

(No Model.)

J. H. DUKE.

CHURN.

No. 283,085.

Patented Aug. 14, 1883.

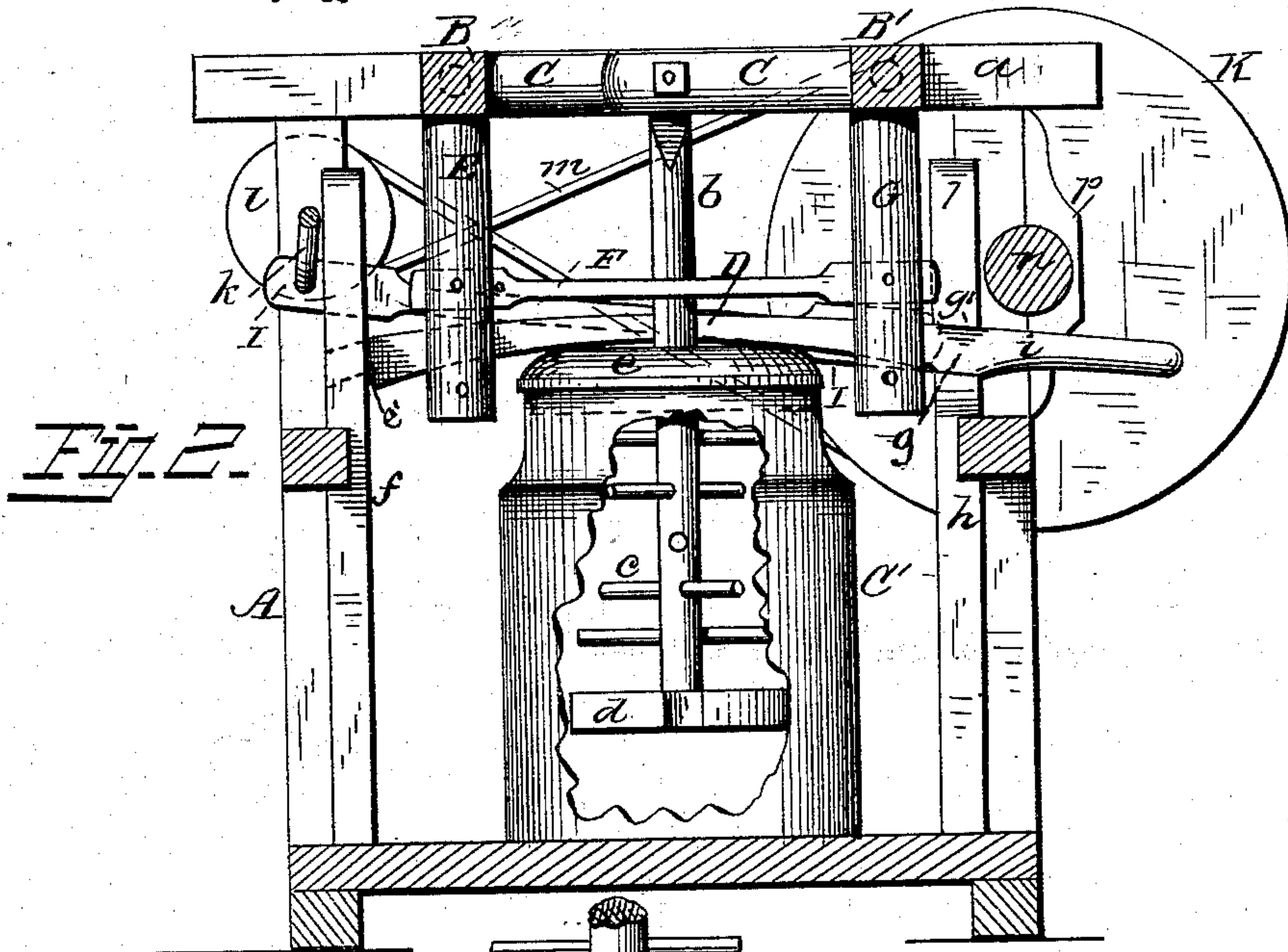
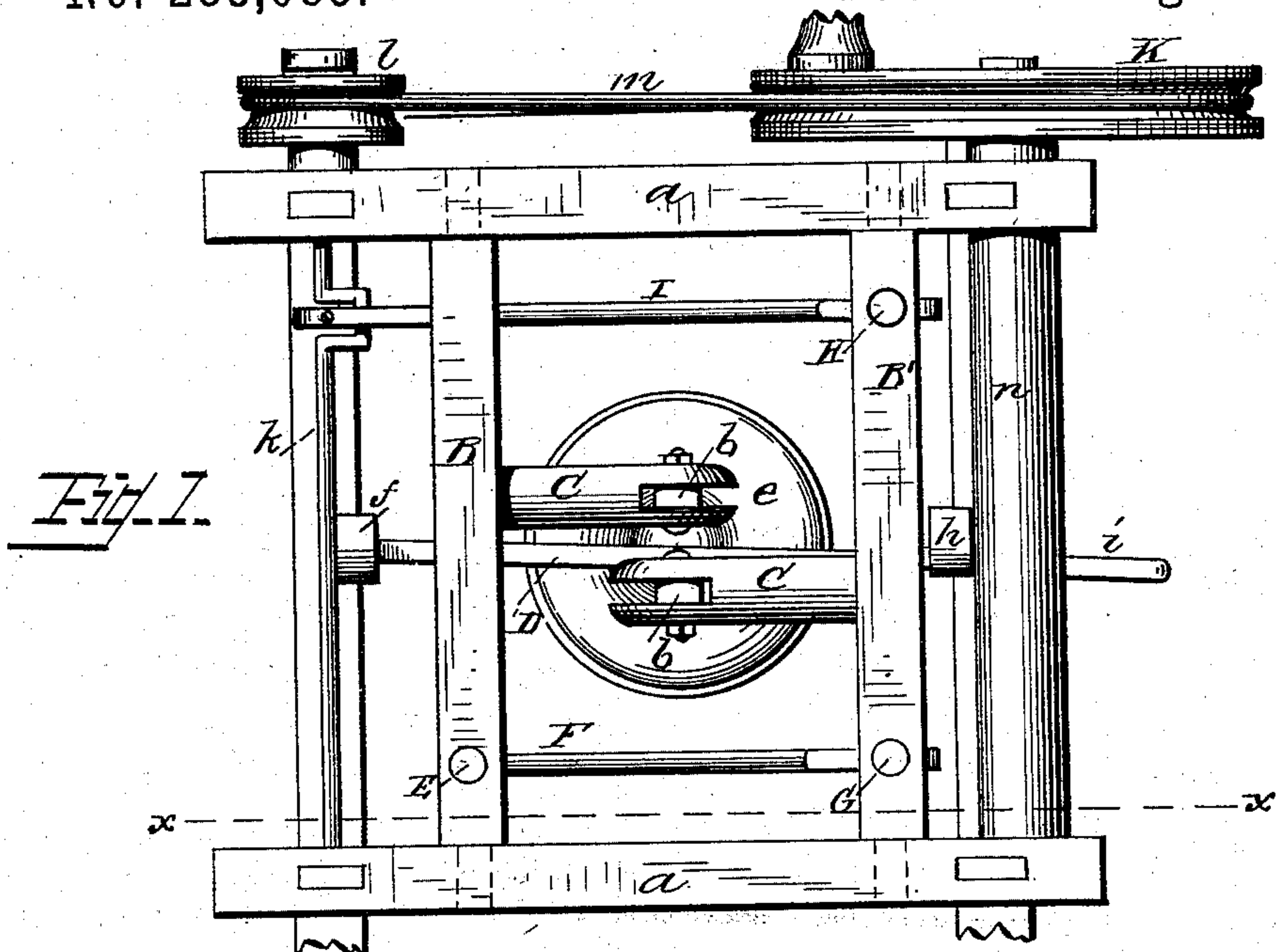
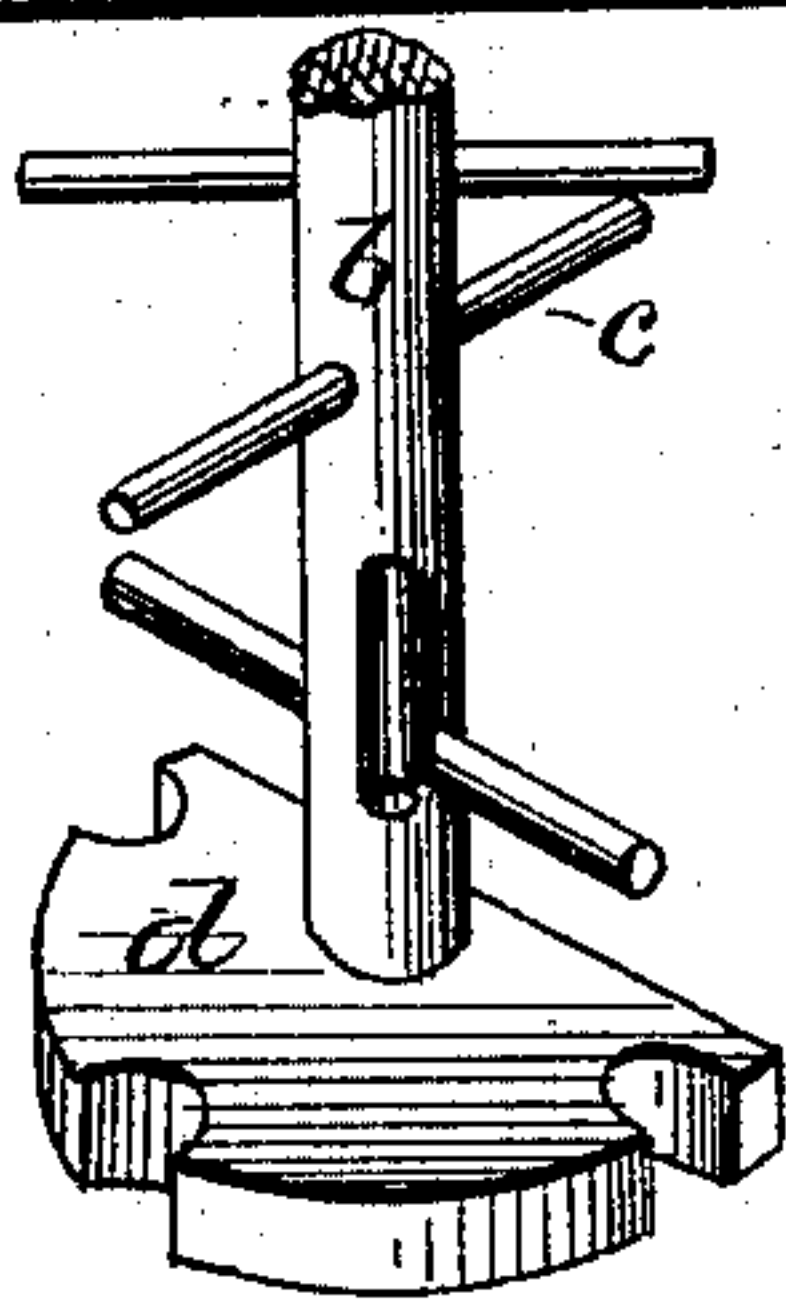


Fig. 3.



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CHURN.

SPECIFICATION forming part of Letters Patent No. 283,085, dated August 14, 1883.

Application filed September 27, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. DUKE, a citizen of the United States, residing at Jackson, in the county of Butts and State of Georgia, have invented certain new and useful Improvements in Churns; and I do hereby declare that the following is a full and exact description 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.

Figure 1 of the drawings is a top plan view of my invention; Fig. 2 a side elevation, partly in section; and Fig. 3 a detail view of one of the dashers.

The present invention has relation to certain new and useful improvements in the driving-power of double-acting churns; and it consists in the details of construction, substantially as shown in the drawings, hereinafter described and claimed.

In the accompanying drawings, A represents a suitable frame having cross-beams *a*, which serve as bearings for the journals of oscillating shafts B B'. These shafts, upon their inner side, have slotted arms C, to which are pivoted the upper ends of dasher-rods *b*. These rods *b* have connected to them the usual pins, *c*, extending radially along their length, to agitate the cream contained in the churn-cylinder C', said rods having at their lower ends dashers *d*. A cover, *e*, fits over the top of the cylinder C', and is held thereon by a curved spring-rod, D, the notched end *e'* thereof entering a slot in the upright *f*, while the bearing *g* bears against a shoulder, *g'*, upon the side of an upright, *h*, whereby said rod is sprung on the churn-cover to hold it in position.

When it is desired to remove the cover the handle end *i* of the rod D is pressed down sufficiently to be disengaged with the shoulder *g*, after which the opposite end is withdrawn from the post or upright *f*, thus allowing the cover to be raised.

A very simple and effective means of securely holding the cover in place while churning is obtained without aid of the usual complicated fastenings.

Upon the under side of the shaft B, near one end thereof, is a depending perforated vertically-vibrating slotted arm, E, to which is pivoted one end of a perforated adjustable

pitman, F. The opposite end of the pitman F is pivoted in like manner to a perforated vertically-vibrating slotted arm, G, depending from the shaft B'. To the opposite end of the shaft B' is another depending perforated vertically-vibrating slotted arm H, to which is pivoted one end of an adjustable pitman, I. The pitman, at its other end, is suitably connected to a crank-shaft, *k*, having its bearings in the sides of the frame A. One end of this crank-shaft extends beyond the side of the frame, and has rigidly connected to it a suitable pulley, *l*, over which passes a belt or cord, *m*. This belt or cord passes over a drive-wheel, K, which is larger than the pulley *l*, secured to one end of a suitable shaft, *n*, which has its bearings in boxes *p*.

It will be seen that by raising or lowering the ends of the pitmen vertically with relation to the arms the extent of the stroke of each dasher may be regulated independent of the other, thereby enabling a variety of changes in the motions of the two dashers to be made when churning cream of different grades or qualities.

The oscillating shafts, with their slotted arms for connecting the dasher-rods and pitmen, are not only effective as a driving-power for churns, but provide a driving mechanism that is both strong and durable.

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

The combination, with the frame A, having the oscillating shafts B B', carrying the slotted arms C C' for attaching the dasher-rods *b b*, and the depending slotted vertically-vibrating arms E G H, of the perforated pitmen F I, the former engaging the arms E G, and vertically adjustable therein, the latter vertically adjustable at one end in the arm H, and its other end connecting the crank-shaft *k*, as shown and described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JAMES H. ^{his} DUKE.
mark.

Witnesses:

JAS. O. BEAUCHAMP,
L. D. WATSON.