

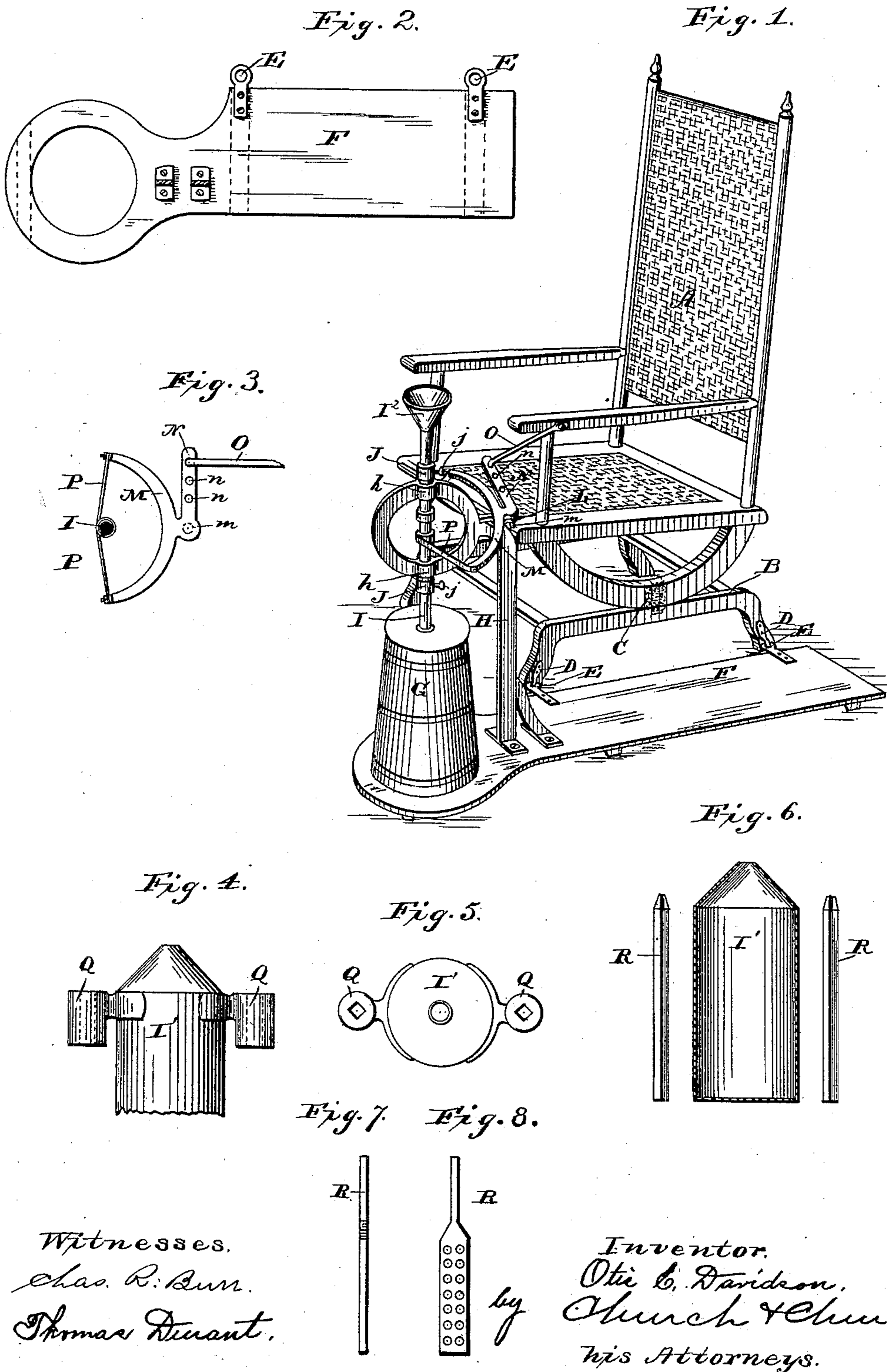
(No Model.)

O. E. DAVIDSON.

CHURN.

No. 392,012.

Patented Oct. 30, 1888.



UNITED STATES PATENT OFFICE.

OTIS E. DAVIDSON, OF NASHVILLE, TENNESSEE.

CHURN.

SPECIFICATION forming part of Letters Patent No. 392,012, dated October 30, 1888.

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To all whom it may concern:

Be it known that I, OTIS E. DAVIDSON, of Nashville, in the county of Davidson and State of Tennessee, have invented certain new and useful Improvements in Churns; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

My invention has for its primary object to turn to practical account the motion of an ordinary rocking-chair by causing it to operate the dasher of a churn, and also has for its object an improvement in the structure of the chair itself.

To these ends the invention consists, first, in the novel construction of the appliances for converting or transmitting the motion of the rocking-chair to the churn-dasher, and, secondly, in certain peculiarities in the construction of the dasher, all as will be hereinafter fully set forth and specifically claimed.

Referring to the accompanying drawings, Figure 1 represents a perspective view of a churn, a rocking-chair, and motion-converting appliances constructed and arranged in accordance with my invention. Fig. 2 is a top plan view of the base-board upon which the rocking-chair and churn are adapted to be mounted. Fig. 3 is a top plan view of the vibratory yoke and the connections between it and the dasher-shaft. Figs. 4, 5, and 6 are detail views of the dasher. Figs. 7 and 8 are respectively edge and side views of a kind of dasher that may be used instead of the one shown in Fig. 1.

Similar letters of reference in the several figures indicate the same parts.

The kind of rocking-chair which I preferably employ is termed a "platform rocker"—that is to say, one in which the chair proper is adapted to rock back and forth upon a stationary base and to be brought to a state of equilibrium by the action of suitable springs interposed between the chair proper and base. Such a chair is represented in Fig. 1, A being the chair proper, B the base, and C the interposed springs. Upon the base of the chair are secured pins or lugs D, that are adapted to enter corresponding eyes or sockets, E E, on

a base-board, F, upon which the churn-body G is adapted to be mounted.

Secured to and rising from the base board F is a standard, H, the upper portion of which is provided with bearings *h h* for the vertical dasher-shaft I, as shown in Fig. 1, the proper portion of said dasher-shaft being maintained by means of adjustable bearing-stops J J, mounted on the dasher-shaft and having set-screws *j j*, by which to secure them to said shaft, as also shown in said Fig. 1.

Upon an offset of bracket L, formed on the standard H, is mounted a centrally-pivoted yoke, M, having a pivot stud or projection, *m*, which passes down through an aperture in said offset L, and is provided with a retaining key or nut. This yoke M is provided with a laterally-projecting arm, N, that has a series of holes, *n n n*, formed in it, with one or the other of which the hook end of a connecting rod or bar, O, pivoted to the arm of the chair-body A, is adapted to co-operate, as seen in Figs. 1 and 3. To the extremities of the yoke M are connected straps or cords P P, whose opposite ends are secured to the dasher-shaft I at different points thereon, as shown. From this construction it follows that whenever the body of the rocking-chair is rocked the yoke M, through the rod O and arm N, will be oscillated back and forth, so as to cause the straps P P to alternately rotate the dasher-shaft to the right and to the left and impart a corresponding motion to the dasher within the churn-body. The throw of the vibrating yoke may be increased or diminished by inserting the hook end of the rod O in one or the other of the holes in the arm N, as will be readily understood.

The dasher-shaft I is preferably made hollow and terminates at the bottom in a chamber, I', while at the top it is provided with a funnel-shaped mouth, I². The chamber I' constitutes a portion of the dasher, and by filling it with hot or cold water through the funnel I² and hollow shaft I the temperature of the cream in the churn-body can be regulated, and this without removing the dasher from the body. To this dasher-chamber, near its upper end, are secured lugs Q, that are provided with vertical perforations, in which are inserted and secured blades R, of wood or metal, which con-

stitutes the dasher, whose function is to serve to agitate the cream when the dasher-shaft is rotated, as before described.

While I prefer to use the kind of dasher shown in Fig. 4, any other suitable kind may be substituted—as, for instance, a flat perforated dasher-blade such as shown in Figs. 7 and 8.

The number of lugs Q and dasher-blades R may be increased, if desired.

To operate my improved churn the operator sits in the chair and rocks backward and forward in a perfectly natural manner, thereby putting the dasher-shaft into rotative action and properly agitating the cream, and this without interfering at all with the operator's attendance to sewing or other light work or reading. Great economy of both time and labor is therefore effected by the use of my invention.

Having thus described my invention, what I claim as new is—

1. In a churn-operating mechanism, the combination, with the base-board, the chair connected thereto, and the standard mounted thereon, of the rotary churn dasher-shaft mounted in bearings on said standard, the vibratory yoke, also mounted in bearings on said standard, the straps connecting the ends of the yoke with the dasher-shaft for rotating the same, and the connecting-rod uniting said yoke and the rocking-chair, whereby said yoke is vibrated, substantially as described.

2. In a churn-operating mechanism, the combination, with the base-board, the churn and standard carrying the dasher-shaft mounted thereon, the rocking-chair and the dasher-shaft-operating yoke mounted on the standard

and connected to the rocking-chair above its center of oscillation, and devices connecting the yoke to the dasher-shaft, of the stationary base of the rocking-chair, having lugs or projections thereon and corresponding eyes or sockets on the base-board engaging therewith, substantially as and for the purpose set forth.

3. In a churn-operating mechanism, the combination, with the standard carrying the dasher-shaft and the vibratory yoke connected to the dasher-shaft for rotating the same, of the rocking-chair and an adjustable connection between said chair and yoke, whereby the extent of rotation of the dasher may be varied, substantially as described.

4. The combination, with the standard, the dasher-shaft mounted in bearings thereon, having the dasher at its lower end, the vibratory yoke, and rocking-chair connected thereto, of adjustable stops on the dasher engaging the bearings on the yoke for regulating the depth the dasher shall be immersed in the churn, with devices connecting the yoke and dasher-shaft, substantially as described.

5. In a churn, the combination, with the rotary churn-dasher having the enlarged chamber at the bottom, and the opening to the same through the dasher-shaft for containing a temperature-regulating medium, of lugs secured at the sides of said chamber, and the blades held in said lugs, whereby the cream will be agitated by the rotation of the chamber and blades, substantially as described.

OTIS E. DAVIDSON.

Witnesses:

CHAS. A. BLACK,
W. W. MARTIN.