May 12, 1925. 1,537,296

A. F. GEARHART

SAFETY FUSE

Filed May 5, 1922

Fig. 1.

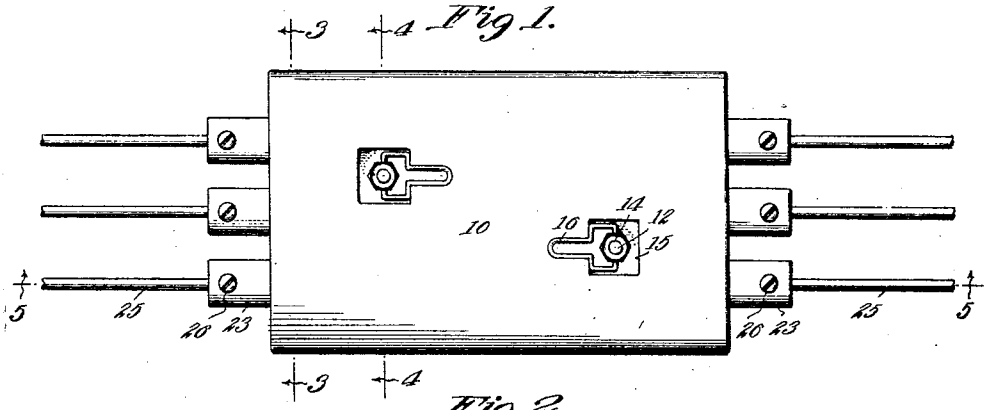


Fig. 2

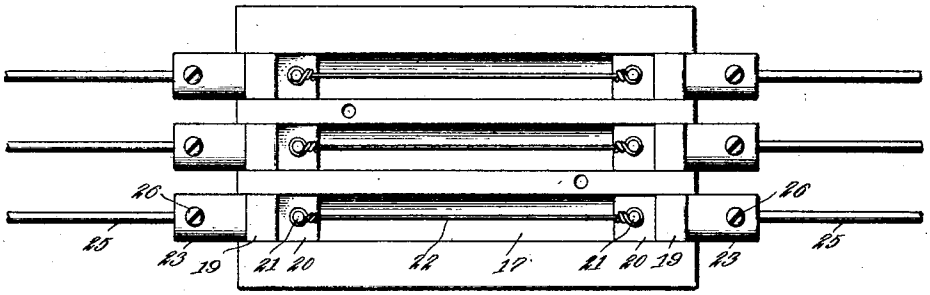


Fig. 3.

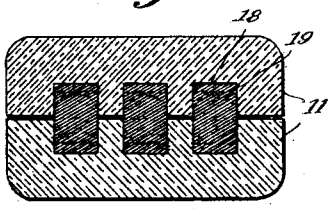


Fig. 4.

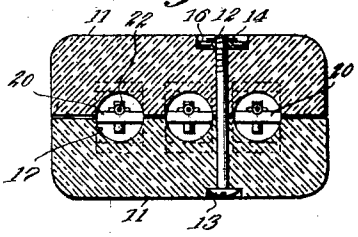
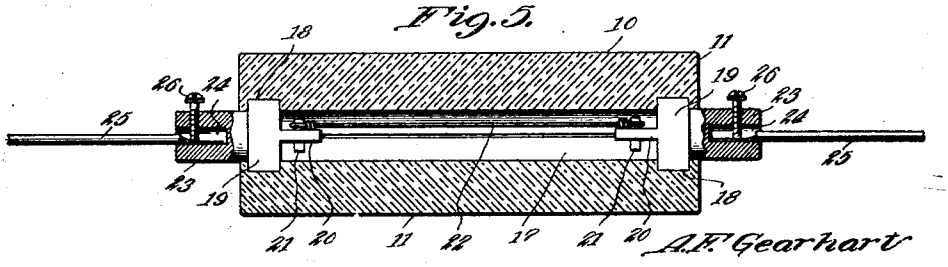


Fig. 5.



A. F. Gearhart

INVENTOR

J. M. Evans

WITNESS:

BY Victor J. Evans

ATTORNEY

Patented May 12, 1925. 1,537,296

UNITED STATES PATENT OFFICE.

ADDISON F. GEARHART, OF MACDUNN, WEST VIRGINIA.

SAFETY FUSE.

Application filed May 5, 1922. Serial No. 558,816.

To all whom it may concern:

Be it known that I, ADDISON F. GEARHART, a citizen of the United States, residing at MacDunn, in the county of Fayette and State of West Virginia, have invented new and useful Improvements in Safety Fuses, of which the following is a specification.

This invention relates to safety appliances, particularly to fuses for interposition in current carrying lines and has for its object the provision of a novel fuse device which instead of being attached stationarily to a portion of the machinery with which it is associated is interposed or connected in the cables and suspended thereby.

An important object is the provision of a device of this character which is adapted for use in carrying current of any strength desired and which is equally well adapted for use in connection with either direct current lines or alternating current systems.

Another object is the provision of a device of this character which includes a supporting block formed of separable sections between which are clamped a plurality of similar terminals to which the fuse wires are attached, these terminals being let into the block so as to have a firm seat therein to provide the necessary strength to permit the device to be used in suspended relation.

An additional object is the provision of a device of this character which will be simple and inexpensive in manufacture, efficient and durable in use, a great safe guard to life and property, and a general improvement in the art.

With the above and other objects and advantages in view the invention consists in the details of construction to be hereinafter more fully described and claimed and illustrated in the accompanying drawings, in which:

Figure 1 is a plan view of the device,

Figure 2 is a plan view with one section of the block removed,

Figure 3 is a cross section on the line 3—3 of Figure 1,

Figure 4 is a cross section on the line 4—4 of Figure 1 and

Figure 5 is a section on the line 5—5 of Figure 1.

Referring more particularly to the drawings I have shown my device as comprising a block 10 formed of suitable insulating material and constructed in two similar sections 11, held together by transverse bolts 12 having their heads 13 recessed into one section and having their other ends carrying nuts 14 located within recesses 15 in the other section. The nuts carry handle members 16 by means of which they may be rotated to effect assembling or disassembling of the device without the employment of any tools.

The sections 11 are formed with a plurality of spaced mating semi-cylindrical longitudinally extending channels 17 near the ends of which are formed rectangular recesses 18. Associated with each channel are two metallic terminal members each of which includes a rectangular head 19 fitting within the recess 18 and terminating in an extension 20. Carried by the extensions 20 of each pair of terminals are pins 21 to which are secured the ends of the fuse wire 22. The carrying capacity of the fuse wire must necessarily depend upon the nature of the current used in driving the machinery with which my device is associated and the capacity may be as great or as little as may be found desirable. Each terminal further includes an elongated cylindrical extension 23 projecting beyond the end of the block and formed with a socket 24 for the reception of the current carrying wire 25 which is held in place as for instance by means of a set screw 26.

Assuming that the device has been constructed and assembled as above described and as shown in the drawings, it is apparent that it will operate electrically in the same manner as any other fuse but it is to be noted that it possesses the great advantage of being capable of interposition in the current carrying cables of mining machines, electric locomotives, street railway cars and also in electric lighting or other systems. Owing to the fact that the various terminals are let or mortised into the sections of the block it is apparent that the device is capable of withstanding a severe endwise pull so that it may be dragged along without causing any injury to the structure and without danger of causing disconnection of any of the wires. It is to be observed that the device is equally well adapted for use in taking care of alternating or direct current and that when used in connection with direct current in case one fuse wire burns out the cables may be switched to one of the

remaining fuse wires so that whatever machinery is protected by the device may be continued in operation without any appreciable delay.

From the foregoing description and a study of the drawings it will be apparent that I have thus provided an extremely simple and consequently inexpensive safety fuse for all types of currents and in which renewal of a burnt out fuse may be accomplished in a very easy manner and without the employment of any tools whatever. As the device is so simple it is apparent that there is nothing to get out of order and that it should thus have a long life and satisfactorily perform all of its functions.

While I have shown and described the preferred embodiment of the invention it is of course to be understood that I reserve the right to make such changes in the form, construction and arrangement of parts as will not depart from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention I claim:

1. A safety fuse comprising a block of insulating material formed of separable sections detachably secured together, said sections being formed with spaced parallel longitudinally extending semicylindrical mating passages leading near their ends into angular recesses, a pair of terminals associated with each passage and including an angular head engaged within the angular recesses and further including a reduced extension projecting beyond the end of the block for connection with current carrying wires, and a fuse wire connected with each pair of terminal members.

2. A device of the character described comprising a block formed in sections detachably secured together, said block being formed of insulating material and having each section provided with a longitudinal channel of semi-cylindrical formation, the channels mating to define a cylindrical bore, the block being formed at the ends of the bore with angular recesses mating to define sockets, terminals held between the sections of the block and each formed with an angular head engaged within the socket and further formed with a reduced plate like tongue entering the bore and carrying a securing element, each terminal member further having an outwardly extending portion projecting beyond the end of the block and having a wire receiving socket intersected by a clamping screw for effecting connection, and a fuse wire extending within the bore with its ends wrapped about said securing elements.

In testimony whereof I affix my signature.

ADDISON F. GEARHART.