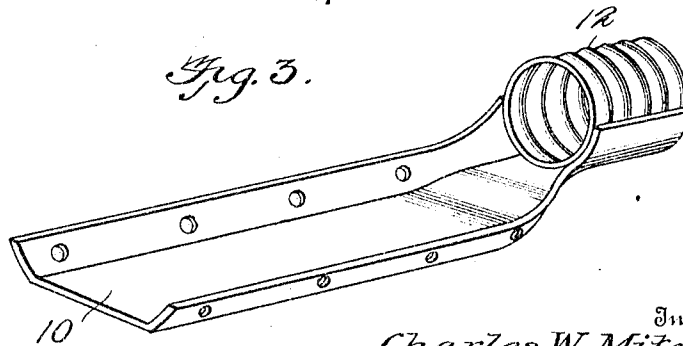
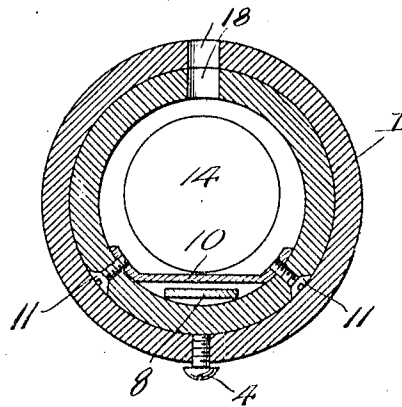
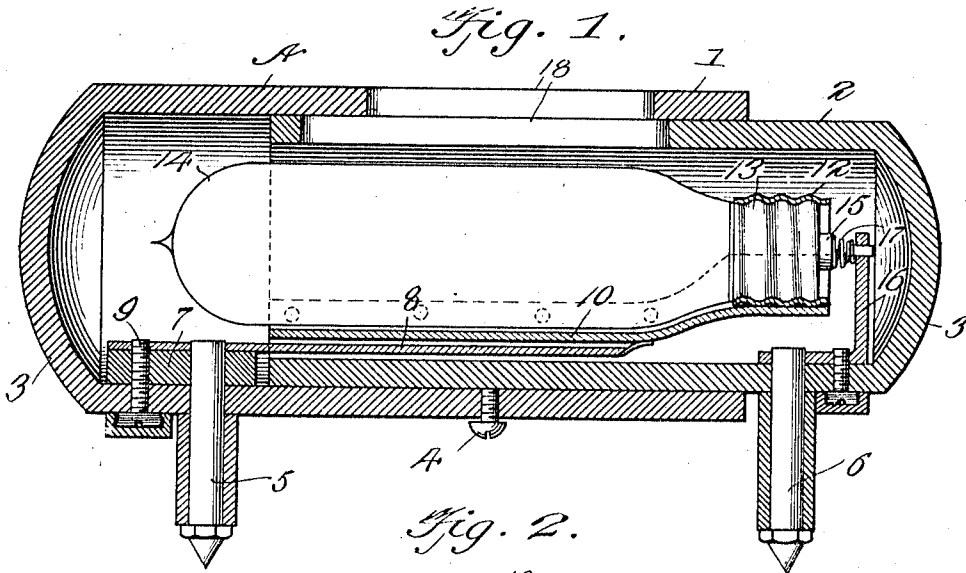


C. W. MITCHELL.
ELECTRIC FUSE TESTING DEVICE.
APPLICATION FILED JUNE 28, 1910.

988,891.

Patented Apr. 4, 1911.



Witnesses

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CHARLES W. MITCHELL, OF BROOKLYN, NEW YORK.

ELECTRIC FUSE-TESTING DEVICE.

988,891.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES W. MITCHELL, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Electric Fuse-Testing Devices, of which the following is a specification.

In those electric circuits where inclosed non-arcing fuses are employed, it is sometimes difficult to determine which of the two fuses connected with the opposite sides of a line circuit has been blown. Especially is this the case when there is an overload, which will destroy the fuse wire or element without igniting the powder in which the said element is incased, and it is customary to test the fuses either by touching the terminals with the fingers, which is extremely dangerous, or by using a lamp which is connected with the terminal of one fuse near the source of supply and with the terminal of the other fuse farthest from the source of supply, so that the lamp will be connected in shunt across the line with the said other fuse in circuit, and should the lamp fail to glow, it is evident that the fuse being tested is destroyed. This manner of testing is accompanied with danger, for the reason that it requires an experienced attendant to make the proper lamp connection without short circuiting the line, and furthermore, if the voltage of the circuit is beyond the capacity of the lamp, the latter will explode and endanger the eyes of the attendant, and again the intense light is trying to the eyes when the testing is carried on by a lamp.

The objects of the present invention are to overcome the difficulties and dangers attending the testing of fuses in the old manner, by providing a lamp inclosed within a protective casing which has contact posts connected with the terminals of the lamp, and so arranged that these posts can be connected with the terminals of the fuses to test the latter.

Another object of the invention is the provision of a testing device in which the casing or housing is composed of telescoping sections for accommodating the device to fuses of different sizes, there being a novel arrangement of contacts in the casing for connecting the lamp with the contact posts.

With these objects in view, and others as will appear as the description proceeds, the invention comprises the various novel fea-

tures of construction and arrangement of parts which will be more fully described hereinafter and set forth with particularity in the claims appended hereto.

In the accompanying drawings, which illustrate one embodiment of the invention:— Figure 1 is a central longitudinal section of the fuse testing device; Fig. 2 is a transverse section thereof; Fig. 3 is a perspective view of the combined lamp holding element and contact member.

Similar reference characters are employed to designate corresponding parts throughout the several views.

Referring to the drawings, A designates the casing of the device which is made in two sections 1 and 2, that are of cylindrical form and of different diameters, so that one can telescope within the other, and the outer ends of the sections being closed by heads 3. These sections are clamped together by a binding screw 4, and the section 1 has a contact post 5, while the section 2 has a contact post 6, both extending in the same direction so that they can be engaged with the opposite terminals of the fuses in the two sides of a line circuit, so as to connect the testing device across the circuit for testing one fuse at a time, the casing being grasped in the hand while the contact posts 5 and 6 are held in engagement with the fuse terminals. The post 5 is fastened to a base block 7 which is disposed within the casing and has fastened thereto by a screw 9 a contact strip 8 extending longitudinally of the casing and spaced from the section 1, so that the section 2 can slip under the contact strip 8. Within the section 2 is a strip 10 which has its edges fastened by rivets to the said section 2 and the contact strip 8 slides under and engages the bottom side of the strip 10. On one end of the strip 10 is a metal threaded socket 12 into which the base 13 of an incandescent lamp 14 screws, and hence the filament of the lamp is connected to the contact post 5 by the strips 8 and 10 and socket 12. Connected with the contact post 6 is an L-shaped metal piece 16 that is electrically connected to the other terminal 15 of the lamp by an interposed spring 17 and hence it will be understood that when both contact posts are connected with the opposite sides of a line circuit, current will pass through the lamp and cause the filament to glow. Light emitted from the lamp passes through registering

slots 18 in the two sections of the casing and by this means the attendant will know that the fuse being tested is intact.

From the foregoing description, taken in connection with the accompanying drawings, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention relates, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative and that such changes may be made when desired as are within the scope of the claims.

What I claim as new and desire to secure by Letters Patent is:

1. A fuse testing device comprising relatively adjustable members, means for supporting an incandescent lamp on one of the members, a contact on the lamp-supporting member electrically connected with one terminal of the lamp, a contact mounted on the other member and engaging the first-mentioned contact, and conductors attached to the respective members and respectively electrically connected with the other terminal of the lamp and the second-mentioned contact.

2. A fuse testing device, comprising a casing composed of slidably related parts for lengthening or shortening the device, a lamp therein, separate contact posts projecting respectively from the said parts of the casing, and means for connecting the posts with the terminals of the lamp.

3. A fuse testing device, comprising a

casing composed of telescoping sections having registering light emitting openings, a lamp in the casing, contact members connected with the respective sections of the casing, and connecting means between the members and terminals of the lamp.

4. A fuse testing device, comprising a casing composed of telescoping sections, contacts arranged within the casing and engaging each other, means on one of the contacts for holding a lamp and to electrically connect the contact with one terminal of the same, a member connected with the other terminal of the lamp, and contact posts fastened to the sections of the casing and connected respectively with said member and with one of the said contacts.

5. A fuse testing device, comprising a casing composed of telescoping sections, a contact strip in one of the sections, a contact strip in the other section arranged to engage with the first-mentioned strip, a metal socket on one of the contact strips, a lamp having its base fitted into said socket, a yielding current conducting connection with the lamp, a contact post on the inner section of the casing and associated with the said yielding connection, and a contact post secured to the outer section of the casing and connected with the first-mentioned contact strip, said contact posts extending laterally from the casing in the same direction.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES W. MITCHELL.

Witnesses:

CHARLES LANSING,
ALTON A. COSTUMA.