

(No Model.)

R. A. MACREADY.

TELEGRAPHIC KEY.

No. 346,930.

Patented Aug. 10, 1886.

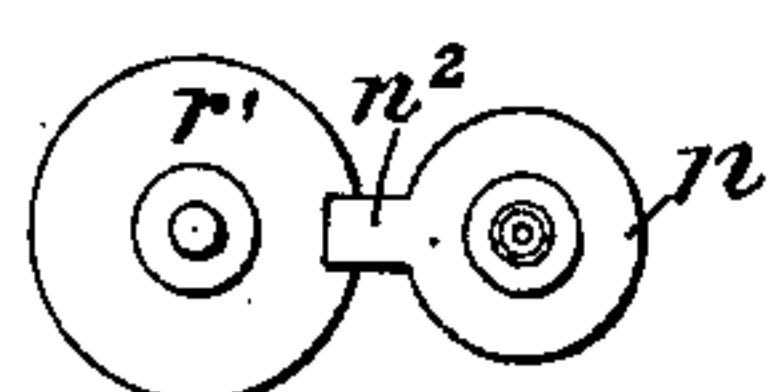
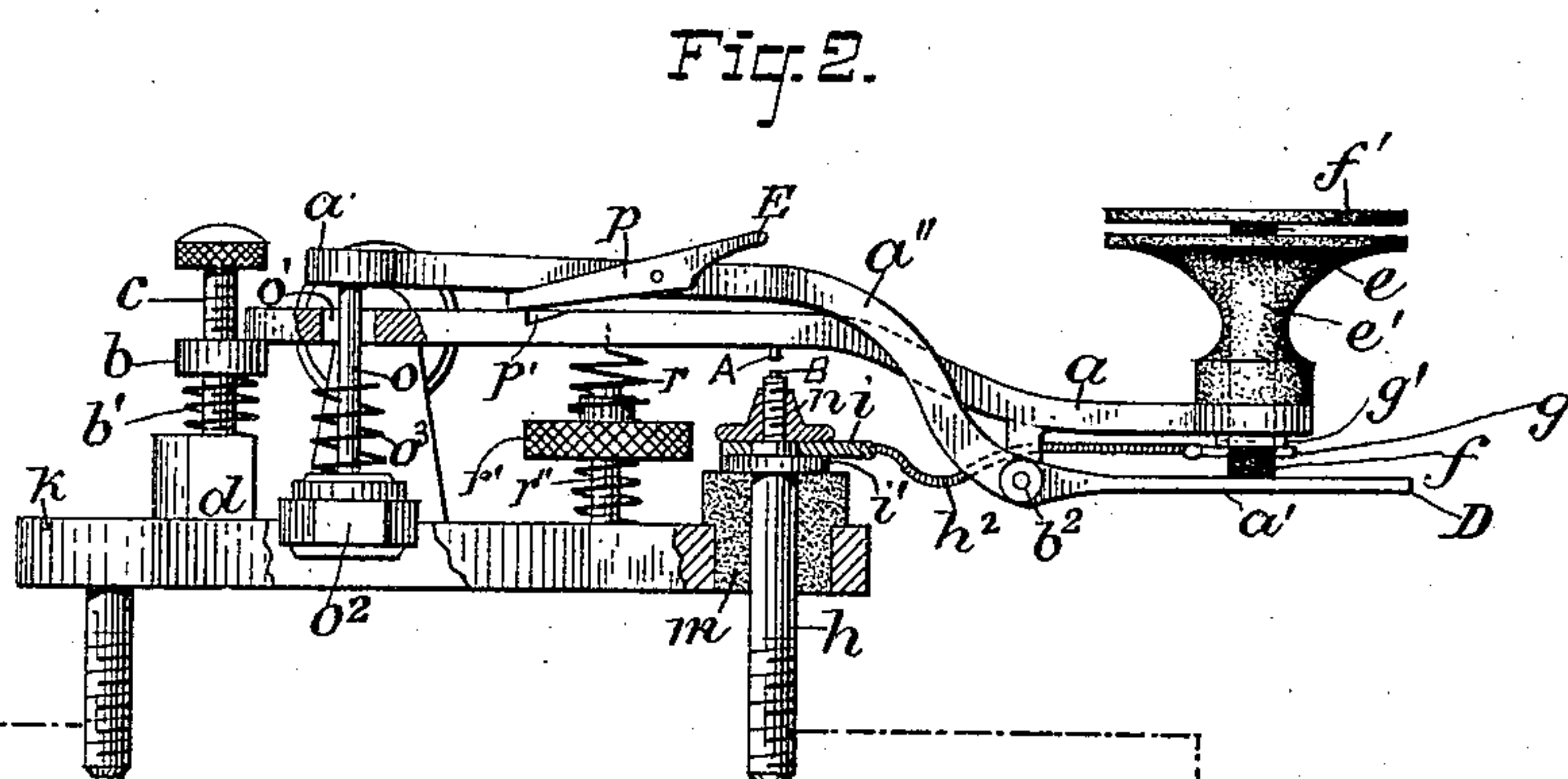
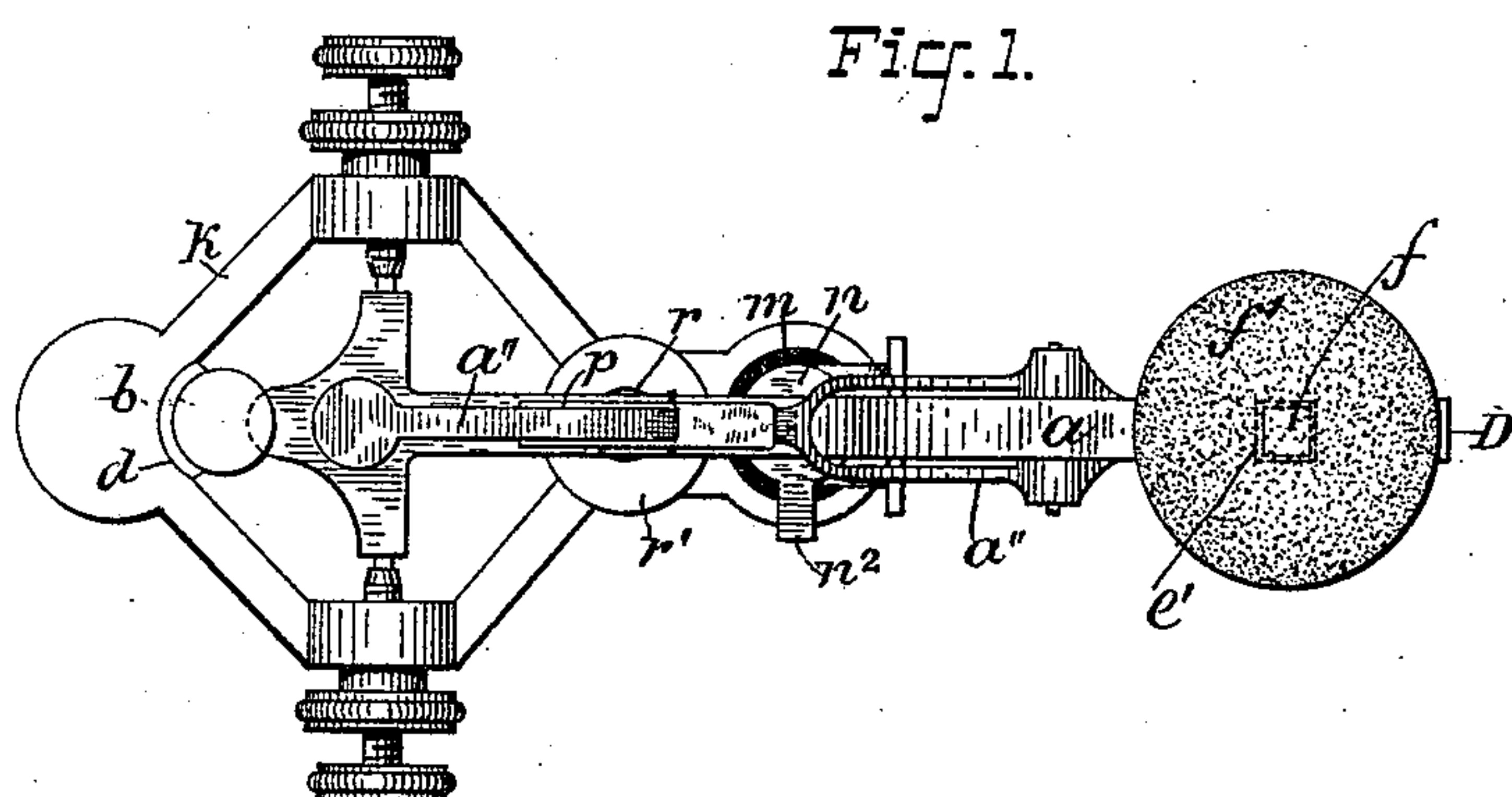


Fig. 3.

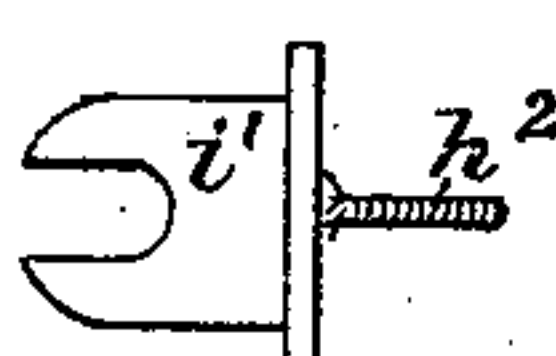


Fig. 4.

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TELEGRAPHIC KEY.

SPECIFICATION forming part of Letters Patent No. 346,930, dated August 10, 1886.

Application filed March 11, 1886. Serial No. 194,799. (No model.)

To all whom it may concern:

Be it known that I, ROBERT ASHTON MACREADY, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Telegraphic Keys, of which the following is a specification.

My invention relates to improvements in electric-telegraph keys in which the opening and closing of the same is performed automatically; and the objects of my improvements are, first, to provide a key that will open and close automatically, and at the same time offer the least resistance possible to the electric current and make a perfect connection; second, to provide means for cutting out the automatic circuit-closing mechanism and keep the key in open circuit for any period of time desired; third, to provide suitable mechanism for keeping the base of the instrument in closed circuit when the levers forming part of the key shall have been removed for repairing or cleaning.

The first part of my invention consists of a tongue having a knob of insulating material rigidly fixed to one end thereof. Said knob is provided with a square perforation, through which a corresponding-shaped shank of a secondary knob plays. Said shank, in its normal condition, extends a trifle below the aforesaid tongue, and is provided with a platinum wire or strip forming one pole of the instrument, said wire or strip adapted to rest in contact with points of a corresponding metal secured to the under side of the aforesaid tongue, forming the other pole.

The second part of my invention consists of connecting with the aforesaid tongue a lever fulcrumed to the said tongue in such a manner as will enable one portion thereof to extend below and parallel with the tongue at the knob end and extending beyond the same, the remaining portion of the lever extending above and parallel with the tongue at the opposite end thereof, where it is provided with a fixed rod projecting downwardly, and carrying at its lower end a suitable weight, upon which is secured a retracting-spring encircling the aforesaid rod, which passes through an elongated slot made in the tongue hereinbefore referred to.

The third part of my invention consists of a detent or locking device fulcrumed on the lever hereinbefore referred to, and adapted to engage with corresponding mechanism secured to or integral with the tongue described above.

The fourth part of my invention consists of the binding-nut of one pole provided with a horizontally-projecting lip or stud adapted to engage with the periphery or sides of the screw-nut carrying the adjusting-spring forming the other pole.

In the drawings, Figure 1 represents a plan view of the key. Fig. 2 represents a side elevation, with parts in section and broken away in order to illustrate the parts clearly. Fig. 3 is a detail view of the binding-nut, having a horizontally-projecting lip integral therewith forming one pole, and the nut carrying the adjusting-spring for the tongue the other pole, the lip adapted to engage with the adjusting-nut when removing the tongue for cleaning or repairing. Fig. 4 represents the slotted metallic washer, which serves to connect electrically one of the binding-posts with the platinum strip secured to the lower end of the square shank.

Similar letters refer to similar parts throughout the drawings, in which *a* represents the tongue, which is held in position by and plays in screws on either side of the base *k*. One end of the tongue *a* rests upon the collar *b*, which is mounted on the screw *c*, which enters the vertically-projecting stud *d*, integral with the base *k*. The collar *b* is checked by the retracting-spring *b'*. The other end of the tongue *a* is provided with the knob *e*, rigidly secured thereto, and having a square opening, *e'*, made through its vertical center, said opening *e'* adapted to receive the corresponding-shaped shank *f* of the secondary knob *f'*. The lower end of the square shank *f* is provided with the platinum strip *g*, which is electrically connected with the binding-post *h* by means of the conductor *h²* and the slotted metallic washer *i*. The post *h* is insulated from the base *k'* by means of the insulating-sleeve *m*, and the metallic washer *i* is held in close contact with the shoulder *i'* of the binding-post by the binding-nut *n*. To the under side of the tongue *a*, on either side of the opening through which the shank *f* passes, is properly secured

the platinum points g' , against which rests in close contact the platinum strip g , which is held in that position by the lower extension, a' , of the lever a'' , which is fulcrumed to the tongue a at b^2 , and carrying at its farther end the downwardly-projecting rod o , which passes through the elongated slot o' of the tongue a . The lower end of the rod o carries the weight o^2 , to which is secured the retracting-spring o^3 , encircling the rod o ; but it does not extend to the tongue a . The lever a'' is provided with the yoke drop-latch p , fulcrumed thereto, and is adapted to engage with the notch p' , made on the upper surface of the tongue a , the operation of which will be described hereinafter. The tongue a rests on the adjusting-spring r , supported by the screw-nut r' , mounted on the screw r'' . The turning of the nut r' will regulate the distance between the platinum points A B, representing the poles of the circuit, and also the throw of the tongue a .

It will at times become necessary to remove the tongue a and lever a'' in order to clean or repair them. In doing so the circuit is broken, but is closed by the binding-nut n being turned so that its lip n^2 will come in contact with the screw-nut r' , thus accomplishing the result required.

Operation: When the finger or fingers are placed on the secondary knob f' , the pressure causes the platinum strip g to disengage with the platinum points g' , thus breaking the circuit through the lever a'' . Further pressure on the knob f' causes the tongue a to descend until the points A B are in contact, when the circuit is again completed, as in telegraphing. When the pressure of the fingers shall have been removed from the knob f' , the weight o^2 will descend and cause the end a' of the lever a'' to ascend, carrying with it the square shank f , whereby the strip g and points g' are again brought in close contact, thus closing the circuit. If an open circuit is desired for a period of time, the end D of the lever a'' should be pressed down until the yoke-latch p shall have dropped into the notch p' , thus separating the strip and points $g g'$, thus making an open circuit, which may be closed by again pressing down on the lever a'' at D, and with one finger press down the end E of the yoke drop-latch p , at the same time remove the pressure

from the lever a'' , when a closed circuit will be maintained.

In my former application the circuit was broken by turning a chamber containing mercury. This, however, does not conflict with my present invention; and, further, there were no means provided for keeping the instrument in open circuit.

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

1. In a telegraphic key, the combination of the tongue, the fixed knob on the end thereof, with a vertical opening through its center adapted to receive the shank of the secondary knob, the platinum strip secured to the lower end of said shank, the conductor connected with said platinum strip, and the platinum points secured to the underside of the tongue, on either side of the opening through which the shank passes, substantially as shown and described.

2. The combination, with the operating tongue of a telegraphic key, of the lever fulcrumed to said tongue, a portion of the lever extending beneath and parallel with said tongue and projecting beyond the end thereof, and a portion of said lever extending above and parallel with said tongue, the rod secured to the under side of said lever, the weight secured to the lower end of the rod, and the retracting-spring secured to the said weight and encircling said rod, substantially as shown and described.

3. The combination of the said tongue and lever of a telegraphic key and a detent or locking device connected with the lever and adapted to work in conjunction with corresponding means connected or integral with the tongue.

4. The combination, with a telegraphic key, of the binding-nut having a projecting lip adapted to engage in close contact with the nut carrying the adjusting-spring, substantially as shown and described.

Signed at New York, in the county of New York and State of New York, this 10th day of March, A. D. 1886.

ROBERT ASHTON MACREADY.

Witnesses:

A. SURY,
OSCAR HAASE.