

(Model.)

W. H. TAWNEY.

CHURN.

No. 295,460.

Patented Mar. 18, 1884.

Fig. 1.

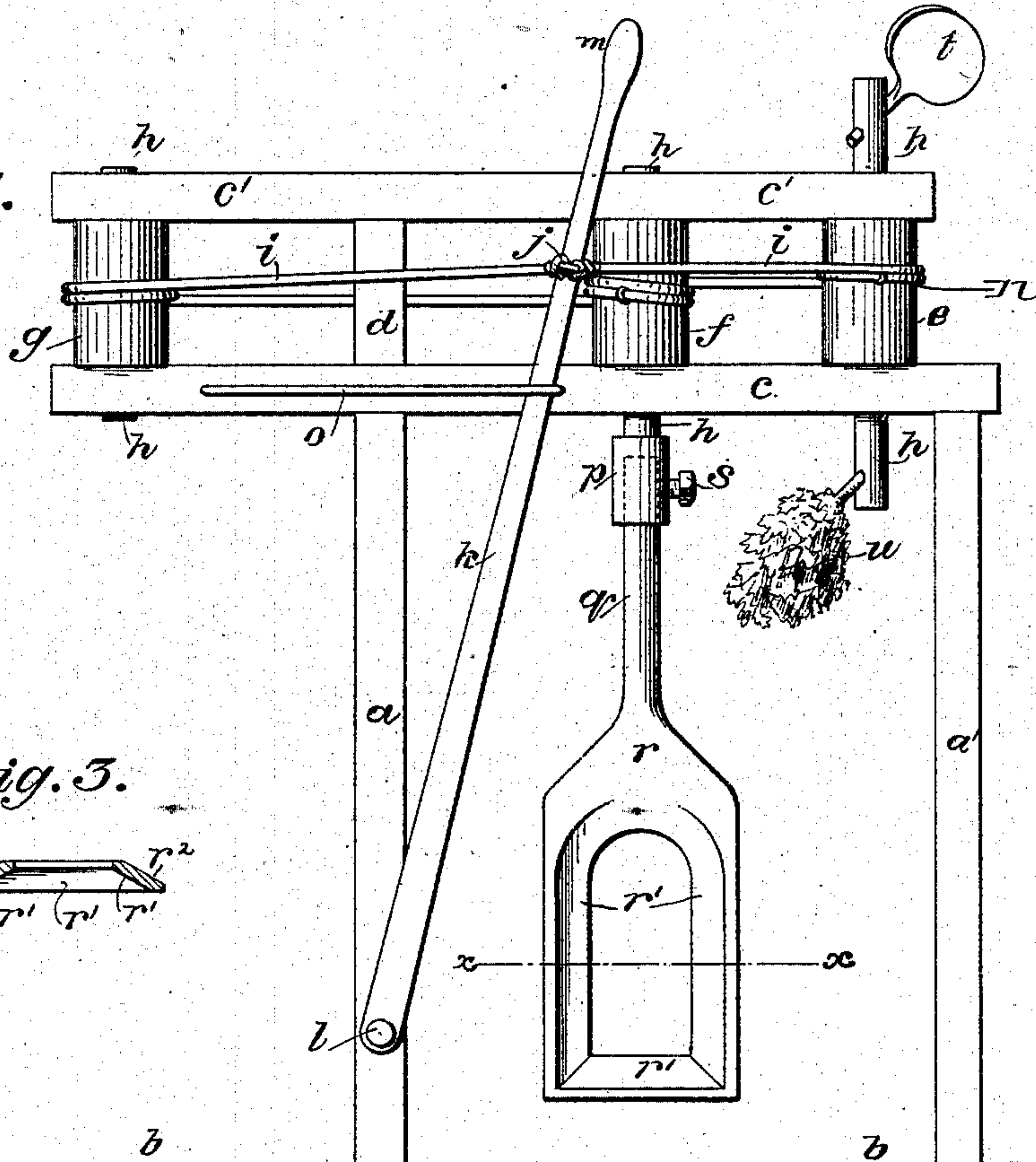


Fig. 3.

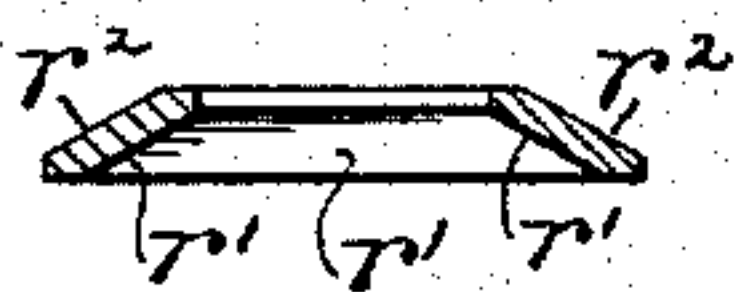
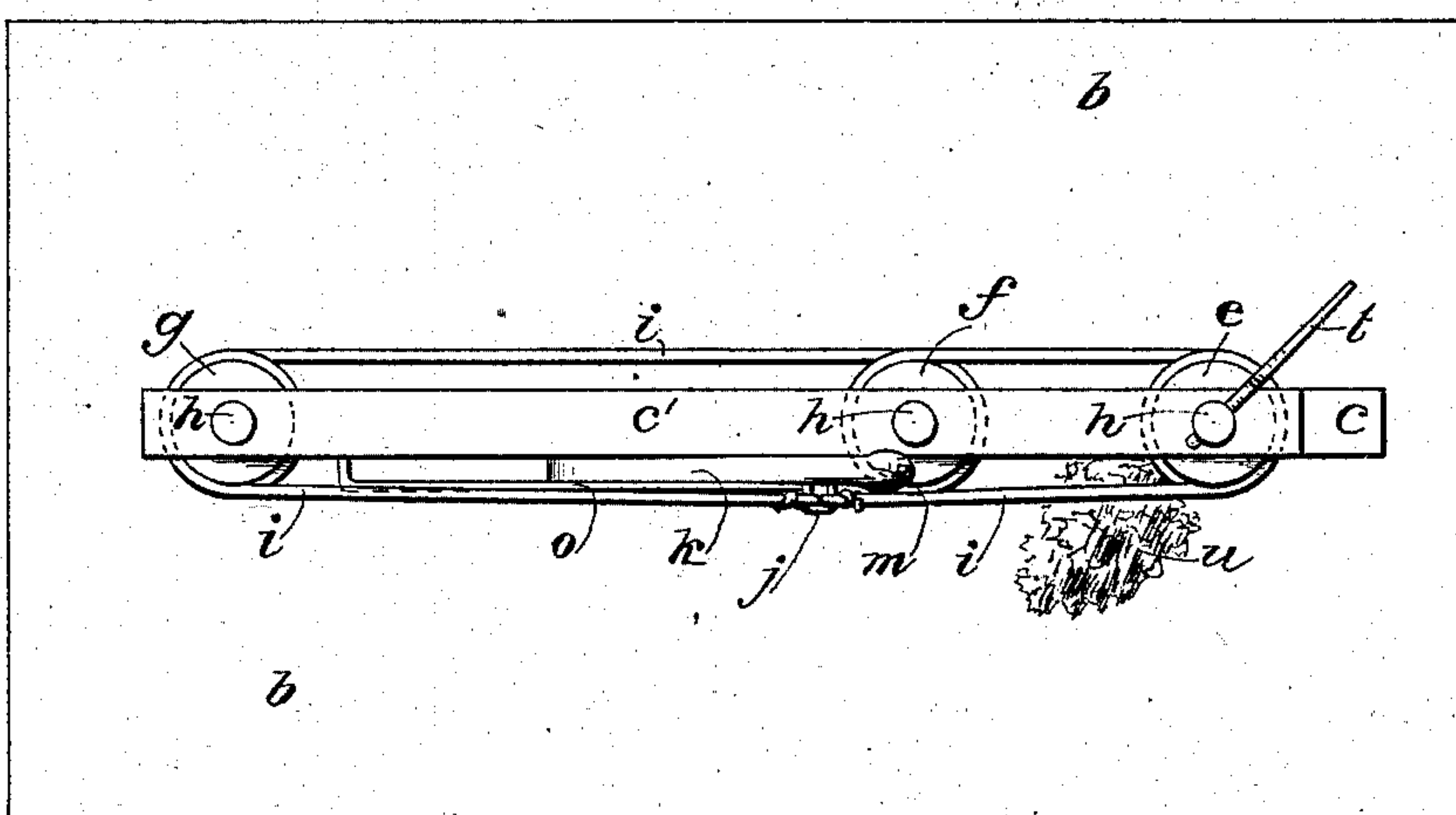


Fig. 2.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

WILLIAM H. TAWNEY, OF LOUISBURG, KANSAS.

## CHURN.

SPECIFICATION forming part of Letters Patent No. 295,460, dated March 18, 1884.

Application filed July 2, 1883. (Model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. TAWNEY, of Louisburg, in the county of Miami and State of Kansas, have invented a new and Improved Churn, of which the following is a full, clear, and exact description.

The object of my invention is to provide a simple, effective, and inexpensive power for working the dashers of churns more particularly, but also adapted to supply power for other light-running connected machinery.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents my improvements in side elevation. Fig. 2 is a plan view of the same; and Fig. 3 is a cross-sectional plan view of the dasher on the line *x x*, Fig. 1.

The letters *a a'* represent vertical standards or posts of a suitable frame, having any approved base or support, *b*, in which the posts are fixed, and to which posts may be braced in any suitable manner.

*c c'* represent cross-heads, the lower one, *c*, serving to tie the posts *a a'* together at the top. These cross-heads *c c'* are arranged parallel with each other, one or more spacing-blocks, *d*, being employed to stay them apart, so that the rollers *e f g*, which are journaled by their pivots *h* in the cross-heads, may rotate freely between the cross-heads in horizontal plane, and with little or no vertical play. A suitable rope or cord, *i*, is wound one or more times successively about each of the rollers *e f g*, and its opposite ends secured at *j* to a lever, *k*, which may be pivoted to a post, *a*, or base *b* at *l*, so as to be swung back and forth by its handle *m*, to rotate the pulleys *e f*, which are or may be connected by pins or staples *n* to the cord *i*, to prevent slip of the cord on them and insure their positive rotation, and the lever *k* works between any suitable bar or plate, *o*, and cross-head *c*, to which bar *o* is fixed, for a guide and stop to the movements of the lever each way. The cross-heads *c c'* are extended beyond the frame-posts *a*, so that the roller *g* may be journaled at suitable equal distance from the post *a* or pivot *l* with the main roller *f*, to allow sufficient swing of the lever *k* for the required number of revolutions of roller *f* to each stroke or half-stroke

of the lever, which is thus pivoted at *l* in a manner to obstruct the space between posts *a a'* as little as possible on the instroke toward pulley *f*, so as not to interfere with the churn-body (not shown) placed below the pulley, and in which the dasher works. The lower journal of main pulley *f* carries a fixed collar or thimble, *p*, preferably having a square aperture to receive the squared end of the shank *q* of the dasher *r*, a binding-screw, *s*, or other suitable device being employed to secure the dasher, as in Fig. 1.

My improved dasher consists of a plate or blade apertured centrally, and preferably made square at the bottom, so as to work small quantities of cream to better advantage. The edges of the aperture of the dasher-blade bevel inward from the plane of the blade toward its center from one face of the blade, as at *r'*, to throw the cream in the churn-body to the center of the blade, and the opposite face of the blade is beveled about parallel with the bevel *r'*, as at *r''*, Fig. 3. By this means I form a concavity on one side and a convexity on the other for a reverse action on the currents of the cream, which will thus be thoroughly "whipped up" or agitated by the dasher-blade to cause the butter to come quickly. The journals *h* of the roller *e* are extended above and below the cross-heads *c' c*, the upper journal being suitably bored or apertured to receive the shank or handle of a fan, *t*, to rotate with the roller, for cooling the person operating the lever *k*, and the lower journal having also a suitable aperture in which to fix a brush, *u*, to drive away the flies or other insects from the churn-body, which latter may readily be positioned beneath roller *f* by removing the dasher from the roller, and the dasher may afterward be secured to the roller and in working position within the churn-body. Fans and brushes *t u* may also be secured to rollers *f g*, if desired. On moving lever *k*, the dasher-blade *r*, fan *t*, and brush *u* will be worked simultaneously.

The cord *i* may be secured to the roller *g* or not, as desired, and roller *g* may be made adjustable in cross-heads *c c'*, to take up the slack of the cord, which may also be done at the joint *j* of the cord with lever *k*.

The fan and brush *t u* may have any suitable construction and connection with the journals



*h* of roller *e*, and the details of construction may otherwise vary from the plan herein shown and described and not depart from the spirit of my invention.

5 My improved power apparatus may be successfully used in driving connected machinery other than the dashers of churns, and in any case it will be noted that the movement of lever *k* involves little fatigue to the operator.

10 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the cross-heads *c c'*, an idler-roll, *g*, a roll, *f*, carrying the dasher-  
15 shaft, a roll, *e*, carrying the fan and brush at

the opposite ends of its shaft, a cord, *i*, coiled about each of said rolls, the staples *n*, preventing slip of said cord on the rolls, and the lever *k*, as shown and described.

2. A churn-dasher consisting of the plate *r*, 20 inwardly inclined at *r'* toward a central aperture, into which the cream is thus guided, and reversely inclined upon the opposite side, whereby the cream may be whipped inwardly and outwardly, as described.

WILLIAM H. TAWNEY.

Witnesses:

E. HAMILTON,  
B. F. GOOD.