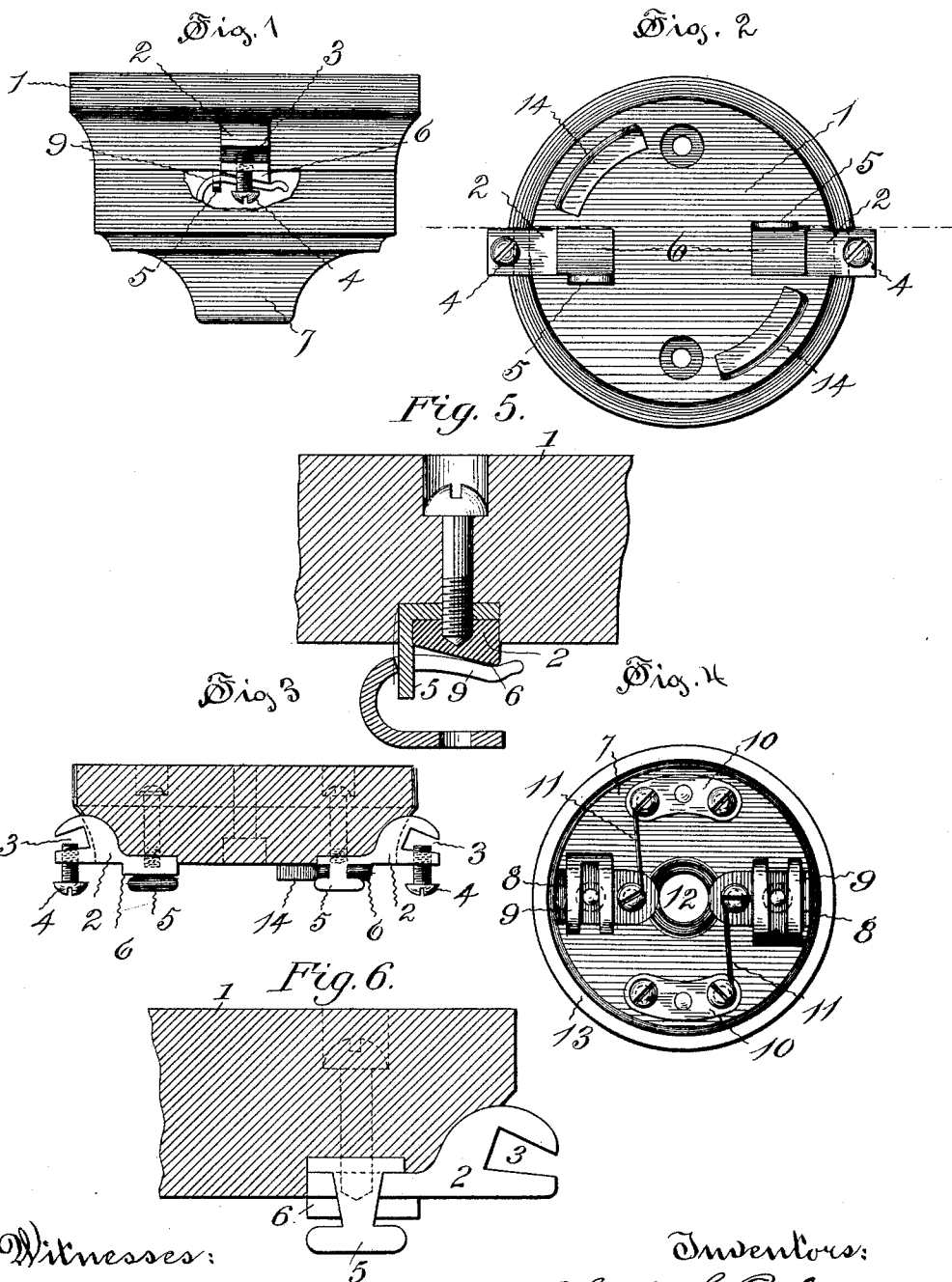


(No Model.)

C. G. PERKINS & J. TREGONING.
FUSIBLE CUT-OUT.

No. 586,565.

Patented July 20, 1897.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES G. PERKINS AND JOHN TREGONING, OF HARTFORD, CONNECTICUT,
ASSIGNORS TO THE PERKINS ELECTRIC SWITCH MANUFACTURING COM-
PANY, OF SAME PLACE.

FUSIBLE CUT-OUT.

SPECIFICATION forming part of Letters Patent No. 586,565, dated July 20, 1897.

Application filed December 15, 1896. Serial No. 615,752. (No model.)

To all whom it may concern:

Be it known that we, CHARLES G. PERKINS and JOHN TREGONING, citizens of the United States, residing at Hartford, in the county of
5 Hartford and State of Connecticut, have invented certain new and useful Improvements in Fusible Cut-Outs, of which the following is a specification.

The invention relates to the class of cut-outs
10 which have a base with contacts adapted to be connected with the wires that lead to and from a source of electrical energy and a cap with contacts adapted to make connection with the contacts on the base and connected
15 by fusible wires with plates adapted to be joined with the ends of the wires that continue to the lamp or other apparatus connected in the circuit.

The object of the invention is to produce a
20 very convenient, attractive, and inexpensive cut-out of this class, having the parts so arranged that the cap bearing the fuses can be easily and quickly locked to or removed from the base by a simple turn of the cap, the con-
25 nection between the base and cap being such that a very strong grasp of the parts is provided and a close and tight electrical junction between the contacts is insured.

The embodiment of the invention shown
30 and described herein has a base of insulating material bearing conducting-pieces adapted to be attached to the main-circuit wires, said conducting-pieces having fastening-heads and inclining binding and locking or wedge
35 surfaces, and a cap of insulating material with holding-arms adapted to engage the fastening-heads and the inclining binding and locking or wedge surfaces on the base, and plates connected with the holding-arms by
40 fusible wires and provided with binding-screws for the attachment of the wires that continue the circuit from the cap to the lamp or other apparatus.

Referring to the accompanying drawings,
45 in which such a cut-out is illustrated, Figure 1 is a side elevation with a portion of the cap broken away to show one of the holding-arms. Fig. 2 is a plan of the base. Fig. 3 is a section of the base, taken on plane denoted by
50 the broken line of Fig. 2. Fig. 4 is a plan of

the cap. Fig. 5 is an enlarged detail section illustrating the manner of engagement of one of the contacts of the cap with one of the contacts of the base, and Fig. 6 is an enlarged detail section showing one of the engaging
55 contacts of the base in side view.

In the views, 1 indicates the base, which is usually a circular disk of porcelain, but which may of course be formed to any desired shape of other suitable insulating material. Se-
60 cured to the outer face of the base are the conducting-pieces 2. These pieces in the form shown have mortises 3, with binding-screws 4 for the attachment of the main-circuit wires
65 that lead from and to the source of electrical energy. Projecting from these pieces are the fastening-heads 5, which may be flat T-shaped pieces or may be round studs with enlarged
70 ends. Portions 6 of the upper surfaces of the conducting-pieces adjacent to the fastening-heads are made on an incline, and these surfaces are arranged so as to incline toward the
75 plane of the fastening-heads as they extend away from the fastening-heads.

The cap 7 is usually formed circular of por-
80 celain or the same insulating material as the base, and mounted in the cap are plates 8, provided with bent spring-holding arms 9. These arms are preferably forked, so that
85 when the cap is placed upon the base the openings of the forks will receive the shanks of the fastening-heads and the projecting edges of the heads will extend over the arms and
90 thus hold the parts together.

Located in the cap are the conducting-
85 plates 10. These plates are connected by fuse-wires 11 with the plates 8, which wires are secured by suitable binding-screws, and the plates are also provided with binding-
90 screws for the attachment of the wires that pass out and in the central perforation 12 through the cap to and from the lamp or
95 other piece of apparatus that is connected through the cut-out with the main circuit.

In the cut-out shown the fastening-heads
95 project outwardly from opposite edges of the conducting-pieces 2 on the base and the binding and locking surfaces incline in opposite directions. Therefore the holding-arms are bent from opposite edges of the plates 8 in
100

the cap and have their forks opening in opposite directions. With the parts arranged in this manner the cap is secured to the base by placing the cap and base face to face and then giving the cap a short rotary movement, so as to pass the forked arms on the cap beneath the fastening-heads on the base. This draws the cap and base together and a continuation of the rotary movement causes the ends of the forked arms to engage and ride up on the inclining surfaces of the pieces 2, adjacent to the fastening-heads, which bends the spring-arms out of their normal form and wedges them between the inclining surfaces and the edges of the heads and insures a close contact between the edges of the fastening-heads and the surfaces of the forked arms and also between the forked arms and the inclining surfaces of the conducting-pieces on the base. This wedges the parts so that besides a good electrical contact being made between the conducting-pieces the arms are bent into locking curves back of the heads, and by these the cap is held tightly in place.

As illustrated in Fig. 1, the ends of the forked arms are slightly bent, so that when the parts are together the arms will bend around the outer edges of the inclining surfaces and lock the parts. When the parts are locked together in this manner, the cap cannot be moved from the base without the exercise of considerable rotary force.

If the fastening-heads were arranged to project outwardly from the same edges of the conducting-pieces 2, with the inclining outer surfaces sloping in the same direction, and the forked arms on the cap were bent and opened in the same direction, the cap would be placed face to face with the base and simply given a sidewise push to engage and secure the parts instead of giving it a slight rotation, as is necessary in engaging and securing the parts when arranged as shown in the views.

Where the arrangement of the parts is such that the cap is secured to the base by a rotary movement instead of a straight sliding movement, an annular rim 13 may be made around the edge of the cap and raised bosses 14 may be formed on the base to make contact with the rim and guide the cap in its rotary movement, so that the holding-arms will correctly engage with the fastening-heads.

The shape of the plates 2, on which are the binding-screws for attaching the circuit-wires, is not material to the invention, for any other common shape for these parts with the usual binding-screws for the attachment of these wires may be employed without in the least changing the character of the invention.

A cut-out embodying this invention is simple and inexpensive to manufacture. The

cap bearing the fuses is readily secured to or removed from the base by a slight movement. The securing means are firmly locked together. A close electrical contact is made between the conducting parts and the cap is tightly held when in position on the base. In fact, the strain of any vertical pull upon the cap or the wires connected with the cap when it is in position tends to make a closer contact between the holding-arms and the fastening-heads and inclining binding and locking surfaces.

We claim as our invention—

1. A cut-out consisting of a base of insulating material bearing contacts adapted to be connected with the circuit-wires, said contacts having outwardly-projecting fastening-heads and binding and locking surfaces inclining outwardly and away from the fastening-heads, and a cap of insulating material bearing forked spring-arms bent so as to engage the inner edges of the fastening-heads and the outer faces of the inclining binding and locking surfaces and extend over the edges of the locking-surfaces when the cap is attached to the base, substantially as specified.

2. A cut-out, consisting of a base of insulating material having contacts adapted to be connected with the circuit-wires, said contacts having outwardly-projecting fastening-heads and wedge-surfaces that incline toward the plane of the fastening-heads as they extend away from the fastening-heads, and a cap of insulating material bearing forked spring-arms arranged so as to engage the inner edges of the fastening-heads and the wedge-surfaces, which wedge-surfaces, as the cap is attached to the base, bend the spring-arms out of their normal form and wedge them into locking curves back of the fastening-heads, substantially as specified.

3. In combination, in a cut-out of the within-described class, a fastening for securing the cap to the base, consisting of a contact adapted to be connected with a circuit-wire, said contact having an outwardly-projecting fastening-head and a wedge-surface that inclines toward the plane of the fastening-head as it extends away from the fastening-head, and a forked spring-arm arranged so as to engage the inner edges of the fastening-head and the wedge-surface, which wedge-surface, as the cap is attached to the base, bends the spring-arm out of normal form and wedges it into a locking curve back of the fastening-head, substantially as specified.

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