

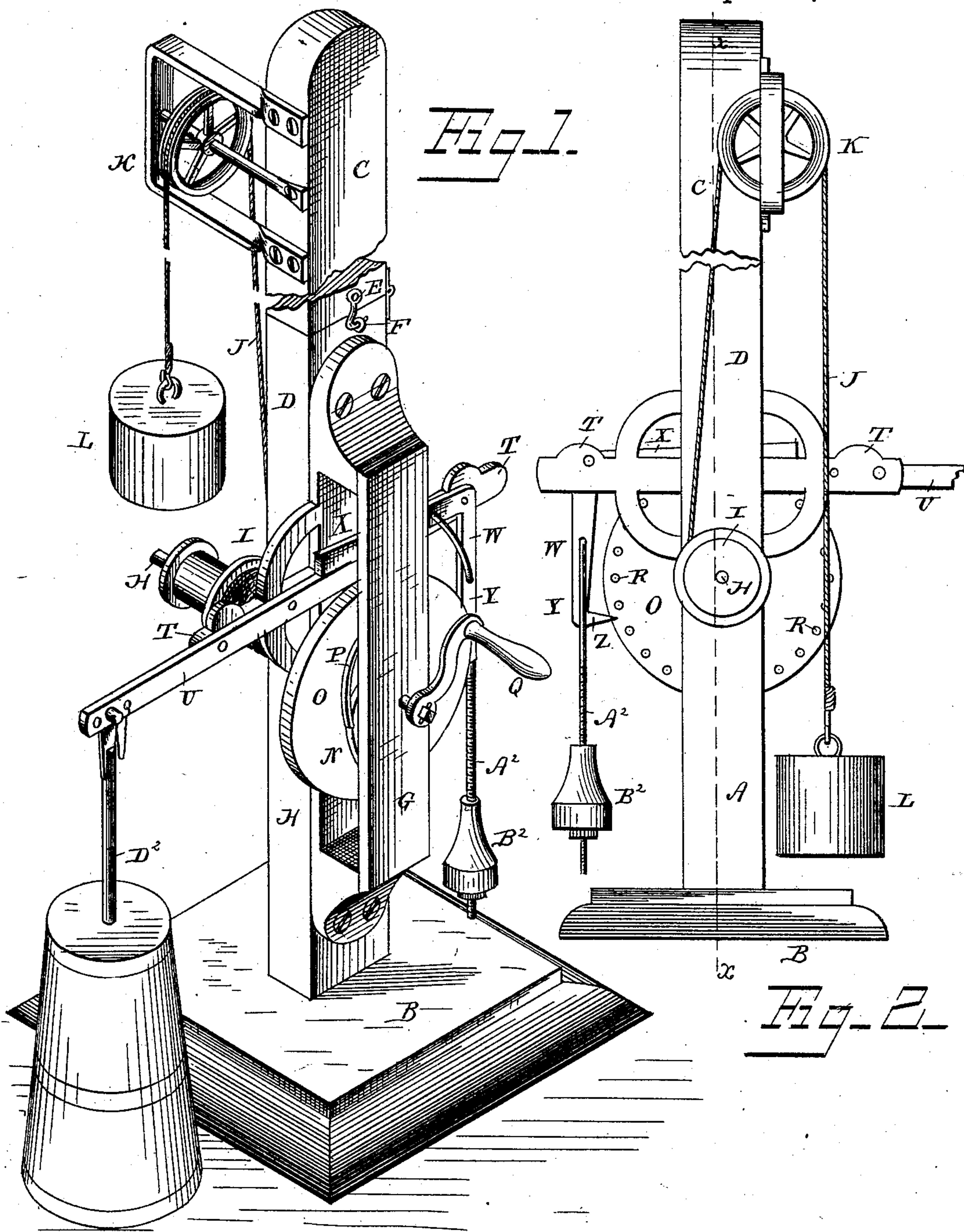
(No Model.)

2 Sheets—Sheet 1.

N. MOSHER.
CHURN MOTOR.

No. 275,691.

Patented Apr. 10, 1883.



WITNESSES
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J. R. Little

N. Mosher,
INVENTOR
by A. Snow & Co.
Attorneys.

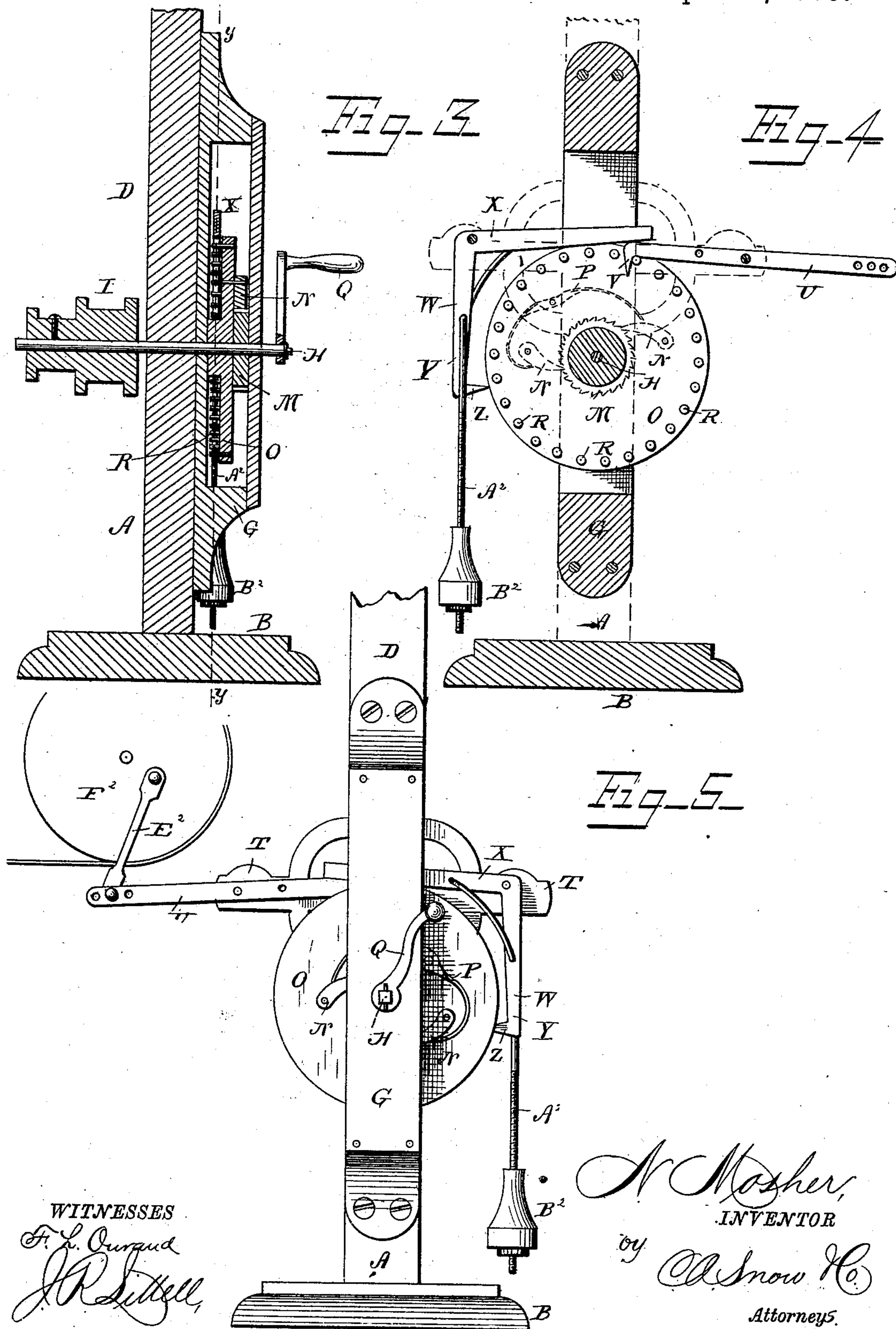
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UNITED STATES PATENT OFFICE.

NELSON MOSHER, OF EAST VENICE, NEW YORK.

CHURN-MOTOR.

SPECIFICATION forming part of Letters Patent No. 275,691, dated April 10, 1883.

Application filed February 17, 1883. (No model.)

To all whom it may concern:

Be it known that I, NELSON MOSHER, a citizen of the United States, residing at East Venice, in the county of Cayuga and State of New York, have invented a new and useful Churn-Motor, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to motors for driving churns and light machinery of all kinds; and it consists in certain improvements in the construction of the same, having for their object to produce a simple and effective machine, as will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a perspective view of my improved motor. Fig. 2 is a rear elevation of the same. Fig. 3 is a vertical sectional view on the line *xx* in Fig. 2. Fig. 4 is a vertical transverse sectional view of the operating mechanism, taken on the line *yy* in Fig. 3; and Fig. 5 is a front view, illustrating a modification.

The same letters refer to the same parts in all the figures.

A in the drawings designates a post or upright mounted securely in a suitable base, B, and constituting the frame of my improved motor. The upright A, which should be of considerable height, may consist of two parts or sections, C and D, the upper one of which, C, is hinged to the lower one, D, and secured in position, when erected, by means of a hook, E, engaging an eye, F, at the upper end of the lower section, D. When the device is not in use the upright may be folded, thus enabling the machine to be readily stored away.

The front side of the upright A is provided with a bracket, G, having bearings for a shaft, H, extending through the upright A, and provided in rear of the latter with pulleys or drums I, upon one of which is wound a rope, J, passing over a pulley, K, at the top of the upright A, and carrying a weight, L, by which the machinery is to be driven.

Upon the shaft H, within the bracket G, is secured a ratchet-wheel, M, engaging a pawl, N, pivoted upon the face of a wheel or disk, O, journaled loosely upon the shaft H. The pawl N is held in contact with the ratchet-wheel M by a suitably-arranged spring, P.

The front end of the shaft H has a crank, Q, by which the said shaft may be revolved, so as to wind the rope J upon the drum I, to which it is attached, and elevate the weight L.

The inner side or face of the wheel or disk O is provided with inwardly-projecting studs R, upon which friction-rollers S may be journaled.

The bracket G is provided with laterally-projecting arms T T, to one of which is pivoted a lever, U, the inner end of which has a beveled stud, V, extending nearly to the shaft H, if it is desired that the stroke of the lever shall be long. If a shorter stroke of the lever is required, the beveled stud V may be shortened accordingly. To the other arm T is pivoted a bell-crank lever, W, the inner arm of which, X, presses on top of the lever U, and the outer downwardly-projecting arm of which, Y, has an inwardly-projecting beveled stud, Z, engaging the teeth or studs R of the wheel or disk O.

To the arm Y of the lever W is secured a downwardly-projecting pendulum-rod, A², carrying a ball or weight, B², which is vertically adjustable upon the said rod by a pin, C², passing transversely through the said weight and rod, or in any other suitable manner.

To the outer end of the lever U is pivoted the dasher-staff D² of the churn to be operated by the machine; or the said lever may, as in Fig. 5, be connected by a pitman, E², with the driving-wheel F² of any machinery to be driven.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation of my invention will be readily understood.

By means of the crank at its front end the shaft H may be revolved, so as to wind the rope J upon the drum and hoist the weight. When the latter is allowed to drop, it causes the shaft H to revolve, thus revolving the wheel or disk O, which is connected to the said shaft by the pawl-and-ratchet mechanism above described. The studs R (or the rollers journaled upon the said studs) will successively bear against the inner beveled side of the stud V upon lever U, raising the inner end of said lever, which, by pressure upon the under side of the inner arm of the bell-crank lever W, manipulates the latter, so as to throw the

escapement-stud Z in between two of the studs upon the wheel O. As the latter continues to revolve, the lower arm of the bell-crank lever is forced outward by the pressure upon the escapement-stud, the impetus given to the said lever by the pendulum-weight being sufficient to cause it to depress the inner end of the lever U, the beveled stud at the end of which is thus again placed in position to be struck by one of the studs R upon the wheel O. By varying the size of the latter and proportioning it properly to other parts of the machine, the speed and power of the same may be easily regulated.

I claim as my invention and desire to secure by Letters Patent of the United States—

1. The combination, with suitable driving mechanism, of the wheel or disk having inwardly-projecting studs carrying friction-rollers, the lever having at its inner end a beveled stud engaging the studs upon the said wheel, and the bell-crank lever having the escapement-stud, all arranged substantially as set forth.

2. The combination, with the wheel or disk having inwardly-projecting studs, of the bell-crank lever, the outer lower arm of which is

provided with an escapement-stud, and with a pendulum-rod having an adjustable weight, and the operating-lever having its inner end arranged under the inner arm of the bell-crank lever, and provided with a beveled stud engaging the teeth or studs of the operating-wheel, substantially as set forth.

3. As an improvement in motors, the combination of the folding upright carrying the weight-rope pulley, the shaft carrying the drums, a ratchet-wheel, and a loose disk having a pawl engaging said ratchet, the rope and weight, studs projecting inwardly from the inner face of the wheel or disk, the operating-lever having a beveled stud engaging the studs upon the said wheel, and the bell-crank lever having the escapement-stud, and a pendulum-rod provided with an adjustable weight, all constructed, arranged, and operating substantially as and for the purpose set forth.

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

NELSON MOSHER.

Witnesses:

A. H. ANDREWS,
LEE HEWITT.