

(No Model.)

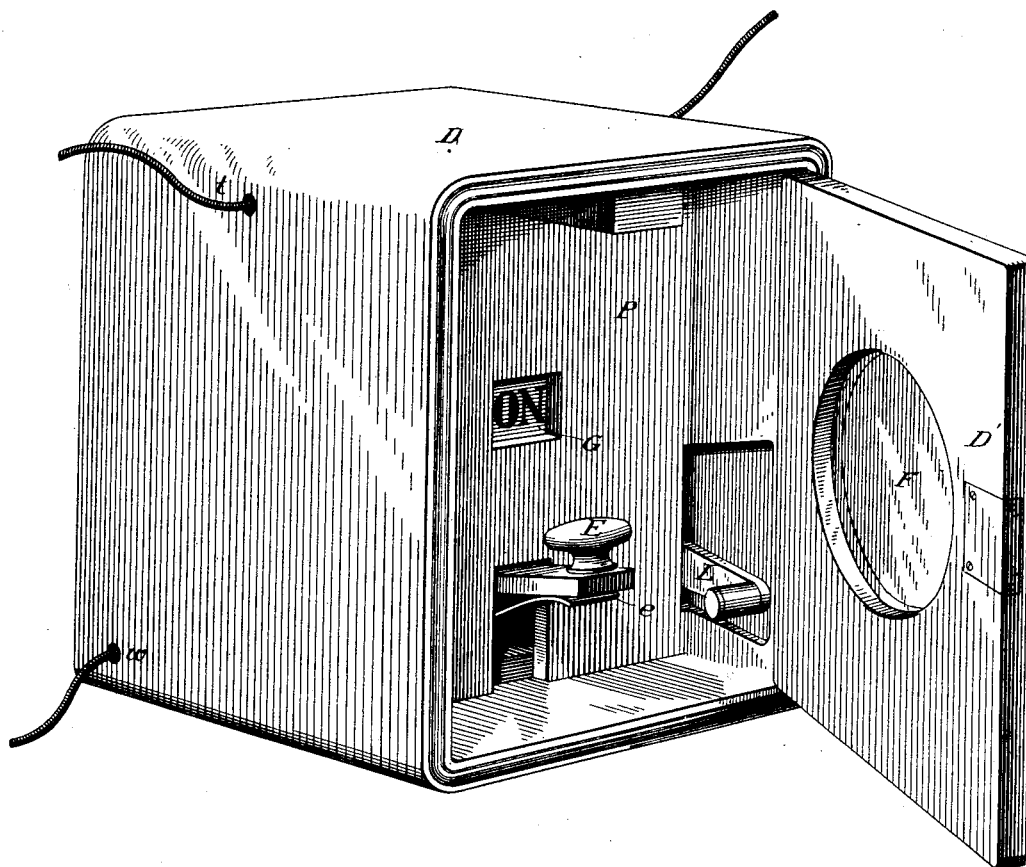
4 Sheets—Sheet 1.

E. WESTON.
CUT-OUT FOR ELECTRIC CIRCUITS.

No. 266,241.

Patented Oct. 17, 1882.

Fig. 1.



Attest:

Raymond A. Barnes.
Attorney

Inventor:

Edward Weston
By Parker W. Page
att'y.

(No Model.)

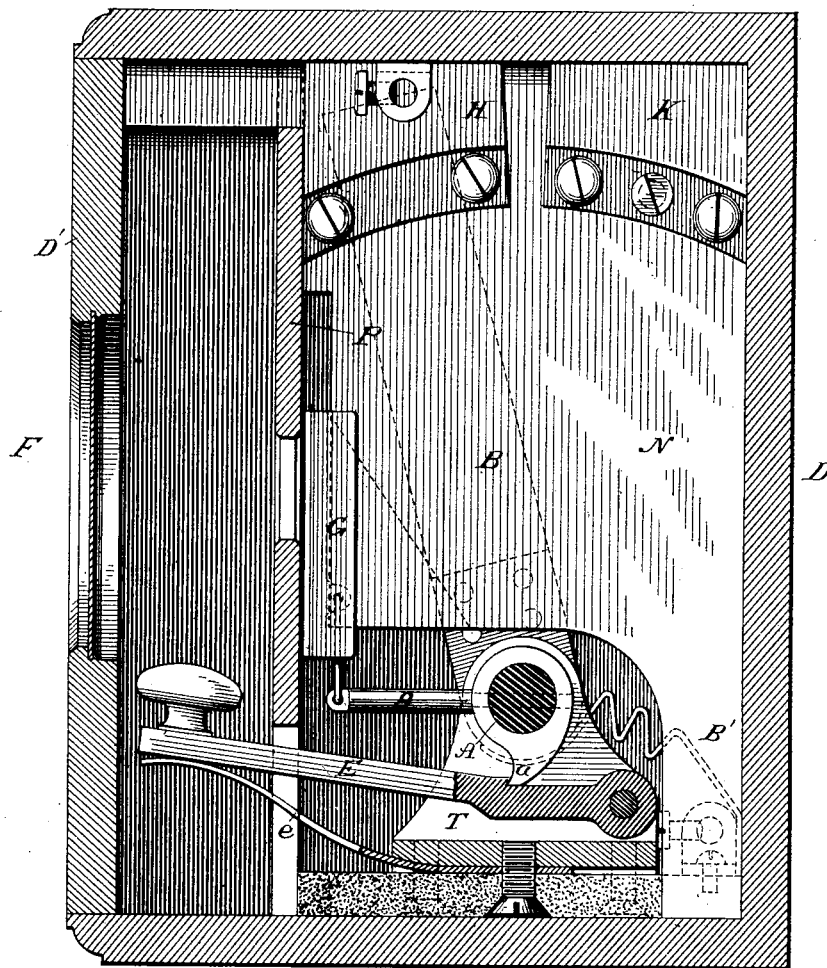
4 Sheets—Sheet 2.

E. WESTON.
CUT-OUT FOR ELECTRIC CIRCUITS.

No. 266,241.

Patented Oct. 17, 1882.

Fig. 2.



Attest:

Raymond F. Barnes.
Secretary

Inventor:

Edward Weston
By Parker W. Page
att'y.

(No Model.)

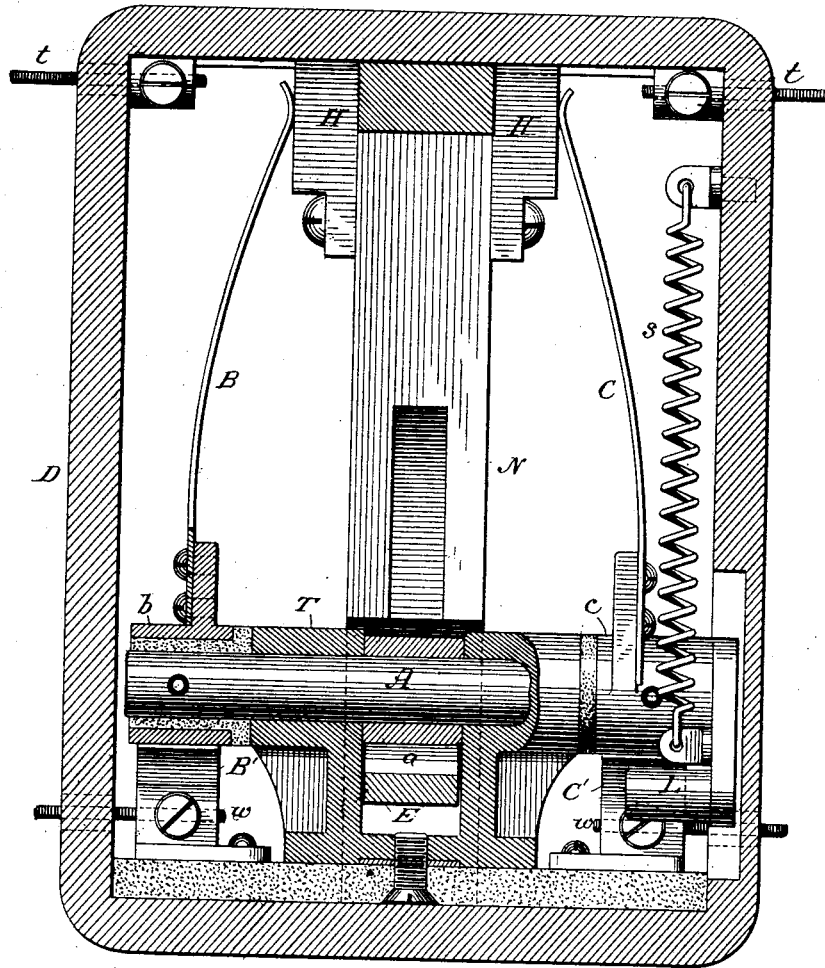
4 Sheets—Sheet 3.

E. WESTON.
CUT-OUT FOR ELECTRIC CIRCUITS.

No. 266,241.

Patented Oct. 17, 1882.

Fig. 3.



Attest:

Raymond C. Barnes.
Henry Hill

Inventor:

Edward Weston
By Parker W. Page
Atty.

(No Model.)

4 Sheets—Sheet 4.

E. WESTON.
CUT-OUT FOR ELECTRIC CIRCUITS.

No. 266,241.

Patented Oct. 17, 1882.

Fig. 4.

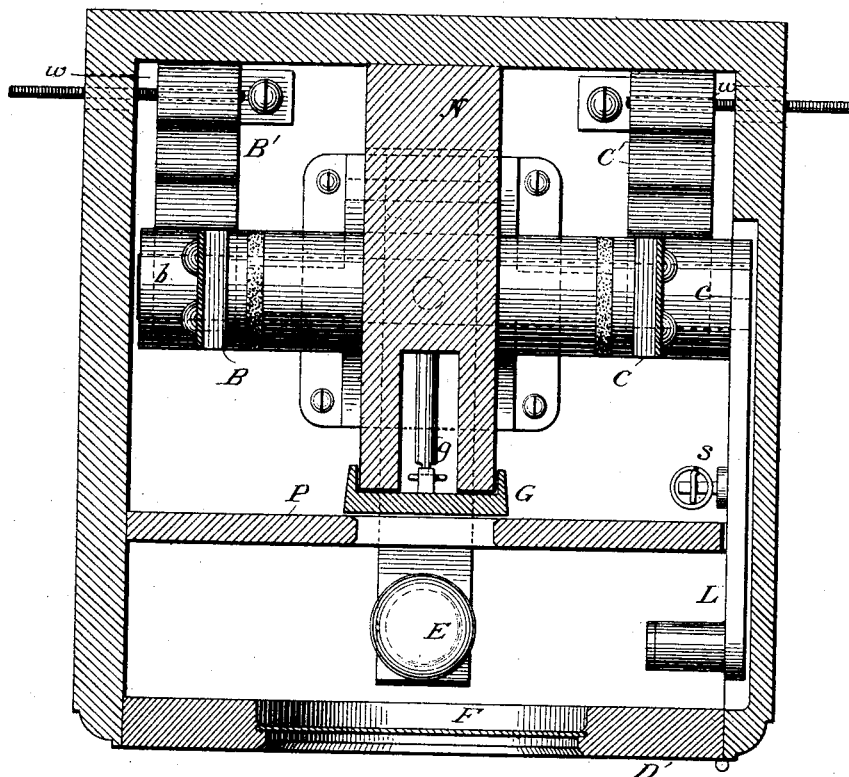
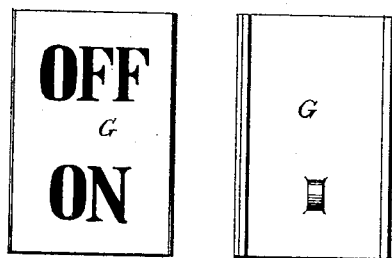


Fig. 5.



Attest:

Raymond A. Barnes.
Henry Hill

Inventor:

Edward Weston
By Parker W. Page
att'y.

UNITED STATES PATENT OFFICE.

EDWARD WESTON, OF NEWARK, NEW JERSEY, ASSIGNOR TO THE UNITED STATES ELECTRIC LIGHTING COMPANY, OF NEW YORK, N. Y.

CUT-OUT FOR ELECTRIC CIRCUITS.

SPECIFICATION forming part of Letters Patent No. 266,241, dated October 17, 1882.

Application filed May 8, 1882. (No model.)

To all whom it may concern:

Be it known that I, EDWARD WESTON, residing in Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Cut-Outs for Electric Circuits, of which the following is a specification, reference being had to the drawings accompanying and forming part of the same.

The subject of my present invention is a manual switch or circuit-controlling device for cutting out parts of an electric circuit without interrupting the continuity of the main portion thereof or disturbing the operation of whatever devices may be connected therewith.

The apparatus is designed particularly to be used at an easily-accessible point in an electric-light circuit where it enters a building of any description, the purpose being to afford an easy and safe means of cutting the current off from the conductors within such building, so that in case of a fire or an accident no injury can result to persons within who may accidentally come in contact with the conductors.

The objects which I have in view are mainly to produce an apparatus the action of which will be readily apparent to unskilled persons, and the manipulation of which is perfectly free from danger. For this purpose I have devised the apparatus which I will now describe by reference to the accompanying drawings, in which—

Figure 1 represents in perspective an open case containing the apparatus; Fig. 2, a vertical section of the same; Fig. 3, a rear view, partly in section, of the circuit-controlling mechanism; Fig. 4, a horizontal section of the same; Fig. 5, a face and rear view of a detail.

Similar letters indicate corresponding parts.

In the interior of a small wooden box, D, is fixed on an insulating-base a branching standard, T. In this is journaled a shaft, A, the ends of which project, as shown in Fig. 3. On each end of the shaft is fitted a sleeve of insulating material, and over these are passed rings of metal *b c*, having lugs or ears projecting from them. One of the rings, as *c*, has also extending from it, or in any suitable manner attached to it, whether insulated or not, a

lever, L. A stout spring, *s*, attached to the upper part of the box D, is connected with lever L and draws the same up. On the lugs projecting from rings *b c* are screwed heavy flat springs B C, and to the rings are soldered or clamped flexible copper strips B' C', leading to binding-posts *w w*. In the center of box D is a wooden partition, N, cut away below to make room for the shaft and its appurtenances, and to the upper part of said partition are clamped two pairs of metal plates, H K. The pair marked H is connected to independent binding-posts. The remaining pair, K, is in metallic contact. Upon these plates the ends of springs B C are arranged to slide. Under the shaft A is a pivoted lever, E, forced upward by a stout spring, *e*. Said lever is provided with a catch, in which a toe, *a*, on the shaft A may be caused to engage. These parts are so constructed as to occupy but little space, and are all contained in the back of box D. A partition, P, is fixed in the forward part of the box and shuts all of them from sight except the ends of levers E and L, which project through slots in the said partition into the forward compartment of the box D. A block of wood, G, having written or printed thereon the words "On" and "Off," or other similar words or characters, is connected to the end of a short pin, *g*, set in the shaft A, and arranged to slide in a space provided for the purpose between the partition P and edge of partition N. An aperture is formed in partition P, through which one-half of the block or slide G at a time may be seen.

When used this apparatus is fixed to the wall of a building into which a circuit is to be introduced. The conductor forming the main circuit is severed and its ends connected with the binding-posts *w w*. The terminals of the wire which carries the current through the building are connected with binding-posts *t t*. If, now, the lever L be depressed, the shaft A is turned and brings the ends of the springs B C in contact with the forward pair of plates, H, where they are held by the toe *a* engaging with the catch on lever E. The circuit is thus completed through the building, and the slide or indicator should now expose the word "On."

Should the lever E be depressed so as to release the toe *a*, the shaft A flies back, bringing the springs on the rear pair of plates—in other words, forming a short circuit between the binding-posts *w w*. The indicator is by this operation raised, and exposes the word "Off."

In order to prevent any tampering with the apparatus, the box is closed, whether by a hinged door, D', or a slide which is securely fastened on. In the door is a small window, F, which allows ready inspection of the indicator within, and which may be broken for depressing the key E, if it is not otherwise possible to gain access to the interior of the box.

It will be seen that as the only exposed parts of the cut-out apparatus are the ends of the two keys or levers no accident or injury to unskilled persons manipulating the same is possible, as these are entirely insulated from one another. Without such precautions it is possible for a person to receive from the conductors of a circuit from a large machine a dangerous shock in an attempt to break or shunt the current.

Having now fully explained the nature of my invention and the best manner of which I am at present aware of carrying the same into effect, what I claim is—

1. The combination of a shunting or short-circuiting apparatus, levers for operating the same, and an indicator connected with a movable portion of the apparatus, as described, with a box or casing divided into compartments by a slotted partition secured therein,

the slots being arranged to allow the levers to extend through them and to expose the indicator to view.

2. In a shunting or short-circuiting apparatus, the combination of an oscillating shaft, two contact-springs, forming terminals of an electric circuit, fixed thereto, a lever for turning said shaft, a lever provided with a catch for holding it in place, and contact-plates placed in the path of movement of the springs, two of said plates being connected with insulated binding-posts and two in metallic contact, as and for the purpose set forth.

3. The combination of oscillating shaft A, insulated rings *b c*, and springs B C, fixed thereto, key L, spring *s*, and key E, having a catch for engaging with a toe on shaft A, with contact-plates H K and circuit-connections to the springs B C and from the plates H, substantially as described.

4. The combination, with an oscillating shaft, A, springs B' and C', and devices for locking and releasing the said shaft, of circuit-closing springs connected with the shaft, contact-plates H K, and an indicator-slide, G, connected with and operated by the movement of the shaft A, as set forth.

In testimony whereof I have hereunto set my hand this 3d day of May, 1882.

EDWARD WESTON.

Witnesses:

HENRY A. BECKMEYER,
MAURICE A. MÜLLER.