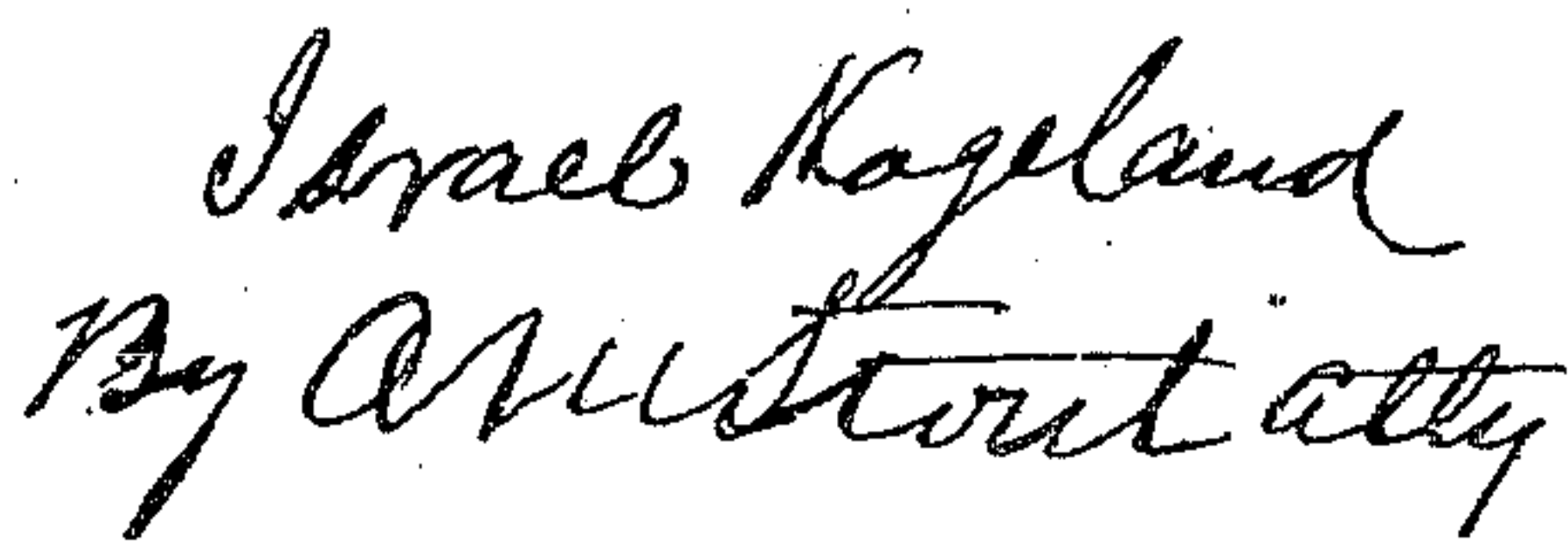


Patented Sept. 16, 1890.





# UNITED STATES PATENT OFFICE.

ISRAEL HOGELAND, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-HALF  
TO FREDERICK B. BANGS, OF CHICAGO, ILLINOIS.

## CHURN.

SPECIFICATION forming part of Letters Patent No. 436,662, dated September 16, 1890.

Application filed July 29, 1889. Serial No. 319,033. (No model.)

*To all whom it may concern:*

Be it known that I, ISRAEL HOGELAND, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Improvement in Churns, of which the following is a specification.

The object of my improvement is to impart rapid motion to the cream or milk in the body of the churn and divide it into thin sheets, and to dash them as formed successively against a break-post, and thus to thoroughly and quickly break the butter globules in the same.

My said improvement will be hereinafter fully described with reference to the accompanying drawings, in which—

Figure 1 represents a central vertical section of a churn embracing my improvement; Fig. 2, a horizontal section of the same, made as indicated by the broken line 1 1 in Fig. 1; Fig. 3, a side view of the dasher G, the sleeve *e* being broken away above the wings *g*; and Fig. 4, a perspective of the base for the support of the break-post H and the rod F and for the collection of the butter.

A indicates the body of the churn, having a cylindrical form, it being made of any suitable material; B, the cover for the same; *b*, the vent for air; *b'*, two spring-catches to hold the cover in position; F, an axial rod made of any metal or other suitable material. Its top end is a little below the upper end of the body A, and its lower end is provided with a collar *i* for the lower end of the sleeve to be supported by, and it is fixed into the cross composed of the arms *h*. The break-post H is fastened at its lower end to one of the arms *h*, so that its outer edge nearly or quite touches the wall of the body A, and its height is nearly the same with the body of the churn, and its inner edge stands in the direction of the center of the body. It may be made of sheet metal or of wood in the form of a simple bar or board. The cross composed of the arms *h* is designed to support the rod F, and it and the rod are used to collect the butter when the churning has been done and the cover removed, the rod being used as a handle.

The dasher G consists of the sleeve *e*, which

is slipped over the rod F, and is adapted to rotate upon the same. Its upper end extends up through the cover B, and it further consists of the two wings *g*, which are the principal operative parts of my improvement. Each wing is composed of a plain plate, which is fastened to the sleeve *e*, and a curved portion, and the last-named portion tapers in width from its lower to its upper end, as shown in Fig. 1, and its curvature corresponds to that of the wall of the body A; and each wing at its lower end has the peculiar formation shown in the drawings, which renders it somewhat similar in appearance to the entering end of a boring-auger, and when the sleeve is rotated the action of the wings is like that of an auger, except the milk or cream enters the wings and is forced upward, whereas the auger enters the material to be bored. As the cream is forced upward, it is freed of the wings and is thrown out by centrifugal force into thin sheets and also in the form of spray, and is met by the break-post H, which not only throws it back, but also prevents the cream in the body from flowing in a circular course in the churn. This violent concussion thoroughly and quickly breaks up the butter globules, which is the principal object attained by the operation of churning.

In order to impart the rotary motion to the sleeve and its wings required, I have erected a frame consisting of the curved bars C and the post P upon the cover B, and have fastened the pinion E upon the sleeve F, and the cogged wheel D is mounted upon a proper bearing in the post P and meshes with pinion E, and then by means of the crank and handle *d* the sleeve is rotated.

By means of handle *a* the frame is held by hand in position while the crank is turned.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The herein-described churn-dasher, consisting of a body part having two wings secured thereto, each wing comprising a straight part and a curved part joined together at an angle to each other, whereby a pocket is formed between them, all substantially as and for the purpose set forth.

2. In combination with the body of the de-

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scribed churn and means for operating the  
dasher of the same, the herein - described  
dasher, consisting of the body part having two  
wings secured thereto, each wing comprising  
5 a straight part and a curved part joined to-  
gether at an angle to each other, whereby a  
pocket is formed between them, and a break-

post to co-operate with said dasher, substan-  
tially as set forth.

ISRAEL HOGELAND.

Witnesses:

W. T. CHURCH,  
S. A. DUVALL.