

J. MLÁDEK.
ELECTRIC SIGNALING.
APPLICATION FILED APR. 19, 1907.

931,632.

Patented Aug. 17, 1909.

Fig. 1

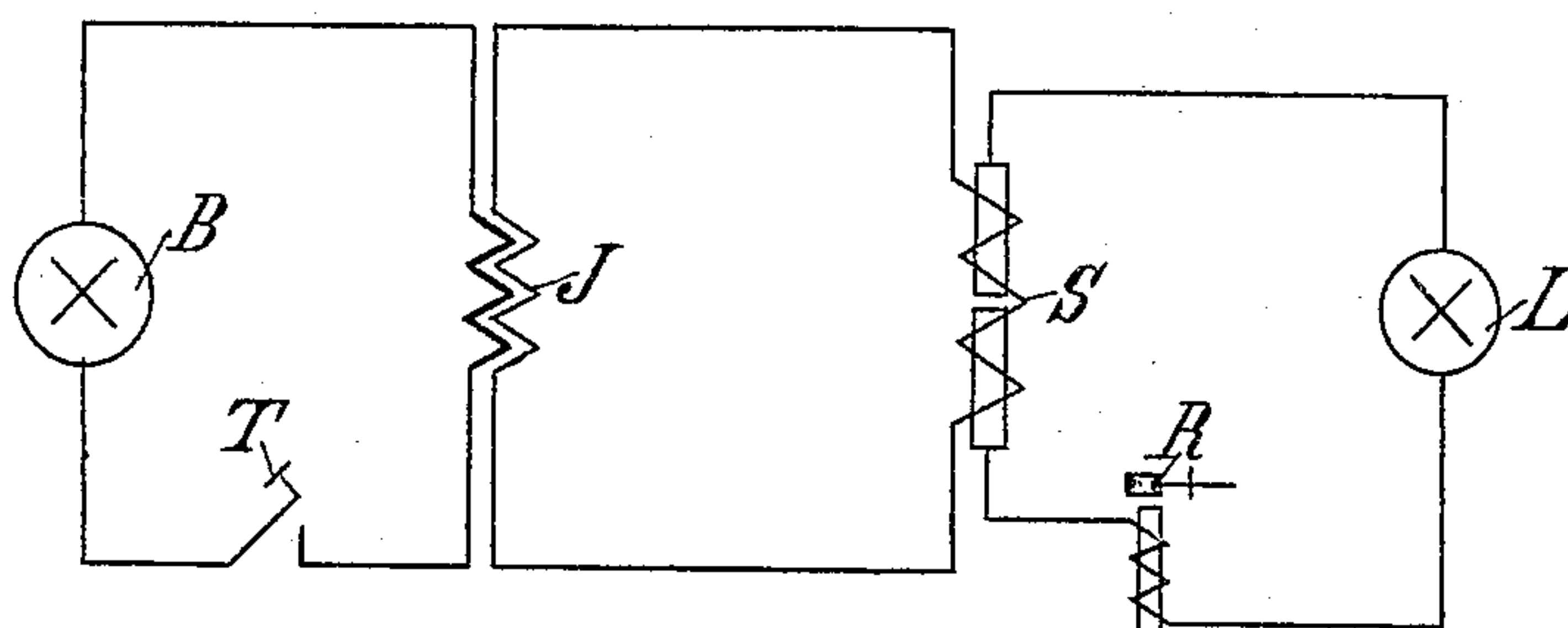


Fig. 2

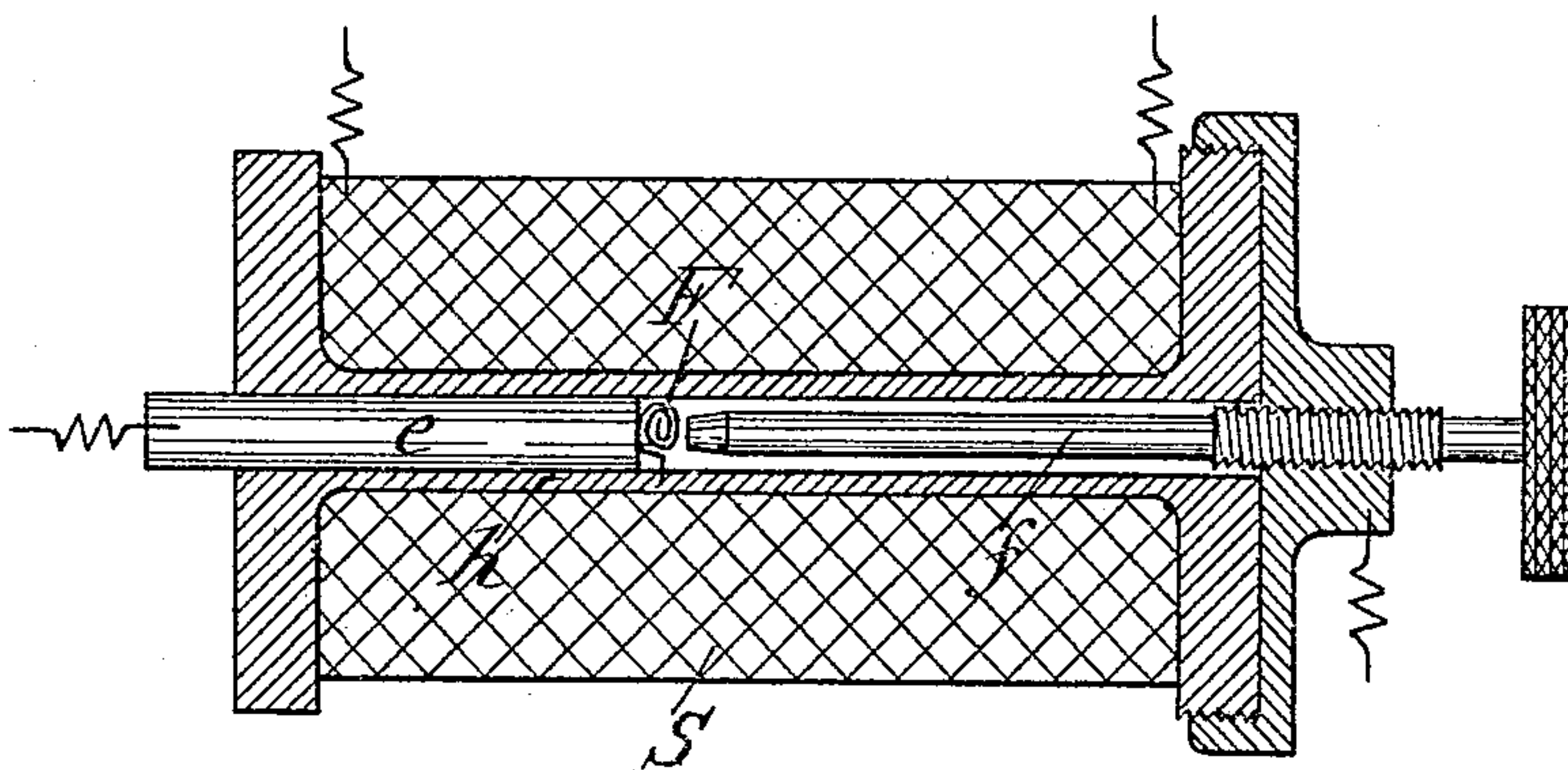
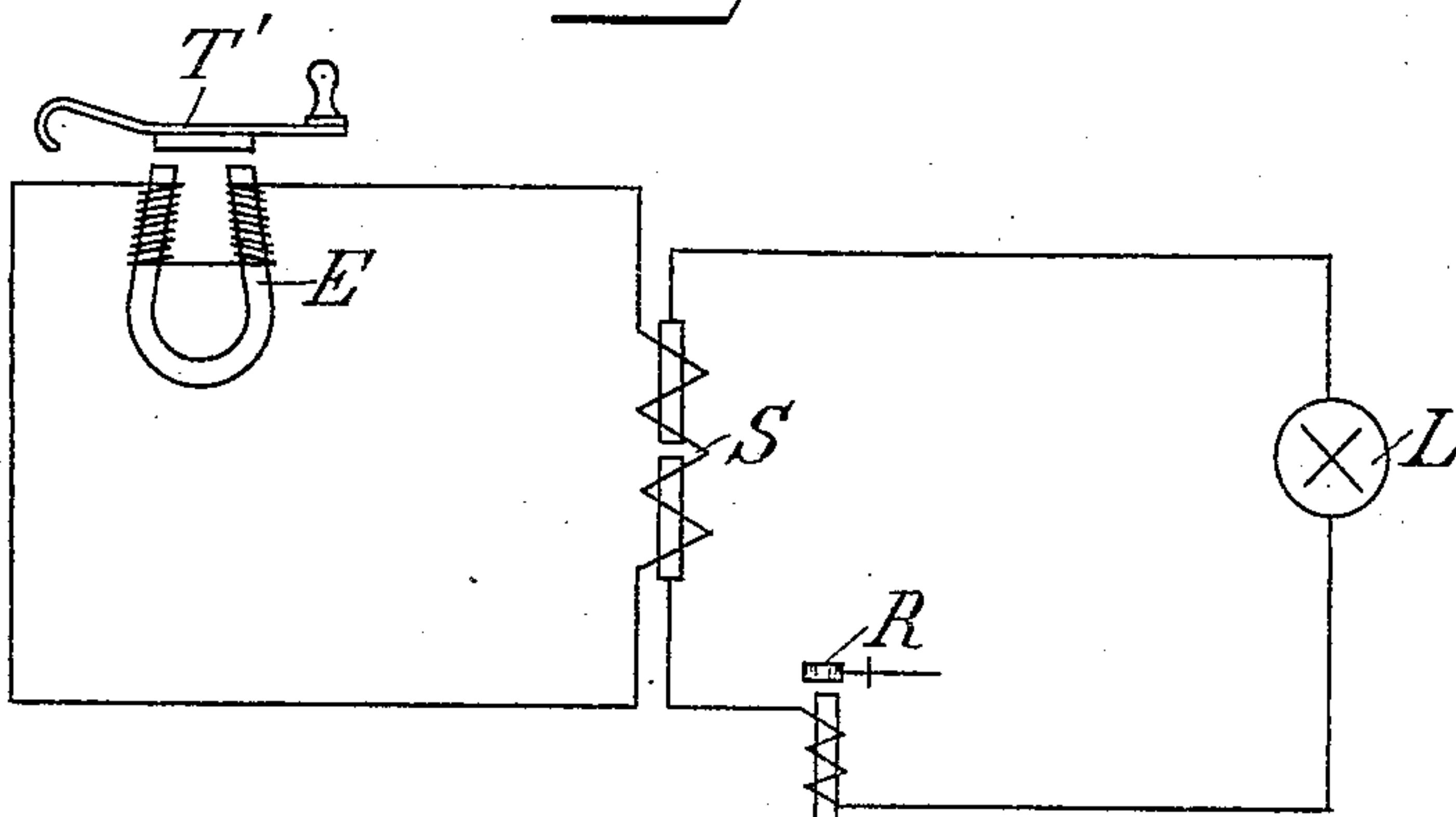


Fig. 3



Witnesses
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JOHANN MLÁDEK, OF PRAGUE, AUSTRIA-HUNGARY.

ELECTRIC SIGNALING.

No. 931,632.

Specification of Letters Patent.

Patented Aug. 17, 1909.

Application filed April 19, 1907. Serial No. 369,136.

To all whom it may concern:

Be it known that I, JOHANN MLÁDEK, a subject of the Emperor of Austria-Hungary, residing at Prague, Kgl. Weinberge, in the Empire of Austria-Hungary, have invented certain new and useful Improvements in or Relating to Electric Signaling, of which the following is a specification.

This invention relates to a device for electric transmission at a distance of signs or signals by induction currents of opposite polarity (impulses), and comprises a receiver in which a constant device, moved in a well known manner by induction currents of opposite polarity maintains (owing to the residual magnetism existing in the paramagnetic portions of the receiver) the altered state of the local circuit as long as no new induction current influences the said contact device. The characteristic working feature of this receiver as compared to the ordinary relay is therefore the circumstance that the line carries current only at the beginning and at the end of a signal, while there is no current during the duration of the signal.

In the accompanying drawings, Figures 1 and 3 are well known connection diagrams for electric transmission at a distance, and Fig. 2 shows a construction of the receiver in cross-section.

The said receiver consists of a coil S in the inner socket *h* of which is mounted a fixed iron core *e* and an adjustable iron core *f*. The two iron cores are connected by means of suitable wires to the local battery L or to the indicator apparatus. Between the two iron cores *e* and *f* is arranged a sensitive adjustable contact device, for instance, a spiral spring F.

The working of the receiver apparatus is explained by the contact device occupying a position of rest depending on the polar attraction due to the residual magnetism and on a counter force (for instance the elasticity of the contact device itself, or of its suspension mechanism etc.) a current impulse which for instance reduces the strength of the pole and therefore the attraction, bringing the said contact device out of its position of rest in such a manner that the opposite poles are moved apart, and the contact

device is brought into a new position of rest depending, on the one hand, on the polar attraction reduced now by the decrease of the residual magnetism, and the increase of the distance between the poles, and on the other hand, on the counter force already mentioned. The second current impulse in the opposite direction brings about the increase of the residual magnetism and of the polar attraction, by means of which the contact device is again brought into the original position of rest.

In one position of rest the local circuit is closed, and in the other opened.

In the construction shown in Fig. 2, the closing of the circuit in one position of rest is effected by the spiral spring contact resting direct against the cores *e* and *f*, and the interruption of current in the other position of rest is due to the contact device standing away from the two cores.

According to Fig. 1, the line circuit comprises a battery B, a key T and an induction coil J the primary winding of which is connected to the battery and the key, while the secondary winding is connected by means of the line to the receiver S. The induction coil can be replaced by a simply wound coil of high self-induction connected in a suitable manner with the battery and the key in the line circuit.

In the construction illustrated in Fig. 3, a current impulse in the line circuit is obtained by bringing the key T' nearer to and farther away from an electromagnet E, so that the working movement here is similar to that of telegraph keys.

What I claim as my invention and desire to secure by Letters Patent is:—

1. In a receiver for electric transmission at a distance of signs and signals by impulses of induced currents of opposite polarity the combination with the magnetic parts of the receiver of a sensitive easily springing contact device which is maintained by the residual magnetism of the magnetic parts of the receiver in the position given to it by a current impulse for the purpose of altering the state of the local circuit.

2. The combination with a receiver for electric transmission at a distance of signs and signals by impulses of induced currents

of opposite polarity, and which comprises magnetic parts and a sensitive easily springing contact device maintained by the residual magnetism of the magnetic parts of the receiver in the position given to it by a current impulse, of apparatus for producing current impulses provided with one or more coils, and a key lever.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHANN MLÁDEK.

Witnesses:

ADOLPH FISCHER,

ARTHUR SCHWEINBURG.