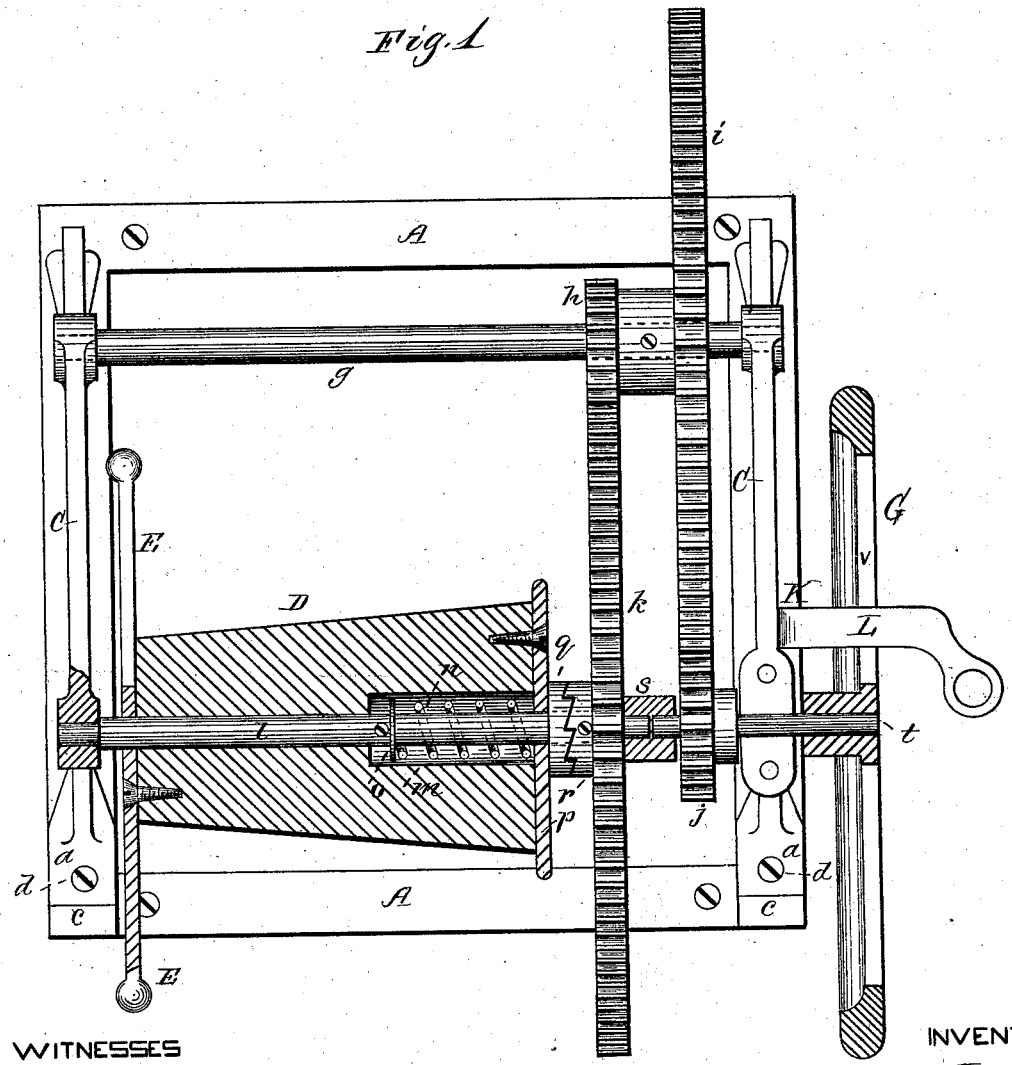
2 Sheets—Sheet 1.

L. P. KING & A. M. WHITE.

Motor.

No. 207,186. Patented Aug. 20, 1878.

Fig. 1



WITNESSES

Nat. E. Oliphant.

Wm. B. Brown

INVENTORS

Leicester P. King,
Arthur M. White,
per Chas. N. Fowler,
Attorney

2 Sheets—Sheet 2.

L. P. KING & A. M. WHITE.

Motor.

No. 207,186. Patented Aug. 20, 1878.

Fig. 3

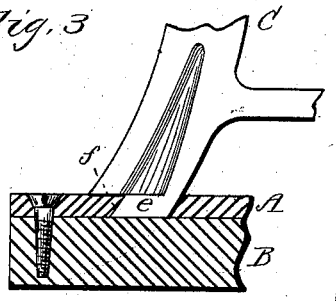


Fig. 4.

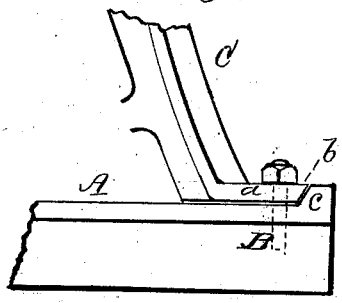
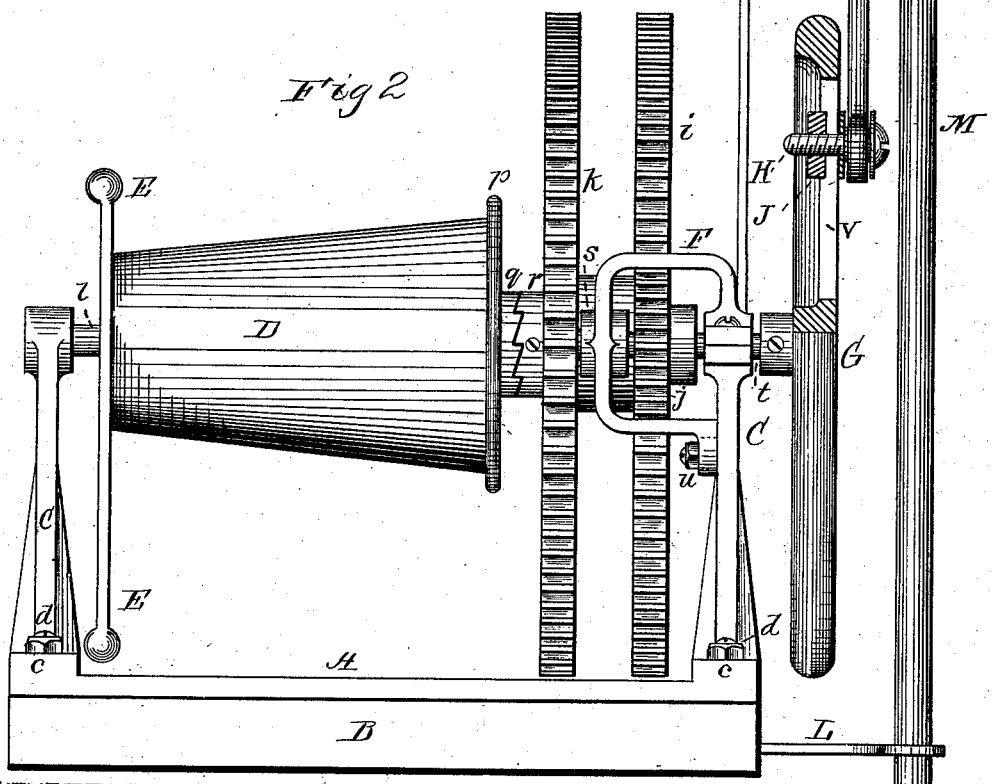


Fig 2



WITNESSES

Nat. E. Oliphant

Wm. B. Brown,

INVENTORS,

Leicester P. King,

Arthur M. White.

per Chas. H. Fowler.

Attorney.

UNITED STATES PATENT OFFICE.

LEICESTER P. KING AND ARTHUR M. WHITE, OF CINCINNATI, OHIO.

IMPROVEMENT IN MOTORS.

Specification forming part of Letters Patent No. **207,186**, dated August 20, 1878; application filed August 2, 1878.

To all whom it may concern:

Be it known that we, LEICESTER P. KING and ARTHUR M. WHITE, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and valuable Improvement in Motive Powers; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation 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 representation of a plan view of my invention, partly in section. Fig. 2 is a side elevation, partly in section. Figs. 3 and 4 are detail views, partly in section, showing the manner of connecting the frames to the bed-plate.

This invention has relation to that class of motors operated by springs or weights, and used for the purpose of running sewing-machines and for churning, or operating fly-fans, pumping water, &c.

The object of the present invention is to construct a motor of the above character in a manner that will render the same not only simple in its parts, but perfect in its operation, and greatly lessening the cost in their manufacture, thereby bringing them within the reach of every one requiring such a device, as will be hereinafter described.

In the accompanying drawings, A represents a skeleton bed-plate, of any suitable metal, secured to a base, B. To each side of the plate A is a frame, C, each frame forming supports for the several operating parts of the motor. Each of the frames C is formed with a flanged plate, *a*, having an inclined end, *b*, which abuts against a correspondingly-inclined shoulder, *c*, upon the plate A, and secured to the plate by suitable screw-bolts *d*. The frames C, directly opposite the flanged plates *a*, have inclined or curved tongues *e*, which fit within inclined openings *f* formed in the plate A.

Journaled within the frames C is a shaft, *g*, carrying gear-wheels *h i*, the latter meshing in the teeth upon the wheel *j*, while the former engages with the teeth upon the wheel *k*. The shaft *l*, to which the gear-wheel *j* is keyed, carries a conical drum, D, which loosely fits thereon, and is provided at its smaller end with handles E for operating the same. The drum D is of tapering or conical form for the purpose of equalizing the power in churning, as, when the cream gets denser, the power is increased. The drum D, at its larger end, is formed with a chamber, *m*, for the reception of a coiled spring, *n*, which passes around the shaft *l*, one end of said spring bearing against a washer, *o*, rigidly secured to the shaft, and the opposite end against a plate, *p*. The plate *p* is formed with ratchet-teeth *q*, which engage with teeth *r* projecting from the axis of the gear-wheel *k*. The inner end of the shaft *l* has its bearing in a short box, *s*, formed with a bracket, F. This bracket, with the box *s*, is cast in one piece, the upper part thereof being bolted or otherwise suitably connected to the plate C at its top, forming a boxing for a short shaft, *t*, which carries the wheel *j* and the crank-wheel G. The bracket F, at its lower end, is secured to the inner side of the plate C by bolt and nut *u*, said bolt passing through an elongated slot in the end of the bracket to admit of its adjustability. The crank-wheel G is formed with an elongated slot, *v*, through which passes a screw-bolt, H, and to which is secured one end of a crank-arm, I. This bolt has secured upon its threaded end a clamping-nut, J, formed with a rib or flange fitting within the slot *v*, so that the screw-bolt H, with the crank-arm, can be adjusted and held at any desired distance from the periphery or axis of the crank-wheel. A guide-plate, K, with right-angled arms L, is bolted to one of the plates C, the arms L being formed with suitable openings for receiving the vertical rod or shaft M of the churn-dasher, pump-rod, &c. This plate K, with its arms L, forms guides for both the top and bottom of the rod, thereby admitting the position of the motor to be varied.

Having now fully described our invention, what we claim, and desire to secure to secure by Letters Patent, is—

1. The tapering or inclined drum D, provided with handles E, said drum formed with a chamber for the reception of a coil-spring, *n*, for keeping the ratchet-teeth *q* engaged with the ratchet *r* of the wheel *j*, substantially as and for the purpose described.

2. The drum D, spring *n*, and ratchet-teeth *q*,

in combination with the wheel *k*, with ratchet teeth *r*, and the wheels *h i j*, for driving the crank-wheel G, substantially as and for the purpose specified.

3. The bed-plate A and frames C, constructed as described, in combination with the shafts *g l*, tapering drum D, spring *n*, ratchet-teeth *q r*, and wheels *k h i j*, substantially as and for the purpose set forth.

4. The bed-plate A and frames C, connected together, as described, in combination with the adjustable bracket F, formed with journal-box *s*, substantially as and for the purpose specified.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

LEICESTER PURINTON KING.
ARTHUR MELVILLE WHITE.

Witnesses:
GUMAL MERKEL,
JOSEPH RICHTER.