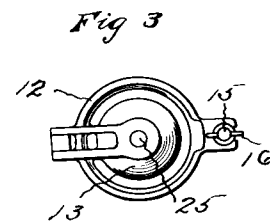
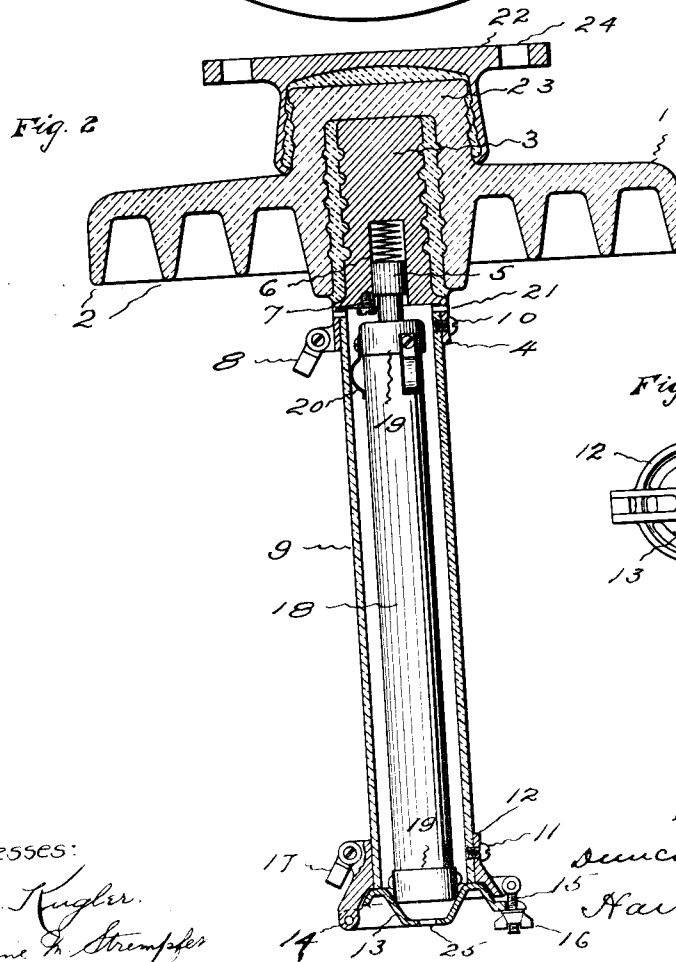
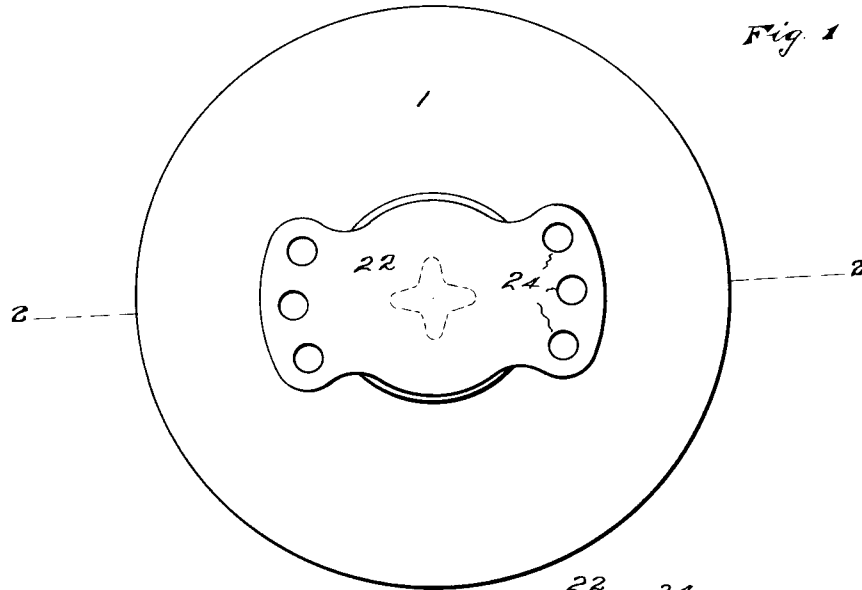


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FUSE HOUSING.
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1,049,362.



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UNITED STATES PATENT OFFICE.

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FUSE-HOUSING.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, DUNCAN C. HOOKER, a citizen of the United States, residing at Farmington, in the county of Hartford and State of Connecticut, have invented a new and useful Improvement in Fuse-Housings, of which the following is a specification.

This invention relates to a structure which is designed to receive, incase, support and insulate an inclosed electrical fuse, and while it is more particularly adapted for housing a fuse employed in a circuit of high voltage, it is very serviceable for use as a holder in an exposed position for a fuse of any voltage.

The object of the invention is to provide a housing into which an inclosed electric fuse can be easily inserted or removed, and when in place will be thoroughly protected from the weather, the structure being such that the live parts will be efficiently insulated from the support to which the device is fastened, and the possibility of electrical leakage will be reduced to a minimum.

The device illustrated as an embodiment of the invention has a receptacle with a cap at one end which can be quickly opened to permit the insertion or removal of the fuse, and can be easily closed so as to render the fuse chamber within weather tight. The other end of the receptacle is attached to an efficient insulator which is provided with means whereby the device may be suspended from the supporting structure, and thus eliminate all other possible paths for electrical leakage.

Figure 1 of the accompanying drawings shows a plan of the top of the device. Fig. 2 shows a central vertical section on the plane indicated by the dotted line 2—2 on Fig. 1, and Fig. 3 shows a plan of the lower end of the device.

The insulator 1 of the device shown may be made of glass, porcelain, molded insulating compound, or any other suitable electrical non-conducting material. This insulator is desirably made circular in outline with depending petticoats 2, for increasing the insulating surface.

A metallic pin 3 with an integral ferrule 4 is cemented or otherwise rigidly secured in a cavity in the underside of the insulator. Projecting from a socket in this pin is a metallic stud 5, a spring 6 normally thrusting it downward and a screw 7 preventing

its complete removal from the socket. One of the circuit wires is adapted to be connected to this ferrule by means of the metallic lug 8. The upper end of a tube 9, of glass, porcelain, molded insulation, fiber, or other suitable electrical non-conducting waterproof material is fitted into and mechanically secured, as by screws 10, to this ferrule at the lower end of the insulator pin. Fitted on, and mechanically secured to the lower end of the tube, as by screws 11, is a ferrule 12. The bottom of this ferrule is closed by a metallic cap 13, which on one side is held by a hinge pin 14, and on the other side by a swinging threaded bolt 15 and thumb nut 16. The other circuit wire is adapted to be connected with this lower ferrule by means of the metallic lug 17.

A common type of inclosed fuse 18 is represented as held in this housing. This fuse has the ordinary end ferrules 19 which are electrically connected with the fusible element, and it is shown as provided with springs 20 to keep its upper end central in the tube. When the cap at the lower end is closed, electrical connection is established from the lug 17 through the ferrule and cap to the fuse ferrule at the lower end, and through the fusible element and fuse ferrule at the upper end to the spring plunger pin, ferrule and lug 8 at the upper end. If desired, perforations 21 may be made through the ferrule at the upper end close beneath the insulator, and a hole 25 may be made in the cap at the lower end, to allow the escape of air and gases when the fusible element blows.

When a fuse is placed in this housing; closing the cap at the lower end establishes the electrical continuity of the circuit through the fuse and closes the tube so that the fuse in the interior is completely protected from the weather. In order to remove the fuse for any purpose it is only necessary to unlock and open the cap at the bottom and allow the fuse to drop out.

The insulator may be provided with any desired means for flexibly or rigidly attaching it to a supporting structure, such as a pole cross-arm, steel tower, or bracket attached to a building, which support might or might not be grounded. The device shown in the drawings is provided with a metallic cap 22 that is cemented or otherwise securely fastened to the insulator

hub 23. This cap has bolt holes 24, by means of which the device may be rigidly secured to a cross-arm or other structure.

A fuse can be easily put into this housing and quickly removed when desired. This accessibility to the fuse results in much economy in the time of re-fusing the device. A fuse arranged in this device is completely protected from the weather. The live parts are efficiently insulated, and as there is but one point of support for the entire device, the possibility of electrical leakage is reduced to the smallest degree. This is particularly advantageous when the device is employed for fusing a high tension circuit in an exposed position.

The invention claimed is:

1. A fuse housing having an insulator, means for suspending the insulator from a support, a weather proof tubular casing attached to and depending from the insulator, said casing being adapted to receive a fuse, conductors at the upper and lower ends of the casing and adapted to be electrically connected by a fuse placed within the casing, and means connected with the conductors at the upper and lower ends of the casing for the attachment of circuit wires.

2. A fuse housing having an insulator, means for suspending the insulator from a support, a weather proof tubular casing attached to and depending from the insulator, said casing being adapted to receive a fuse, a conductor at the upper end of the casing, a conducting cap arranged to open and close the lower end of the casing to permit the insertion and removal of a fuse, said conductor and cap being adapted to be electrically connected by a fuse placed within the casing, and means connected with the said conductor and cap for the attachment of circuit wires.

3. A fuse housing having an insulator, means for suspending the insulator from a support, an electrical conductor depending from the insulator, an insulating tube attached to and supported by the conductor, a conductor attached to the lower end of the tube, and means connected with the con-

ductor at the upper and lower ends of the tube for the attachment of circuit wires.

4. A fuse housing having an insulator, means for suspending the insulator from a support, a conducting pin held in a cavity in the underside of the insulator, an insulating tube fastened to the pin, a conducting cap at the lower end of the tube, and means for electrically connecting circuit wires with the pin at the upper end and the cap at the lower end of the tube.

5. A fuse housing having an insulator, means for suspending the insulator from a support, a conducting pin secured in a cavity in the underside of the insulator, a ferrule integral with the pin, an insulating tube secured to the ferrule, a ferrule at the lower end of the tube, a cap adapted to open and close the lower ferrule, and means for electrically connecting circuit wires with the ferrules.

6. A fuse housing having an insulator, means for suspending the insulator from a support, a conducting pin secured in a cavity in the underside of the insulator, a ferrule integral with said pin, a yielding plunger projecting from said pin, an insulating tube secured to the ferrule, a ferrule secured to the lower end of the tube, a cap hinged to the ferrule at the lower end of the tube, and means for electrically connecting circuit wires with the ferrules.

7. A fuse housing having an insulator adapted to be suspended from a supporting structure, a pin projecting from the insulator, a weather proof casing attached to said pin and depending from the insulator, said casing being adapted to receive a fuse, a yielding contact at the upper end of the casing, a swinging cap at the lower end of the casing, said contact and cap being adapted to be connected by a fuse placed in the housing, and means for connecting circuit wires with the yielding contact and the cap.

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