

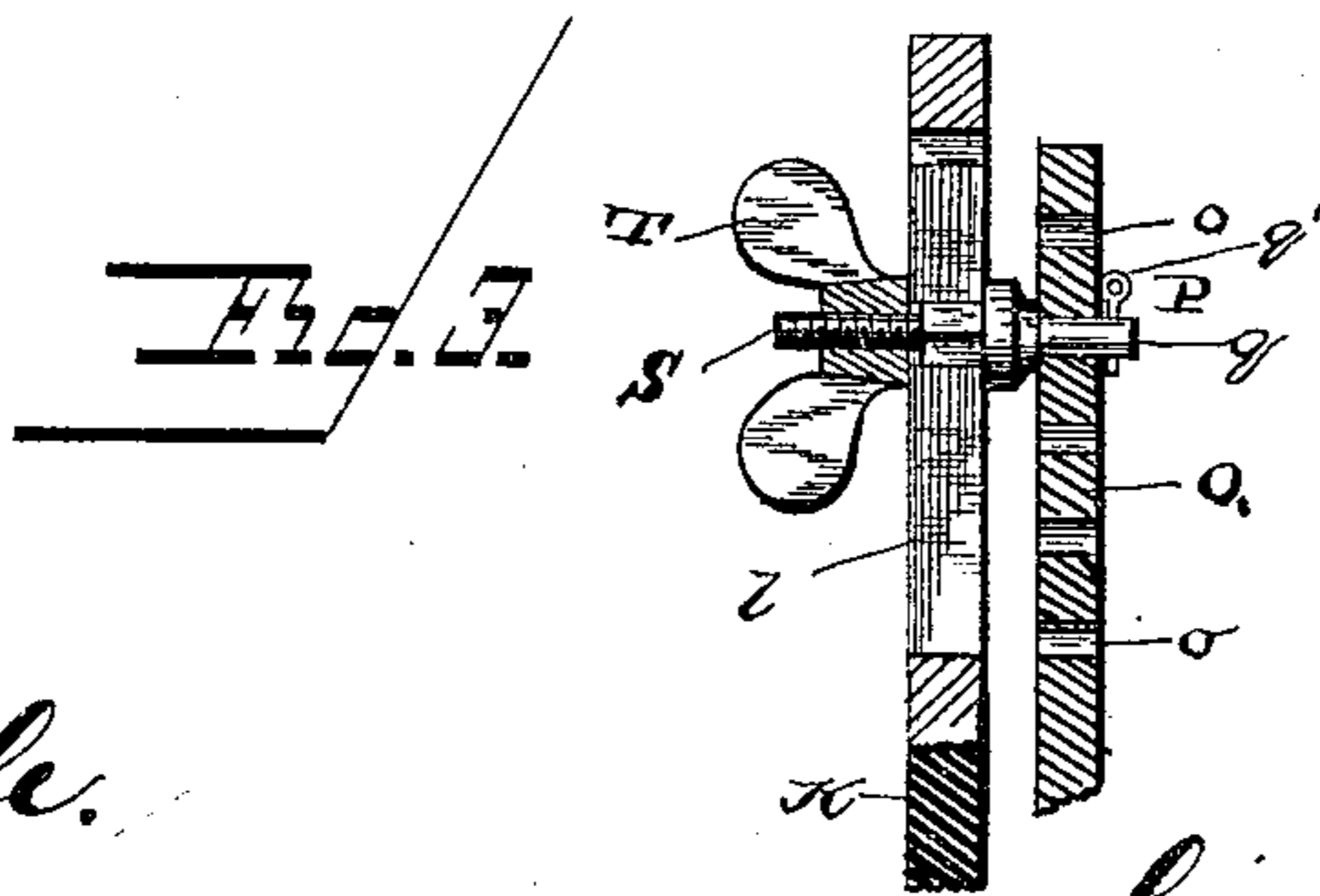
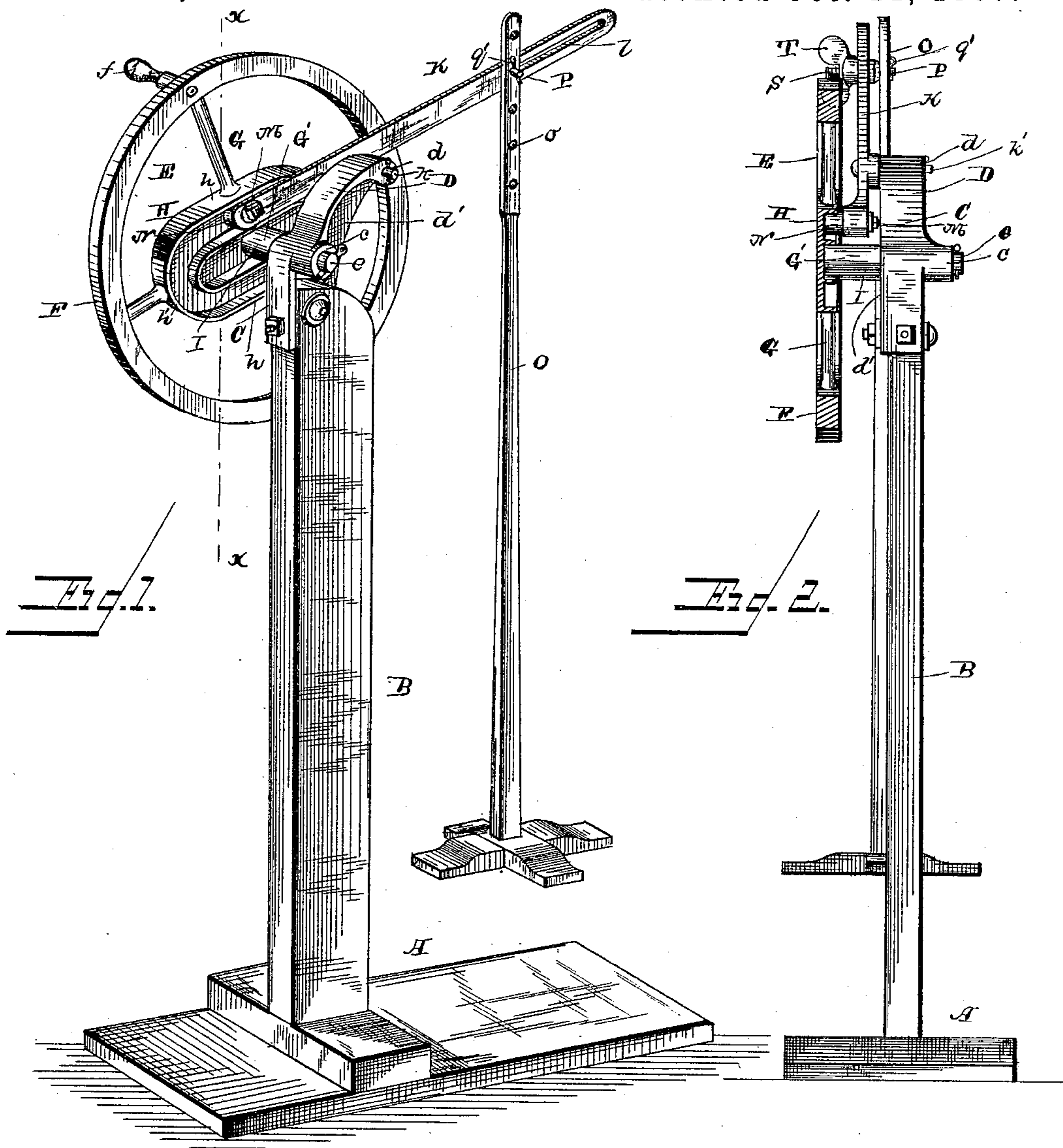
(No Model.)

A. G. BUTLER.

CHURN POWER.

No. 371,487.

Patented Oct. 11, 1887.



Witnesses

C. E. Doyle.

M. E. Fowler

Inventor

Aron G. Butler.

By *his* Attorneys *Chas. H. Snow & Co.*

UNITED STATES PATENT OFFICE.

ARON GREEN BUTLER, OF ATLANTA, ASSIGNOR OF ONE-HALF TO WALTER B. WOLCOTT, OF GRIFFIN, GEORGIA.

CHURN-POWER.

SPECIFICATION forming part of Letters Patent No. 371,487, dated October 11, 1887.

Application filed January 20, 1887. Serial No. 224,901. (No model.)

To all whom it may concern:

Be it known that I, ARON GREEN BUTLER, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented a new and useful improvement in Churn-Powers, of which the following is a specification.

My invention relates to an improvement in churn-powers, consisting in a certain novel construction and arrangement of parts for service, fully set forth hereinafter, and specifically pointed out in the claim.

In the accompanying drawings, Figure 1 is a perspective view of my churn-power, in which the churn-body is omitted. Fig. 2 is a vertical section on the line *x x*, Fig. 1. Fig. 3 is a detail sectional view through the bolt for fastening the dasher-shaft to the lever.

Referring to the drawings, in which similar letters denote corresponding parts in all the figures, A is the base or platform of the churn, having the vertical standard B near one end thereof, and secured to the upper end of said standard is a casting, C, comprising the horizontal bearing-box *c*, the upwardly-inclined arm D, having the bearing-box *d* at the extremity thereof, and the right angled attaching and strengthening web *d'*. The web *d'* is fitted to the sides of the standard and bolted or otherwise secured thereto.

E designates the large metallic power-wheel of the machine, comprising the rim F, to which is secured the crank or handle *f*, the spokes G, and the hub G', having the approximately elliptical cam-groove H, provided with the straight sides *h* and the curved ends *h'*, and the journal-boss I in the center of the wheel, all of which parts are cast integrally. The axle *e* of the wheel is rigidly secured at one end in an opening in the boss I, and is journaled at the other end in the bearing-box *c*.

The lever K is journaled on a pivot-pin, *k*, rigidly secured in the bearing-box *d*, and has the slot *l* at the outer end for the attachment of the dasher-staff, and the short transverse pin M near the inner end, on which transverse pin is journaled the friction-roller N, adapted to move easily in the cam-groove H.

The ordinary dasher-staff, O, is provided near the upper end with the series of transverse

openings *o*, through any one of which passes the bolt P. Said bolt comprises the pivot *q*, on which is journaled the dasher-staff O, the pin *q'* in the outer end thereof, a rectangular portion adapted to be movable in the slot *l* of the lever K, and the threaded end S, on which is screwed the thumb-nut T.

It will be seen that the dasher-staff is vertically adjustable; as the pivot *q* may be inserted in any one of the transverse openings *o* in the dasher-staff, and the length of the vertical stroke of the staff may be varied by adjusting the bolt P in the slot *l* of the lever K, it being obvious that the farther said bolt is adjusted from the axis of the lever the longer will be the stroke of the dasher-staff.

The operation of the cam-groove, as will be readily seen, is as follows: When the major axis of the elliptical cam is in a horizontal position, the dasher-staff will be raised to its highest point, and when said major axis is in a vertical position the dasher-staff will be at its lowest point. Therefore, as the power-wheel is turned by means of the handle *f*, the major axis will be alternately horizontal and vertical, and obviously the dasher-staff will be alternately raised and lowered. As the said major axis will be horizontal twice and vertical twice during one revolution of the wheel, the dasher-staff will be raised and lowered twice, or, in other words, will make two strokes to one revolution of the said power-wheel.

It will be seen from the above description that my churn-power is very compact and simple in construction, having no belts or gears to get out of order; and, also, my machine is more easily operated, is lighter-running, and there is no noise or jar while using it.

A still further advantage which my machine possesses is that it can be applied to the old form of churns now to be found, especially in the country, by simply making transverse openings *o* in the dasher-staff and inserting the pivot-bolt P.

I am aware that it is not new to connect the dasher-staff to its operating-lever by means of a bolt passed through one of a series of holes in the upper end of the lever, and also to adjust the staff to or from the pivot of the lever by securing the bolt at different points along

a slot provided at the end of the lever. This construction I disclaim.

I am also aware that it is not new to reciprocate a lever by means of a wheel having a cam-groove within which the end of the lever is fitted, and I make no broad claim thereto.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

10 A churn-power comprising a base, a standard erected thereon, a casting, C, at the upper end of the standard, having the bearing-block c, and the upwardly-inclined arm D, provided with the bearing-block d, and the web d', fitted

to the end of the standard, the lever K, piv- 15
oted in the bearing-block d, and the drive-wheel mounted on a shaft journaled in the bearing-block c, and having a cam-groove, within which the end of the lever K works, substantially as specified. 20

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ARON GREEN BUTLER.

Witnesses:

J. P. BUFORD,
G. W. MALONE.