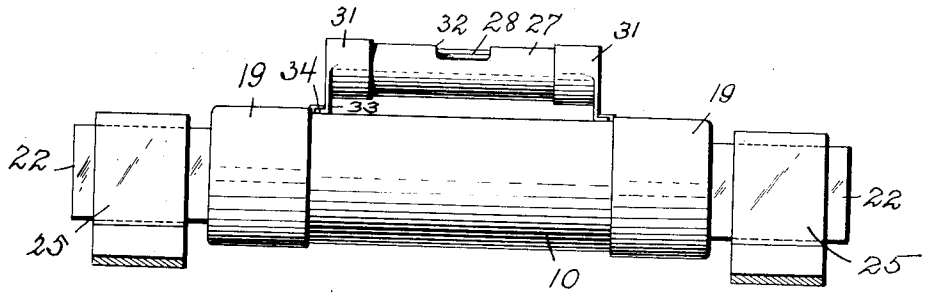
Feb. 23, 1937. I. KORN 2,071,843

FUSE

Original Filed Nov. 15, 1934

Fig. 1



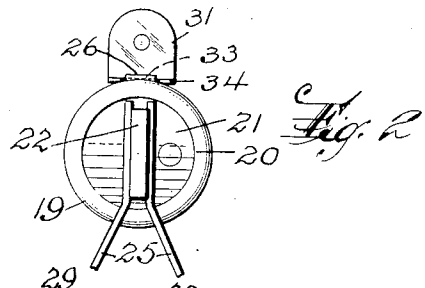


Fig. 2

Fig. 3

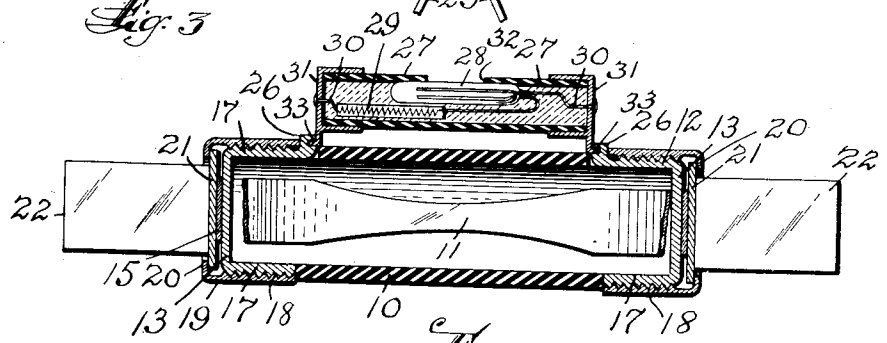
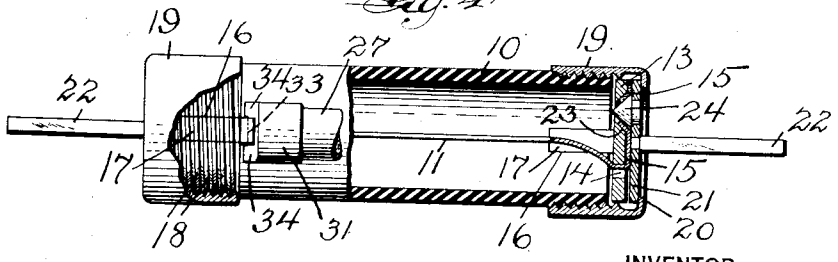


Fig. 4



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Patented Feb. 23, 1937 2,071,843

UNITED STATES PATENT OFFICE

2,071,843

FUSE

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Application November 15, 1934, Serial No. 753,104
Renewed July 25, 1936

4 Claims. (Cl. 200—121)

This invention relates to a fuse which contains a fusible element which is easily removed when burnt out and into which a new one is readily installed. The fuse is provided with clamping means at the end of the fuse casing for securely holding a fusible strip in place.

The fuse is also constructed to hold an electrically operated visual signal such as a lamp and also a resistance, these being installed in a holder which includes terminals.

The fuse is adapted to be used with or without the signal element, and the signal element can be quickly removed or installed.

Another advantage of the fuse is the construction that utilizes the strip holding means as a signal holder whereby a means, common to both, when placed on the fuse clamp both the fusible strip and the signal in place.

The invention is illustrated in the accompanying drawing. Figure 1 is a side view of my improved fuse with the signal element in place. Figure 2 is an end view of Figure 1. Figure 3 is a vertical longitudinal section of the fuse and the signal element. Figure 4 is partly a top view and partly a horizontal section to clearly illustrate the preferred construction for holding the end of the fusible strip.

The fuse comprises a casing 10 which is made of insulation and is tubular, usually cylindrical for its entire length. The casing is provided with a strip of fusible metal 11 which is fastened at its ends and held reasonably taut. The casing is provided with a cap 12 which may be at one end only but the preferred way of making the article is to place a cap at each end. The caps fit against the end of the casing as they have the disk-like ends 13 which abut against the casing.

The ends 13 each have a slit 14 through which the end of the strip is passed and then bent over as at 15. This bent over end rests against the outside face of the end 13 and is thereby not only held taut but is forced into secure electrical contact with the disk-like plate by means to be described hereinafter. The caps are usually made of metal.

The casing is provided with longitudinal slots 16 extending inwardly from the ends of the casing. The caps 12 have tongues 17 which extend into the slots. These slots are shown as two in number at each end and are opposed. This holds the caps against rotation on the casing. The outside surfaces of the assembled casing and caps are provided with a screw-thread 18.

On each end is a cup-shaped cover 19, with a screw-thread on its inside face to receive the screw-thread 18 of the casing and caps, the covers having inwardly extending annular flanges 20. Inside of the covers are the plates 21 each with a lip 22. The flanges bear on the plates 21 and force them against the turned-over ends of the inside strip 11. The disk like ends 13 of the caps 12 are provided with recesses 23, usually countersunk and each plate 21 has a prong 24 which fits into a recess. When the covers are screwed on, the prongs perforate the strip, make a tight electrical connection between the plates 21, the ends 15 of the strip and the disk-like ends 13 of the caps, hold the strips taut and prevent any of the parts from rotating relative to the others. The recesses are alined and this locates the prongs 24 in line and the lips 22 are therefore in line and are held rigidly in place for insertion in any of the usual commercial terminals indicated in the drawing at 25.

This fuse is equipped to receive a visual signal element if one is desired and to secure it in place by the cap and cover that secures the fusible strip, I show the tongues 17 provided with shoulders 26 against the rear face of which the ends of the covers 19 abut when the covers are tightly in place.

The signal element is shown as a tubular holder 27 which contains a signal lamp 28 and a suitable resistance coil 29. These are connected in series and also connected by wires 30 with the terminal ends 31 which terminals are substantially rigid and form firm ends for grasping by proper holding means. The holder 27 is cut out as at 32 to expose part of the lamp. The terminal ends 31 are provided with feet 33. The shoulders 26 of the cap have slots on their inner faces to receive the feet 33. The feet 33 have wings 34 which extend to both sides of the shoulders 26 to prevent side movement of the signal element.

The signal element can be installed or removed by relieving the covers 19 slightly to allow the tongues 16 to retreat enough to release the feet 33. The fuse is operable without the signal and on the other hand it can be quickly equipped with a signal element.

The covers have the functions of clamping and holding the ends of the fusible strip, of holding the tongues 22 securely in place and of forcing the shoulders 26 in close contact with the feet 33 of the signal element.

Various changes can be made in the shape and proportion of the parts without departing from the scope of my invention.

I claim:—

1. A fuse comprising a tubular casing, the casing having a longitudinal slot extending inwardly from the end, a cap having a disk-like end and a tongue to fit in the slot, the end of the casing on the outside and the outer side of the tongue having a screw-thread, the end of the cap having a slit to receive the end of a fusible strip, a fusible strip with its end projecting through the slit and bent over on its outer face, a cup-like cover with its interior screw-threaded to embrace the casing and the tongue and a flat plate at the end of the cover to clamp the turned over end of the strip in place against the end of the cap.

2. A fuse comprising a tubular casing, the casing having a longitudinal slot extending inwardly from the end, a cap having a disk-like end and a tongue to fit in the slot, the end of the casing on the outside and outer side of the tongue having a screw-thread, the end of the cap having a slit to receive the end of a fusible strip, a fusible strip with its end projecting through the slit and bent over on its outer face, a cup-like cover with its interior screw-threaded to embrace the casing and the tongue, the end of the cover having an inwardly extending annular flange, a terminal comprising a plate to fit against the inside of the flange and having an outwardly projecting lip, the plate pressing the bent over end of the strip against the cap.

3. A fuse comprising a tubular casing, the casing having a longitudinal slot extending inwardly from the end, a cap having a disk-like end and a tongue to fit in the slot, the end of the casing on the outside and the outer side of the tongue having a screw-thread, the end of the cap having a slit to receive the end of a fusible strip, a fusible strip with its end projecting through the slit and bent over on its outer face, a cup-like cover with its interior screw-threaded to embrace the casing and the tongue, the end of the cover having an inwardly extending annular flange, a terminal comprising a plate to fit against the inside of the flange and having an outwardly projecting lip, the plate pressing the bent over end of the strip against the cap, the end of the cap having a recess and the inside of the plate having a prong to enter the recess whereby they puncture and clamp the end of the fusible strip against the end of the cap.

4. A fuse comprising a tubular casing, a fusible strip in the casing, a cap at each end of the casing and having means for receiving the ends of the fusible strip, the caps each having a tongue seated into a slot in the casing, the tongues having at their ends laterally arranged slots on their opposed faces, a visual electric signal element with terminals at the ends with feet to enter the slots of the tongues and wings to engage the sides of the tongues, and covers fitting over the caps and the ends of the casing, said caps, the casing and the covers having screw-threads for engagement whereby the covers engage the ends of the fusible strip which are turned over on the caps and said covers also force the ends of the tongues into holding engagement with the ends of the feet on the signal element.

ISIDOR KORN.