(No Model.)

# H. H. SHEELY.

## CHURN DASHER.

No. 592,175. Patented Oct. 19, 1897.

Fig. 1.

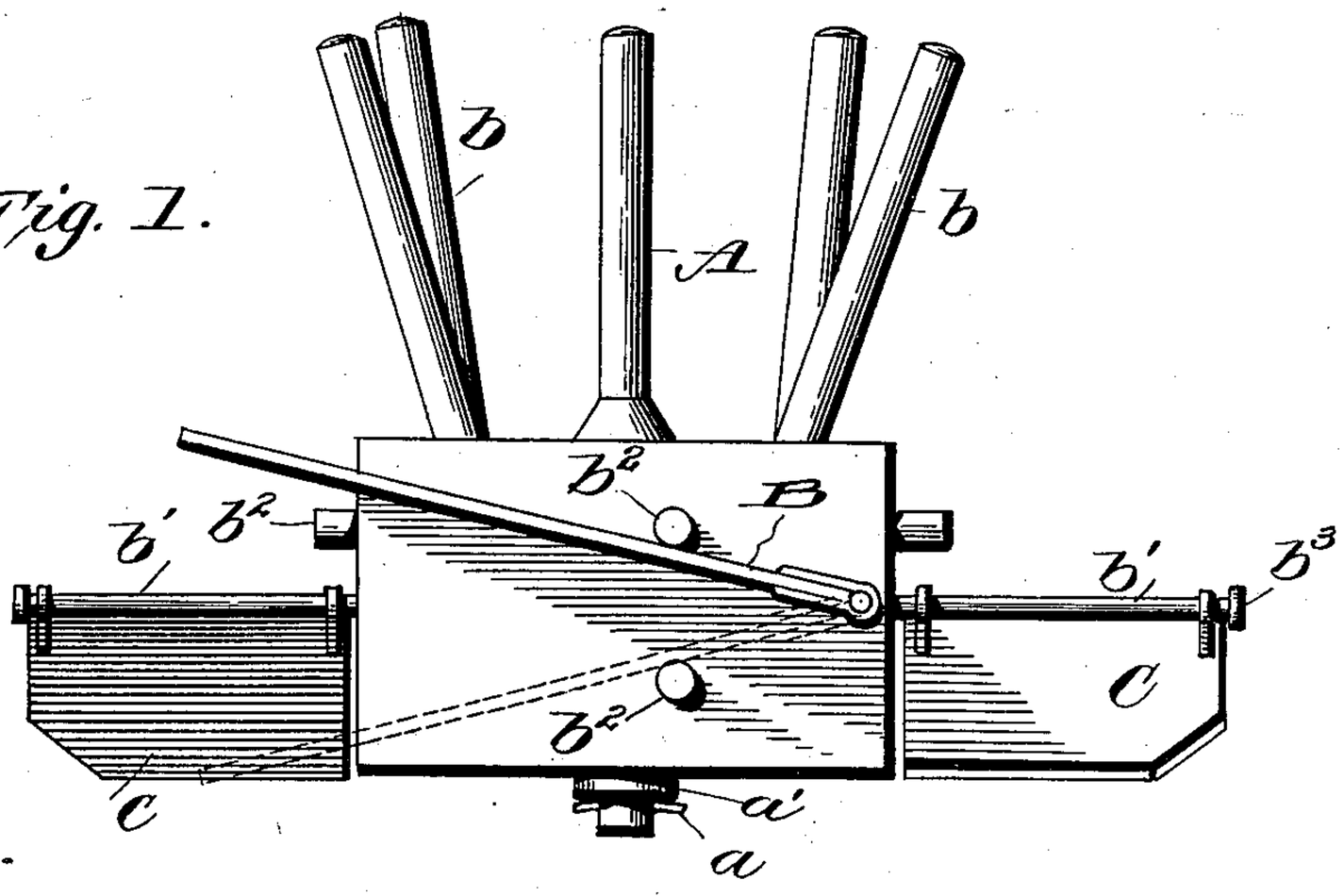
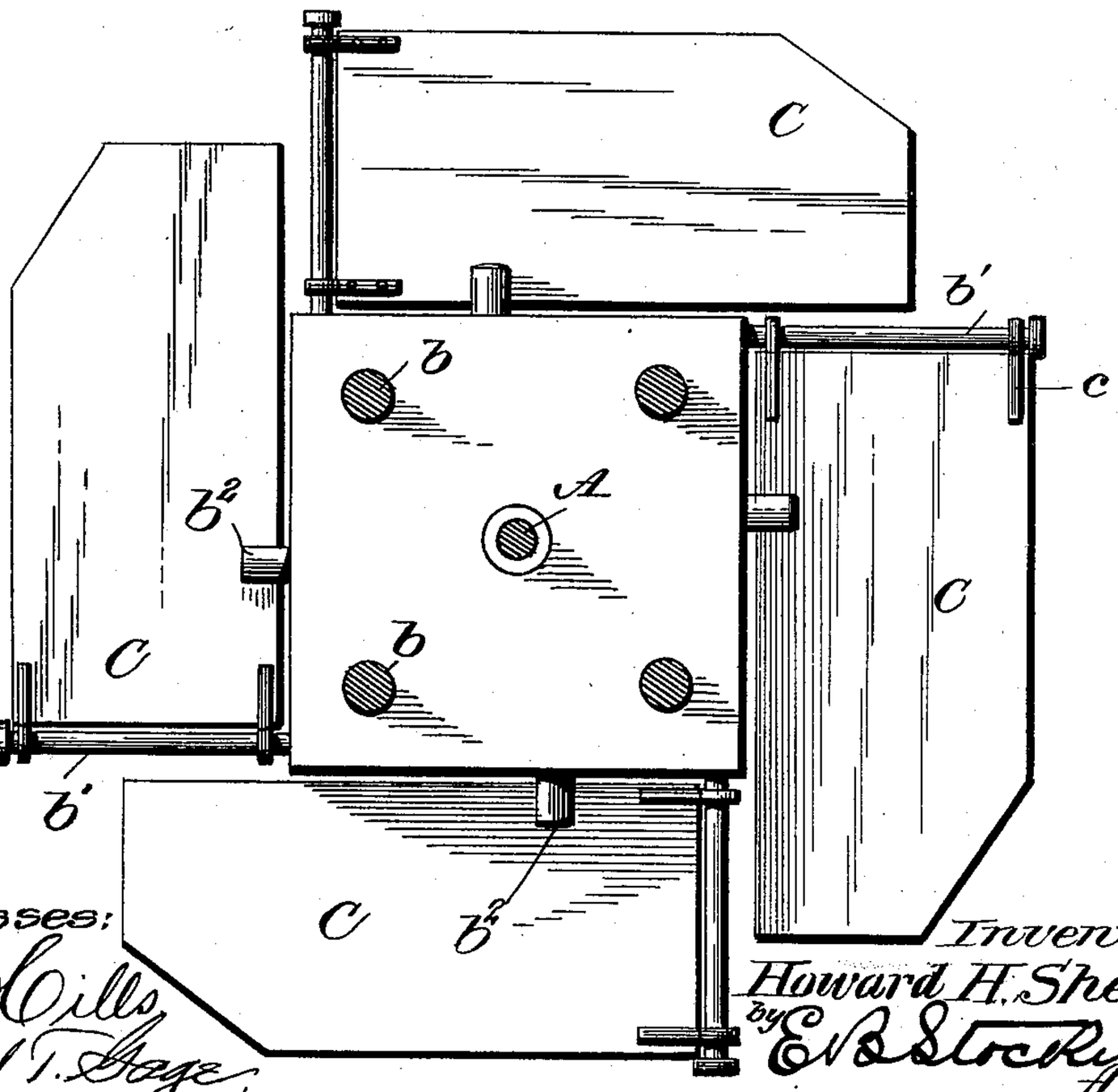



Fig. 2.

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# UNITED STATES PATENT OFFICE.

HOWARD H. SHEELY, OF HUTCHINSON, KANSAS.

## CHURN-DASHER.

SPECIFICATION forming part of Letters Patent No. 592,175, dated October 19, 1897.

Application filed April 10, 1897. Serial No. 631,599. (No model.)

*To all whom it may concern:*

Be it known that I, HOWARD H. SHEELY, a citizen of the United States, residing at Hutchinson, in the county of Reno, State of Kansas, have invented certain new and useful Improvements in Churn-Dashers, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to churn-dashers, and more particularly to that class of dashers in which the blades or paddles are given both a reciprocating and rotating movement in their passage through the liquid to be churned.

The object of the invention is to provide an improved dasher that will thoroughly agitate the cream and keep the same in motion constantly in the same direction, so as to avoid foaming and splashing, while at the same time less resistance is offered to the reciprocation of the dasher.

The invention also has for its object to improve the structure of the dasher, so as to render the same more efficient in operation and simple in construction.

The invention consists in the novel construction, combination, and arrangement of parts by means of which the objects of the invention are attained and which are more specifically defined by the claim, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of the invention, showing the side blades or paddles in the position occupied during the upward movement of the dasher, and the front blade or paddle in dotted lines to indicate its position during the upward movement of the dasher, and in full lines to indicate its position during the descending movement of the dasher; and Fig. 2 is a top plan with parts in section, showing the location of the blades or paddles.

In the accompanying drawings the letter A indicates the shaft of the dasher, which is provided with a head or plunger B, rotatably mounted at its lower end and held thereon by means of a washer $a$ and linchpin $a'$. The upper surface of the head is provided with a series of agitator-arms $b$, extending at an angle from its upper surface and arranged at the four corners of the head. The head B may be of any desired configuration, but in the present instance is illustrated as rectangular in form and is provided upon each side, midway of its height, with a journaling pin or post $b'$, having a head $b^3$. To this pin or post is attached the paddle or blade C. These paddles or blades are journaled upon the pins or posts $b'$ by means of the straps $c$, which surround the pin or post and are secured to the paddle or blade. In order to limit the vertical swing of the paddle or blade, pins or lugs $b^2$ are secured to the face of the head B above and below the paddle or blade, so that the same will come in contact with the lugs in the upward and downward movement of the dasher.

It will be observed that in both the upward and downward movement of the dasher the liquid in the churn will be displaced by the same and the paddles or blades will lie in an inclined position or at an angle to the pivoting pin or post, so that in the reciprocating movement of the dasher the paddle or blade will impart also a rotating movement to the head B. As the blade or paddle will change its inclination when the direction of movement of the dasher is changed, it will seem that the movement of the head will be constantly in the same direction and thus avoid the foaming and splashing of the cream due to the changes in the direction of movement which would otherwise occur in the reciprocation of the dasher. The agitator-arms $b$ assist in agitating the cream and the inclination of the blades or paddles facilitates the reciprocation of the dasher in its movement through the liquid to be churned.

By providing a rotating head upon the shaft of the dasher and the paddles or blades at the sides of the head the cream in the churn is caused to revolve by the movement of the head, so that a more efficient, rapid, and easy churning of the cream is produced.

I have illustrated and described with particularity the preferred details of construction of my invention, but it is obvious changes can be made in the several parts without departing from the spirit of the invention.

Having described my invention and set forth its merits, what I claim, and desire to secure by Letters Patent, is—

In a churn-dasher, the combination with a

reciprocating shaft, of a rotatable rectangular dasher-head or plunger of sufficient area to displace the liquid above and below the same in its reciprocation, vertically-vibrating paddles or blades located upon the sides thereof, journaling pins or posts projecting from one end of each side of said plunger, and pins or lugs carried by each side of the plunger above and below the paddles or blades journaled thereon, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

HOWARD H. SHEELY.

Witnesses:

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