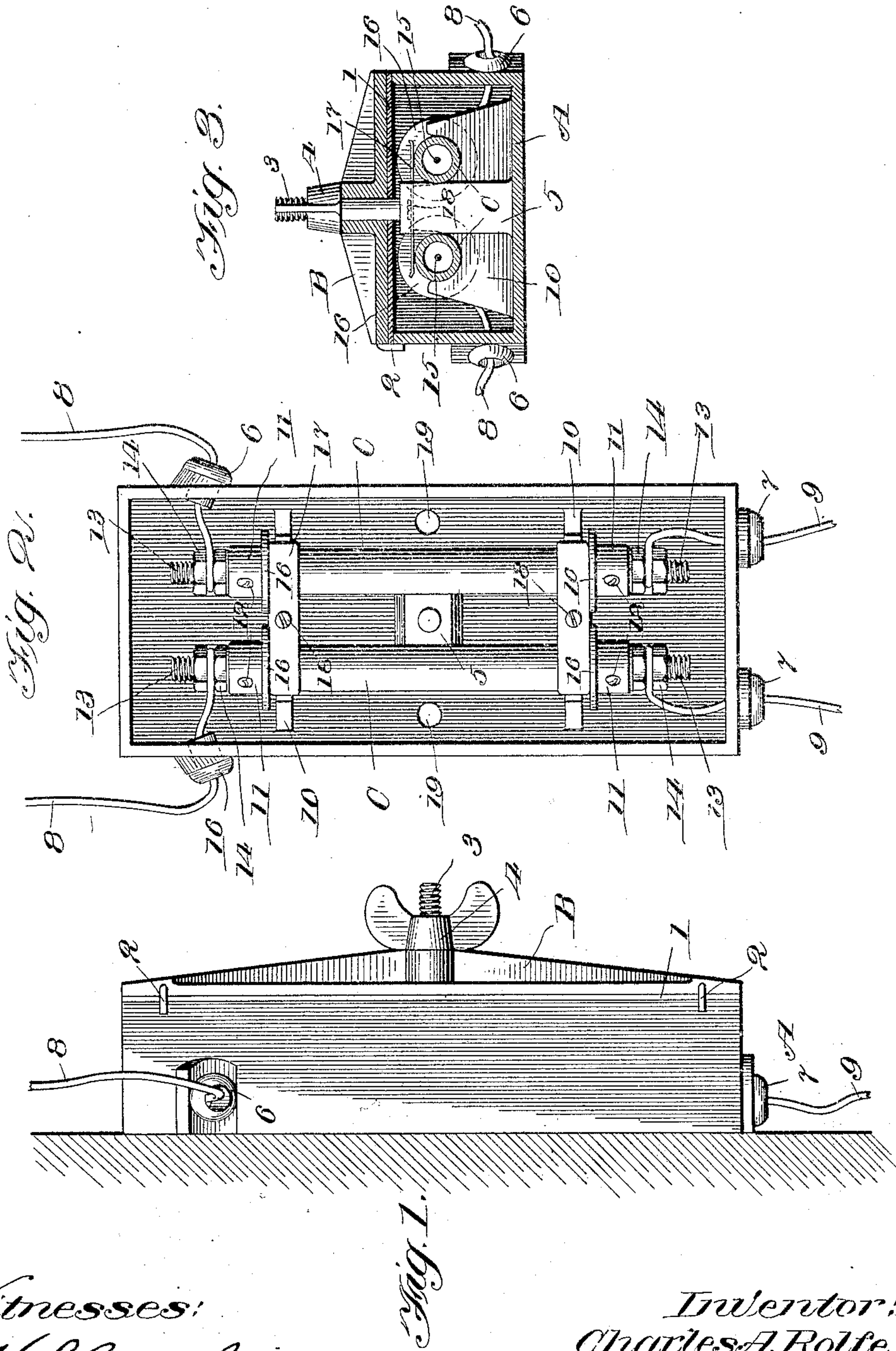


No. 841,449.

PATENTED JAN. 15, 1907.

C. A. ROLFE.
FUSE BOX.

APPLICATION FILED JAN. 21, 1903.



Witnesses:

H. S. Gaither
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Fig. 1.

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UNITED STATES PATENT OFFICE.

CHARLES A. ROLFE, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO ROLFE ELECTRIC CO., OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

FUSE-BOX.

No. 841,449.

Specification of Letters Patent.

Patented Jan. 15, 1907.

Application filed January 21, 1903. Serial No. 140,013.

To all whom it may concern:

Be it known that I, CHARLES A. ROLFE, 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 Fuse-Boxes, 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.

My invention relates to protective devices for protecting fine-wire circuits—such as telephone, fire-alarm, and similar circuits—from the damaging effects of unduly strong currents—such, for example, as those carried by lighting and power circuits.

The object of my invention is to provide a simple, cheap, practical, and durable device for exterior use adapted to protect both sides of a fine-wire circuit and to insure against the possibility of any damage or injury by fire as a result of the operation of the device.

In the device for carrying out my invention herein shown I provide a box which can be made of metal or any suitable non-combustible material and provide the same with a cover which can be made to fit water and air tight to the box. Within the box I suitably mount a pair of fuse devices, each containing an inclosed fuse. These fuse devices are so supported as to be a suitable distance from each wall of the box. By such arrangement I provide a fuse for each side of the circuit, and these fuses are inclosed by the device containing them and are also reinclosed, in effect, by being confined in the hermetically-sealed non-combustible box. In this way the circuit is amply protected, and at the same time there is no possibility of danger by operation of the fuses.

In the accompanying drawings, Figure 1 is a side elevation of a fuse-box embodying my present invention. Fig. 2 is a plan view of the box with the cover removed, and Fig. 3 is a cross-section of the box with the cover in place.

The device shown comprises a relatively long box A, desirably made of metal coated with waterproof material. The box is provided with a cover B, adapted to fit over the

top of the box A, the cover B being also made of metal and covered with waterproof material. As a convenient and cheap arrangement both the box A and cover B can be cast. The cover B is desirably provided with a sheet 1 of packing material to make a water-tight joint between the box and cover. The cover is also provided with a pair of pins 2 2, adapted to extend down on the sides of the box, and thereby prevent the cover from turning. The cover is held in place by a threaded bolt 3 and a wing-nut 4. The bolt 3 is secured to and rises from a standard or post 5, mounted on the floor of the box A, being conveniently cast integral therewith.

The box A is provided with a pair of side openings 6 6 and a pair of bottom openings 7 7. These are for the line-wires 8 8 and instrument-wires 9 9, respectively. The box A is also provided with a pair of supports 10 10, one near each end of the box, being cast integral therewith. Each of these supports has its upper portion recessed in two places, so as to form two concave seats, as shown in Fig. 3. Upon these supports rest a pair of fuse devices C C. These fuse devices can be of any desired construction or style. As a preferred arrangement, however, they embody the general principles of construction of the fuse devices set forth in Patent No. 800,822, issued to me October 3, 1905. As such fuse devices are fully described and claimed therein, I will describe them here but briefly and will not claim them separately herein.

Each device consists of a tube which can be made of wood coated with waterproof material and having its opposite ends provided with metallic caps 11 11. Each of these caps 11 11 is held in position by a screw 12, which passes through both the cap and the wall of the tube. Into the ends of the tube are fitted threaded metallic tubes 13, which are also held in position by the screws 12 12. Nuts 14 14 are fitted on the threaded metallic tubes 13 13 and are adapted to engage a sleeve as connectors for the line and instrument wires 8 8 and 9 9. Each device C contains an inclosed fuse 15, which is soldered to the threaded metallic tubes 13 13. Each fuse-tube is provided with flanges 16 16, located just inside of the caps 11 11.

These flanges are conveniently formed by washers fitted tightly upon the tube. The fuse devices C C thus constructed fit into the concave seats of the supports 10 10, as shown in Fig. 3, and are held securely in place by clips 17 17, removably attached to the supports 10 10 by screws 18 18.

In using the device the box is secured in position to the wall of the building or otherwise, as by screws passing through apertures 19 19 in the floor of the box A, and the line-wires 8 8 and instrument-wires 9 9 are connected with the opposite ends of the two fuse devices C C, as shown in Fig. 2. As thus arranged the device will protect the circuit against unduly strong currents. When such a current traverses the line, either one or both of the fuses in the fuse devices C C will blow, thereupon opening the circuit. Since these fuses are inclosed, there is no exposed arc, and, furthermore, since both fuse devices are confined in a sealed metal box there can be no danger by fire from operation of the fuses. Either or both of the fuses can be replaced, as may be required, after operation by unscrewing the screws 18 18 and removing one or both of the fuse devices C C and either substituting other devices for them or stringing a new fuse or new fuses therein.

It will be seen that the device is simple and practical and can be easily and inexpensively made and that it removes all liability of damage and injury by fire.

What I claim as my invention is—

1. A fuse-box comprising a box structure having its bottom provided with a pair of supports, each of which is provided with two recesses, a pair of fuse-holding devices mounted upon said supports and fitted into said recesses, a pair of clips 16, 16 secured to said supports and resting upon said fuse-holding devices so as to hold the same in position, said fuse-holding devices being extended lengthwise of the box, and the side walls of the latter being provided near their upper ends with apertures for wires to connect with the upper ends of the fuse devices, and the bottom wall of the box being provided with two apertures for connecting-wires running to the lower ends of the fuse devices.

2. A fuse-box having its bottom provided with integrally-formed supports, in combination with inclosed fuses resting upon said supports and provided with collars 16, 16, and clips 17, 17, removably secured to said supports and extending across said inclosed fuses, the collars 16, 16, engaging the clips 17, 17, whereby the fuses are held against endwise movement, and a cover detachably secured to said box.

In witness whereof I hereunto subscribe my name this 23d day of July, A. D. 1902.

CHARLES A. ROLFE.

Witnesses:

A. MILLER BELFIELD,
I. C. LEE.