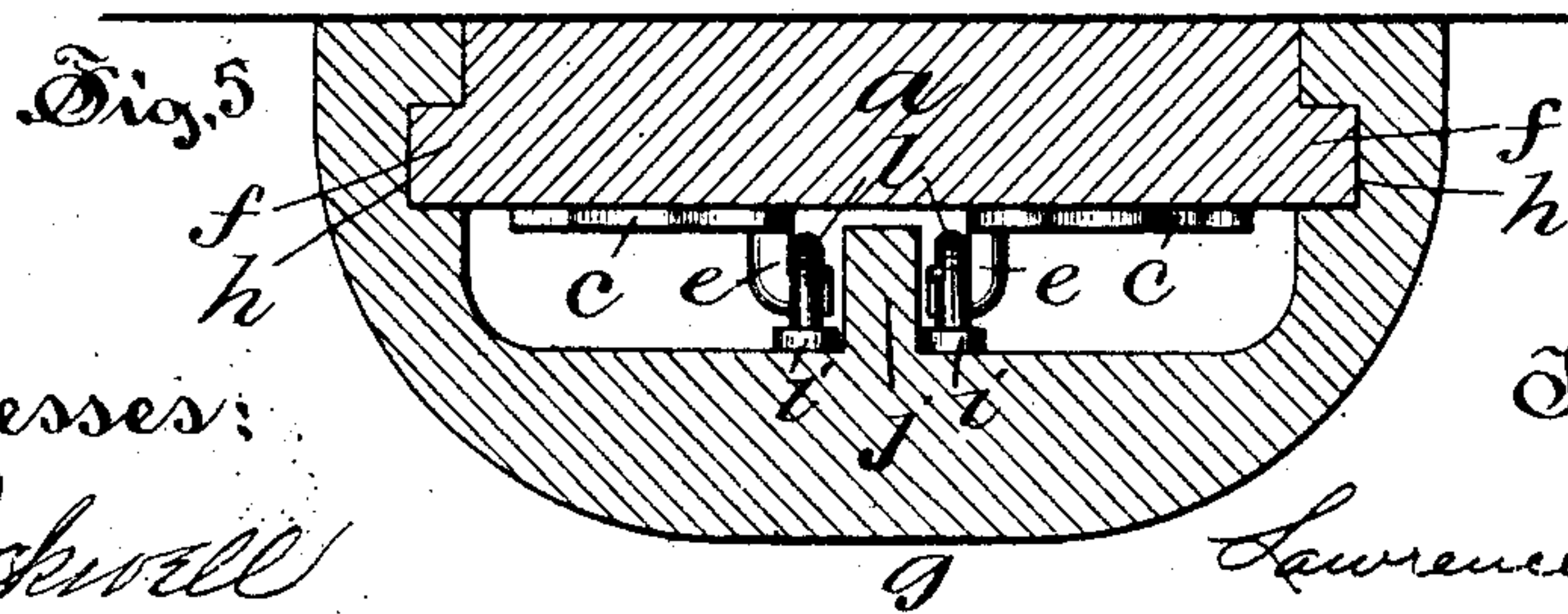
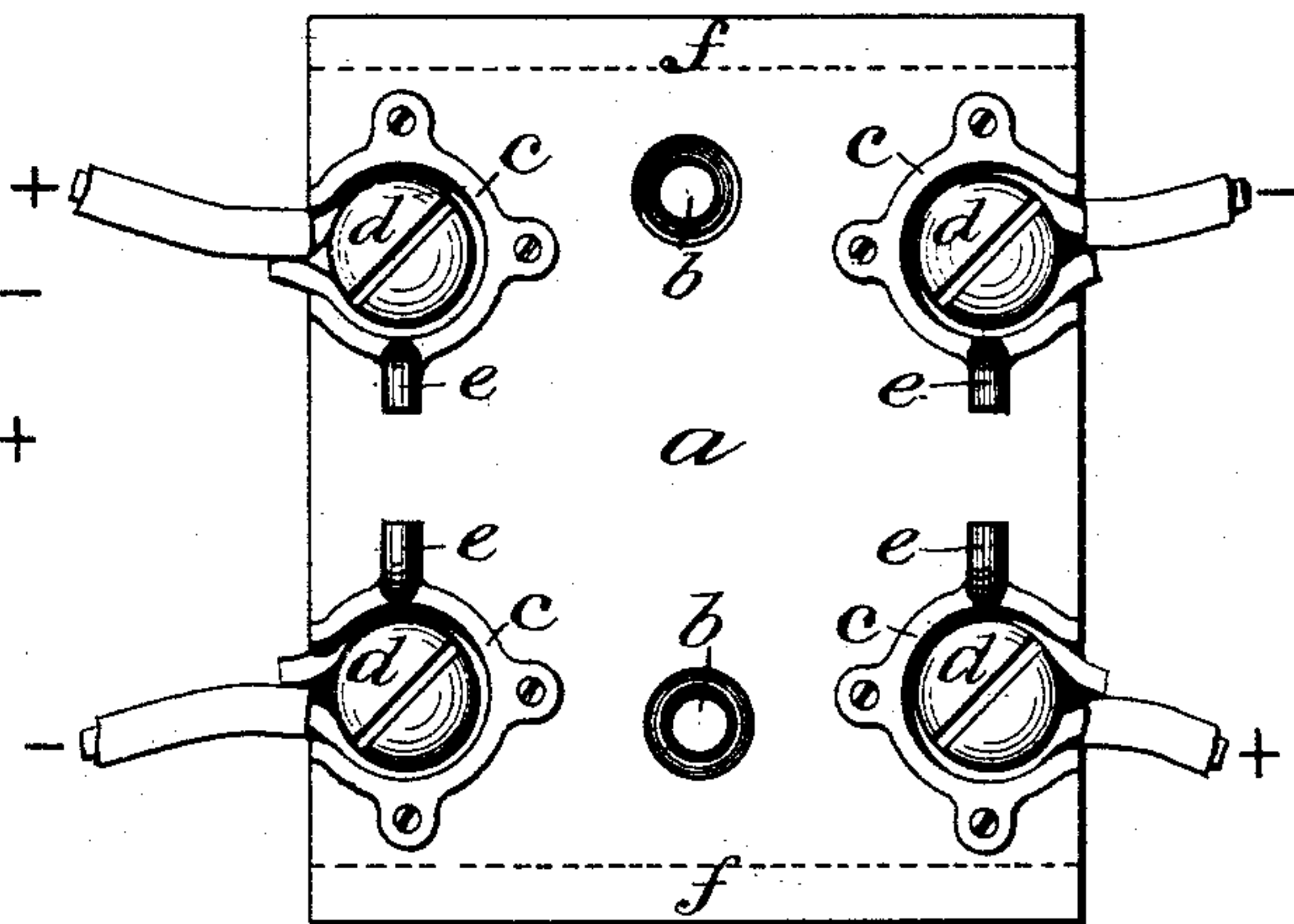
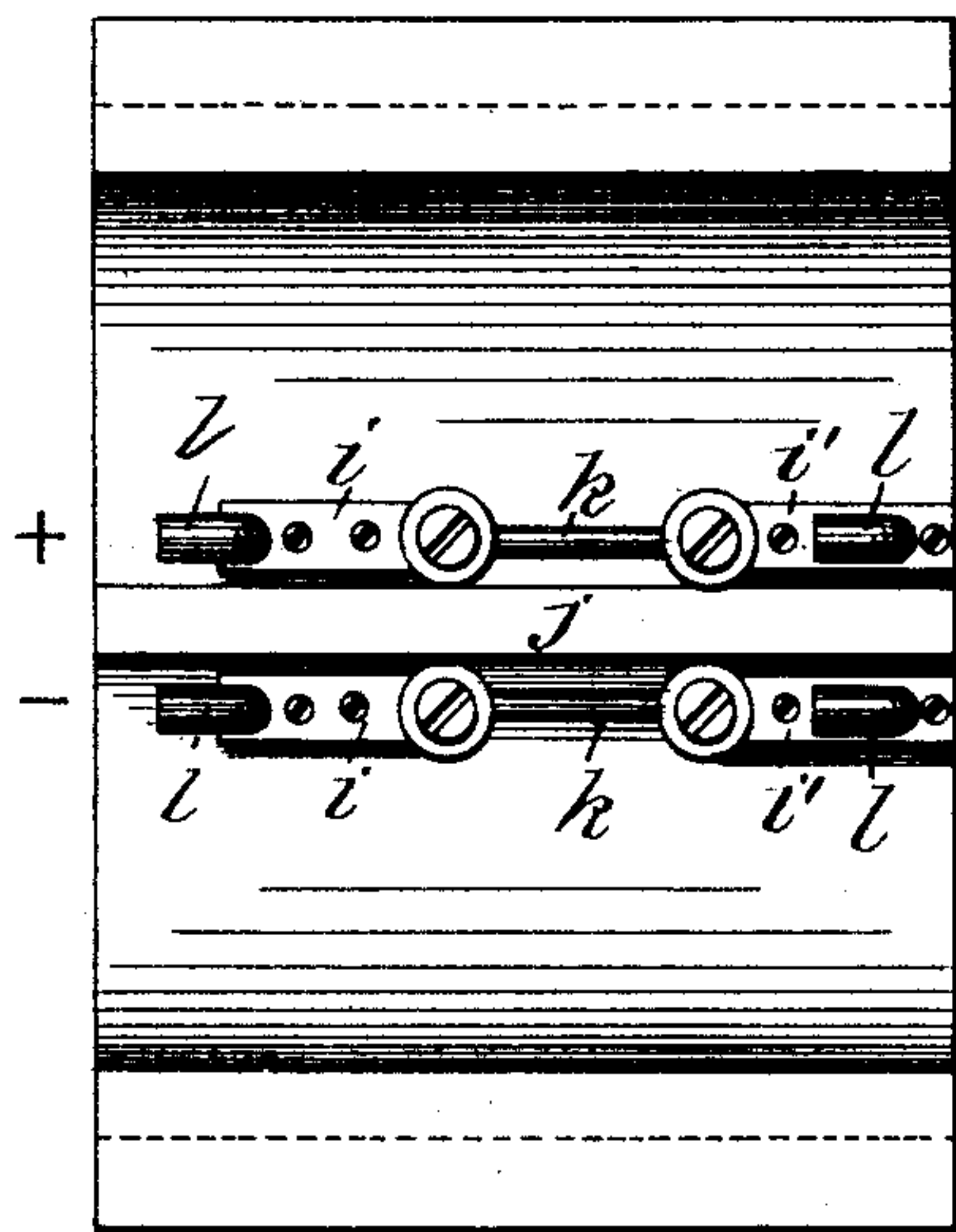
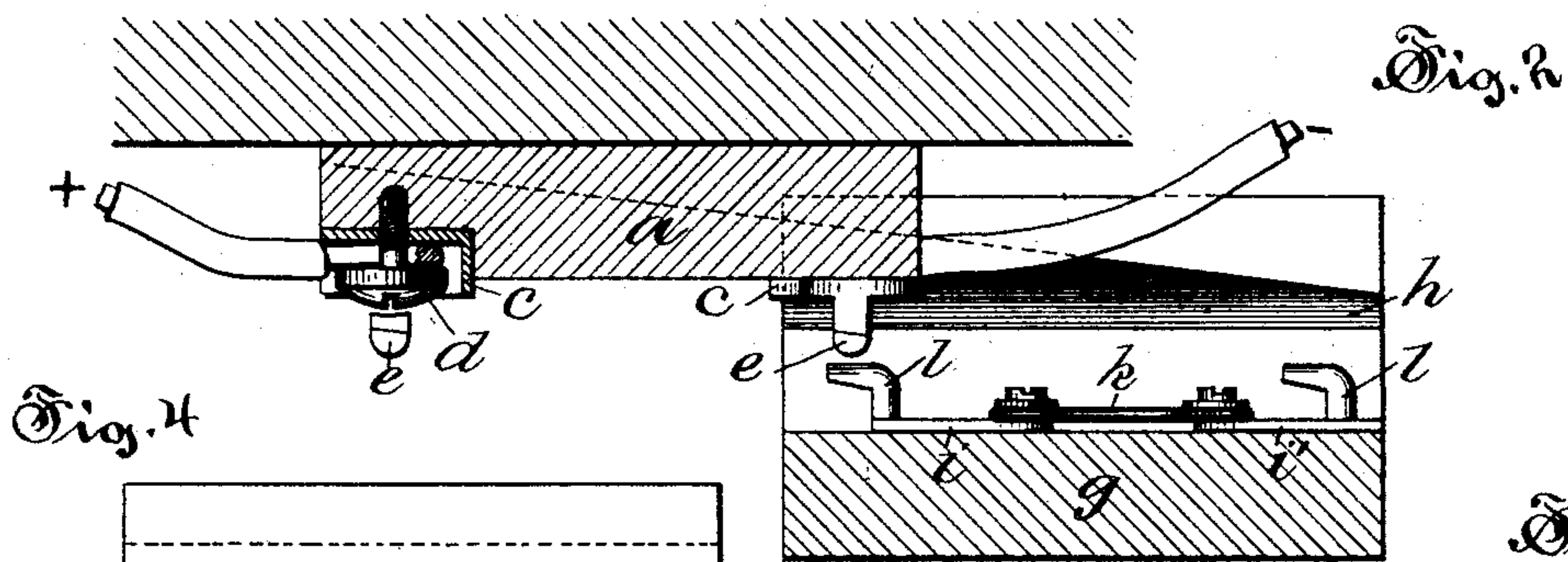
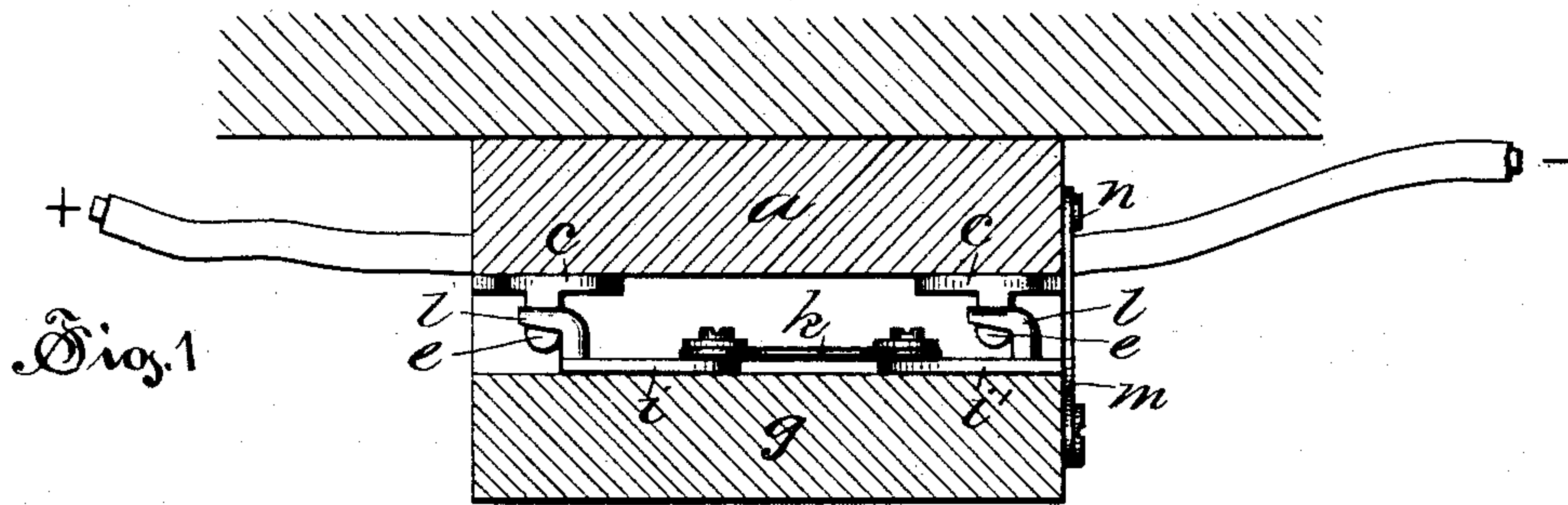


(No Model.)

L. F. FURLONG.
CUT-OUT.

No. 410,545.

Patented Sept. 3, 1889.



Witnesses:
H. Rockwell
A. P. Jenkins

Inventor,
Lawrence F. Furlong, by
Harry P. Williams,
att'y

UNITED STATES PATENT OFFICE.

LAWRENCE F. FURLONG, OF HARTFORD, CONNECTICUT, ASSIGNOR TO
FREDERICK C. ROCKWELL, OF SAME PLACE.

CUT-OUT.

SPECIFICATION forming part of Letters Patent No. 410,545, dated September 3, 1889.

Application filed April 26, 1889. Serial No. 308,729. (No model.)

To all whom it may concern:

Be it known that I, LAWRENCE F. FURLONG, of Hartford, Connecticut, have invented certain new and useful Improvements in Electrical Cut-Outs, of which the following is a specification.

My invention relates to the class of cut-outs that are formed in two parts—a base bearing contact-plates to which the circuit-wires are fastened adapted to be permanently secured in position, and a removable cap bearing a safety-fuse.

The object of the invention is to provide a simple and cheap cut-out of the above class, which is easily manipulated and can be handled without danger of short-circuiting the current, particularly when replacing a fuse.

Referring to the accompanying drawings, Figure 1 is a view in vertical longitudinal section of the cut-out. Fig. 2 is a similar view with the cap partly removed. Fig. 3 is a face view of the base. Fig. 4 is a face view of the inside of the cap. Fig. 5 is a view in transverse section of the base and cap.

In the drawings, *a* indicates the base, which is formed of wood or any desirable insulating material, with screw-holes *b*, whereby it may be secured in position, usually to the ceiling of a room. Secured to the face of this base are four contact-plates *c*, each bearing a binding-screw *d*, that holds an end of the circuit-wires to a contact-plate. Preferably integral with these contact-plates are the lugs *e*, which rise from one side and turn at right angles toward the contact-plate attached to the same end of the base. Tongues *f* are formed on two of the edges of the base, and it is preferred that these tongues should be wedge shape—that is, wider at one end of the base than at the other.

The trough-shaped cap *g*, formed of the same material as the base, is provided along the inside of the upper edge with wedge-shaped grooves *h*, into which the tongues *f* on the edge of the base tightly fit when the base and cap are put together.

A partition *j* extends the length of the cap on the inside, and upon each side thereof are secured two metallic plates *i i'*, each set of plates being united by a fuse *k*, formed of the

proper composition to melt at the desired voltage, these fuses being joined to the plates by the ordinary binding-screws. Preferably formed integral with these plates *i i'* are the lugs *l*, which rise from the plates and project forward in line therewith, so that when the cap and base are slid together these lugs *l* on the cap will hook under and make contact with the lugs *e* on the base, the under side of the hooks of these lugs being beveled, so as to insure perfect contact.

The object of making the tongue-and-groove connection of the cap and base wedge-shaped is to allow the first pair of lugs which project from the cap to pass one set of lugs projecting from the base without making contact, as shown in Fig. 2, the incline, however, bringing the parts up so that the lugs will hook together and make contact when the cap is slid on flush with the base. The contact of the lugs stops the cap from being slid onto the base too far, while a hook *m*, attached to the end of the cap, is caught over a pin *n* on the base and prevents the parts from accidental disengagement.

When the cut-out is in use an electric current passes from the positive wire through one of the contact-plates *c* and lugs *e* on the base to the lugs *l*, plates, and fuse on the cap, thence through the opposite contact-plate *c* to the circuit-wire, through which it returns to the contact-plate on the opposite side of the base, and thence through the second set of lugs *e* and *l*, plates, and fuse, to the remaining contact-plate, when it again passes into the circuit-wire.

When one or both of the fuses melt by an excessive voltage of electricity and the circuit is broken, the cap is removed from the base and a new fuse inserted between the plates attached to the cap, while it is removed from the base without any danger of accidentally short-circuiting the current, and as the cap and base are constructed it is impossible to so put the parts together that contact can be made which will short-circuit a current.

I claim as my invention—

1. In an electrical cut-out, in combination, a base two edges of which are provided with

wedge-shaped tongues, contact-plates with outwardly-projecting lugs attached to the base, a cap two edges of which are provided with wedge-shaped grooves adapted to receive
5 the tongues on the base, and outwardly-projecting lugs attached to the cap, so as to make contact with the lugs on the base when the base and cap are slid together, substantially as specified.
10 2. In an electrical cut-out, in combination, a base two edges of which are provided with tongues, contact-plates with hook-shaped lugs attached to the base, a cap two edges of which are provided with grooves adapted to receive
15 the tongues on the base, and plates having hook-shaped lugs attached to the cap, one or more of said plates on the cap being joined by an electric fuse, said lugs on the base being

adapted to interlock and make contact with the lugs on the cap when the tongues on the
20 base are slid into the grooves in the cap, substantially as specified.

3. In an electrical cut-out of the within-described class in combination, a rectangular
25 base two edges of which are provided with a wedge-shaped tongue, and a rectangular trough-shaped cap, two edges of which are provided with wedge-shaped grooves adapted to receive the tongues on the base, substantially as described, and for the purpose speci-
30 fied.

LAWRENCE F. FURLONG.

Witnesses:

F. ROCKWELL,
HARRY R. WILLIAMS.