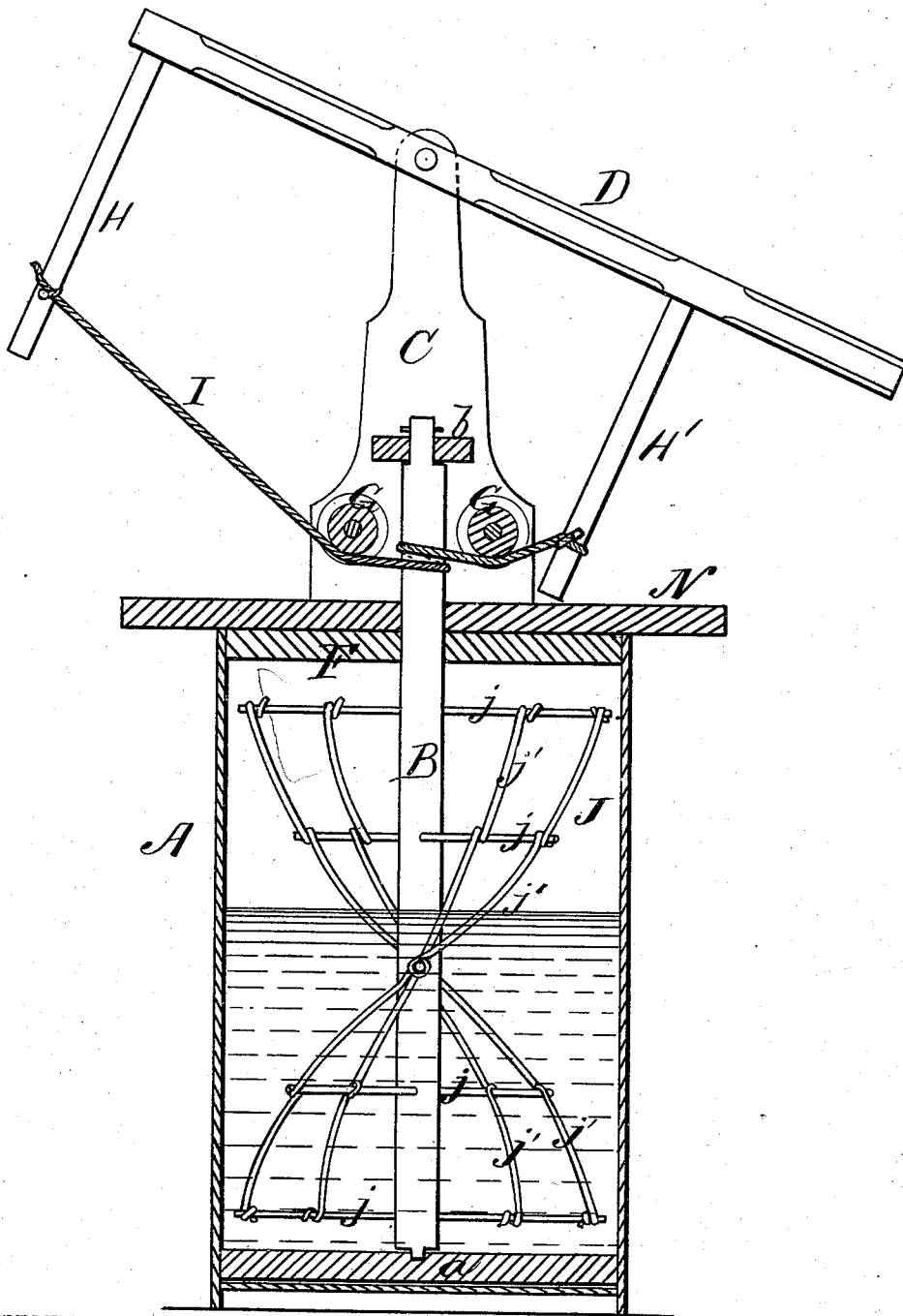


D. McC. D. D. BROWN.

CHURN.

No. 171,265.

Patented Dec. 21, 1875.



WITNESSES

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# UNITED STATES PATENT OFFICE.

DANIEL McCARTY DEMARCUS DELAFAYETTE BROWN, OF CROPPER'S  
DEPOT, KENTUCKY.

## IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. **171,265**, dated December 21, 1875; application filed  
August 21, 1875.

*To all whom it may concern:*

Be it known that I, DANIEL McCARTY DEMARCUS DELAFAYETTE BROWN, of Cropper's Depot, in the county of Shelby and State of Kentucky, have invented a new and valuable Improvement in Churns; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

The figure of the drawings is a representation of a vertical section of my churn.

This invention has relation to improvements in churns; and it consists in the novel construction of the dasher, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A indicates the tub or receptacle for cream of my improved churn, which is preferably of cylindrical form, and is designed to be secured to a suitable stand or support. Within this tub is centrally arranged a vertical shaft, B, the lower end of which has its bearings in a plate, *a*, in the bottom of the tub, and which is held against tilting or otherwise deviating from the perpendicular by having its upper bearings in a transverse brace, *b*, arranged in between upright spaced standards C C, in the upper ends of which is mounted a lever, D, in the nature of a walking-beam, by the operation of which this dash-shaft is rotated. These standards are mortised into, or otherwise suitably secured to, a flat board, N, to the under side of which may be secured a disk, F, accurately closing the open upper end of tub A, and they afford bearings below brace *b* for rotating pulleys or drums G, the functions of which will hereinafter appear. Lever D is provided with two depending arms, H H', of suitable rigidity, arranged at equal distances each side of the journals of the said lever, at or near the lower ends of which is secured a preferably elastic operating-cord, I. This cord, previous to being secured to arms H H', is wound once or twice around the shaft B, and is passed under drums G.

Lever D, arms H H', and cord I greatly resemble, when combined as above described, a drill-bow, with the exception that the said lever is pivoted in the upper ends of standards C C', and imparts a rotary motion to the dasher-shaft when made to operate as a walking-beam; whereas an endwise-reciprocating motion of a drill-bow is used to produce the same effect, but with a greatly-decreased power, owing to the absence of leverage.

The effect of drums G in their relation to lever D and the dasher-shaft is to prevent the operating-cord I from being drawn upward against the upper bearing *b* of the said shaft; also to confine its line of applied power in a plane transverse to the long axis of the same, having the effect of preserving the said cord from all attrition other than what is produced by rolling-friction, and increasing the rapidity of rotation of the said shaft, owing to the direct application of the power of the said cord to the dasher-shaft.

Upon the lower end of shaft B a cream-dasher, J, is made by passing metallic rods *j* radially through the same, and in different planes. These rods are connected and braced by means of metallic wires J', which are spaced and arranged at equal distances apart, so as to form, with radial rods *j*, an open-work helix, of which dasher-shaft B is the axis.

By the rotation of dasher-shaft B a very rapid screw-like motion is imparted to the dasher B, the effect of which is to lighten up the cream, separate the butyrous globules, and, through the violent thrashing of rods *j* and connecting-wires J', to break up the cells and cause a speedy disintegration thereof, and a speedy separation of the oleaginous from the watery parts of the cream.

I am aware that a churn provided with a dasher having spiral beaters, as shown in Letters Patent granted to O. F. Monfort, dated July 11, 1871, has heretofore been employed; and I therefore lay no claim to such invention.

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

A dasher consisting of a revolving perpen-

dicular shaft, having transverse, horizontal, and spirally-arranged arms, of equal length, passing through its axis, and two pairs of wires near the periphery, forming, with the transverse bars, a semicircular elevator on each side of the axis, substantially as described, and for the purpose set forth.

In testimony that I claim the above I have

hereunto subscribed my name in the presence of two witnesses.

DANIEL McCARTY DEMARCUS  
DELAFALETTE BROWN.

Witnesses:

J. L. CALDWELL,  
DAVID BROWN.