helical spring 5 has its inner end fixed to the shaft and its outer end secured to the wheel, and is prevented from expanding too far when unwound by means of lugs 6 cast on the face of the wheel, between which the coils of the spring lie.

A second gear-wheel 7 is journaled upon the stud-shaft 8, secured in the top of the cabinet, and is provided with a fixed pinion 9, which meshes with the gear 3. A pinion 10 is journaled upon the shaft 11, secured to the top of the casing, and meshes with the gear 9. This shaft 11 projects downward through the top into the cabinet and is provided with a socket 12 at its lower end, preferably polygonal in cross-section. This socket receives the polygonal end of the rotary dasher-rod 13, and is secured thereto by a set-screw 14. The said top is provided with upwardly-extending sides and ends, which, when the cover is closed, forms a housing for the train of gearing. By this construction the gearing is concealed from view and is out of the way, yet access can be readily had thereto when required by simply lifting the cover.

15 denotes the churn, and 16 the dashers thereof.

By loosening the set-screw 14 the churn may be readily removed from the cabinet when desired.

17 denotes a cover or plate which is hinged to the top of the cabinet and is adapted to swing down upon the gearing-cover and protect the same, and which, in conjunction with the top 2′ and upwardly-projected marginal edge, forms a compartment for the storage of utensils and tools or implements used in connection with a churn. Journaled in this plate is a ratchet-wheel 18, having a tubular extension 19, formed with a crank-handle 20. A spring-pawl 21 is secured to the plate and engages the ratchet-wheel and prevents its backward movement. When this plate is swung down upon the top, as shown in Fig. 2, the shafts 8 and 11 will project through holes 11′, and the winding-shaft, which is provided with a squared end, will project upward into the tubular extension 19.

In operation the crank-handle 20 is rotated to wind up the spring 5. When the spring has been properly wound and the handle released, the spring will rotate its gear 3, which, through the gear 7 and its pinion 9, will rotate the pinion 10, the movement of which will be imparted to the dasher-shaft.

A churn thus constructed is simple and very efficient in operation, and will greatly lessen the toil of the operator and allow him to employ his time for other purposes while the cream is being churned.

A very important feature of our invention is that the cabinet can contain several churns

when not in use, and when butter is to be made the churns are removed, one filled with cream, and the gearing started, and when the butter comes that churn can be removed, another filled one inserted, and the operation continued while the operator is removing the butter from the first churn, washing it, refilling with cream, and ready to insert in the cabinet as soon as the second one is completed, and so on indefinitely, one cabinet and gearing serving for several churns and greatly facilitating and simplifying the operation and economizing the time of the operator.

Having thus fully described our invention, what we claim as new and useful, and desire to secure by Letters Patent of the United States, is—

In a churn of the class described, a cabinet 1 having door 2 and a flanged top 2′, provided with a hinged top 17 in which is journaled a crank-shaft 20 provided with a ratchet-wheel 18 and spring-pawl 21, the end of the crank-shaft terminating in a tubular square socket 19 adapted to removably engage the train of gearing located in said flanged top 2 and rotate a shaft 11, the lower end of which terminates in a polygonal socket 12 having a set-screw 14, in combination with the rotary dasher-rod 13 having polygonal upper end, and radially-projecting independent dashers 16 16 located in the churn 15, whereby the churn-dashers and rod may be released from the gearing by the socket 12 and set-screw 14 and removed from the cabinet, and another churn placed in said cabinet and its polygonal shaft connected by the socket 12 and operated by the gearing, substantially as shown and described.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN A. ROBERTS.
WILLIAM E. C. VERMILLION.

Witnesses:
G. W. BRANSOM,
H. C. GOODLOE.