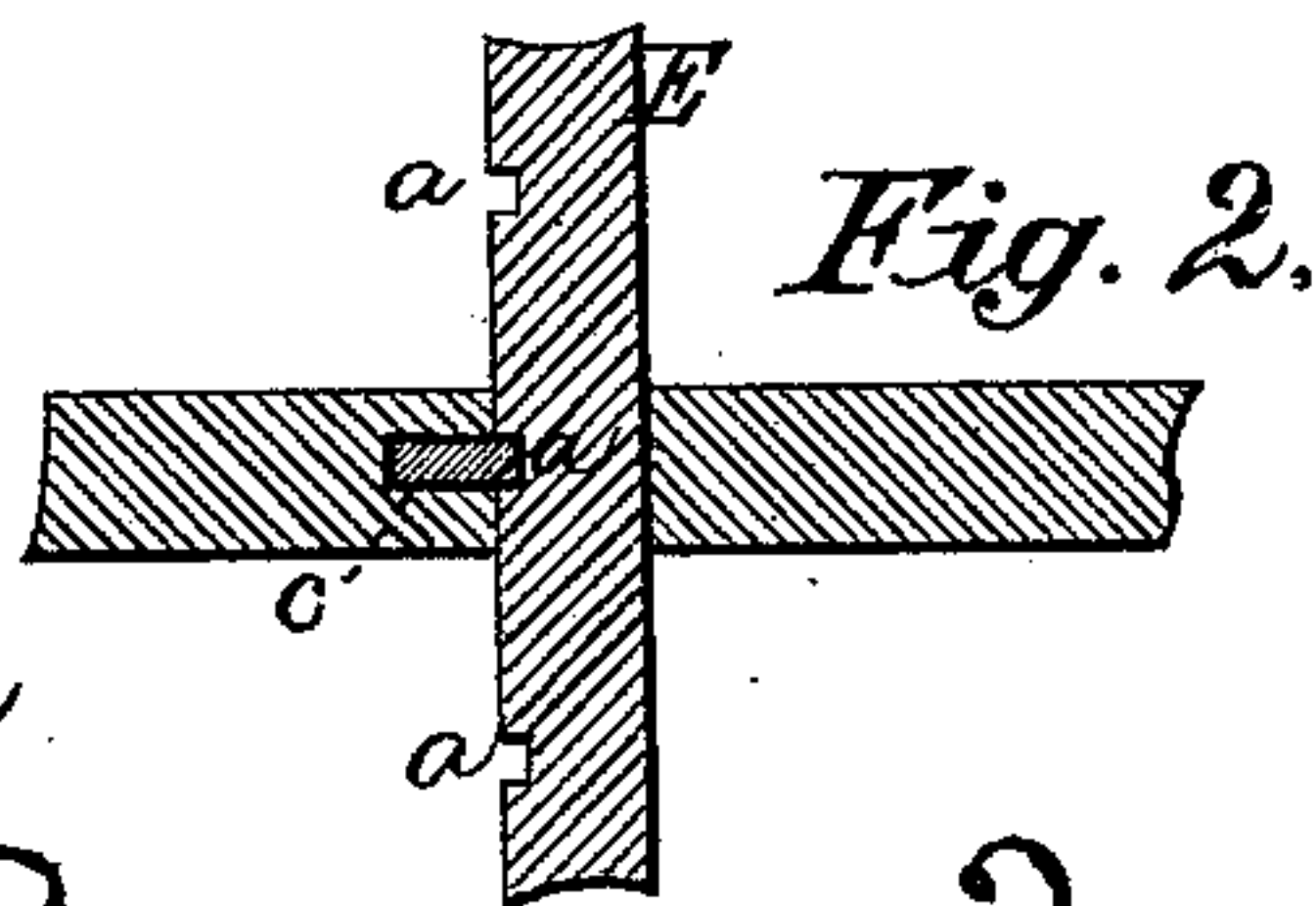
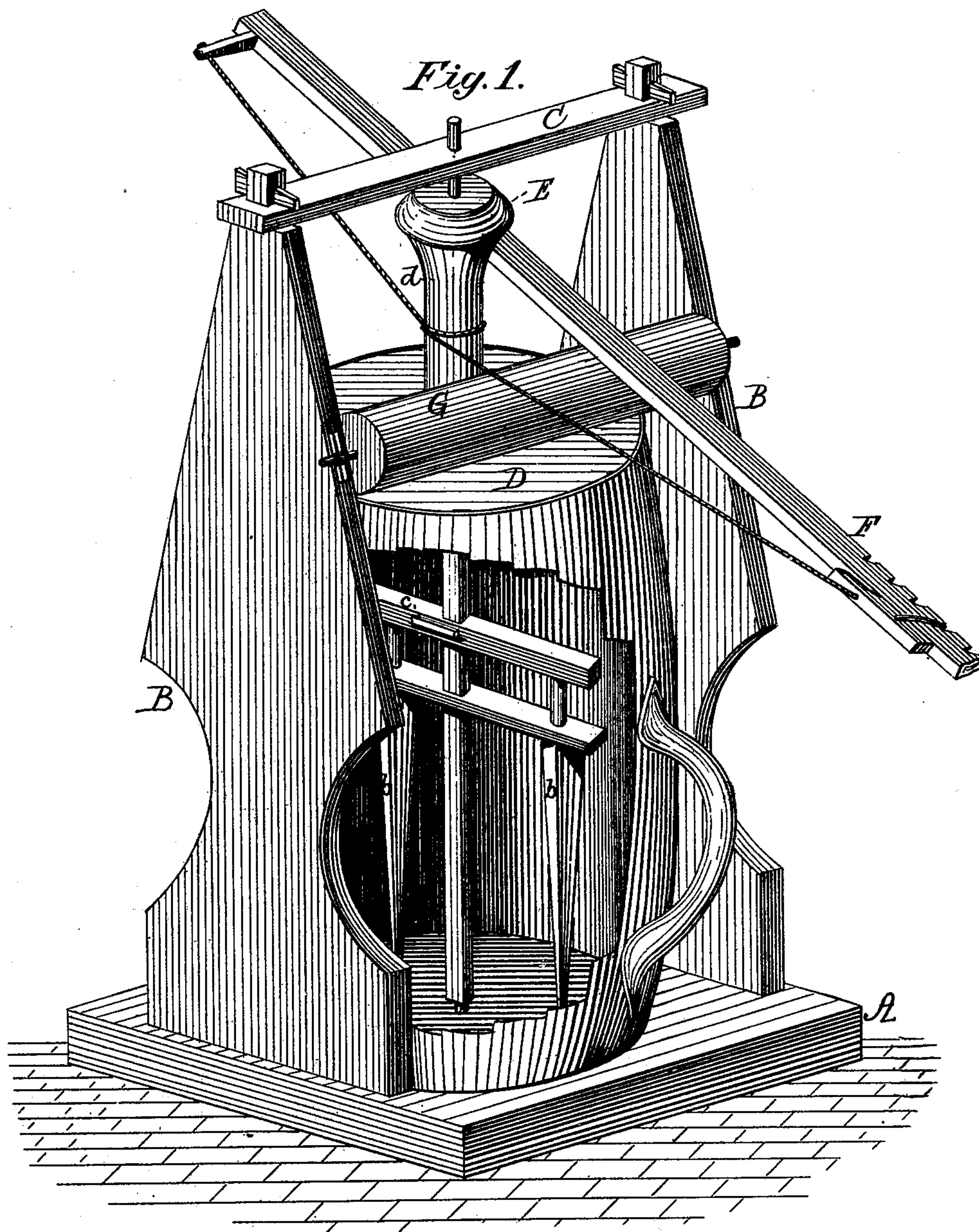


J. M. WELCH.  
RECIPROCATING CHURN.

No. 187,954.

Patented Feb. 27, 1877.



Attest:  
J. M. McGuire  
Otto L. Johnson.

Per.

Inventor:  
John M. Welch  
Rankin H. Sweet, Jr. & Co.  
Attys



# UNITED STATES PATENT OFFICE

JOHN M. WELCH, OF BUENA VISTA, TEXAS.

## IMPROVEMENT IN RECIPROCATING CHURNS.

Specification forming part of Letters Patent No. 187,954, dated February 27, 1877; application filed June 21, 1876.

### *To all whom it may concern :*

Be it known that I, JOHN M. WELCH, of Buena Vista, in the county of Shelby and State of Texas, have invented certain new and useful Improvements in Churns; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in the construction of churns, whereby the dashers are caused to rotate very rapidly, thus greatly facilitating the process of producing butter; also, the churn and its supporting frame-work being constructed and arranged in sections permits of its being taken apart very readily, and packed in a very small space for shipment. It consists of a cylindrical or barrel churn, supported upon a base between two parallel uprights having a cross arm or brace at the top, in the center of which is pivoted the shaft which carries the rotating dashers, said shaft being actuated by means of a bow and string held in position upon a friction-roller, all as will be hereinafter more fully described, and pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective view of my improved churn, with a portion of the side broken away to show the position of the rotary dashers. Fig. 2 is a detail view.

Similar letters of reference occurring on the several figures indicate like parts.

A represents a square wooden base or stand, having parallel uprights B on two sides of the same, said uprights being fitted to the base by a mortise and tenon, or by pins upon their lower ends, which fit into corresponding sized openings in the base. C represents a cross arm or brace, also fitted to the tops of the parallel uprights in such a manner as to be readily attached or detached. D represents an ordinary barrel-churn placed in position between the uprights B, and held stationary by a cleat, or other suitable means. A vertical shaft, E, having

its bearings in the center of the cross-arm C and in the bottom of the churn, is provided with a suitable number of grooves, *a*, the object of which is such that the rotary dashers *b* may be raised or lowered, as desired, by inserting or wedge or pin, *c*, through an opening in the cross-arm of the dashers, and into the openings *a* upon the said shaft, which is also provided with a roller, *d*, directly under the cross-arm C. F represents a straight bow, provided with a string of cat-gut or twine, which passes around the roller *d* upon the shaft E, said bow being held in position while in operation by a friction-roller, G, having its bearings in the parallel uprights B, all as fully shown in the drawings.

The churn is provided with a lid divided in two sections, having an opening in the center, through which the shaft E passes.

In the operation of my invention the bow is lightly drawn back and forth upon the friction-rollers, thereby causing the dashers to rotate with great rapidity, and securing a uniform and steady motion of the same, enabling the process of producing butter to be greatly facilitated in an easy and thorough manner.

The construction of the supporting frame-work of the churn in sections, as already described, permits of its being readily taken apart and packed in a very small space for shipment to any desired point.

The advantages of my invention will be readily seen, inasmuch as it combines in its construction and operation a high degree of utility and strength, with a ready adaptation to the purpose intended.

Having thus described my invention, I claim as new and useful—

1. The hereinbefore-described churn, provided with the stand A, detachable sides and top B C, and central vertical shaft E, having the dashers *b b*, adjustable thereon at suitable heights by means of the wedge *c*, fitting into the recesses *a*, the several parts constructed and arranged substantially as and for the purpose described.

2. In a churn, the vertical shaft E, provided with the recesses *a*, in combination with the

adjustable dashers *b b*, and wedge or pin *a*, substantially as described.

3. The combination of the vertical shaft E, carrying the adjustable dashers *b b*, the bow F, and friction-roller G, substantially as and for the purpose described.

In testimony that I claim the foregoing as

my own invention I affix my signature in presence of two witnesses.

JOHN M. WELCH.

Witnesses:

JOHN F. REED,

WM. E. LEMONS.