

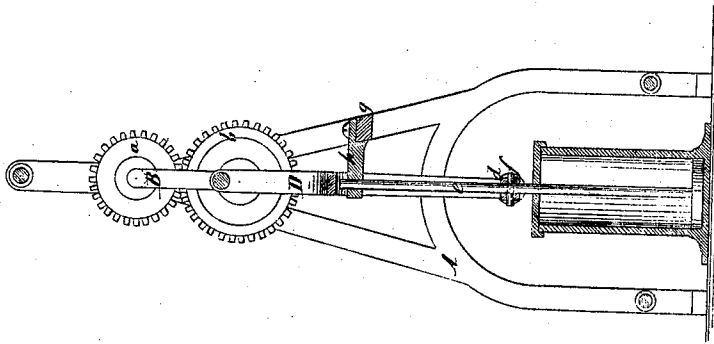
*R. N. Smith,*

*Churn.*

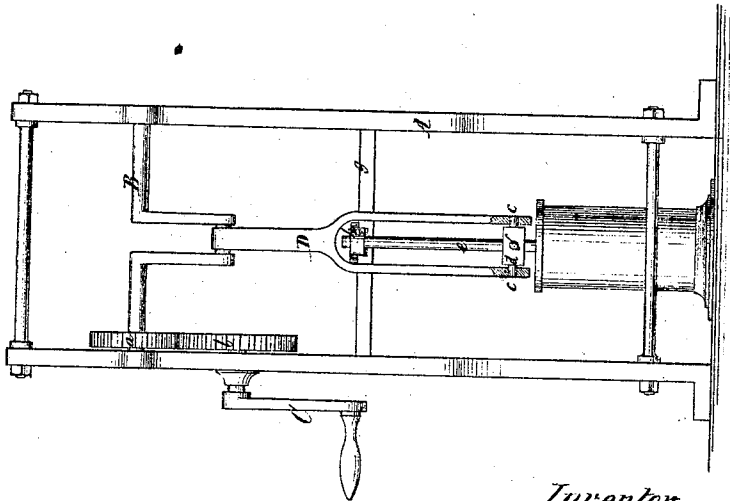
*No. 102,171.*

*Patented Apr. 19, 1870.*

*Fig. 2.*



*Fig. 1.*



*Witnesses.*  
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*per*  
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# United States Patent Office.

RUTH N. SMITH, OF NEW YORK, N. Y.

Letters Patent No. 102,171, dated April 19, 1870.

## IMPROVEMENT IN CHURN POWER.

The Schedule referred to in these Letters Patent and making part of the same

### To all whom it may concern:

Be it known that I, RUTH N. SMITH, of the city, county and State of New York, have invented a new and improved Churn Power; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a sectional front view of this invention.

Figure 2 is a transverse vertical section of the same.

Similar letters indicate corresponding parts.

This invention relates to a churn power composed of a crank-shaft, which connects, by means of a bifurcated rod and a swivel head, with the dasher-staff, said staff being guided in a removable bracket, secured to the frame of the churn power in such a manner that the required reciprocating motion can be imparted to the dasher without creating much friction, and, furthermore, by means of the removable bracket and swivel head, the operation of connecting a churn to or disconnecting it from the power is materially facilitated.

In the drawing—

The letter A designates a frame, made of metal or any other suitable material, and provided with two bearings for the crank-shaft B, which are geared together by cog-wheels *a b*, with a hand-crank C, so that, by the operation of said hand-crank, a rapid rotary motion can be imparted to the crank-shaft.

To the crank of this shaft is attached a bifurcated rod, D, the arms of which form the bearings for the gudgeons *c c* of a head, *d*, which is perforated with a hole to admit the staff *e* of the churn-dasher.

A pin, *f*, which passes transversely through the swivel-head *d*, and through the dasher-staff, forms the connection between said head and the staff, and compels the churn-dasher to follow the motion of the rod D.

To the cross-bar *g* of the frame A is secured a bracket, *h*, which is perforated with a hole to admit the dasher-staff, and to guide the same in its up and down motion. This bracket is secured to the cross-bar *g* by a screw, which passes through a flange extending from the bracket and resting on the cross-bar, or said bracket may be constructed with two flanges, capable of straddling the cross-bar, and, in this case, it can be held in position by a simple pin. In either case the bracket *h* is removable, and, if it is desired to disconnect the churn from the power, the bracket is taken off, and, by removing the cover of the churn, the dasher can be readily brought in such a position that its staff can be withdrawn from the swivel-head *d*, since this head allows of swinging the dasher out to the position required for this operation.

From this description it will be readily understood how the dasher of a churn is to be connected to my power, and it will be seen that, by the combined action of the removable bracket *h* and the swivel-head *d*, the operation of connecting and disconnecting a churn to the power is materially facilitated, and that churns of different sizes can be readily operated by my power.

It must be remarked that the form of the frame can be changed, so as to allow of introducing and removing the churn with ease and facility.

What I claim as new, and desire to secure by Letters Patent, is—

The churn and power, consisting of the frame A, the crank-shaft B, the bifurcated rod D, the shaft E, the gudgeons *c c*, the swivel-head *d*, the gearing *a b*, the crank C, the cross-bar *g*, bracket *h*, and churn, all combined, arranged, and operating as described.

This specification signed by me this 26th day of February, 1870.

RUTH N. SMITH.

Witnesses:

ORIN B. SMITH,  
W. HAUFF.