

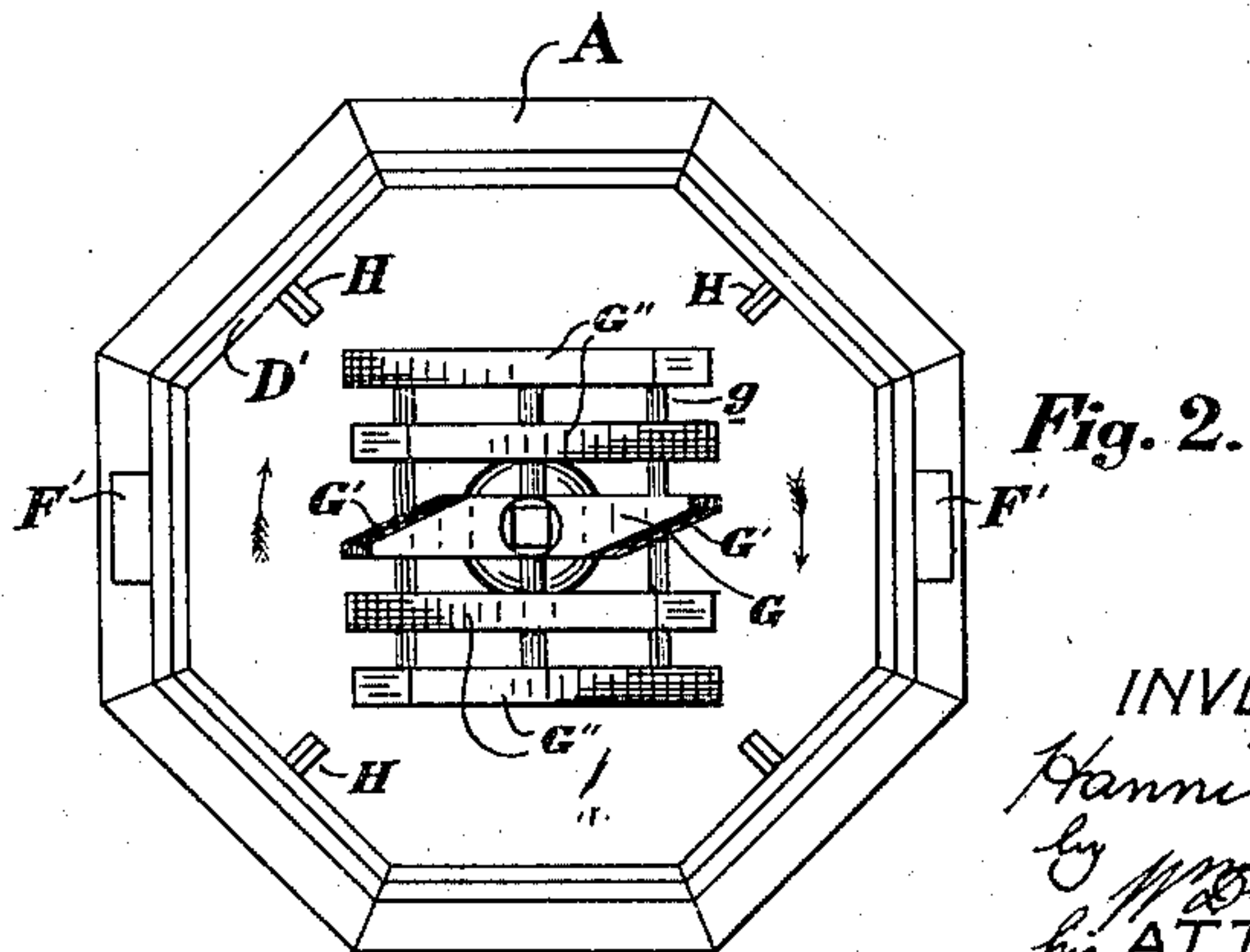
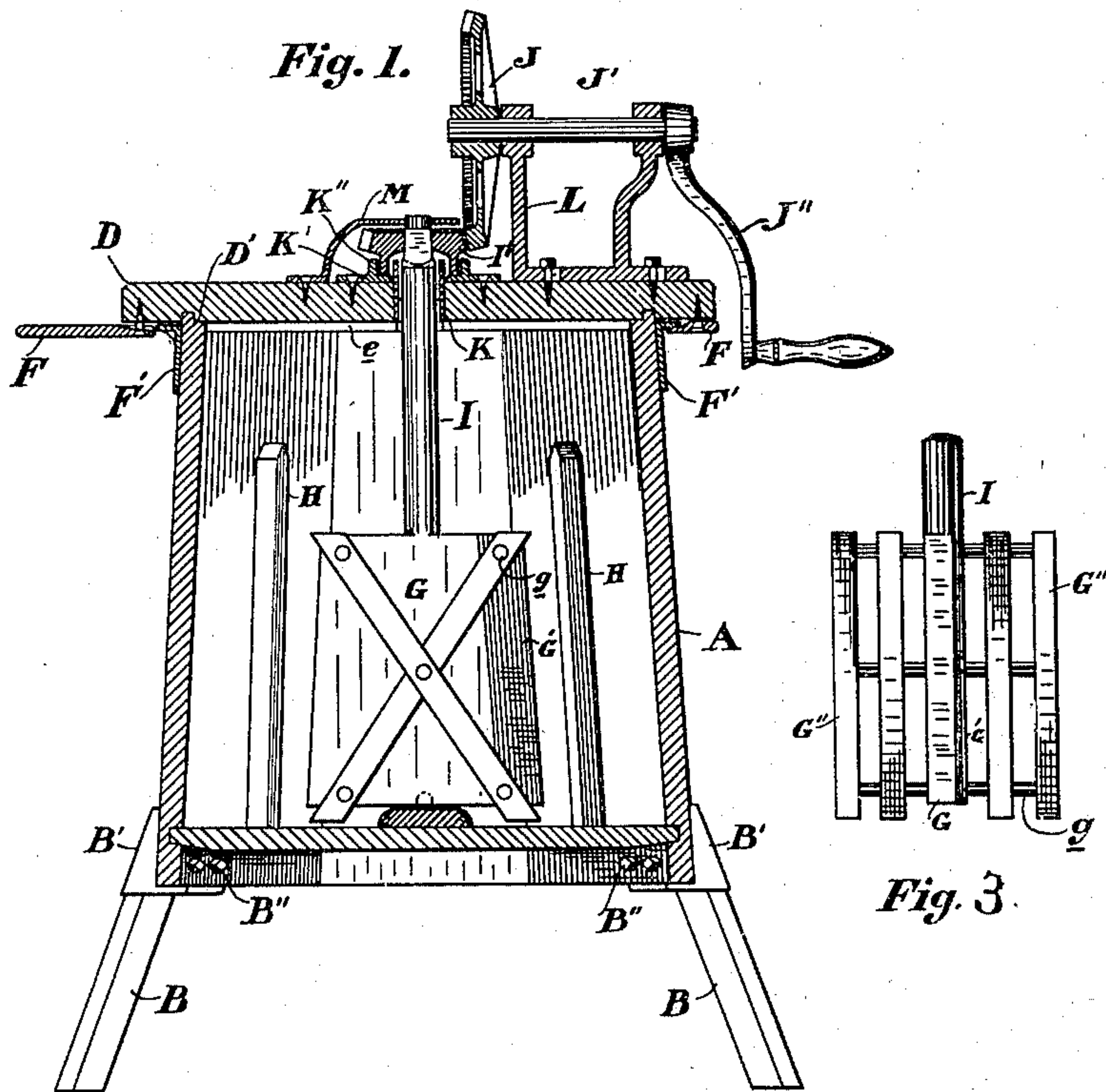
No. 639,159.

Patented Dec. 12, 1899.

H. FELT.
CHURN.

(Application filed Sept. 21, 1898.)

(No Model.)



WITNESSES:

Thos. L. Ryan
H. H. Wolf.

INVENTOR.

Hannibal Felt
by *Wm. D. Valbrown*
the ATTORNEY.

UNITED STATES PATENT OFFICE.

HANNIBAL FELT, OF HAGERSTOWN, INDIANA.

CHURN.

SPECIFICATION forming part of Letters Patent No. 639,159, dated December 12, 1899.

Application filed September 21, 1898. Serial No. 691,488. (No model.)

To all whom it may concern:

Be it known that I, HANNIBAL FELT, a citizen of the United States, residing at Hagerstown, in the county of Wayne and State of Indiana, have invented a new and useful Churn, of which the following is a specification.

My invention relates to a new and useful improvement in churns; and it consists in the construction and arrangement of parts hereinafter described, and definitely pointed out in the claims.

The aim and purpose of this invention is to construct a churn provided with a dasher so constructed that it will thoroughly separate the globules from the buttermilk and make butter in the shortest possible time.

A further object is to construct a churn provided with a dasher which can be easily operated and kept in a clean condition and one that can be cheaply manufactured.

Figure 1 is a vertical central longitudinal section through my improved churn, showing the dasher in elevation. Fig. 2 is a top plan view with the cover removed. Fig. 3 is a detail side view of the dasher.

In the drawings, A designates the churn-body, which is preferably octagonal in form and which is supported by the legs B, which are secured to the body by means of the brackets B' and bolts B''.

D designates the cross-bar, which is adapted to rest on the upper edge of the churn and also support the operating-gearing. The upper edge of the churn is provided with a cut-out portion, forming the annular shoulder D', and the cross-bar is provided with grooves near its ends, which fit the edge of the churn and allow the bar to rest on the edge and also upon the shoulder, thereby making a tight and secure joint.

G designates the dasher, which is centrally stepped on the bottom of the churn-body. The body of the dasher is provided with the beveled sides G' for a purpose hereinafter described. Secured on opposite sides of the body of the dasher are the blades G''. These blades extend obliquely across the sides of the body of the dasher and in opposite directions and extend below the body of the dasher adjacent to the bottom of the churn. The inner blades are spaced from the sides of the dasher and the outer blades are spaced from the inner

blades, and the blades are secured in place by means of the pins g, which pass through the blades and body of the dasher.

Secured to the interior of the body of the churn are abutments H. I show four in the drawings, although it is obvious that I might use a greater or smaller number.

In operation when the dasher is revolving the beveled sides of the body will force the material toward the blades, and the blades, extending in opposite directions and obliquely, will have a tendency to force the material both up and down, the inner blade forcing the material up and the outer blade forcing it downward and both blades forcing it from the center to the flat sides of the churn-body, where it will be forced once more to the center by means of the abutments H.

By forming the body of the churn octagonal it will have flat inner sides, thereby breaking the cells in the cream and without friction, as would be the case if the churn were circular. Being circular, the cream would glide around the churn and the cells would not so readily break, and the friction would injure the grain of the butter.

The dasher-shaft I extends up through an aperture in the cross-bar and is provided with a squared head, on which fits a beveled gear-wheel I'. The aperture in the cross-bar is protected by a bushing K, which extends above the top of the cross-bar. Surrounding the bushing is a casting K', which has an annular rib K''. This rib, with the bottom of the casting and the extension of the bushing, forms an annular groove, in which fits a downwardly-extending annular rib on the gear-wheel I'. This groove forms a bearing for the gear-wheel and also a tight oil-chamber. The gear-wheel I' is actuated by means of the bevel gear-wheel J, which is mounted on the shaft J, and the shaft is turned by means of the handle J''. The shaft is supported on the cross-bar by means of the standard L.

By mounting the gearing on the cross-bar and forming the cover in two parts it will readily be seen that by simply lifting one of the covers the interior of the churn can be inspected without moving the gearing, which will all the time be securely clamped to the churn.

M designates a covering for the gear-wheel I. Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. A churn-dasher consisting of a body portion, pins extending from the opposite sides thereof and a pair of blades supported on the pins on opposite sides of the body portion, the blades on each side being spaced apart and spaced from the sides of the body portion their entire length and arranged obliquely relative to the vertical axis of the body portion and each blade of each pair extending in opposite oblique directions.

2. The combination with a churn having an angular body, abutments arranged at inter-

vals on the interior of the body, of a churn-dasher consisting of a body portion, and a pair of obliquely and oppositely extending blades spaced apart and out of contact with the body portion and arranged on opposite sides thereof.

In testimony whereof I have hereunto affixed my signature in the presence of two witnesses.

HANNIBAL FELT.

Witnesses:

THOMAS L. RYAN,
WILLIAM A. THOMPSON.