

(No Model.)

2 Sheets—Sheet 1.

J. TWEEDY.

CHURN.

No. 282,935.

Patented Aug. 7, 1883.

Fig. 1.

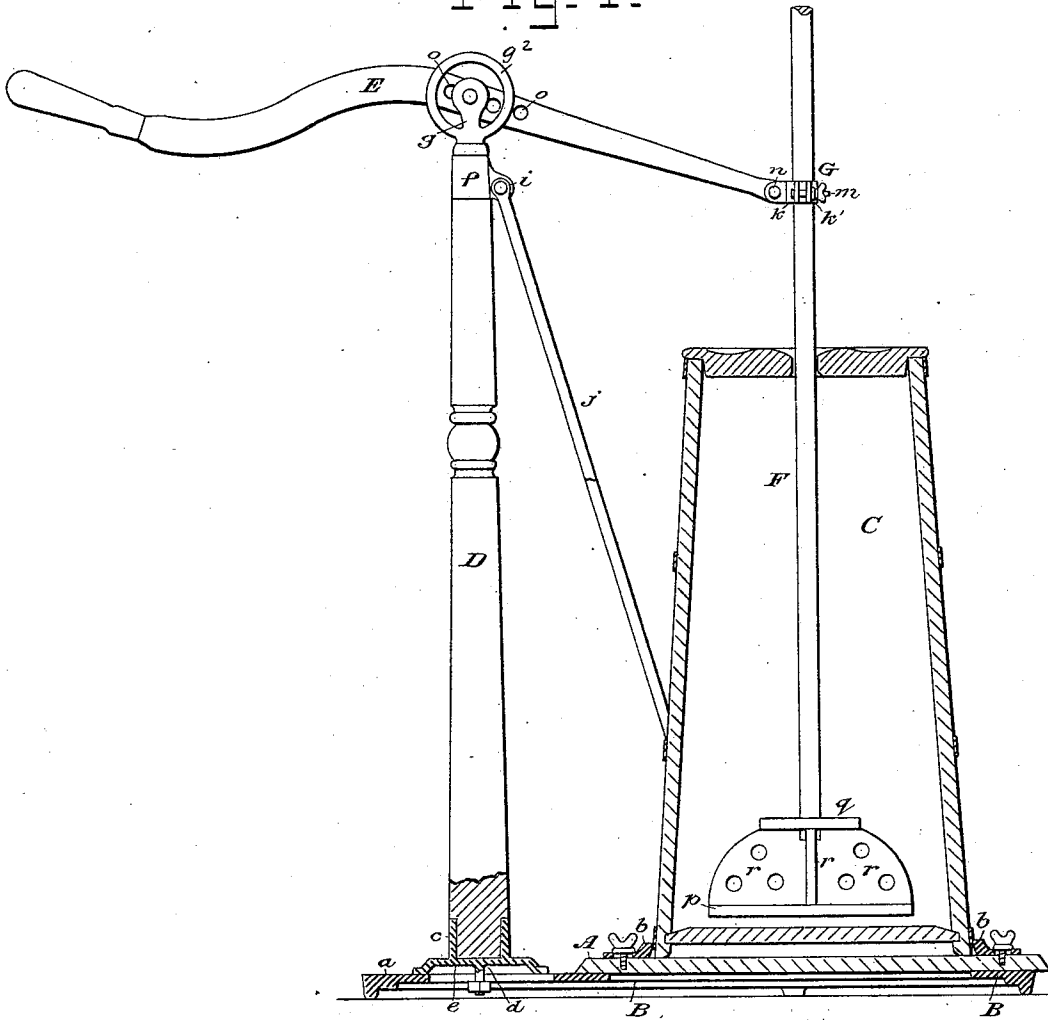
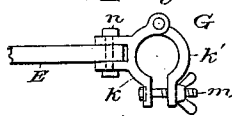


Fig. 2.



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Fig. 2.

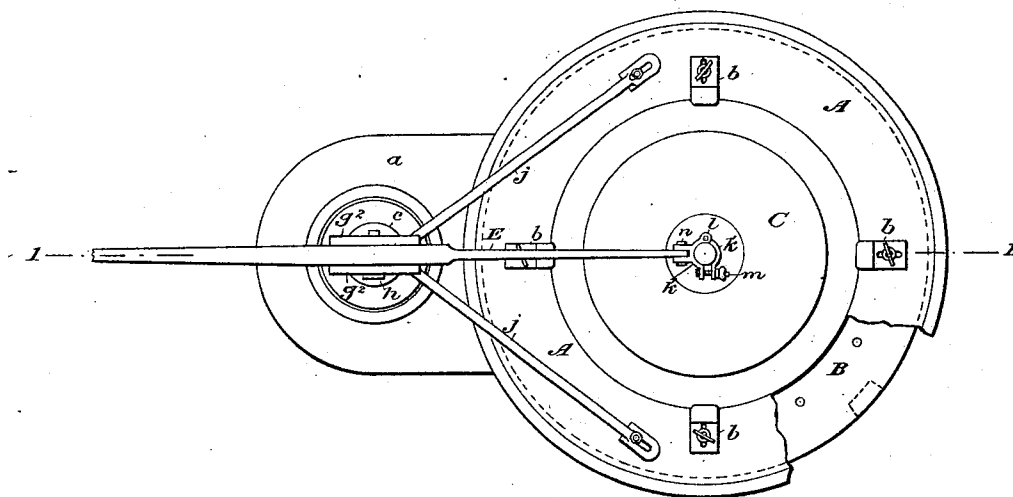


Fig. 3.

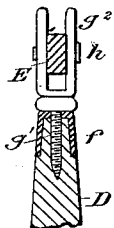


Fig. 4.

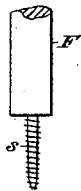


Fig. 5.



Fig. 6.

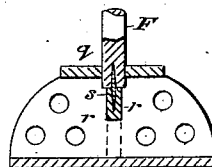
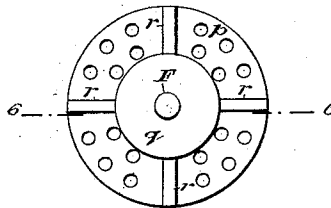


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHN TWEEDY, OF VERNON, INDIANA.

CHURN.

SPECIFICATION forming part of Letters Patent No. 282,935, dated August 7, 1883.

Application filed March 27, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN TWEEDY, a citizen of the United States, residing at Vernon, Jennings county, Indiana, have invented certain
5 Improvements in Churns, of which the following is a specification.

My invention relates in part to the mountings of the churn and the means for operating the dasher, and in part to the peculiar construction of the dasher itself.

In the drawings, which serve to illustrate my invention, Figure 1 is a vertical mid-section taken on line 1 1 in Fig. 2, and Fig. 2 is a plan. These general views show the churn-mountings and the actuating mechanism and dasher in operative connection. The remaining views illustrate details of construction. Fig. 3 shows the forked guide in the top of the post wherein the lever is fulcrumed. Fig. 4 is an enlarged view of the dasher-stock, showing the screw for securing it to the dasher. Fig. 5 shows one blade of the dasher detached. Fig. 6 is a sectional view of the dasher substantially on line 6 6 in Fig. 7. Fig. 7 is a plan of the dasher. Fig. 8 is an enlarged plan view of the clamp for securing the lever to the dasher-stock.

I employ, or may employ, the ordinary churn proper, or cream-receptacle, and I employ a vertically-reciprocating dasher. This dasher I prefer to reciprocate by means of the mechanism shown. I also provide means for mounting the churn, which, in connection with the dasher-operating mechanism, I will now describe.

A is a circular wooden platform with a chamfered or molded edge, which is mounted on a cast-iron base, B, of ring-like form, provided with feet. A portion of the wooden platform is broken away in Fig. 2, to show this base and the holes in it through which pass attaching-screws. On the platform A are mounted adjustable clamps *b b*, to hold the churn proper or cream-receptacle, C, firmly in place.

D is a fulcrum-post for the operating-lever E. This post may be made of wood or metal; I have shown it herein as constructed of wood. The foot of this post is provided with a socket-plate, *c*, which plate is provided with a bolt, *d*, which extends down through a slot, *e*, in a projecting part, *a*, of the base B, and is pro-

vided with a nut, as seen in Fig. 1. This attachment serves to give the post a broad and firm base, and permits it to be moved to and fro from the axis of the churn C when it is desired to vary the leverage and stroke. At its upper end the post D is provided with a ferrule, *f*, and a forked bearing, *g*, to receive the lever and provide a fulcrum therefor. This bearing has a screw, *g'*, whereby it is secured to the post D, and two ring-like cheeks, *g''*, which embrace the lever E and give it a firm lateral bearing. The lever is fulcrumed on a bolt, pin, or rivet, *h*. On the ferrule *f* is mounted an eye, *i*, to which are secured the upper ends of brace-rods, *j*, the feet of which are adjustably secured to the platform A by means of bolts which engage slots in the braces, as shown in Fig. 2. The lever E is coupled to the dasher-stock F by means of a clamp, G, which I will now describe, referring particularly to Fig. 8. This clamp is composed of two semi-circular jaws, *k k'*, hinged together at *l*, and adapted to be clamped forcibly on the stock by means of a thumb-nut and bolt, *m*. The jaw *k* is hinged to the end of the lever E at *n*, whereby the movement of the lever is permitted to impart a substantially vertical reciprocating movement to the dasher. In order to vary the leverage, I provide the lever with several holes, *o o*, to receive the fulcrum-pin; but when the leverage is changed by shifting said pin it will be necessary also to shift the post D and its braces, which may be readily done, owing to their slotted attachments to the platform A.

I will now describe the dasher, referring particularly to Fig. 1, which shows the dasher in elevation, and to Figs. 4, 5, 6, and 7.

The dasher is made, by preference, of wood, and comprises a perforated bottom disk, *p*, an unperforated and smaller top disk, *q*, and two perforated blades, *r r*, which stand at right angles, or nearly so, to each other, and are halved together, as indicated in Figs. 5 and 6. These blades form a cross and the top and bottom disks are secured firmly thereto. The stock F passes down through the top disk, and it may also extend down a little way into the wings, as shown in Figs. 1, 5, and 6, and it is secured to the dasher by means of a screw, *s*, (see Fig. 4,) either of metal fixed in the wooden stock, or of wood cut on the re-

duced end of the stock. I have shown but two blades *r*, arranged to cross at right angles, and these I find sufficient; but for large dashers there may be three of these blades arranged to stand at angles of sixty degrees. I find this dasher to be extremely effective in agitating the milk and breaking the globules of cream. The top disk co-operating with the perforated blades produces cross-currents, whereby the maximum agitation is effected with the minimum of movement of the dasher. Thus I am enabled to separate the butter with the least expenditure of labor, and am enabled to churn a larger quantity of milk at one time than with the ordinary dasher.

I wish it understood that while my improved dasher is well adapted to the operative mechanism herein shown and described I may use it in any churn of this character, and I may also employ my mounting and operative mechanism with churns having other forms of dashers.

I am aware that it has been proposed to construct a dasher of several superposed perforated disks with a lesser unperforated disk at the top; and I am also aware that dashers have been proposed made up of several perforated disks with radial perforated slides arranged between the two uppermost disks; but I am not aware of a dasher such as I have herein described having ever before been proposed.

I do not claim, broadly, securing the dasher to its stock by screws, as this has been done before.

Having thus described my invention, I claim—

1. The combination, with a churn and its reciprocating dasher and dasher-stock, of the iron base B, the wooden platform A, secured thereon and provided with clamps *b b*, the fulcrum-post D, mounted adjustably on the base B, the lever E, and the clamp G, all constructed and arranged to operate substantially as set forth.

2. As a means for mounting a churn and actuating its dasher, the base B, the platform A, provided with clamps *b b*, the post D, provided with a socket-piece, *c*, having a bolt, *d*, arranged in a slot in the base, and an attaching-nut, the lever E, provided with holes *o o* and fulcrumed in the post D, and the clamp G, hinged to the lever E, all combined and arranged to operate substantially as set forth.

3. The combination, with the perforated bottom disk *p*, the lesser unperforated top disk, *q*, and the perforated blades *r r*, halved together as shown, of the stock F, with its end entering recesses in the blades, and provided with a screw, *s*, and secured to the parts forming the dasher, substantially as shown.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN TWEEDY.

Witnesses:

his
ALEN + SMITH,
mark.
JOHN WENZEL.