(No Model.)

R. F. FLEAK.

MECHANICAL MOVEMENT.

No. 367,340. Patented July 26, 1887.

Fig. 1

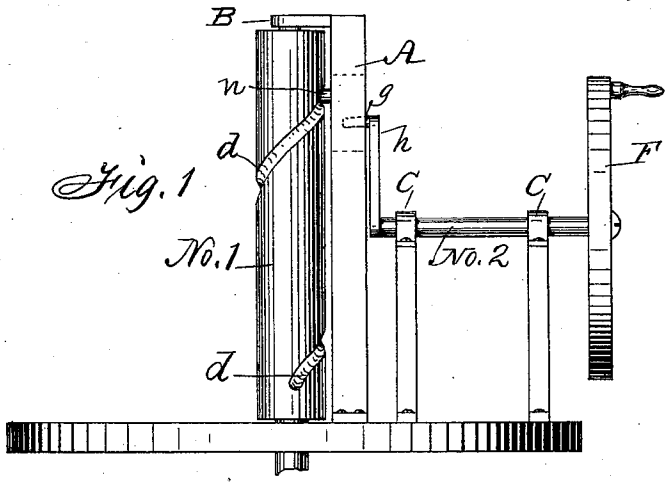


Fig. 2

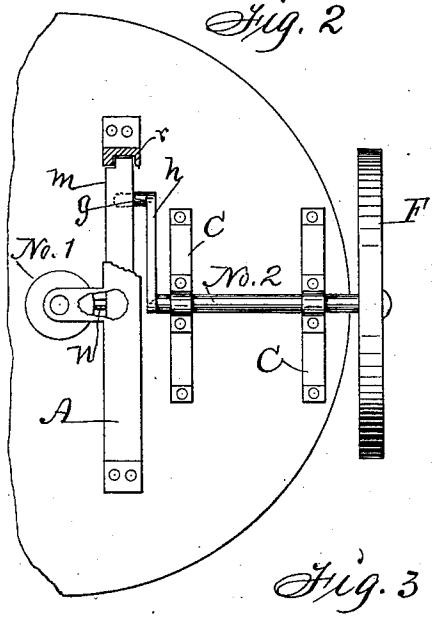


Fig. 5

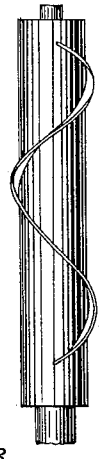


Fig. 4

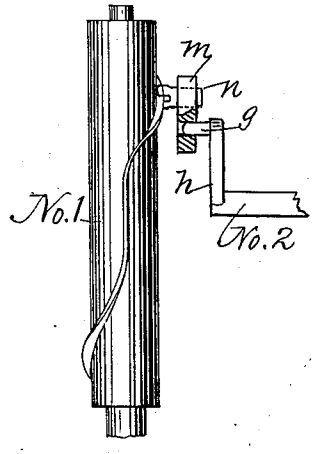
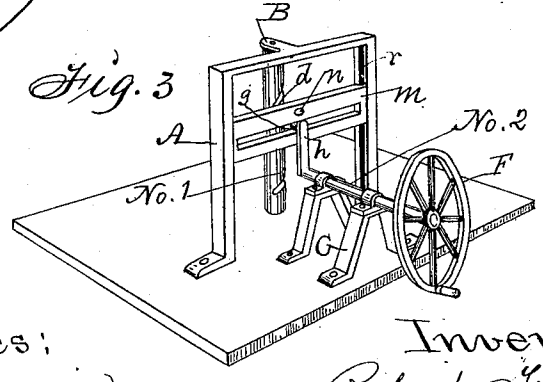


Fig. 3



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N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

ROBERT F. FLEAK, OF STUART, IOWA, ASSIGNOR OF ONE-HALF TO M. A. WILLIAMS, OF SAME PLACE.

MECHANICAL MOVEMENT.

SPECIFICATION forming part of Letters Patent No. 367,340, dated July 26, 1887.

Application filed November 8, 1886. Serial No. 218,329. (No model.)

To all whom it may concern:

Be it known that I, ROBERT F. FLEAK, a citizen of the United States of America, and resident of Stuart, in the county of Guthrie and State of Iowa, have invented a new and useful Mechanical Movement, of which the following is a specification.

My object is to produce intermittent rotary motions in reverse ways by means of a continuous rotary motion, and I accomplish the same by the construction and combination of a shaft having a groove or flange on its periphery, a frame adapted to support the grooved shaft, a sliding cross-piece having a fixed pin, and a crank-shaft, as hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a side view, Fig. 2 a top view, and Fig. 3 a perspective view, of my complete device. Fig. 4 shows a flange on the shaft extended in reverse ways from a straight vertical section in the center. Fig. 5 shows a flange in serpentine form.

A is the frame, preferably made of cast metal and adapted to be fixed on the cover of a churn. It has a lateral extension, B, at its top, that serves as a bearer to support the rotating grooved or flanged shaft.

C are bearers formed on or fixed to the base to support the crank-shaft in a right-angled position to the grooved or flanged shaft.

No. 1 is a grooved shaft and No. 2 the crank-shaft.

d is a groove formed in the surface of the shaft No. 1, or fixed thereto in any suitable way.

F represents a driving-wheel fixed to the end of the crank-shaft No. 2.

g is a wrist-pin fixed to the crank *h* of the shaft No. 2.

m is a cross-bar that slides up and down in grooves in the frame. A pin, *n*, fixed to this cross-bar projects into the groove *d* of the shaft No. 1, and the pin *g* on the end of the crank *h* projects into a slot, *r*, in the cross-bar, as clearly shown in Fig. 3, which slot it traverses when the device is in operation.

When the wheel F is rotated by hand, or power applied in any other way, the crank on the end of the shaft No. 2 will slide the pin *g* back and forth in the slot *r* of the cross-bar *m*, and thereby move said cross-bar up and down in its bearings and cause the pin *n* to traverse the groove *d* in the shaft No. 1, as required to perform the function of a cam in imparting a rotary motion to that shaft. As the pin *g* moves in reverse ways in the straight slot in the cross-bar *m*, the rotary motion of the shaft No. 1 will also be in reverse ways as required to operate a churn-dasher attached to the lower end of the shaft, or other operative device that may be substituted for the dasher.

The number of revolutions or the fractional parts of a revolution of the No. 1 shaft will be governed by the form of the groove *d*, which may be a regular spiral curve, as shown in Fig. 1, or provided with one or more straight sections, as shown in Fig. 4, or serpentine bends, as shown in Fig. 5.

I claim as my invention—

1. The combination of a straight shaft or cylinder having a groove on its periphery, a shaft having a crank on its end in a right-angled position to the grooved shaft, a wrist-pin on the end of the crank, a sliding cross-bar having a pin projecting into the groove in the shaft, and a frame or base having bearings to support the two shafts, to operate in the manner set forth.

2. The frame A B C, the rotating shaft No. 1, having a groove, *d*, the shaft No. 2, the driving-wheel F, having a crank, *h*, the pin *g*, and the sliding bar *m*, having a slot, *r*, and a pin, *n*, arranged and combined to operate in the manner set forth.

ROBERT F. FLEAK.

Witnesses:
E. ADAMSON,
A. C. SAVAGE.