

Klingenberg & Mau.

Operating Churns.

N^o 9,942.

Patented Jan. 29, 1869.

Fig. 1.

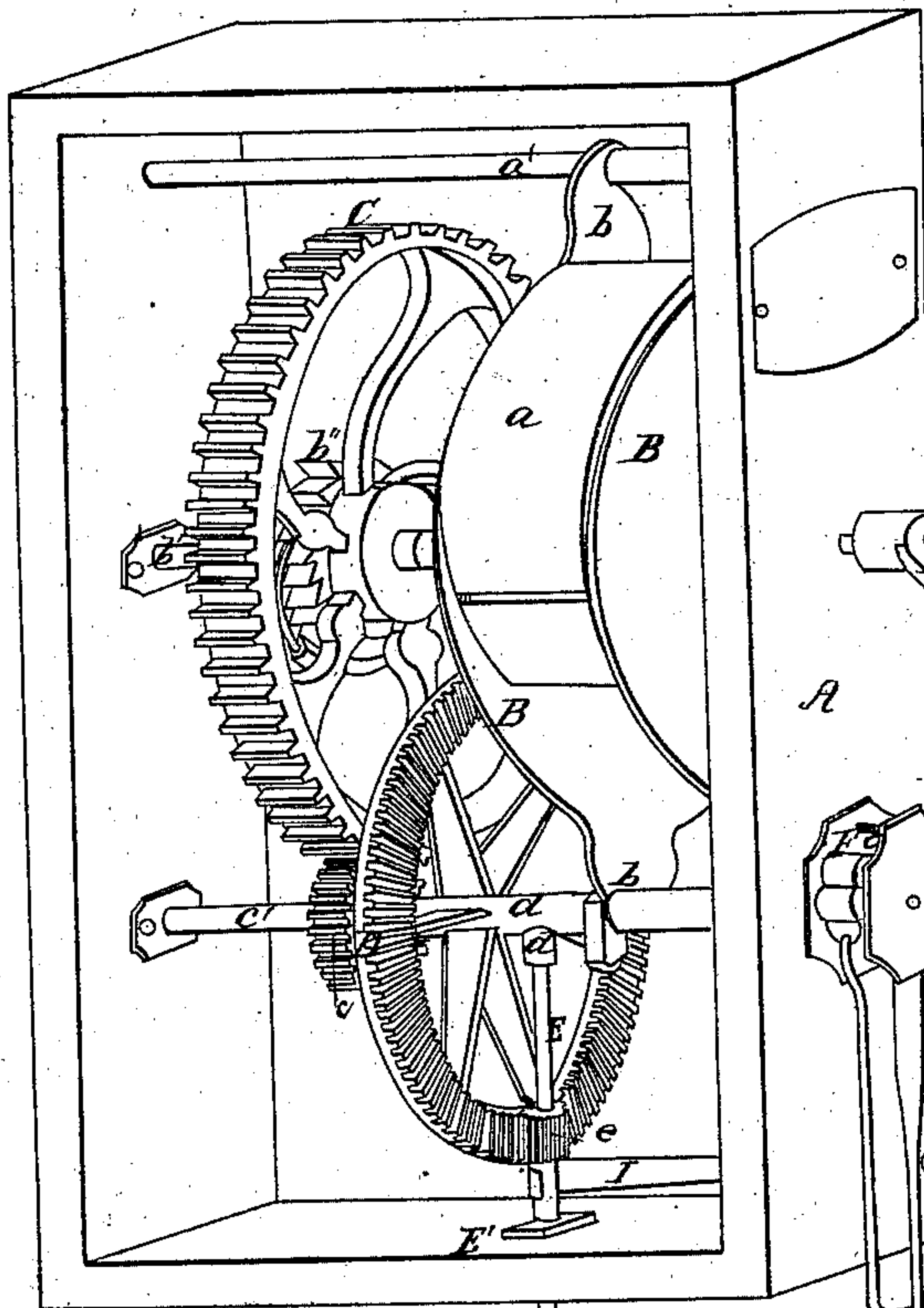


Fig. 2.

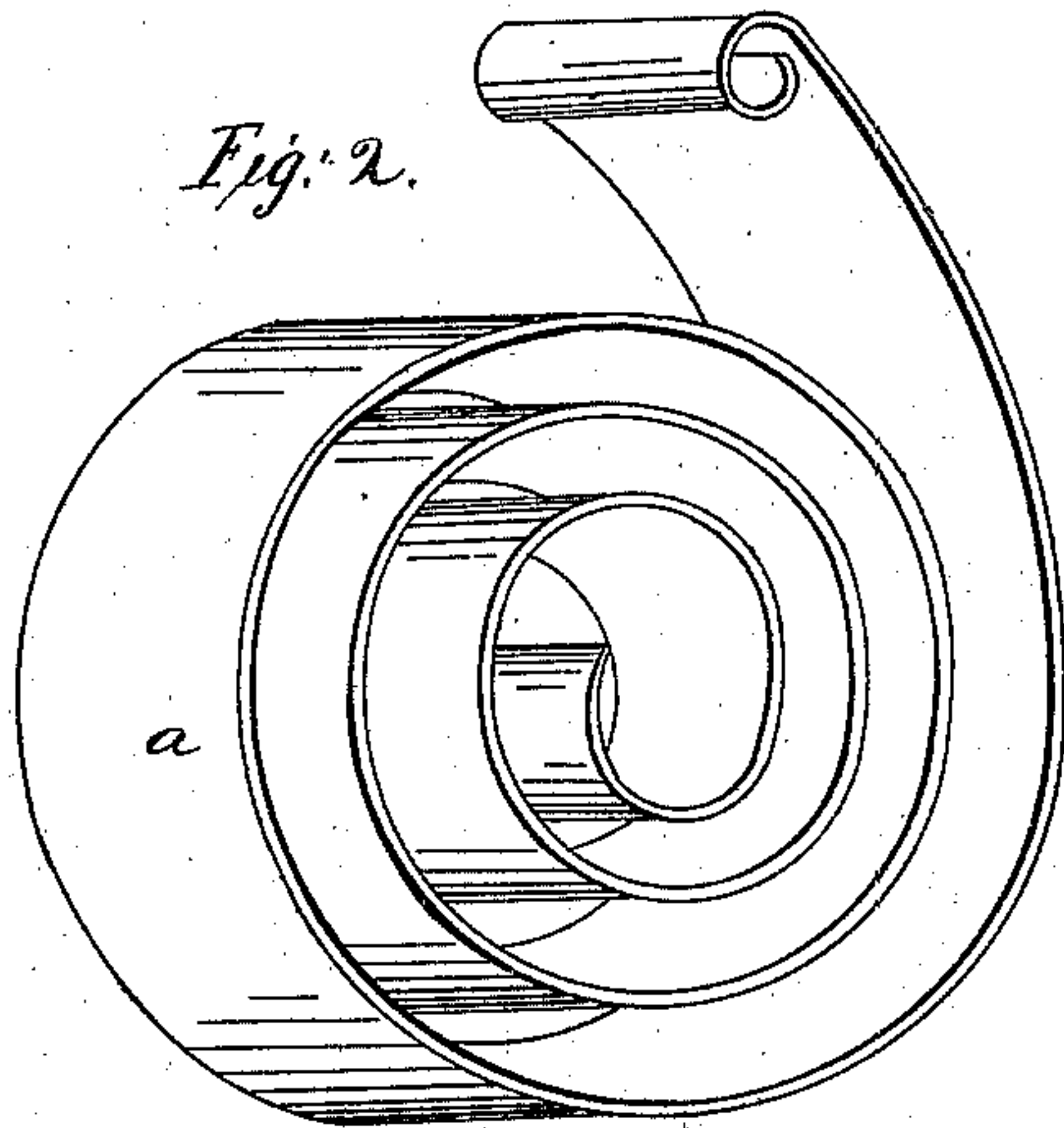


Fig. 3.

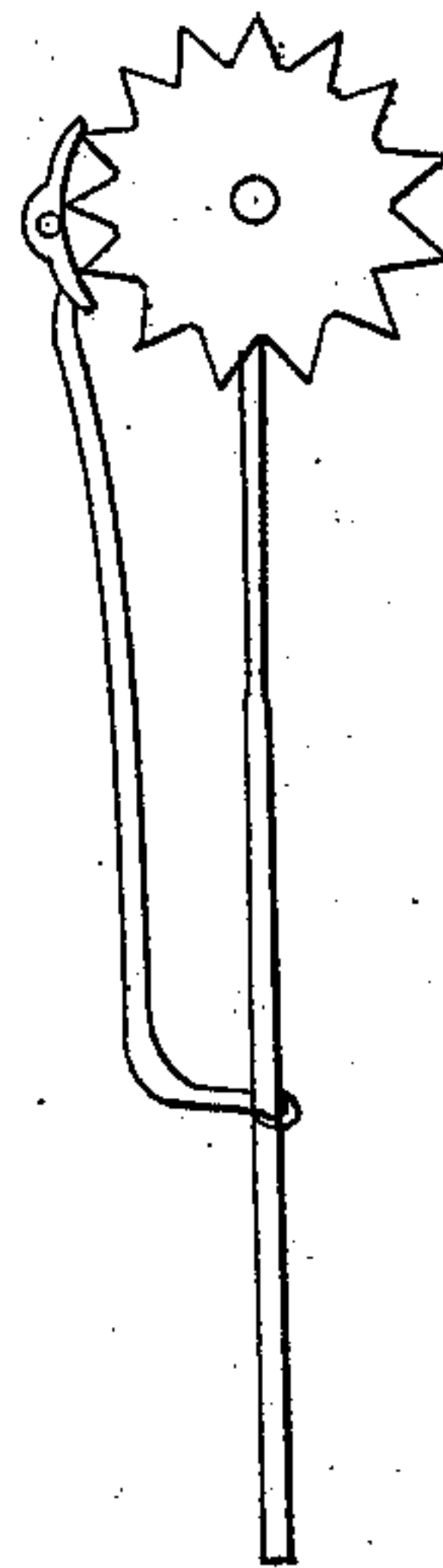
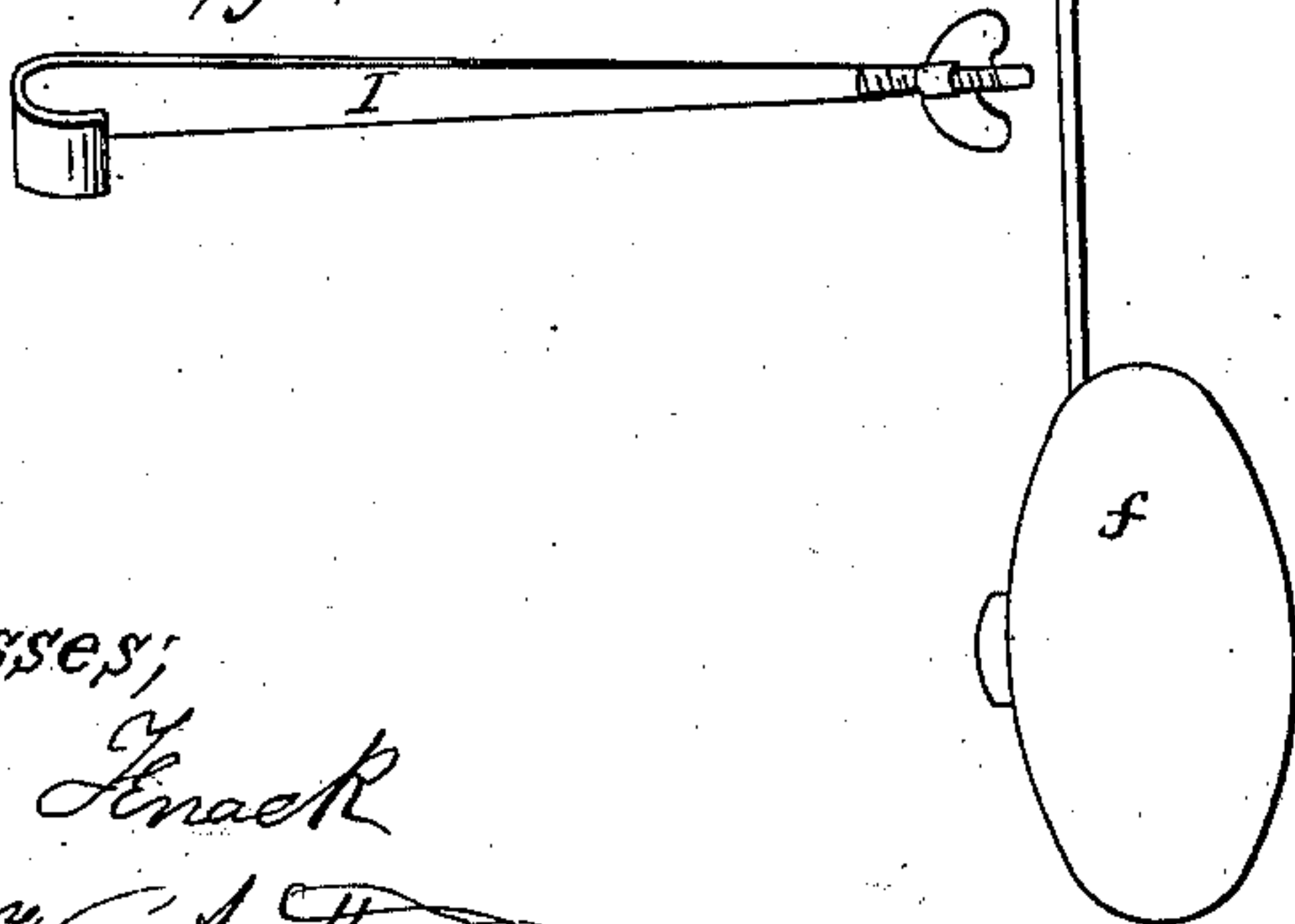


Fig. 4.



Witnesses;

*Henry Enack
J. W. Anthony*

Inventor;

*Haruk F. Klingenberg
John Gillen*

United States Patent Office.

HENRY J. KLINGENBERG AND JOHN J. MAU, OF DAVENPORT, IOWA.

Letters Patent No. 91,942, dated June 29, 1869.

APPARATUS FOR OPERATING 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 we, HENRY J. KLINGENBERG, and JOHN J. MAU, of Davenport, in the county of Scott, and State of Iowa, have invented a new and useful Improvement in Spring-Power for Churns; and we do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to an improved spring-device for imparting motion; and consists of certain details of construction, which will more fully appear hereinafter.

In the drawings—

Figure 1 is a perspective view of our invention.

Figure 2 is a perspective view of the spring.

Figures 3 and 4 are views of parts detached.

To enable others skilled in the art to make and use our invention, we will now proceed to describe fully its construction and operation.

A represents the frame-work of our invention, in which the mechanism is located.

a represents the spring, which is of the ordinary coiled form, one end of which is attached to the cross-bar *a'*.

The spring *a* is enclosed between the metal disks B, which are provided with ears, *b*, by means of which they are secured in position.

b' represents the driving-shaft, upon which the spring *a* bears, and which is provided with the ratchet *b''*.

A cog-wheel, C, is attached loosely to the shaft *b*, besides the ratchet *b''*, and is provided with a spring-pawl, which engages the latter.

The cog-wheel C meshes with a pinion, *c*, on the shaft *c'*, which is further provided with a bevel-gear wheel, D.

d represents a casing, surrounding the shaft *c'*, between the wheel D and the frame, on which is a hollow projection, *d'*, which forms the upper bearing of vertical shaft E, on which is the bevel-pinion *e*, which meshes with the wheel D.

The lower end of the shaft E passes through the cross-piece E' of the frame A, and is attached in any suitable manner to the apparatus to be driven.

On the end of the shaft D, on the outside of the frame A, is the escapement F, which is of the usual form, and is provided with the pendulum *f*.

The shaft *b* also projects beyond the frame A, and

has a square head, to which is fitted the key, or crank H.

I represents the brake, which consists of a strip of metal, passing through the frame A, and gradually widening until it reaches the shaft E, where it is bent into a semicircle, and partially clasps an enlargement of said shaft below the pinion *e*.

On the outside of the frame A, the strip I is provided with a screw-thread and thumb-screw, by means of which the brake is regulated.

The operation of our invention will be readily understood.

The spring *a* is wound up, by turning the crank H in the proper direction, which will cause the ratchet *b''* to revolve backward, the pawl slipping over the teeth thereof, while the cog-wheel C, not being rigidly attached to the shaft, remains stationary until the spring is wound, which will revolve the shaft in the opposite direction, causing the teeth of the ratchet to engage the pawl and revolve the cog-wheel C, which imparts motion to the pinion *c* and bevel-gear D *e*, by which means a rotary motion is imparted to the shaft E.

The motion of the mechanism may be regulated by shortening or lengthening the pendulum, which is provided with a screw-thread for the purpose, or by putting on the brake, which is done by turning up the set-screw, and, if desired, the motion may be entirely stopped by the latter device.

This invention may be applied to a variety of purposes, and may be so arranged as to give motion to a horizontal or vertical shaft. Being easily regulated, is well adapted to light kinds of work, particularly churning, which is the chief purpose contemplated.

Having thus fully described our invention,

What we claim as new, and desire to secure by Letters Patent, is—

The spring *a*, confined within the metal disks B, shaft *b*, ratchet *b'*, cog-wheel A, pinion *c*, bevel-gear D *e*, shaft E, escapement F, and brake I, when constructed and arranged as described, for the purpose set forth.

This specification signed and witnessed, this 27th day of April, 1869.

HENRY J. KLINGENBERG.
JOHN J. MAU.

Witnesses:

HENRY KRACK,
F. GEO. ANTHON.