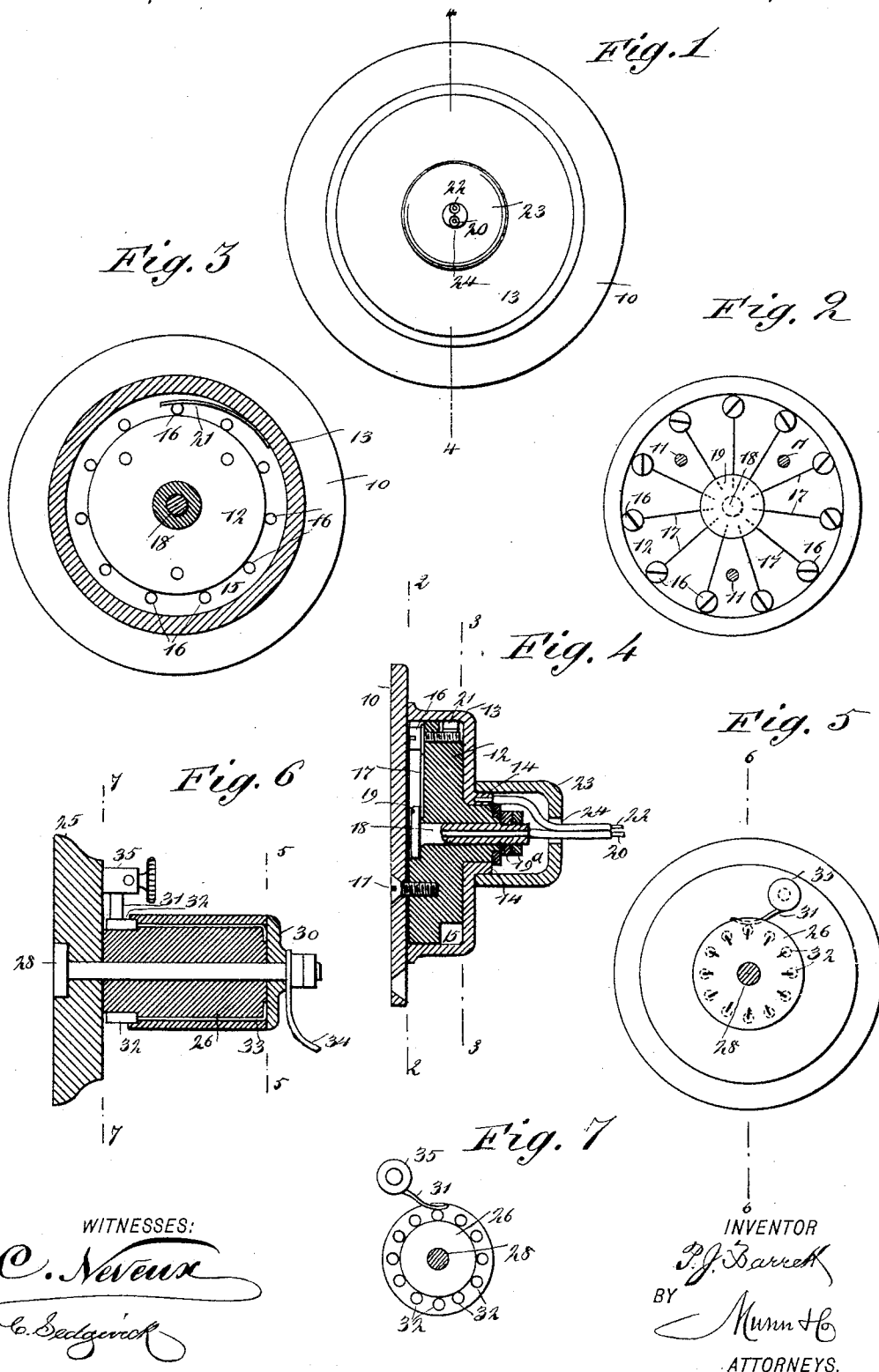


(No Model.)

P. J. BARRETT.
CUT-OUT.

No. 499,497.

Patented June 13, 1893.



WITNESSES:
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UNITED STATES PATENT OFFICE.

PATRICK J. BARRETT, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO JOHN J. FRAWLEY AS PRESIDENT OF THE BOSTON SOCIETY OF REDEMPTORIST FATHERS, OF SAME PLACE.

CUT-OUT.

SPECIFICATION forming part of Letters Patent No. 499,497, dated June 13, 1893.

Application filed April 3, 1893. Serial No. 468,829. (No model.)

To all whom it may concern:

Be it known that I, PATRICK J. BARRETT, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Cut-Out, of which the following is a full, clear, and exact description.

My invention relates to improvements in that class of electric cut-outs or fuse boxes, which are provided with conducting wires through which the current is passed to a lamp or other piece of mechanism, and which conductors are of sufficient capacity to supply a current to the lamp or other mechanism but which, if the current is suddenly increased to any great extent, will burn out, thus breaking the circuit and saving the lamp.

The object of my invention is to produce a cut-out or fuse box of this class, which is of very simple construction, which is especially applicable to incandescent lamp circuits, but which may be used for other purposes, and which is adapted to carry a great many fusible conductors arranged to have one conductor quickly brought into position to close the circuit after another or others have been burned out.

To these ends my invention consists in certain features of construction and combinations of parts, as will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the cut-out or fuse box embodying my invention. Fig. 2 is a sectional plan, on the line 2—2 in Fig. 4, of the revoluble drum carried by the box. Fig. 3 is a vertical section on the line 3—3 in Fig. 4. Fig. 4 is a central cross section through the cut-out, on the line 4—4 in Fig. 1. Fig. 5 is a cross section on the line 5—5 in Fig. 6, showing a modified construction. Fig. 6 is a cross section on the line 6—6 in Fig. 5; and Fig. 7 is a cross section on the line 7—7 in Fig. 6.

The cut-out is provided with a suitable base 10 which is preferably of wood, but may be of any suitable material, and this base is se-

cured by means of screws 11 or equivalent fastenings to a circular block or drum 12, which is of insulating material, and which is inclosed in a revoluble case or box 13, the latter having preferably a hub 14 which turns on the hub of the block or drum 12. The block or drum 12 is provided with an annular recess 15 which extends around it near its outer end, and projecting through this recess and arranged circumferentially around the block or drum are conductors 16, which are preferably formed of screws and each of these connects by a fusible wire 17, with a central pole or main conductor 18, which extends longitudinally through the block or drum 12 and which is preferably provided with a head 19 with which the wires 17 contact.

Each wire 17 is of a size capable of carrying sufficient current to supply the lamp or other mechanism with which the cut-out connects, and it will be readily seen that any desired number of these wires 17 and conductors 16 may be used. The central pole or conductor 18 is held in place, preferably, by nuts 19^a which are screwed to its outer end and it connects with one of the circuit wires 20.

On the inner side of the case or box 13 is a spring contact brush 21 which is adapted to engage or contact with the conductors or screws 16, as best shown in Fig. 3, and it will be seen that by turning the case or box the brush may be brought successively into contact with the conductors or screws and it also acts as a pawl, and its end, by engaging the conductors, prevents the case from being turned except in one direction. The case connects with the other circuit wire 22 and both the wires 20 and 22 are held in an insulating collar 23 which fits the hub 14 of the case 13 and which has an opening 24 for the passage of the wires. The wire 20 is adapted to connect with the line and the wire 22 with the lamp in the usual way, or the arrangement may be reversed if desired. Under normal conditions, the circuit is through the wire 20, the pole 18, one of the fusible wires 17, a conductor 16, the brush 21, the case 13, and the wire 22 to the lamp. If, however, the current is suddenly and excessively increased,

the wire 17 burns out, thus breaking the circuit and preventing the lamp or other mechanism from being injured, and the circuit may be again closed by simply turning the case or box 13 slightly so as to bring the brush 21 into contact with the next conductor 16. In this way the cut-out may be successively moved until all the fusible wires have been burned out, and as the conductors may be provided with a great many of them, the arrangement provides for an instantaneous shifting of the cut-out and, moreover, the construction of the cut-out is such that the wires may be very easily removed as they are held on the surface of the block or drum 12.

The modified form of cut-out shown in Figs. 5 to 7 is the same in principle as the one already described, and the only essential difference is that the fusible wires are held on the face of a cylindrical insulating box instead of on its ends. As illustrated, this modified form has a suitable base 25 which may be secured conveniently to any support and on it is a cylindrical insulating block 26 through which extends the pivot bolt 28 on which the block turns. At the outer end of the block or drum 26 is a conducting collar 30 carried by the pivot bolt, and in this form of cut-out a contact spring 31, substantially like that already described, is used, and is adapted to successively touch the contacts 32 which are arranged at the inner end of the cylinder or drum 26 and which connect by fusible wires 33 with the conducting collar 30. A wire 34 connects with the pivot bolt 28 and a binding post 35 is adapted to connect with the other wire, and this post also carries the contact brush 31 so that the current passes through the wire 34, the collar 30, one of the wires 33 and contacts or conductors 32, the spring 31 and the binding post 35. When one of the wires 33 has been burned out, the cut-out is shifted by simply turning the cylinder or drum 26 so as to bring a new conductor into contact with the brush 31.

The two forms of the device illustrated, show that the drum carrying the fusible wires may be revolved or that the fusible wires may be held in a stationary position and the con-

tact brush for engaging them may be revolved, without changing the nature of the invention.

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

1. A cut out comprising an attaching plate or base 10, a circular block 12 of insulating material secured to the face of the base and provided with a central aperture, a circular series of conductors extending from the inner face of the said block parallel with its central aperture and exposed at its periphery, a central pole or conductor extending through the said central aperture, fusible wires connecting the inner end of the central pole with the inner ends of said series of conductors, and a conducting casing inclosing and turning upon the periphery of said block and provided with a spring on its inner side to contact with any one of said circular series of conductors: said casing and central pole being adapted to have the circuit wires connected to them, substantially as set forth.

2. A cut out comprising an attaching plate or base 10—a circular block 12, of insulating material secured to the face of the base and provided with a central aperture, an annular flange around the outer end thereof, and a peripheral recess, a headed central pole or conductor 18 extending through said block from its inner side and provided on its outer end with nuts 19^a, a circular series of conductors 16 extending from the inner side of the block into said peripheral recess, fusible wires on the inner face of the block and held thereto by the inner headed ends of the central and other conductors, a conducting case 13 inclosing said block and turning thereon, said case having a hub like flange 14, receiving the similar portion of the block 12 and a spring 21 to contact with any one of the conductors 16, the insulating cap 23 fitting on the hub 14 and provided with an opening 24 for the passage of the wires to the conductor 18 and hub 14, substantially as set forth.

PATRICK J. BARRETT.

Witnesses:

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