

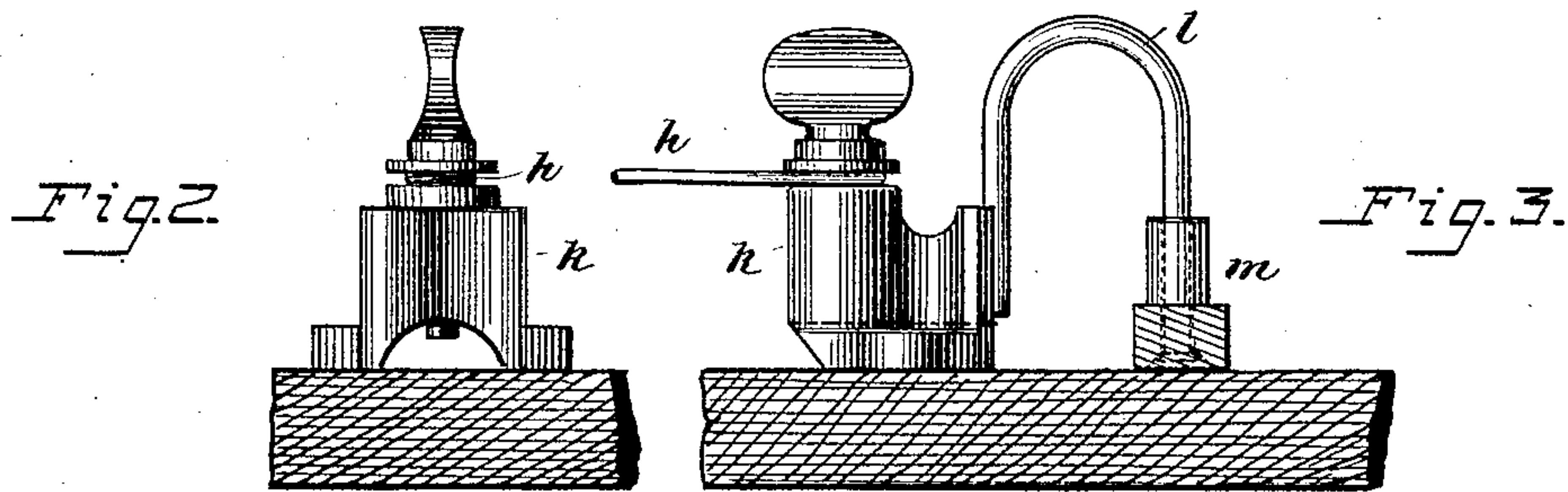
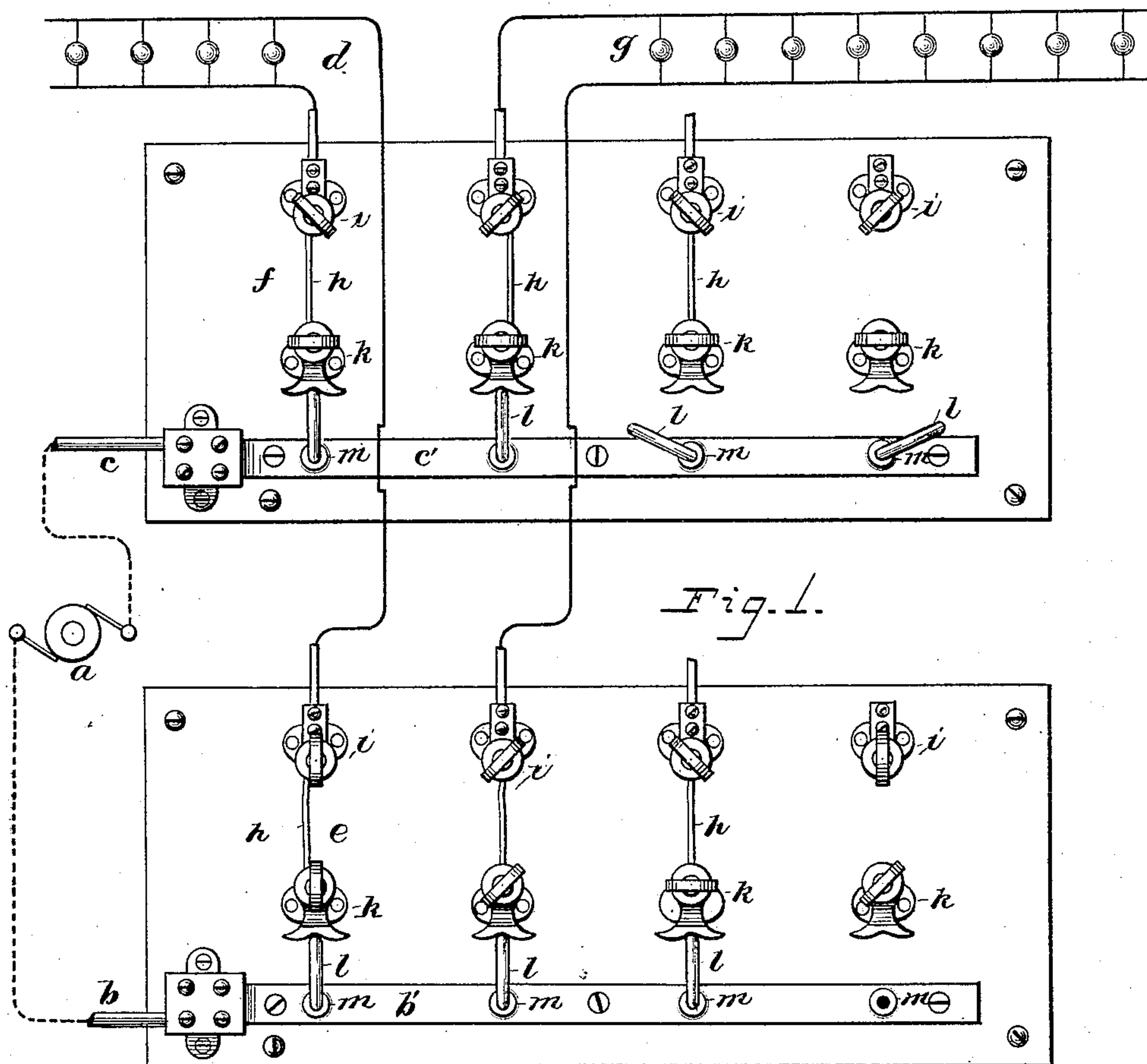
(No Model.)

E. P. WARNER.

MULTIPLE CUT-OUT FOR ELECTRIC DISTRIBUTION SYSTEMS.

No. 453,029.

Patented May 26, 1891.



Witnesses.

Charles E. Hawley.
Ella Edler

Inventor.

Ernest P. Warner.

By George P. Barton
Attorney.

UNITED STATES PATENT OFFICE.

ERNEST P. WARNER, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE WESTERN ELECTRIC COMPANY, OF SAME PLACE.

MULTIPLE CUT-OUT FOR ELECTRIC DISTRIBUTION SYSTEMS.

SPECIFICATION forming part of Letters Patent No. 453,029, dated May 26, 1891.

Application filed February 16, 1891. Serial No. 381,698. (No model.)

To all whom it may concern:

Be it known that I, ERNEST P. WARNER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Multiple Cut-Outs for Electric Distribution Systems, (Case 35,) of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

Heretofore in running the wires for incandescent electric-lighting circuits it has been common to arrange a number of safety cut-outs in a group, so that they may be all easily accessible for inspection or repairs. When thus arranged, the construction has heretofore been such that two separate connections would be required for each cut-out.

My invention consists in the construction hereinafter described, whereby several cut-outs may be connected on one side with a common buss-bar by means of U-spring switches arranged so as to permit of the ready disconnection of any cut-out from the buss-bar. In this manner each circuit of lamps would be provided with a cut-out at each point of attachment to the main feeders.

My invention will be more readily understood by reference to the accompanying drawings, in which—

Figure 1 is a diagram showing several of my cut-outs in connection with incandescent-light circuits. Fig. 2 is a front view of the double cam and screw clamp, the U-spring being removed. Fig. 3 is a side elevation thereof.

Referring now to Fig. 1, *a* is the generator with its different poles connected with the mains *b c*. The buss-bars *b' c'* are connected, respectively, with said mains *b c*. The lamp-circuits have their different terminals connected with the different buss-bars. Thus circuit *d* is connected at one terminal through the cut-out *e* with the buss-bar *b'*, and at its other terminal the circuit is closed to buss-bar *c'* through the cut-out *f*. The lamp-circuit *g* is connected in a similar manner with the different buss-bars. The different cut-outs *f e* are preferably of the same construction

as shown. I will therefore describe the construction of the cut-out *e*, as shown in Fig. 1, in connection with the details illustrated in Figs. 2 and 3. The fuse-wire *h* is connected between the clamp or binding-post *i* and the double cam-clamp *k*, these clamps *i* and *k* being insulated from one another, preferably by being mounted upon a soapstone or wooden base, as shown.

The U-spring *l* is provided with a pivotal connection *m* with the buss-bar. The free end of this U-spring is adapted to be bent inwardly as it is forced over either wing of its cam, so as when opposite the groove it will expand so as to rest in said groove and be held in position to maintain the electrical connection between the buss-bar and the clamp *k*. In order to disconnect the circuit it is only necessary to turn the U-spring *l* upon its pivot away from the cam in either direction, and to entirely disconnect a circuit from both mains it is only necessary to turn the U-switch of each of the two cut-outs of the circuit. It will be seen that by this construction only one connection is required to connect a wire with a cut-out and hence with the main. The different parts of the cut-out are attached to the base, so that they are not liable to become disarranged, and in case of the burning out of a fuse the connection with the main may be readily opened while a new fuse is being inserted. It will thus be seen that as many cut-outs as desired may be provided in connection with each buss-bar or main source of supply, so that lamps or other translating devices in multiple may be connected therewith as desired.

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

1. The combination, with the supply conductors or mains on different sides of the generator, of cut-outs, each cut-out consisting of a binding-post or clamp for connection with the circuit to be supplied and each provided with a double cam-clamp, with which a U-spring connected with the main is adapted to engage, substantially as and for the purpose specified.

2. The combination, in an electric switch,

of a pivoted U-spring and a double cam-clamp, with which the free end of said U-spring is adapted to be brought into connection to hold the same in position and complete the electric circuit, substantially as and for the purpose specified.

3. In a system of electrical distribution, buss-bars connected to the different sides of a source of supply of electrical energy, said
10 buss-bars having two or more U-shaped springs pivoted thereto, each in combination

with a cam-clamp, with which the free end of the corresponding U-spring is adapted to be connected and disconnected, substantially as and for the purpose specified.

In witness whereof I hereunto subscribe my name this 20th day of August, A. D. 1890.

ERNEST P. WARNER.

Witnesses:

GEORGE P. BARTON,
ELLA EDLER.