

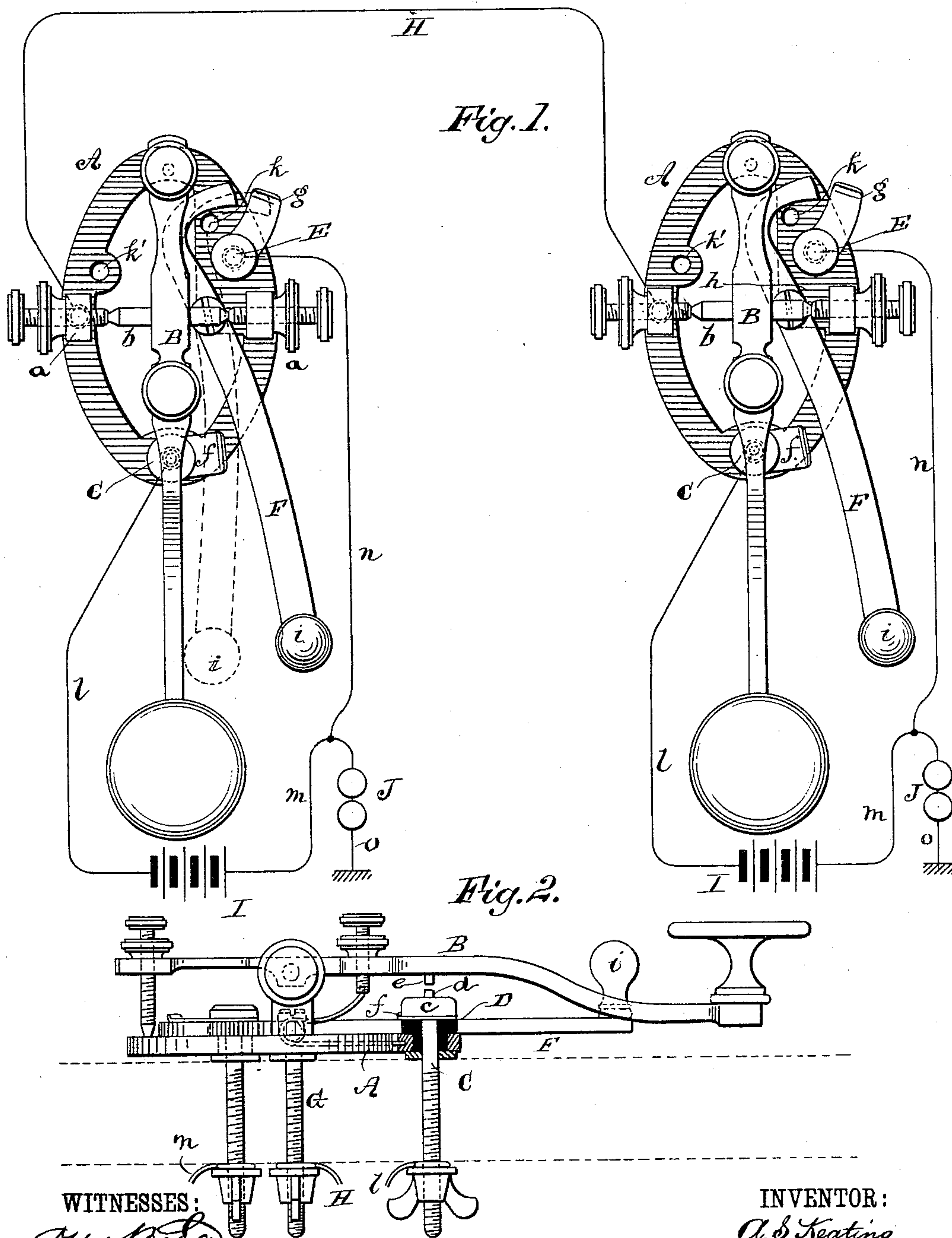
(No Model.)

2 Sheets--Sheet 1.

A. S. KEATING.
TELEGRAPH KEY.

No. 366,400.

Patented July 12, 1887.



WITNESSES:
Mr. Berger
C. Sedgwick

INVENTOR:
A. S. Keating
BY *Munn & Co*
ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

A. S. KEATING.
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Fig. 3.

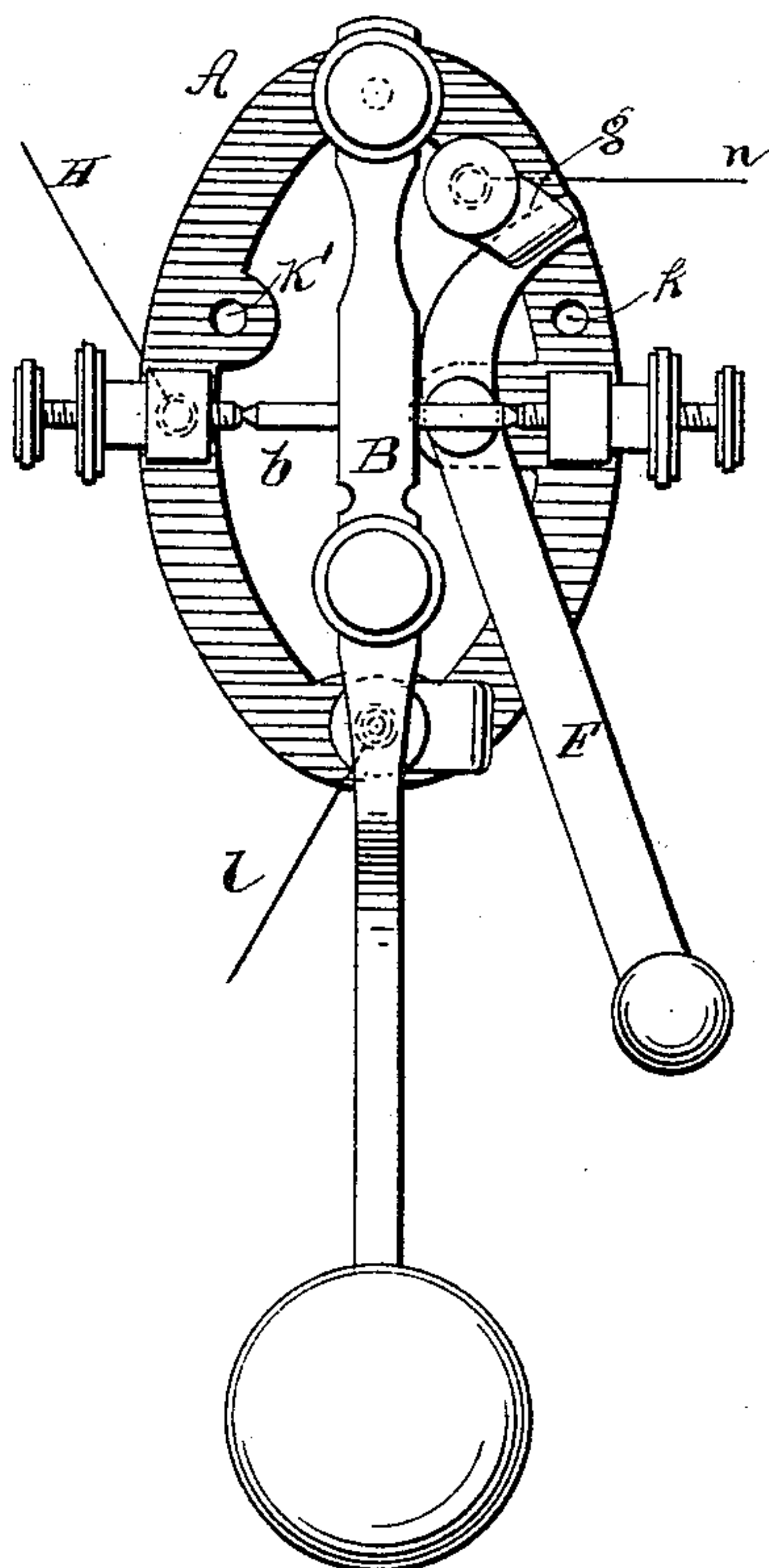
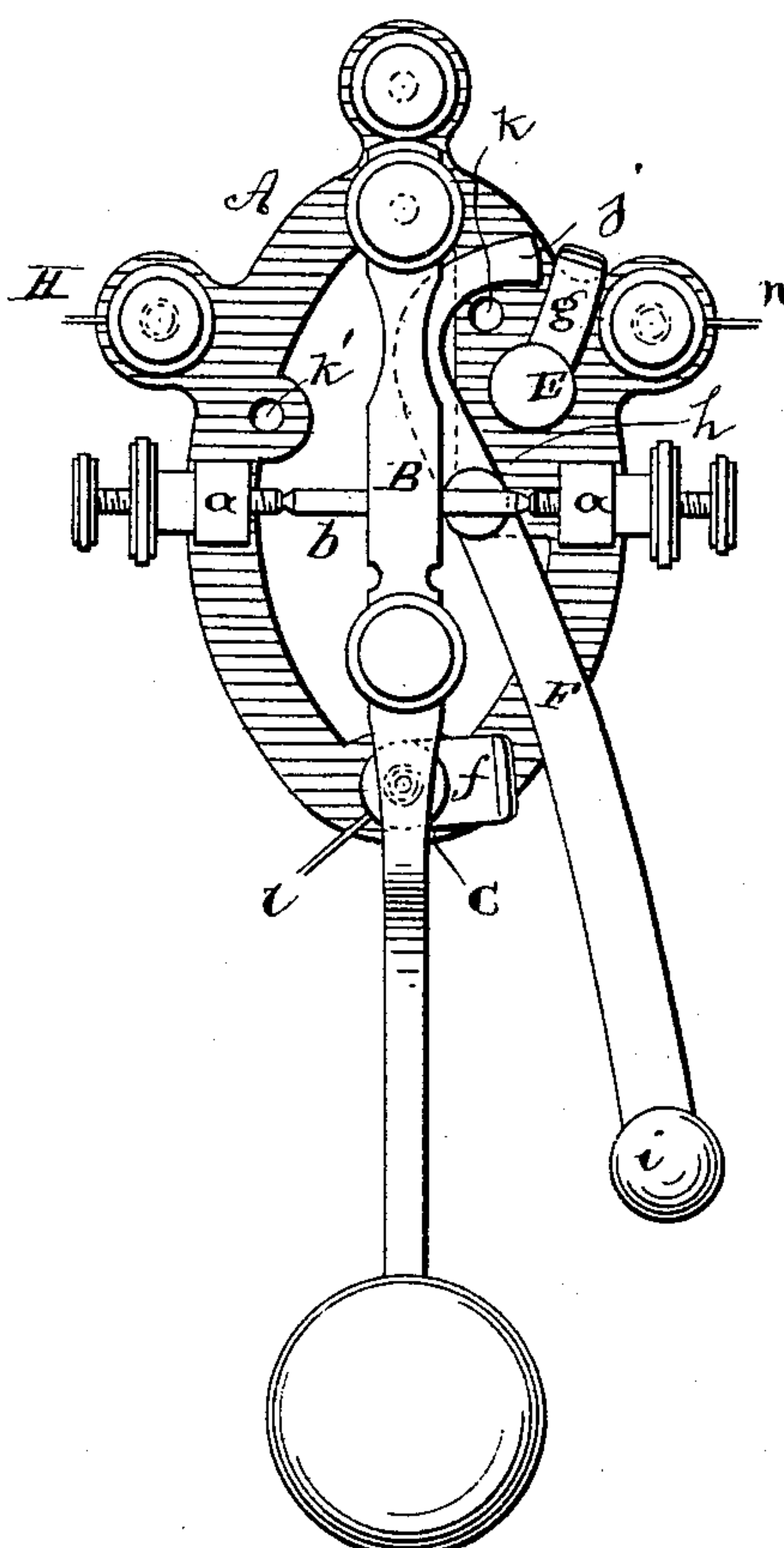


Fig. 4.



WITNESSES:

WITNESSES:
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UNITED STATES PATENT OFFICE.

ALPHONSO S. KEATING, OF CORRY, PENNSYLVANIA.

TELEGRAPH-KEY.

SPECIFICATION forming part of Letters Patent No. 366,400, dated July 12, 1887.

Application filed August 6, 1886. Serial No. 210,212. (No model.)

To all whom it may concern:

Be it known that I, ALPHONSO S. KEATING, of Corry, in the county of Erie and State of Pennsylvania, have invented a new and Improved Telegraph-Key, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a plan view of a pair of my improved telegraph-keys, showing the line and local connections. Fig. 2 is a side elevation. Fig. 3 is a plan view of a key detached from the line and local circuits, and Fig. 4 is a plan view of a modified form of a key.

Similar letters of reference indicate corresponding parts in the different figures of the drawings.

The object of my invention is to provide means for cutting off the current from the main line when the line is not in use, and for allowing signals to be sent over the line from any station when desirable; also, to provide means whereby open-circuit batteries can be used successfully upon a single line-wire.

My invention consists in a key provided with a switch for diverting the main-line circuit from the contact-points of the key, and at the same time allowing the current to pass through the key to the sounder and the earth.

The key is provided with a base-plate, A, of any desired form, having standards *a* for supporting the trunnion *b* on the key-lever B in the usual way. Under the forward end of the key is placed a leg, C, which extends upward through the base-plate A, but is insulated therefrom by the rubber collar D. The upper end of the leg C is provided with a head, *c*, having a contact-point, *d*, corresponding with the contact-point *e*, carried by the key-lever B. Between the head *c* and the rubber collar D is clamped a flat contact spring, *f*. The leg E extends through the base-plate A, but is insulated therefrom, and carries a flat contact-spring, *g*, extending toward the rear of the key.

To a projection, *h*, extending inward from the edge of the plate A, is pivoted the switch-lever F, which is provided at its outer end with the usual knob, *i*, and the end *j*, which extends beyond the pivot, is curved laterally toward the leg E. The switch-lever F is capable of contacting with both contact-springs

f g by swinging its outer end as far as possible toward the key B. When it is desired to make a contact with the rear spring, *g*, only, a plug is inserted in the hole *k*, which serves as a stop to the switch-lever F and prevents it from being moved far enough to bring it into contact with the contact-spring *f*. The base-plate of the key is provided with a leg, G, which communicates electrically therewith and serves to receive the current from the line H.

One pole of the battery I communicates by a wire, *l*, with the leg C, the opposite pole of the battery being connected with the sounder or relay-magnet J by the wire *m*, and the wire *m* also communicates through a wire, *n*, with the leg E. The sounder or relay J is connected with the ground by a wire, *o*. As the connections at opposite ends of the line are the same, one description will answer for both.

When a closed-circuit battery is used, the wire *n* may be detached from the leg E, if desired, allowing the battery to be on the line, as is generally the case with instruments now in use. When it is desired to employ an open-circuit battery, the wire *n* is connected with the leg E, and the plug is inserted in the hole *k*, which will permit the switch-lever F to make an electrical contact with the spring *g*, but will prevent the switch-lever from being moved a sufficient distance to bring it into contact with the spring *f*. When the switch is closed in this manner, the line-wire communicates with the ground through the plate A, switch-lever F, spring *g*, leg E, wire *n*, sounder J, and ground-wire *o*.

A current is sent over the line by disengaging the lever F from the spring *g* and depressing the key-lever B, the current flowing from the battery I through the wire *l*, leg C, and base-plate A to the line H. The current passes through base-plate A of the key at the opposite end of the line, through the lever F of the said key, thence through the spring *g*, leg E, wires *n m*, and sounder or relay J to the ground.

In the modified form shown in Fig. 3 the switch-lever F' is arranged upon the same side of both contact-springs *f g*, so that the lever may be used for making a contact with either of the springs separably, but cannot be brought into contact with both at the same time. To prevent the lever from coming in contact with

the spring *f*, the plug is inserted in the hole *k*, as in the other case, and when the plug is not in use it is inserted in the hole *k'*.

In the form shown in Fig. 4 the construction is the same as that shown in Fig. 1, and with the exception of dispensing with the legs and making the connections directly with the frame and with the springs *g f*, the frame A in this case to be connected with the table by means of screws.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a telegraph-key, the combination of the base-plate A, key-lever B, the legs C E, supported by the base-plate, but insulated therefrom, the contact-springs *f g*, attached to the legs C E, and the switch-lever F, pivoted to the base-plate and arranged to contact with both springs *f g*, substantially as shown and described.

2. The combination of a base-plate, A, pro-

vided with the aperture *k* for receiving a stop-pin, a key-lever, B, the legs C E, secured to the base-plate, but insulated therefrom, the springs *f g*, secured to the legs C E, and the switch-lever F, pivoted to the base-plate and arranged to contact with one or both of the springs *f g*, substantially as shown and described.

3. The combination, with the key provided with the base-plate A, key-lever B, insulated legs C E, contact-springs *f g*, and switch-lever F, of the line-wire H, connected with the base-plate, the battery I, the wire *l*, connected with the leg C, the wire *m*, sounder J, ground-wire *o*, and the wire *n*, communicating with the wire *m* between the battery and sounder and connected electrically with the leg E, substantially as shown and described.

ALPHONSO S. KEATING.

Witnesses:

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H. L. KING.