

(No Model.)

J. D. WALLACE.

CHURN DASHER.

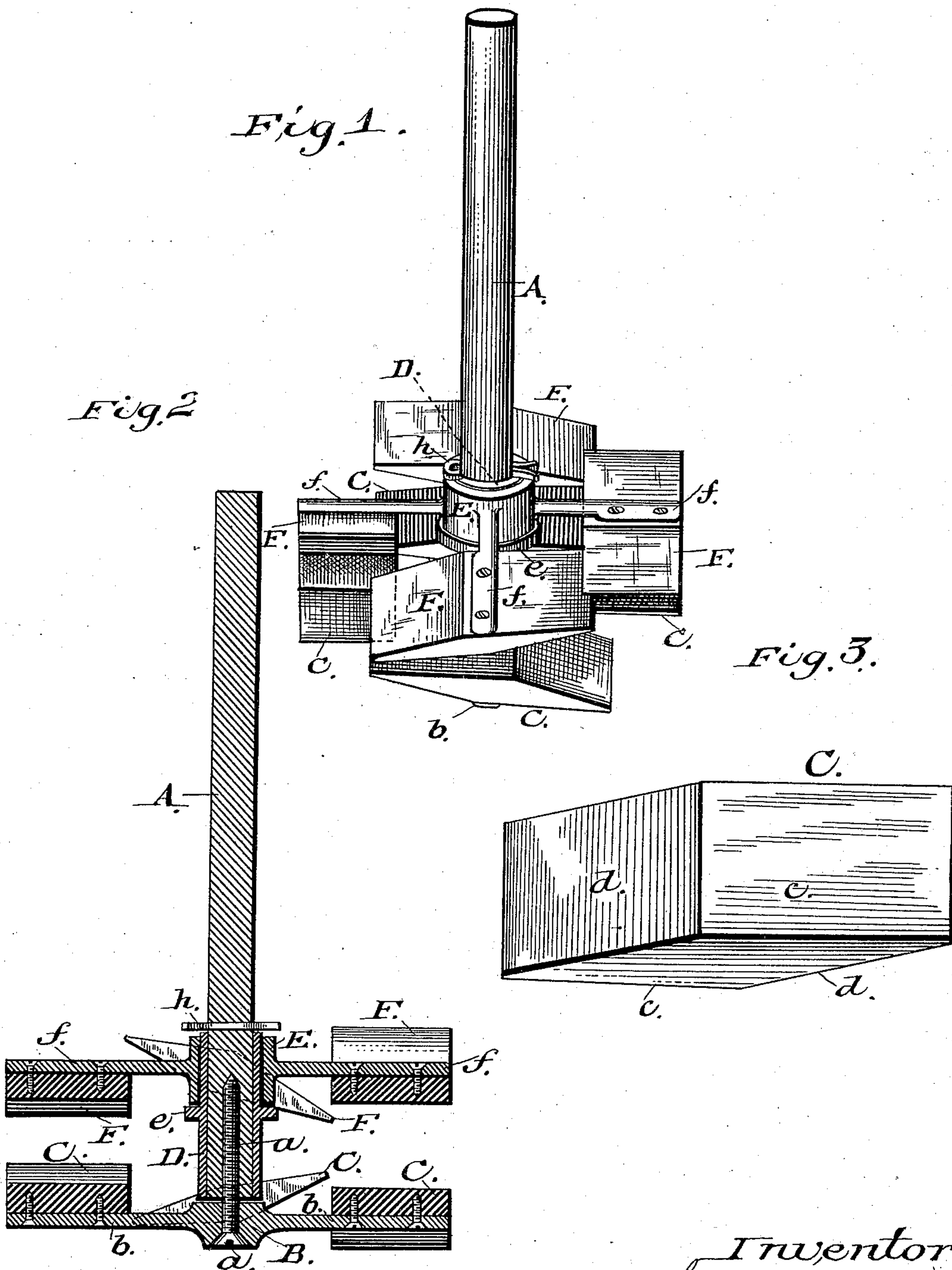
No. 316,699.

Patented Apr. 28, 1885.

Fig. 1.

Fig. 2.

Fig. 3.



Witnesses
J. Walter Fowler,
H. B. Applewhite,

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Per Atty. A. H. Evans & Co.

UNITED STATES PATENT OFFICE.

JAMES D. WALLACE, OF SALINA, OHIO, ASSIGNOR OF ONE-HALF TO W. H. MARTIN, OF SAME PLACE.

CHURN-DASHER.

SPECIFICATION forming part of Letters Patent No. 316,699, dated April 28, 1885.

Application filed October 31, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES D. WALLACE, a citizen of the United States, residing at Salina, in the county of Athens and State of Ohio, 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 part of this specification, in which—

Figure 1 represents a perspective view of my improved churn-dasher. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a detail in perspective of one of the blades.

My invention relates to churn-dashers having a hollow hub with radiating arms, upon which are attached diamond-shaped blades arranged upon the arms in such manner that each of the blades shall present to the action of the fluid an upper and lower parallel face and an upper and lower inclined face, so that by either the upward or downward movement of the dasher the fluid acting upon the inclined surfaces will give to the blades a rotary movement.

The object of my invention is to supply a churn-dasher which requires much less power to operate than the ordinary dashers, and I attain this object by the mechanism illustrated in the several figures of the drawings.

My invention consists in the peculiar construction, arrangement, and combination of devices, all of which I shall hereinafter fully set forth and claim.

To enable others skilled in the art to make and use my improvements, I will now proceed to describe its exact construction and the manner in which I have carried it out.

In the drawings, A is the dasher-staff, to the lower end of which is attached by a screw, *a*, a hub, B, which has its under surface countersunk to receive the head of the screw. This screw passes up into the stem A, and while securing the hub B with its attachments permits the said hub to have a rotary movement.

From the hub B radiate arms *b*, having secured to their outer ends the blades C. These blades are of peculiar construction, and, as seen in Fig. 3, have an upper and lower straight face, *c*, and an upper and lower in-

clined face, *d*, the straight portions being the longer of the two, and the blades being approximately diamond-shaped in side elevation.

Upon the lower end of the staff A, and snugly fitting the same, is a sleeve, D, its lower end resting upon the hub B, which supports it, and the said sleeve is also provided at or about its center with an annular flange, *e*, upon which is loosely mounted to revolve another hollow hub, E, provided with arms *f* and blades F, and corresponding in form and size with the one above described. A pin or stop, *h*, prevents the upper dasher from riding upon the staff. Thus it will be seen that by the peculiar arrangement of these several parts the blades upon both dashers are brought into play, and the fluid acting upon the inclined faces causes the dashers to be revolved in opposite directions, greatly assisting in the process of butter-making.

I am aware in the construction of churn-dashers various revolving devices and wooden sections attached to arms have been employed. I therefore do not lay claim to such construction, broadly.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The staff A, in combination with sleeve D, provided with a bearing-flange, *e*, at or near its center, a dasher with hollow hub encircling the sleeve, and arms carrying diamond-shaped blades having straight and inclined faces attached to the hubs, substantially as described.

2. The staff A, sleeve D, provided with a flange, *e*, the hub E, arms *f*, and diamond-shaped blades F, in combination with a hub, B, bearing against the lower end of the sleeve, said hub having a countersunk opening, the arms *b*, attached to the hub, and diamond-shaped blades C, attached to the arms, the screw *a*, and pin *h*, all constructed to operate substantially as described, and for the purpose herein set forth.

JAMES D. WALLACE.

Witnesses:

A. J. FRAME,
ALEXANDER EWING.