

2,437,310

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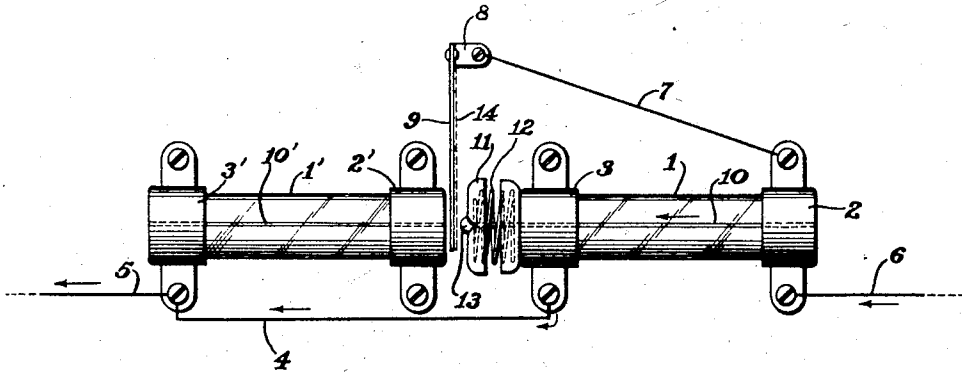


Fig. 1

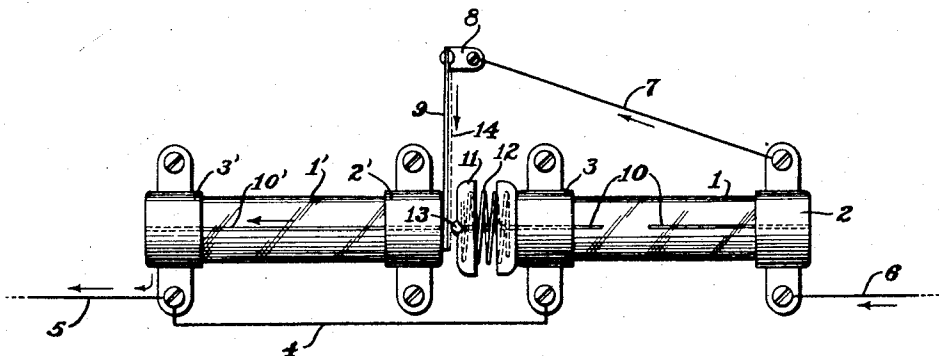


Fig. 2

Inventor,
Norberto Werber

By Richard J. Geier
Attorneys

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DOUBLE FUSE

Norberto Werber, Buenos Aires, Argentina

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3 Claims. (Cl. 200-126)

1

This invention relates to improvements in double fuses and essentially has for object a combination of two fuses, whereby, when one of the fuses is put out of use by short circuit or other similar cause, the other will automatically be placed in position of operation.

By the arrangement in accordance with this invention, the advantage is secured that in case of a short circuit or other accident causing the destruction of one of the fuses, the passage of the electric current will not be interrupted, this being a fact of great importance, particularly in those cases in which the current is used for feeding lights, light houses or similar services where such interruption may be cause of serious trouble.

In order that the invention may be readily understood and carried into practice without difficulty, a preferred form of construction of the same has been shown by way of example in the accompanying sheet of drawings, in which—

Figure 1 shows a lateral elevation of a double fuse in accordance with this invention, in its position of normal operation, and

Figure 2 is a similar view, in which one of the fuses has been burnt.

The same number of reference has been used to indicate like or corresponding parts in both figures.

In the form of construction shown, the device consists of two single fuses 1, 1', of the tubular type, with their corresponding terminals 2, 2' and 3, 3', the said fuses being arranged in alignment, one in continuation of the other, with their adjacent ends separated by a small gap. The terminals 3, 3' of both fuses are electrically connected one to the other, as indicated at 4, as well as to one of the sides of the line, at 5.

The terminal 2 of the fuse 1 is connected to the opposite side of the line, as shown at 6, and also, by means of a conductor 7, to a support 8 to which is connected the end of a flexible leaf or blade 9 of conductive material, inserted between the adjacent ends of the two fuses and normally separated therefrom. Each of the fuses is provided, in the usual way, with a wire of fusible material 10, 10', which connects both terminals of each of them. The fuse 1, at its end adjacent to the fuse 1', is provided with a cap 11, with the interposition of a spring 12 which tends to separate the cap from said end, said cap being retained in position by the pull exerted on the same by the fusible wire 10.

Under normal conditions, the several parts occupy the positions shown in Figure 1. When for any reason the rupture of the fusible wire 10 takes

2

place, the cap 11 will be released from the pull exerted by said wire, so that the said cap will be urged in an outward direction by the spring 12 and caused to act on the leaf or blade 9, placing the same in contact with the terminal 2' of the fuse 1'. Thereupon the current, interrupted at the fuse 1, will continue its flow through the fuse 1', so that the passage of the current in the general line will not be interrupted.

In order to prevent the passage of any current between the cap 11 and the metallic leaf or blade 9, said cap or the part of the surface of the leaf adjacent to the same may be covered by a suitable insulating material, as indicated at 13 and 14, respectively.

From the foregoing description, the scope and operation of the invention will have fully been understood and no further explanations will be required by those skilled in the art.

It will be evident that several modifications of construction and detail may be introduced without departing from the scope of this invention, as clearly defined in the following claim.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim and desire to secure by Letters Patent is:

1. A device of the nature described comprising a primary fuse and a secondary fuse in axial alignment one with the other, and separated by a relatively small gap, each of said fuses having an intake and an output terminal, a fuse wire in each fuse connecting the respective terminals thereof, means electrically connecting the output terminals of the respective fuses, a support, a lead wire electrically connecting the support to the intake terminal of the primary fuse, a resilient metallic leaf supported at one end on said support and extending into the gap at its opposite end, a two part cap at the output terminal of the primary fuse, the forward part of said cap being secured to the fuse wire of the primary fuse, and a spring interposed between the two cap parts normally exerting a tension between said cap parts and adapted to force the said leaf against the intake terminal of the secondary fuse when the fuse wire of the primary fuse is ruptured.

2. In an electric circuit, a double fuse, comprising a primary fuse and a secondary fuse in axial alignment one with the other, and separated by a relatively small gap, each of said fuses having an intake and an output terminal, the intake terminal of the primary fuse and the output terminal of the secondary fuse being electrically

3

connected to opposite sides of the circuit, a fuse wire in each fuse connecting the respective terminals thereof, means electrically connecting the output terminals of the respective fuses, a support, a lead wire electrically connecting the support to the intake terminal of the primary fuse, a resilient metallic leaf supported at one end on said support and extending into the gap at its opposite end, a two part cap at the output terminal of the primary fuse, the forward part of said cap being secured to the fuse wire of the primary fuse, and a spring interposed between the two cap parts normally exerting a tension between said cap parts and adapted to force the said leaf against the intake terminal of the sec-

4

ondary fuse when the fuse wire of the primary fuse is ruptured.

3. A device according to claim 1 and means for electrically insulating the leaf from the cap when the latter is forced against the former.

NORBERTO WERBER.

REFERENCES CITED

The following references are of record in the file of this patent:

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