

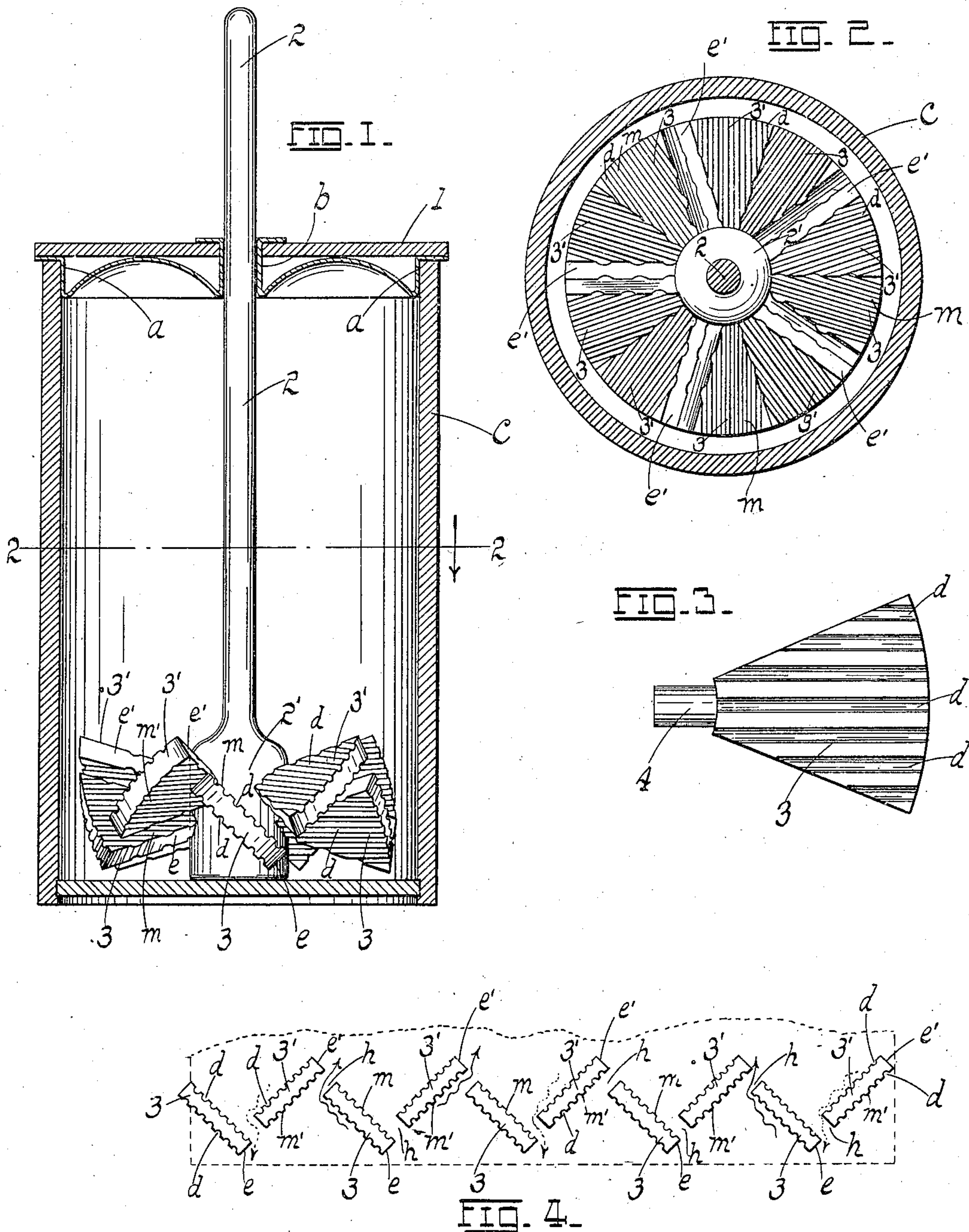
H. C. GROSS.

CHURN DASHER.

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990,546.

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WITNESSES:

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CHURN-DASHER.

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To all whom it may concern:

Be it known that I, HENRY C. GROSS, citizen of the United States, residing at St. Charles, in the county of St. Charles and State of Missouri, have invented certain new and useful Improvements in Churn-Dashers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in dashers for churns and the like; and it consists in the novel details of construction more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a vertical middle section taken through the receptacle or container of a churn showing my invention applied thereto; Fig. 2 is a cross-section on the line 2—2 of Fig. 1; Fig. 3 is a detached plan view of one of the blades; and Fig. 4 is a diagrammatic view or development showing the relative disposition of the blades.

The object of my invention is to construct a dasher which will subject the material treated (milk and cream) to a maximum degree of agitation with a view of extracting the butter constituent from the cream in a minimum amount of time; one which shall be simple, cheap, durable, and one possessing further and other advantages better apparent from a detailed description of the invention, which is as follows:—

Referring to the drawings, C represents a cream container or receptacle, provided with a preferably wooden cover 1, to which is secured a bottom sheet of metal stamped in such a way as to form an outer flange *a* to engage the inner wall of the container, and a central hollow portion or socket *b* serving as a bearing for the reciprocating staff or handle 2 of the dasher. The handle terminates in a bottom expanded portion or head 2' about which are distributed circularly two independent series of blades 3, 3' (there may be two or more such series if desirable, two being illustrated in the present example), the blades being substantially triangular in outline with sides converging toward the axis of the handle. Each blade is provided with a stem 4 which is received by a socket in the head 2', or they may be attached in any other suitable mechanical manner. The opposite faces of the blades are

provided with parallel grooves or depressions *d*, which run radially outward from the axis of the handle 2.

As shown in Figs. 1 and 4, the blades of the respective series are disposed in planes perpendicular to the plane in which the axis of the handle lies, but are themselves inclined to such axis. One series 3 dips in one direction, and the other series 3' dips in the opposite direction, one blade 3 overlapping the next blade 3' (and vice versa) the blades of the respective series being disposed in staggered relation, leaving passage-ways *h* between the face of a blade of one series and the edge of a blade of the next series. Moreover (Figs. 1, 4) the lower edges *e* of the bottom series of blades 3 are disposed substantially in the planes of the faces *m'* of the blades of the adjacent upper series, and the upper edges *e'* of the upper series lie in the planes of the faces *m* of the blades of the lower series (Fig. 4). The blades 3 are in addition disposed at right angles to the blades 3'.

As the handle is reciprocated in its socket or bearing *b*, the dasher is worked up and down through the body of the cream in the container C. The cream is forced to pass through the passage-ways *h*, and over the grooved faces of the blades, thus resulting in a succession of ripples, whereby the butter particles are soon churned and separated out from the cream, and the formation of the butter results in a minimum amount of time. The overlapping of one blade by another, causes the overlapping blade to deflect the current passing over the face of the blade thus overlapped (see left-hand arrows Fig. 4) and hence a maximum agitation of the cream is the result.

Having described my invention, what I claim is:—

1. A dasher comprising a member adapted to be reciprocated in a suitable receptacle or container, independent series of blades disposed thereon and set at an angle to the direction of such reciprocation, the blades of the respective series being disposed at an angle to one another, the edges of the blades of one series being disposed substantially in the planes of the faces of the blades of the adjacent series.

2. A dasher comprising a member adapted to be reciprocated in a suitable container, independent series of substantially trian-

gular blades disposed thereon, and set at an angle to the direction of such reciprocation, the blades of the respective series being disposed at an angle to one another and leaving
5 passage-ways between them, the edges of the blades of one series being substantially in the planes of the faces of the blades of the adjacent series.

3. A dasher comprising a handle terminating in two independent series of blades having opposite triangular faces converging toward the axis of the handle and disposed in planes substantially perpendicular to the plane in which said axis lies, but set at an
10 angle to said axis, the faces being provided with grooves running substantially at right

angles to the plane in which the axis of the handle lies, the blades of one series being mounted substantially at right angles to those of the adjacent series, the bottom edges
20 of the blades of one series and the upper edges of the blades of the other series being disposed substantially in the planes of one of the faces of the adjacent blades, the blades of one series overlapping those of the other
25 series, substantially as set forth.

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

HENRY C. GROSS.

Witnesses:

EMIL STAREK,
WINIFRED McHALE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
