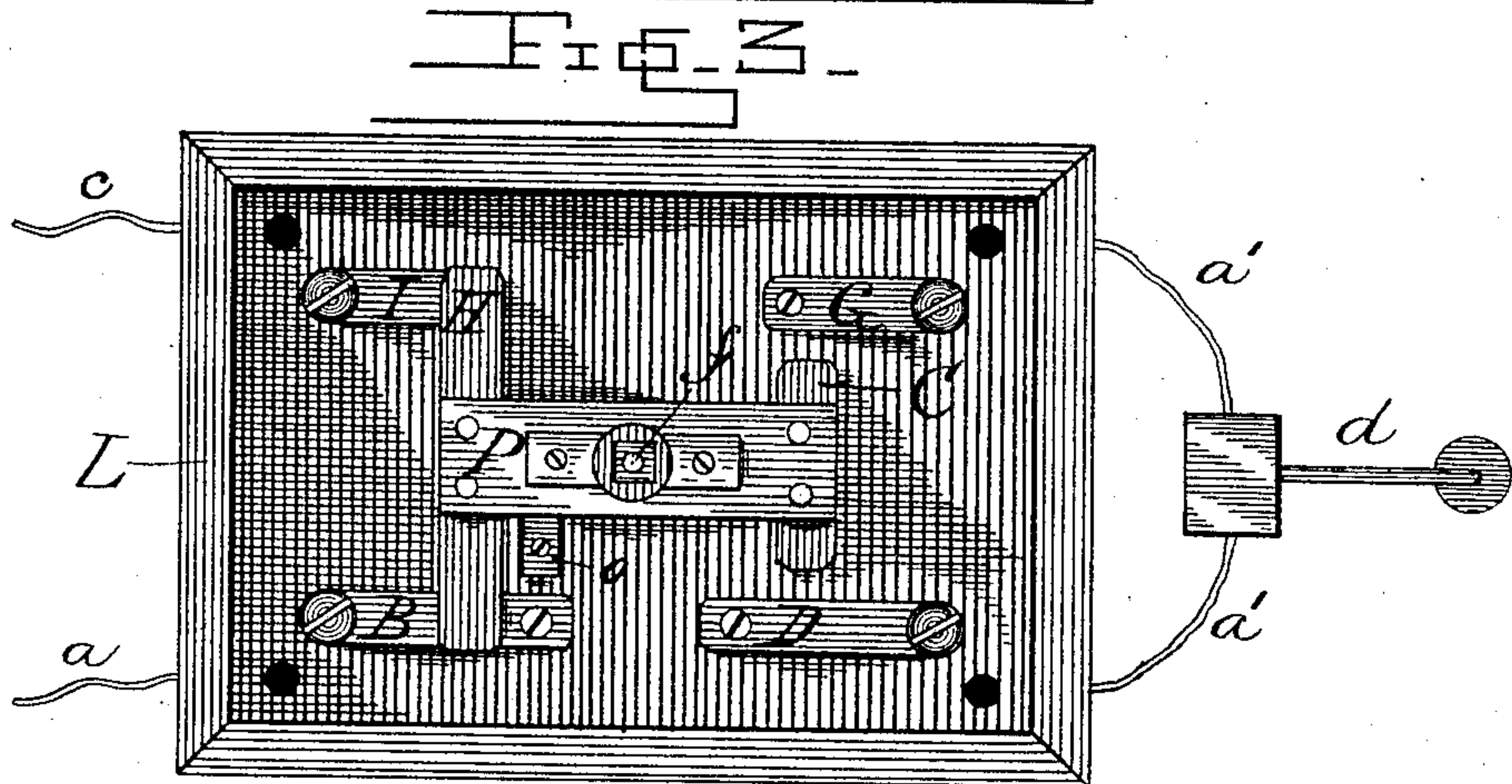
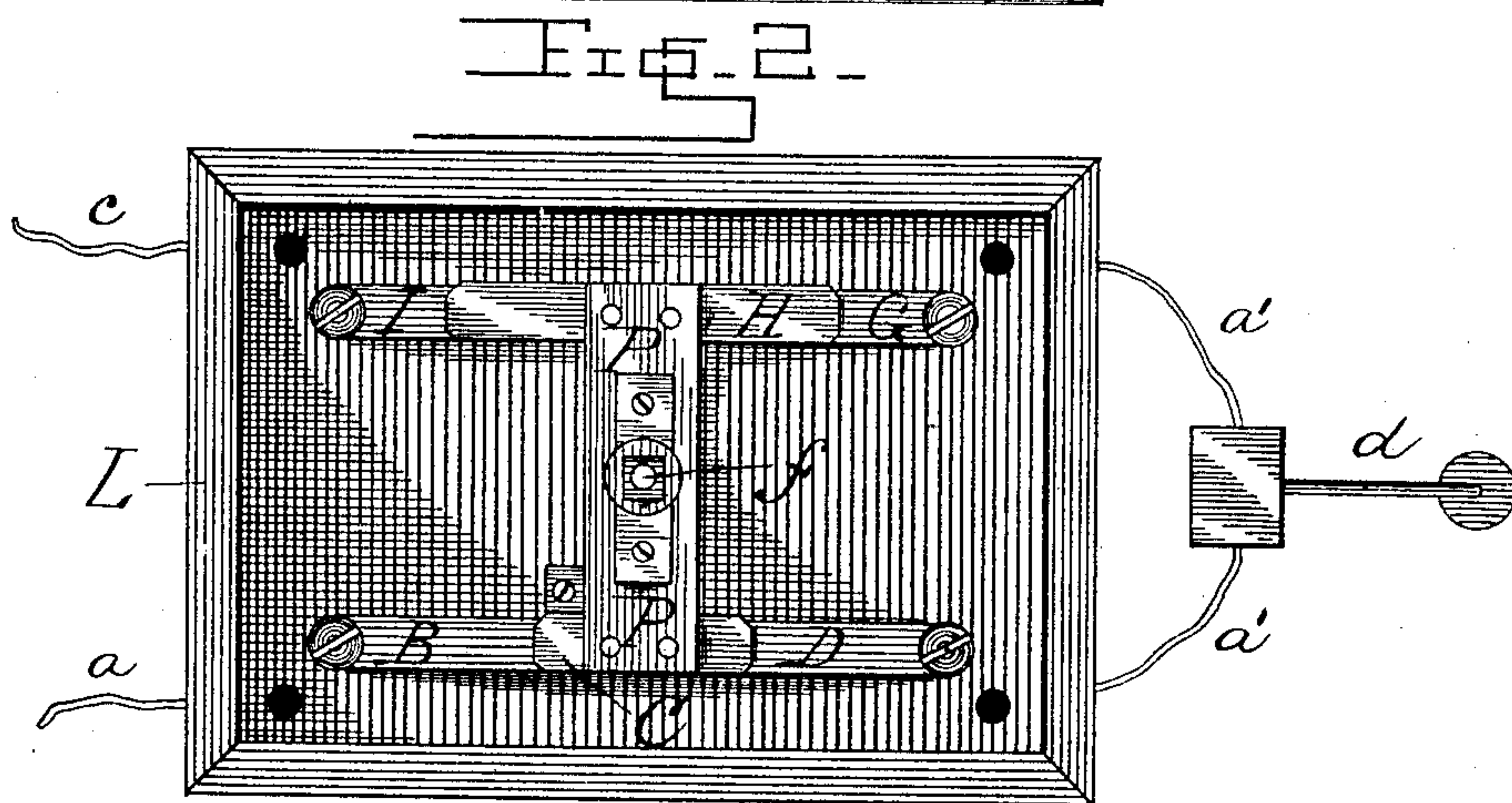
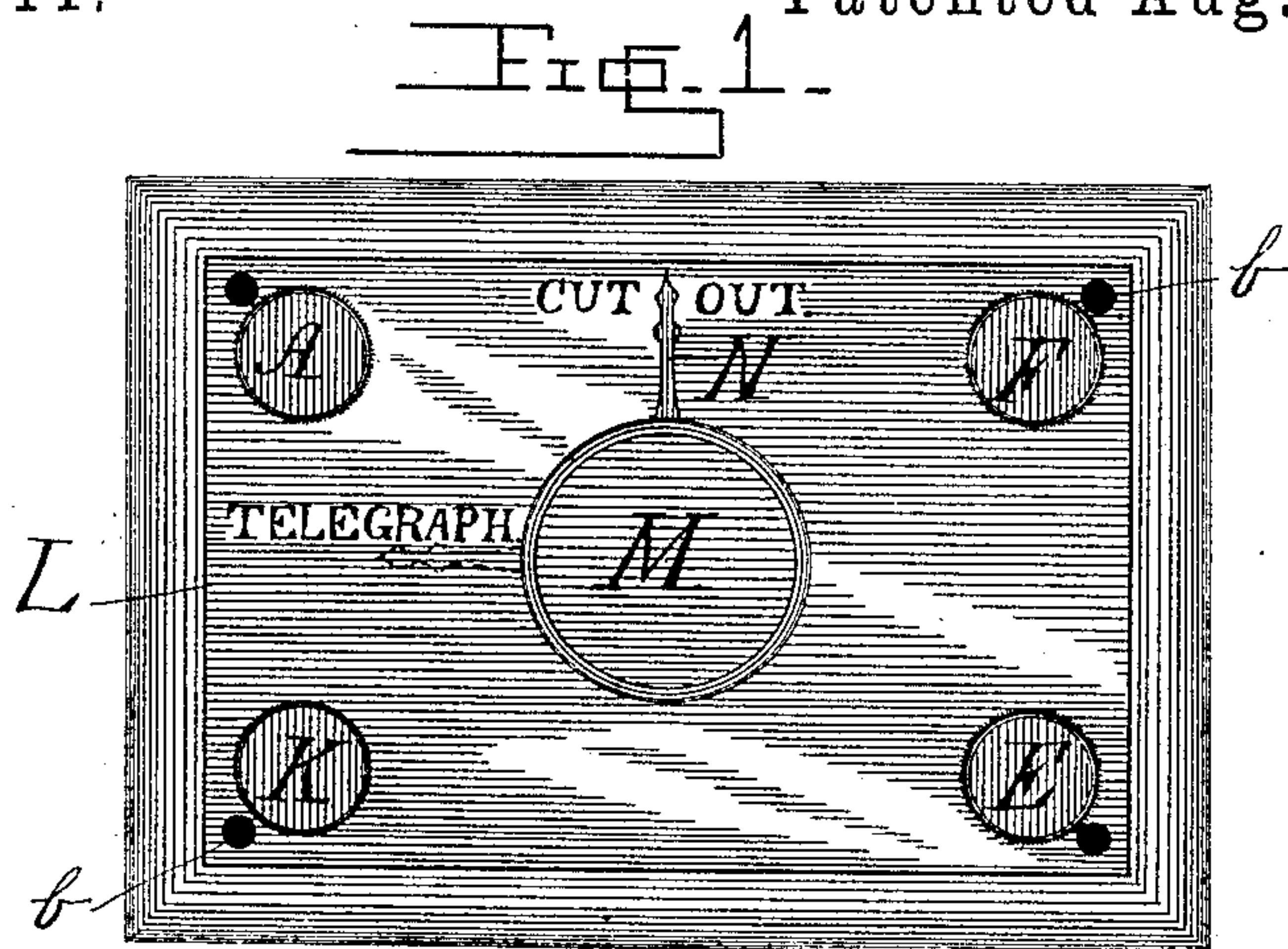


(No Model.)

C. H. LOTHROP.  
TELEGRAPH CUT-OUT.

No. 324,711.

Patented Aug. 18, 1885.



WITNESSES;

Witnesses,  
Jost H. Blackwood.  
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INVENTOR;

INVENTOR;  
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by W. H. Doolittle  
Attorney.



# UNITED STATES PATENT OFFICE.

CHARLES H. LOTHROP, OF LYONS, IOWA.

## TELEGRAPH CUT-OUT.

SPECIFICATION forming part of Letters Patent No. 324,711, dated August 18, 1885.

Application filed May 1, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES H. LOTHROP, a citizen of the United States, residing at Lyons, in the county of Clinton and State of Iowa, have invented certain new and useful Improvements in Telegraph Cut-Outs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of my invention is to produce a simple and cheap cut-out or ground-switch especially adapted to telegraph-lines.

It consists of a tablet having upon the under side a pivoted bar with a long electrode upon one end and a short electrode upon the other end, both being insulated from each other, and terminals of the long and short line or circuit for the reception of said electrodes, which make contact therewith, and having upon the face of said tablet a lever for operating said bar, and a hand for indicating when the switch is off or on. By these means the electrodes can be made either to form part of the main circuit, allowing the current to pass through an instrument, or it can be made to divert the main circuit from the instrument, cutting out the same and leaving the short circuit broken, as will be more fully described hereinafter.

In the accompanying drawings, Figure 1 is a top plan view; Fig. 2, a bottom plan view, and Fig. 3 the same, showing position of parts when an instrument is cut out.

The device is shown connected to a tablet, L, which can be applied to a suitable support by means of screws through holes *b*.

*M* is a switch-lever, having attached thereto a hand, *N*, upon the exterior of the tablet. The shank *f* of the switch-lever extends through the tablet and serves as a pivot for the non-conducting bar *P*, which is attached thereto upon the under side of the tablet. Upon both ends of this bar, and electrically insulated therefrom, are connecting-electrodes *C* *H*, which come in contact with electrodes or terminals *B* *I* of the main circuit *a* and *D* *G* of the auxiliary or short circuit *a'* *a'*. Said terminals or electrodes *B* *D* are located nearer together than the terminals *G* *I*. The elec-

trode *C*, upon the non-conducting bar *P*, is shorter than the electrode *H* upon the opposite end of said bar. The distance between the terminals *B* *I* and *D* *G* is the same. The bar *P* comes in contact with the lug *o* upon being turned sufficiently, and prevents the bar from being turned too far to the right or left.

It is well understood that when a telegraph-instrument is looped in the main or long circuit of a telegraph-line, it is desirable to keep it disconnected or cut out when not in use, and upon using it to make the connection again. For this purpose it has been customary to use a loose metallic plug placed between two metal plates, the current passing through the plug when the telegraph-instrument is not in use. While this new local circuit is formed the long or main circuit remains intact, making it possible for the current to traverse either one or both circuits.

In my device, when a telegraph-instrument is in use and the switch turned, so that the hand points to the word "Telegraph," the electrodes *C* and *H*, coming in contact with the terminals of the long and short circuits, form part of the main line *a*, and the current enters at binding-post *A*, over electrode *B*, connecting electrode *C*, electrode *D*, and binding-post *E*, through short circuit *a'*, to the instrument *d*, thence through the instrument and short circuit *a'* to binding-post *F*, through electrode *G*, connecting electrode *H*, electrode *I*, and binding-post *K*, to ground through ground-wire *c*. When the switch is turned so that the hand points to the words "Cut out," the instrument *d* is completely disconnected from the main line. The connecting-electrode *H* now connects the electrodes *B* and *I*, and the only path for the current is through binding-post *A* directly to the ground *via* electrodes *B*, *H*, and *I*. When the switch is in this position, the short circuit is completely broken by reason of the electrode *C* being too short to connect the terminals or electrodes *D* *G*.

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

1. In a switch for telegraphic and other instruments, the combination of a pivoted bar having an electrode upon either end, one of

which is shorter than the other, whereby the short circuit remains broken while the long one is complete, substantially as described.

2. In a switch for telegraphic and other instruments, the combination of a pivoted bar having an electrode upon either end, one of which is shorter than the other, terminals B D and G I, the former being placed nearer together than the latter for the reception of said short and long electrodes, substantially as described and shown.

3. In a switch for telegraphic and other instruments, the combination of a tablet having upon the under side, attached to a pivot, *f*, a movable bar, P, provided upon either end with connecting electrodes C and H, electrically in-

sulated from each other, the former being shorter than the latter, electrodes B I of the main circuit, and D G of the short circuit, which make contact with said short and long electrodes, a lever, M, and hand N, upon the face of said tablet, the former for operating said movable bar and the latter for indicating the position of the switch, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES H. LOTHROP.

Witnesses:

ROBT. S. WILLIAMS,  
CHAS. OSBORN.