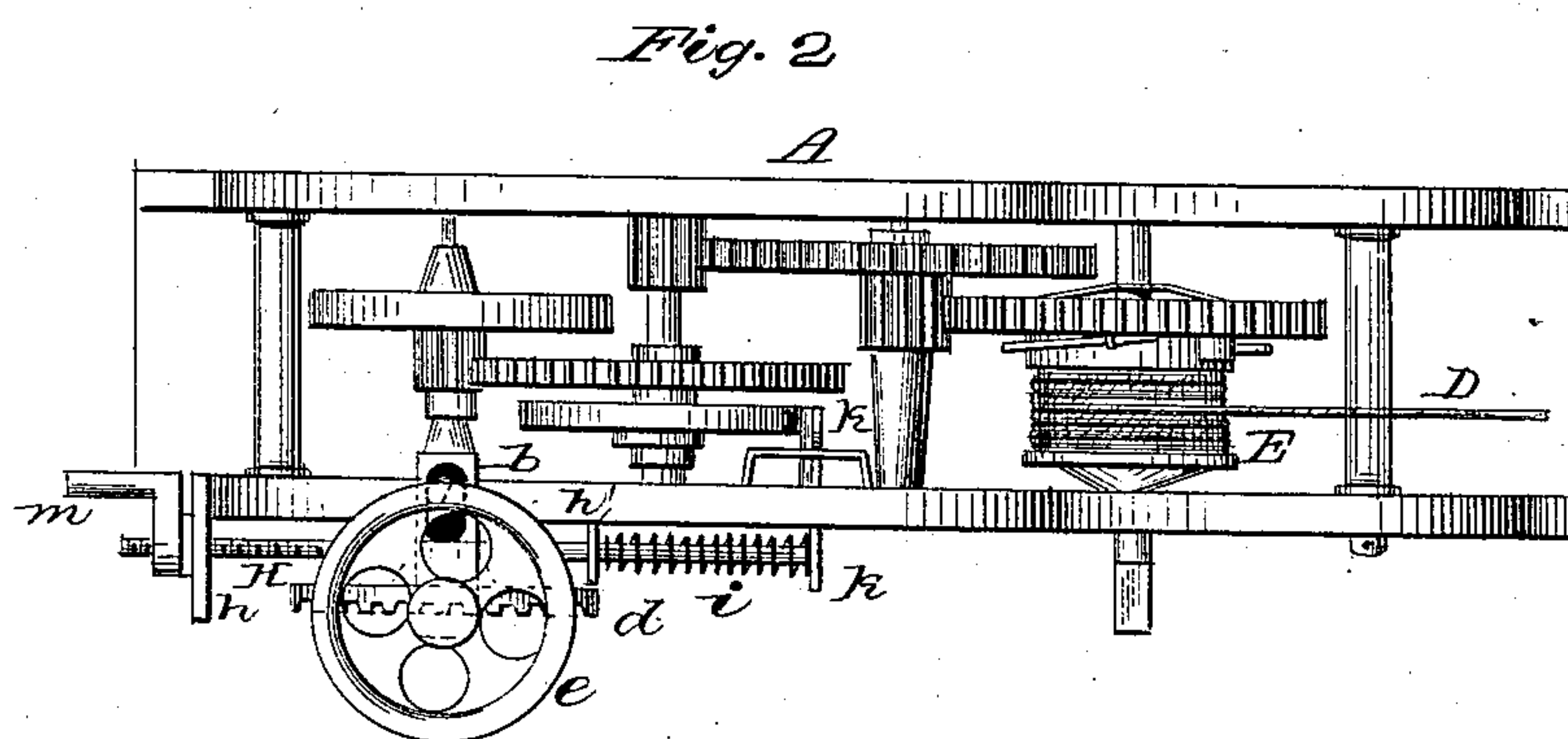
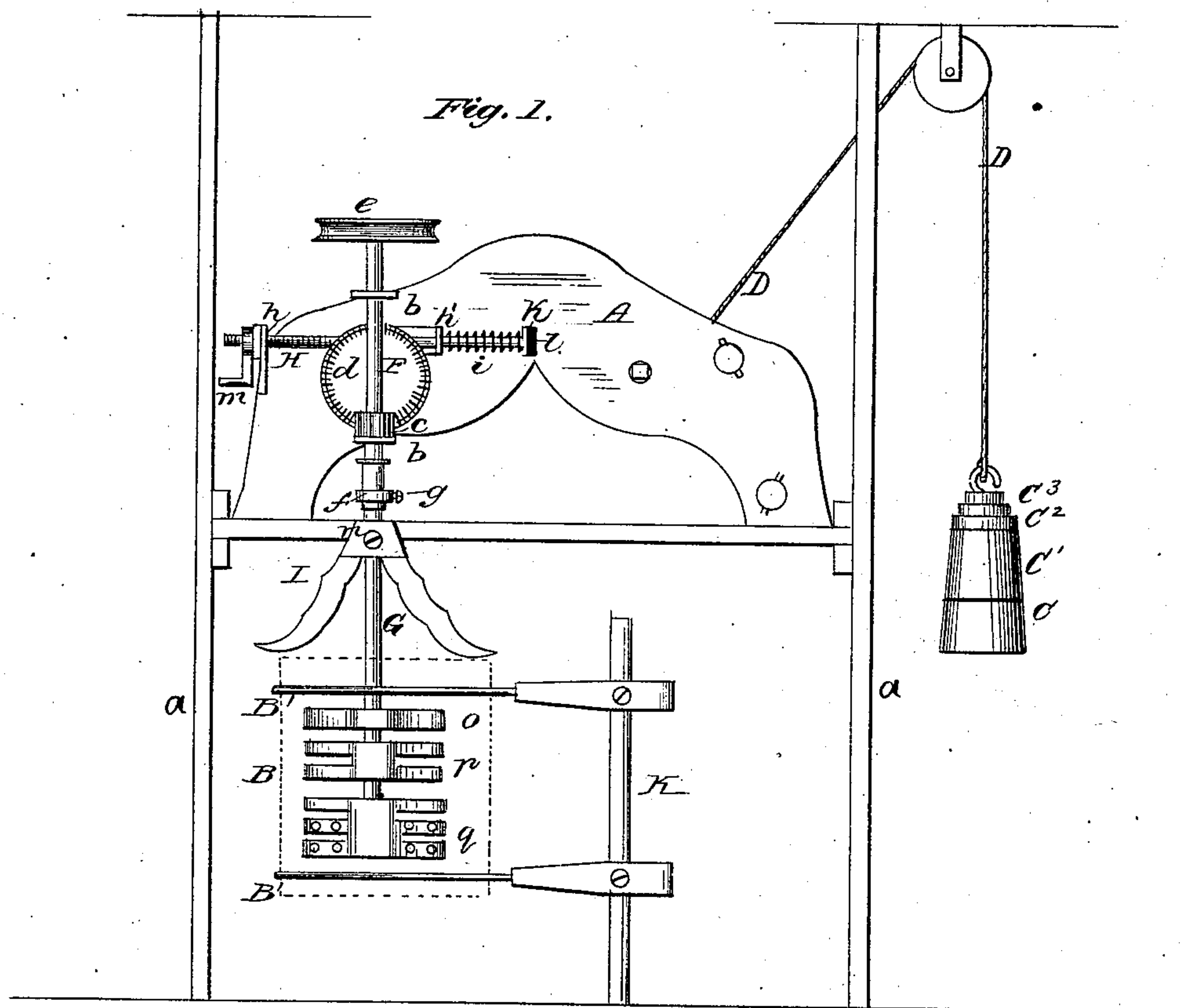


J. A. ALEXANDER.

Churn-Motor.

No. 206,520.

Patented July 30, 1878.



Witnesses:

Ed. E. Dutch

August Petersen

Inventor
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UNITED STATES PATENT OFFICE.

JULIUS A. ALEXANDER, OF SULPHUR SPRINGS, TEXAS.

IMPROVEMENT IN CHURN-MOTORS.

Specification forming part of Letters Patent No. **206,520**, dated July 30, 1878; application filed June 5, 1878.

To all whom it may concern:

Be it known that I, JULIUS A. ALEXANDER, of Sulphur Springs, in the county of Hopkins and State of Texas, have invented certain new and useful Improvements in Churn-Motors; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a front elevation; and Fig. 2 is a top view, showing the brake and operating mechanism.

Similar letters of reference indicate corresponding parts in both the figures.

This invention relates to powers for operating churns; and consists in an improved construction and arrangement of parts, having for its object to produce a churn-motor which may be readily regulated to run fast or slow, as circumstances may render desirable, substantially as hereinafter more fully described.

In the drawing, A is the motor, which is supported upon uprights *a a*, above the churn B. The motor A consists of a series of intermeshing gear-wheels and pinions, operated by a weight, C, cord D, and drum E, in a manner well understood. The weight C consists of several parts or sections, C¹ C² C³, by means of which its weight may be increased, and the speed of the machine thereby increased or decreased, at will.

F is a vertical shaft, journaled in brackets *b b*, which project from the face-plate of the motor, and has a pinion, *c*, keyed upon it, which meshes with a bevel-wheel, *d*, operated by the mechanism of the motor A and weight C. To the top of shaft F is secured a horizontal pulley, *e*, and its lower end terminates in a sleeve or socket-piece, *f*, having a thumb-screw, *g*. The dasher-staff G is inserted into sleeve *f* and secured by the screw *g*, so that it will rotate with shaft F.

H is a rod, which passes through bearings *h h'* on the face-plate of the motor, and has a screw-thread at one end, which works in the screw-threaded bearing *h*. Its other end is passed through a coiled spring, *i*, one end of which impinges upon the bearing *h'*, while its other end abuts against the brake-plate *k*, piv-

oted upon the end of rod H, and which projects into the motor through a slot or opening, *l*, in the face-plate. *m* is a crank, by which the brake-rod H may be turned and worked forward or backward in its bearing-plates.

I is a fly-minder or fan, secured adjustably upon the dasher-staff G by a thumb-screw, *n*, and *o p q* are the rotating dashers, which are secured in a similar manner upon the staff G, so that one or more sets of dashers, each constructed with from one to five double blades or wings, may be used, according to the quantity of milk to be churned. The churn B is secured in ring-brackets B' B', which are secured adjustably upon an upright, K, as shown.

From the foregoing description, taken in connection with the drawing, the operation of my invention will be readily understood. To set the churn-dasher in motion, the motor is wound up in the same manner as an ordinary clock, when the weight C will at once start it in motion, and its speed may be regulated either by removing sections from or adding them to the weight, or by adjusting the brake H *k*, the plate *k* of which is provided with a roller, which bears against the brake-drum of the motor. When the brake is released by turning rod H, by means of its crank *m*, the tension of the coiled spring *i* will immediately release the brake-plate and roller from the brake-drum *o*.

By means of the pulley *e* upon the top of shaft F, the motor may, if desired, be used to run a sewing-machine or other light machinery besides the churn.

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

A churn-motor consisting of the adjustable weight C, operating-cord D, motor A, having a brake-drum, and screw-threaded rod H, having coiled spring *i*, and brake-plate *k*, provided with the friction-roller *p*, all constructed and combined to operate substantially as and for the purpose herein shown and specified.

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

JULIUS A. ALEXANDER.

Witnesses:

THOS. P. GARRETT,
JOHN W. CRABTREE.