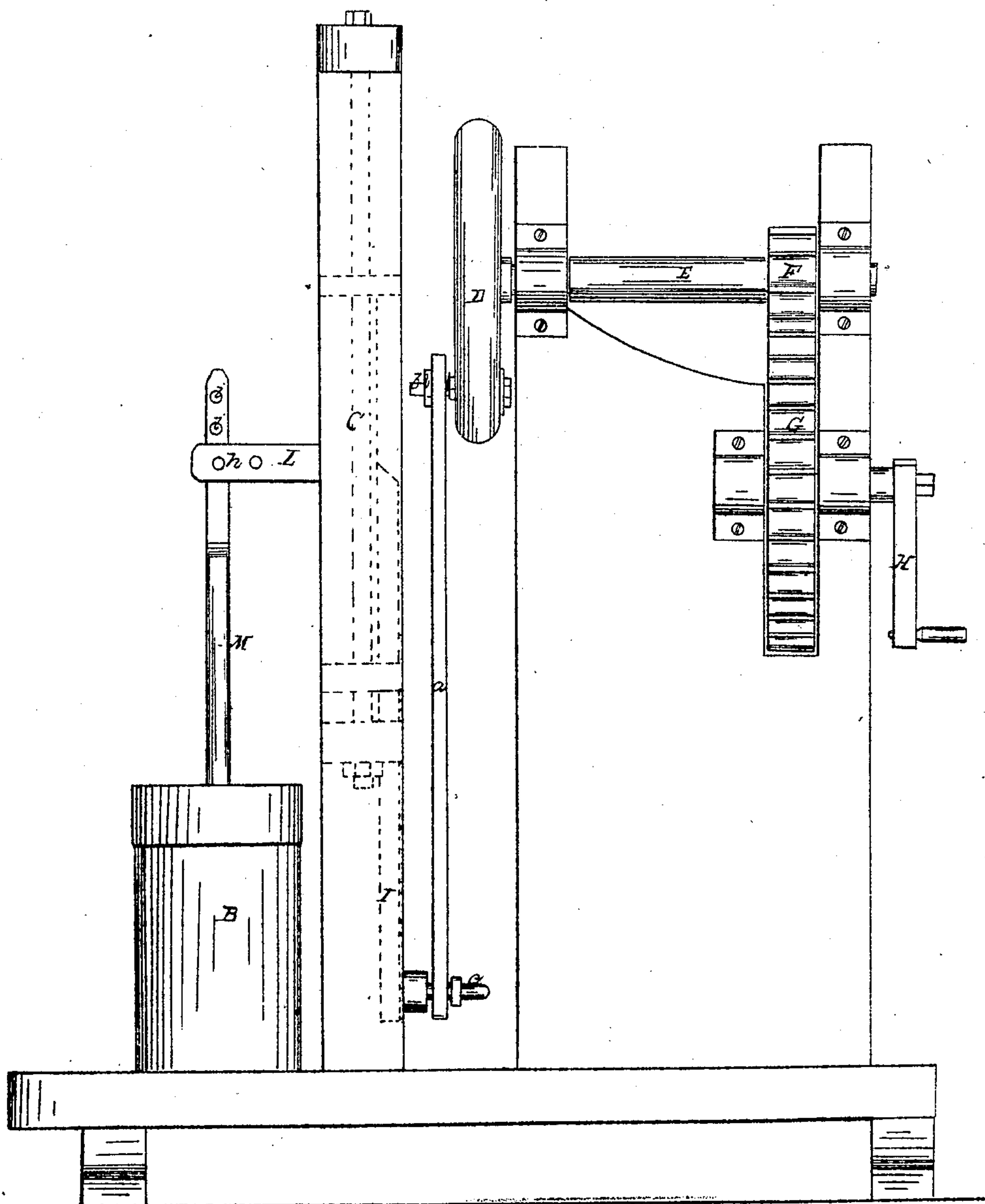


J. I. Cheatham.
Churn.

No 92164.

Patented July 6. 1869.

Fig. 1.



Witnesses

H Beale
J C Day

Inventor.

John I Cheatham
By his atty
J. S. Brown

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Fig. 2.

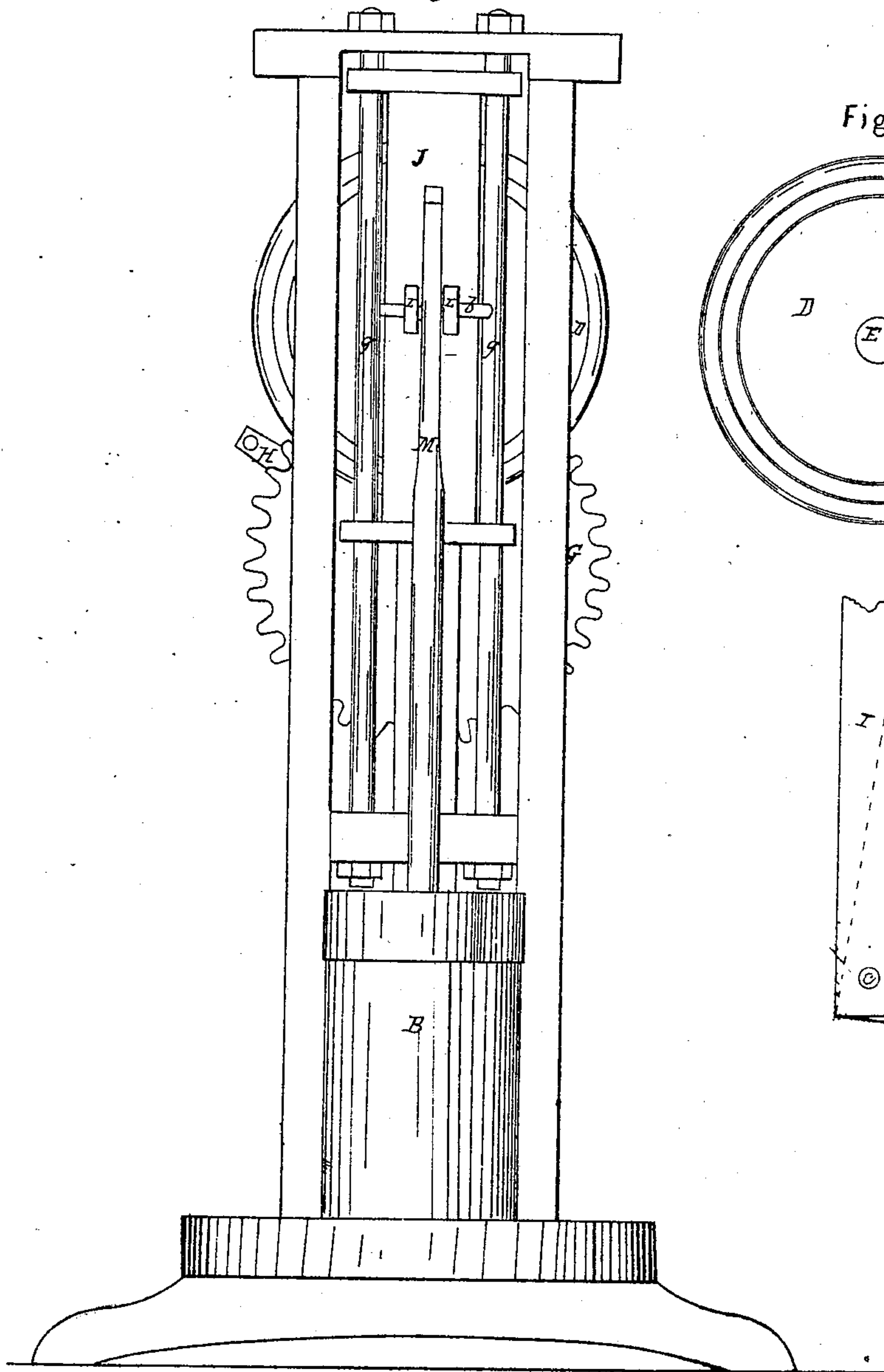
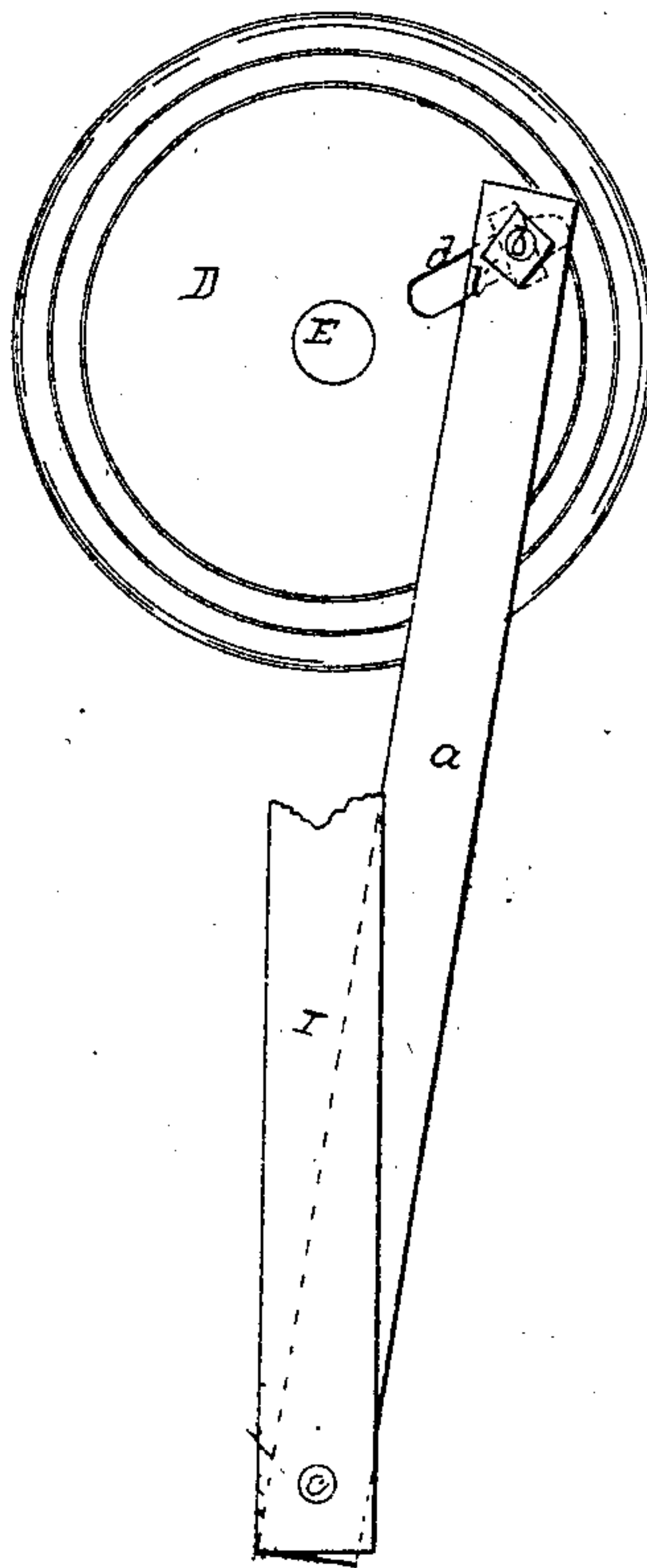


Fig. 3



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United States Patent Office.

JOHN I. CHEATHAM, OF ATHENS, ASSIGNOR TO CICERO A. MITCHELL AND RUFUS W. SMITH, OF GREENSBOROUGH, GEORGIA.

Letters Patent No. 92,164, dated July 6, 1869.

IMPROVEMENT IN CHURNS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, JOHN I. CHEATHAM, of Athens, in the county of Clark, and State of Georgia, have invented an Improved Churn; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification—

Figure 1 being a side view of the churn.

Figure 2, a front view of the same.

Figure 3, a view showing the adjusting-slot in the crank-wheel, and the parts immediately in connection therewith.

Like letters designate corresponding parts in all of the figures.

My improvement consists in an arrangement for imparting an easy vertical reciprocating motion to the dasher of a churn, by means of a crank, through the medium of a sliding gate.

Another feature of improvement consists in a method of adjusting the length and position of the stroke of the dasher, to suit the amount of cream in the churn.

Let A represent a support for the driving-gear, and B, a dasher-churn, of the ordinary kind.

Two uprights, C C, properly connected above and below, constitute an open frame, to support guide-rods or ways *g g*, on which a sliding gate or sash, J, traverses vertically.

The driving-gear consists of a crank, H, which drives a spur-wheel, G, this wheel matching into a pinion, F, on a shaft, E.

On the end of this shaft is a crank-wheel, D, which may also serve as a fly-wheel; and it imparts a vertical reciprocating motion to the gate or sash J, by means of a connecting-rod, *a*, extending from the crank-pin *b*, on the said wheel D, to a corresponding pin, *c*, on a bar, I, which projects downward from the gate, and forms a part thereof.

The motion is imparted to the dasher-rod M by connecting its upper end with a projecting piece, L, which forms a part of the same sliding gate, J.

By the above-described arrangement, I interpose

the sliding gate J between the crank-wheel D and the dasher-rod M, and by this means obtain a much steadier and easier movement of all the parts than would result from the direct connection of the dasher-rod and crank-wheel. This arises partly from the greater length of connecting-rod *a* than if it joined immediately with the dasher-rod, and partly from the action of the sliding gate upon the dasher-rod being always direct and in line with its motion.

The dasher-rod M has a series of holes, *i i*, in its upper end, through one of which, and a corresponding hole in the projecting bar L of the sliding gate, a coupling-pin, *h*, fig. 1, passes.

By using different holes *i i* for connecting with the gate, the height of the dasher in the churn is varied at pleasure, according to the varying amount of cream in the churn; and since it is desirable, also, to give a longer stroke to the dasher, when there is a full depth of cream in the churn, than when there is only a shallow quantity therein, I accomplish this object by adjusting the crank-pin *b* to different distances from the centre of the crank-wheel D, by means of the radial slot *d* and set-screw *l*, as represented in fig. 3, or the equivalent thereof.

This invention is also applicable to washing-machines, and other machines requiring a similar reciprocating motion.

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

The combination and arrangement of the crank-wheel D, with its adjustable crank-pin *b*, the intermediate sliding gate J, and dasher-rod M, adjustable to different heights on the gate, substantially as and for the purpose herein specified.

The above specification of my improved churning machine signed by me, this 14th day of October, 1868.

JOHN I. CHEATHAM.

Witnesses:

F. B. LUCAS,

W. A. GILLELAND.