Aug. 10, 1948. E. H. YONKERS 2,446,676

FUSED CUTOUT

Filed Dec. 30, 1944

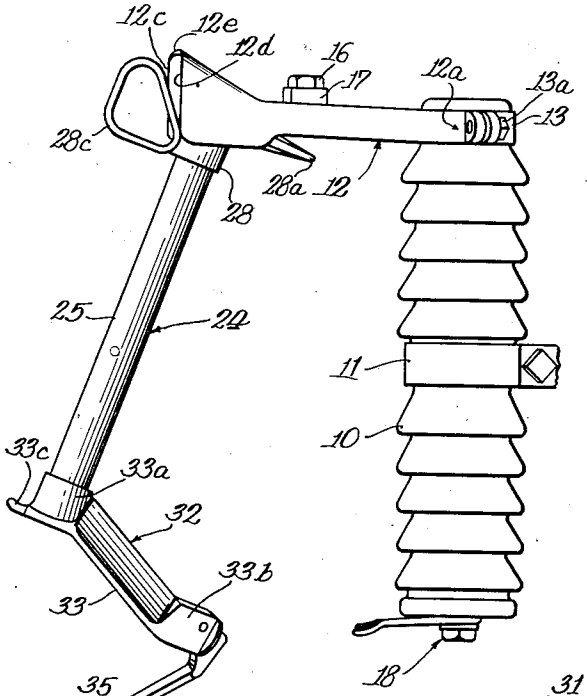


Fig. 1.

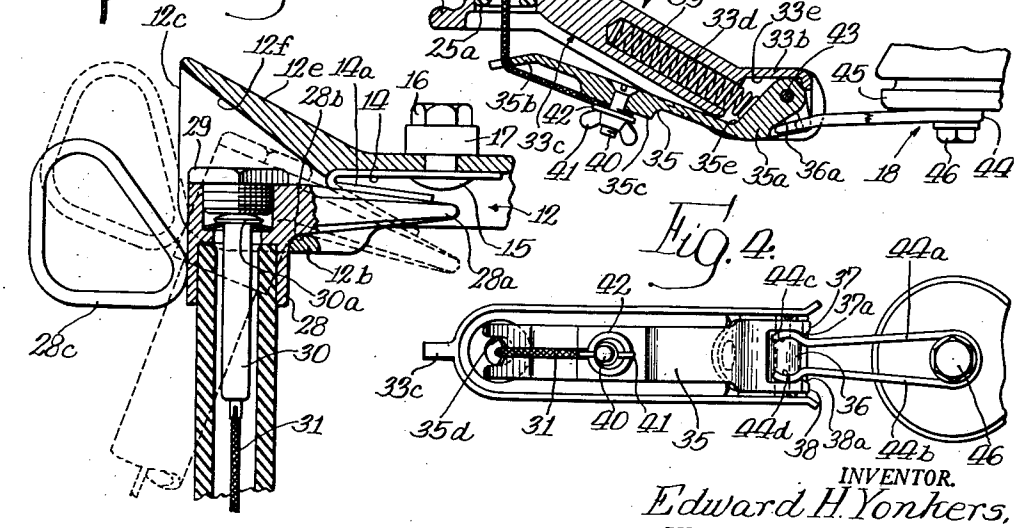


Fig. 2.

Fig. 3.

Fig. 4.

INVENTOR.
Edward H. Yonkers,
BY
Mueller, Dodds & Mason
Atty's.

Patented Aug. 10, 1948 2,446,676

UNITED STATES PATENT OFFICE

2,446,676

FUSED CUTOUT

Edward H. Yonkers, Chicago, Ill., assignor to Joslyn Manufacturing and Supply Company, Chicago, Ill., a corporation of Illinois

Application December 30, 1944, Serial No. 570,527

8 Claims. (Cl. 200—114)

1

The present invention relates to fused cutouts, and has for on of its objects the provision of an improved cutout of the dropout type which is of simple and rugged construction, is thoroughly reliable in operation, and in which the fuse tube assembly may be easily and quickly mounted upon or detached from the spaced terminals of the insulating support.

It is another object of the present invention to provide an improved and simple fuse controlled mechanism for releasably latching one end terminal of the fuse tube assembly and a cooperating terminal member of the insulator assembly.

According to a further and more specific object of the invention the fuse tube assembly is provided with a spring biased multi-purpose fuse extracting member which is itself provided with one of the terminal latching parts and which also responds to fuse rupture within the fuse tube to reliably and rapidly perform the functions of fuse pigtail conductor extraction, disengagement of the latching parts and swinging of the fuse tube away from the insulating support.

It is a still further object of the invention to provide a fused cutout of the type embodying a fuse tube having a pivoted upper end in which the fuse tube is supported in a vertical position between the terminal members of the insulating support and the center of gravity of the fuse tube assembly is displaced from the axis of the fuse tube toward the insulating support, thereby to permit gravity pull upon the assembly to effect separation of the lower fuse tube terminal from the cooperating terminal member of the insulating support when the latching connection therebetween is broken incident to fuse rupture.

It is still another object of the invention to provide an improved, simple and weather protected arrangement for detachably and pivotally supporting a fuse tube at one end thereof.

The invention, both as to its organization and method of operation, together with further objects and advantages thereof, will best be understood by reference to the following specification taken in connection with the accompanying drawings, in which;

Fig. 1 is an angular side view illustrating an improved cutout characterized by the features of the present invention;

Fig. 2 is a fragmentary sectional view illustrating the upper end support for the fuse tube assembly of the cutout shown in Fig. 1;

Fig. 3 is a fragmentary side view, partially in section, illustrating the improved fuse extracting and latching mechanism provided at the lower end of the cutout; and

Fig. 4 is an underside view of the mechanism shown in Fig. 3.

Referring now to the drawing, and more particularly to Fig. 1 thereof, the present improved

2

fused cutout is there illustrated as comprising the usual insulating support in the form of a petticoat insulator 10 having a center zone longitudinally thereof clampingly embraced by a bracket 11 which may be utilized in supporting the insulator in a vertical position upon a pole or another suitable supporting structure. At its respective upper and lower ends the insulating support 10 is provided with spaced apart upper and lower terminal members indicated generally at 12 and 18, respectively, and between which a fuse tube assembly 24 of the expulsion type is adapted to be supported.

Specifically, the upper terminal 12 comprises a conductive channel member of U-shaped cross section thoughout its length which is disposed with its open side down and has an integrally formed half collar 12*a* at one end thereof for embracing the collar seat provided at the upper end of the insulating support 10. This portion of the terminal 12 is clamped against the seating surface of the support 10 by means of a half collar clamping member 13 and clamping screws 13*a* disposed upon opposite sides of the support 10. At the laterally extended end thereof, the upper terminal member is provided with downwardly extending hood skirts 12*c* and 12*d*, the upper edges of which are arranged in meeting engagement with an upwardly flared top wall 12*e*. Thus, the parts 12*c*, 12*d* and 12*e* define a hooded or partially enclosed space at the extended end of the terminal member 12 for receiving therewithin and partially housing the upper end of the fuse tube assembly 24. In order pivotally to support the upper end of the assembly 24 and to prevent this end of the assembly from being moved beyond a predetermined point longitudinally of the skirts 12*c* and 12*d* as the assembly is supported upon the terminal 12, a pivot and stop member 12*b* is connected transversely between the two identified skirts along the lower edges thereof. This member, which may be formed integral with the skirts 12*c* and 12*d*, is arranged to coact with a reversely bent leaf spring 14 in biasing the upper end terminal of the fuse tube assembly 24 thereagainst to produce outwardly swinging movement of the lower end thereof to the open circuit position. The base end of the spring 14 is anchored to the under side of the upper terminal member by means of a terminal screw 15 which is threaded through a holding nut 17 disposed top side of the terminal member 12. A clamping nut 16 threaded on the screw 15 may be utilized to establish line wire connections with the upper terminal member.

The detachable fuse tube assembly 24 comprises the usual expulsion fuse tube 25 formed of an inner layer of pressed fibre or the like, having good arc-extinguishing gas evolving properties, and an outer layer of Bakelite inpregnated

paper having excellent insulating properties. At its upper end, this fuse tube is provided with a terminal 28 having an internally threaded end portion for receiving the externally threaded terminal cap 29. The terminal 28 also includes a laterally extending tongue 28*a* which is adapted to be slid down the under side 12*f* of the terminal wall 12*e* to a position between the spring arm 14*a* and the pivot member 12*b*. A shallow seat 28*b* is formed transversely of the tongue 28*a* adjacent the ferrule part of the terminal 28 to receive the rounded upper surface of the member 12*b* therewithin and thus pivotally support the assembly 24 upon the upper terminal member 12. In order to provide for switch stick manipulation of the fuse tube assembly into and out of engagement with the vertically spaced terminal members 12 and 18, the upper terminal 28 is also provided with an enlarged and integrally formed loop 28*c* into which the hook of a switch stick may be readily inserted. The two terminal parts 28 and 29 are arranged to have the head 30*a* of a fuse link 30 clamped therebetween internally of the fuse tube 25. This link, which preferably is of the improved form disclosed and claimed in applicant's copending application, Serial No. 533,824, filed May 3, 1944, is provided with a pigtail conductor 31 extending longitudinally of the tube 25 and out of the open lower end of this tube.

At its lower end, the fuse tube 25 carries a second terminal 32 which comprises a metallic supporting arm 32 extending laterally away from the lower open end 25*a* of the tube and a metallic fuse extracting arm 35 pivotally supported at the head end 33*b* of the arm 33 remote from the lower open end of the fuse tube. The ferrule end 33*a* of the supporting arm 32 is set screw mounted upon the lower end of the tube 25 by means of a set screw 34, and is provided with a radial projection 33*c* against which the hook of a switch stick may be brought to bear to produce engagement of the terminal 32 with the lower terminal member 18 of the insulating support 10. At its head end 33*b* the supporting arm 33 is provided with an underside recess 33*d* which is opened at its end and within which the V-shaped head end or latching part 35*a* of the arm 35 is disposed. A pin 43 extending transversely between the side walls of the head 33*b* and a registering pin receiving opening through the head 35*a* of the arm 35 is employed pivotally to support the latter arm at its end upon the supporting arm 33 for swinging movement of its opposed end 35*b* toward and away from the lower end 25*a* of the fuse tube. The arm 35 is of flat cross section, is adapted to be snugly received within a channel 33*c* provided at the underside of the arm 33, and is provided with an angularly disposed swingable end part 35*b* having a notch 35*d* at the end thereof within which the pigtail conductor 31 of a fuse 30 is adapted to be received. Intermediate the ends thereof the arm 35 is provided with a thickened portion 35*c* through which a clamping screw 40 is threaded to receive a wing nut 41 and a washer 42, which elements are utilized in clamping the end of the pigtail conductor 31 to the arm 35. In order to bias the arm 35 away from the arm 33 for the purposes described below, a biasing spring 39 of the compression type is provided to bear against the upper head surface 35*e* of the arm head 35*a*. This spring is completely enclosed within an elongated hole 33*d* drilled longitudinally of the arm 33 in the manner illustrated in Fig. 3 of the drawings.

In accordance with one feature of the present invention, the pivoted end 35*a* of the arm 35 is directly engageable with the lower terminal member 18 of the insulating support 10, so that upon fuse rupture within the tube 25, the arm 35 acts directly, and not through an intermediate linkage, to release the lower end of the fuse tube assembly for swinging movement away from the insulating support 10. More specifically, the lower terminal member 18 mounted upon the support 10 comprises two parallel extending and elongated resilient elements 44*a* and 44*b* projecting from the insulating support 10 and provided with oppositely extending arcuate-shaped catch parts 44*c* and 44*d* at their respective ends. These elements, in the arrangement illustrated, comprise opposite legs of a U-shaped resilient wire member 44, the base portion of which is clamped to the lower end of the insulating support 10 by means of an assembly comprising a petticoat embracing collar 45 and an assembly screw 46. As indicated above, the opposed catch parts 44*c* and 44*d* of the resilient elements 44*a* and 44*b* are engageable with the head end 35*a* of the arm 35 to provide a latching connection between the terminal 33 and the terminal member 18. To this end the head end 35*a* of the arm 35 is provided with an underside recess 36 having end wall segments which define jaws 37 and 38 respectively engageable with the catch parts 44*c* and 44*d*. These jaws are provided with oppositely flaring camming surfaces 37*a* and 38*a* which are adapted for engagement with the outer end surfaces of the catch parts 44*c* and 44*d* to squeeze the ends of the resilient elements 44*a* and 44*b* toward each other as the terminal 32 is swung to engage the terminal member 18. Immediately back of the jaws 37 and 38, the walls of the recess 36 are cut back away from each other to provide opposed pockets for receiving the catch parts and thus permit an interlocking connection to be made between the jaws and the catch parts when the jaws are disposed fully within the recess 36. In order to provide for disengagement of the catch parts 44*c* and 44*d* from the jaws 37 and 38 incident to the pivotal movement of the arm 35 which results from fuse rupture within the tube 25, the recess 36 is provided with an inclined bottom wall which terminates at its left end in a hollowed out pocket for catching and holding the ends of the catch parts to move the same downward and away from the jaws 37 and 38 as the arm 35 is pivoted in a counter clockwise direction from the position illustrated in Fig. 3 of the drawing.

From the above explanation, it will be apparent that when the fuse tube assembly 24 is detached from the terminal members of the insulating support 10, and it is desired to fuse the assembly 24, the terminal cap 29 is unscrewed from the terminal 28 and a fuse link 30 inserted within the chamber of the tube 25 so that the pigtail conductor 31 thereof projects out of the open lower end 25*a* of the tube. Following this operation, and with the extracting arm 35 firmly held in the channel 33*c* of the supporting arm 33, the projecting end of the conductor 31 is positioned within the slot 35*d*, tensioned around the screw 40, and clamped against the arm 35 by finger manipulation of the wing nut 41. Thus the pigtail conductor serves tightly to hold the arm 35 in engagement with the channeled underside of the arm 33 against the bias of the spring 39 reacting between these two arms. With the two arms thus tied together, the head end 35*a*

of the arm 35 occupies an angular setting relative to the pivot point 28b of the fuse tube assembly such that it is engageable with the catch parts 44c and 44d to provide a latching connection between the terminal 32 and the terminal member 18. After the described operations are completed, the terminal cap 29 may be threaded into the ferrule 28 to clamp the head 30a of the fuse link tightly against the internally shouldered portion of the terminal 28.

In order to mount the fuse tube assembly upon the terminal member of the insulating support 10, the hook of a switch stick is first inserted within the opening of the loop 28c, following which the assembly may be elevated to a position for engagement of the terminal 28 with the terminal member 12. In this regard it is noted that, by virtue of the mass of the arms 32 and 35, the center of gravity of the assembly 24 is displaced outwardly along these arms away from the axis of the tube 25 so that the axis of the tube is tilted with respect to the vertical when the assembly is suspended by the loop 28c from the end of a switch stick. This causes the tongue 28a to be tilted down with respect to the horizontal by an angle which is approximately the same as the angle of upward tilt of the upper terminal member wall 12e. Accordingly, after the assembly is manipulated to position the end of the tongue 28a between the skirts 12c and 12d and against the upper wall 12e of the terminal 12, this tongue is easily slidable to the right to a position between the spring arm 14a and the pivot member 12b. In this regard it will be noted that in its unsprung setting the arm 14a forms a substantital continuation of the inclined surface 12f, whereby the tongue 28a is automatically cammed over the surface 12f and the spring arm 14a into the desired position by the simple expedient of moving the upper end of the assembly toward the insulating support 10. When the tongue 28a is fully inserted between the arm 14a and the pivot member 12b, the latter member is automatically brought into engagement with the seat 28b and is engaged by the ferrule part of the terminal 28 to stop further movement of this terminal toward the insulating support 10.

After the assembly 24 is thus pivotally supported at its upper end upon the upper terminal member 12, the hook of the switch stick may be withdrawn from the opening within the loop 28c and engaged with the projection 33c for the purpose of rotating the assembly 24 into its closed circuit position. As the fuse tube assembly is rotated in a counter clockwise direction about the pivot member 12b, the spring 14 is tensioned against the tongue 14 and the camming surfaces 37a and 38a of the jaws 37 and 38 are engaged with the outer end surface of the catch parts 44c and 44d. Further movement of the tube 25 toward the support 10 causes the jaws 37 and 38 to ride over the catch parts and thus squeeze or flex the ends of the elements 44a and 44b toward each other. After the jaws have passed the opposed high points of the catch parts, the ends of the resilient elements 44a and 44b are expanded within the side wall pockets recess 36 to provide an interlock between the catch parts and jaws which serves to restrain the fuse tube assembly 24 in its closed circuit position against the bias of the spring 14. Thus the fuse tube assembly 24 is fixedly mounted upon the insulating support 10 to provide a fused current

path between the two terminals 12 and 18. Specifically, this path extends from the terminal screw 15 through the terminal member 12 and the spring 14 to the terminal 28. From this point, the conductive path extends through the fusible element of the link 30, the flexible pigtail conductor 31 and the extracting arm 32 to the lower terminal member 18 of the insulating support. It will be noted that the spring 14 serves to hold all contacting parts of the fuse tube assembly and insulator terminals in pressure engagement, thereby to minimize contact resistance therebetween.

So long as current flow over the described conductive path between the terminals 12 and 18 does not exceed the current-time fusing characteristic of the link 30, the fusible element within this link serves mechanically to hold the extracting arm 35 in its set position against the channeled underside of the supporting arm 33. When, however, this fusible element is required to carry current in excess of a predetermined magnitude for more than a predetermined interval, it is ruptured to relieve the holding force imposed upon the extracting arm 35 through the pigtail conductor 31. The spring 39, in reacting between the arm 32 and the surface 35e is thus rendered operative rapidly to rotate the arm 35 downwardly about the pivot pin 43, thereby to withdraw the pigtail conductor 31 from the lower end of the fuse tube 25. In this regard, it is noted that the arm 35 is of substantial length, such that rotation thereof through a relative small angle produces a relatively large displacement between the swingable end 35b thereof and the lower end 25a of the tube 25. Further, this arm has relatively little inertia, is positively driven by the spring 39 throughout its entire stroke, and is not substantially impeded in its movement through the engagement of the pivoted end thereof with the resilient elements 44a and 44d. Accordingly, fairly reasonably rapid movement of the swingable end 35b thereof away from the lower end of the fuse tube 25 is obtained. This provides for rapid elongation of the arc within the fuse tube and rapid extinction of the arc following fuse rupture. Further, the length of the extracting arm 35 and the length of the arc through which the end 35b thereof is moved is such that under all conditions of fuse rupture, all of the pigtail conductor 31 and the lower unfused segment of the fuse link are completely removed from the bore of the fuse tube 25 to hang downwardly away from the fuse tube. After the arm 35 has been rotated substantially to the position illustrated in Fig. 1 of the drawings, the jaws 37 and 38 engage the end of the arm 32 to arrest further rotation of the arm 35. During the initial pivotal movement of the arm 35 away from the arm 33, the inwardly pocketed end 36a of the recess 36 is brought into interlocking engagement with the ends of the catch parts 44c and 44d. Accordingly, as rotation of the arm 35 continues, the catch part ends are moved downwardly away from the pivot pin 43, thereby to flex the resilient elements 44a and 44b so that the catch parts are disengaged from the jaws 37 and 38. Thus the latching connection between the terminal member 18 and the terminal 32 is broken. Further, and due to continued engagement with the pocketed end 36a of the recess 36 with the ends of the catch parts 44c and 44d, continued rotation of the arm 35 serves to force the lower end of the fuse tube 25 away from the insulating support 10. This high leverage

force exerted backwardly through the fuse tube assembly may be useful in breaking ice crusts which may have formed between the contacting surfaces of the terminal 28 and the terminal member 12. In this regard it is noted that all of the movable parts of the lower terminal 33 are either completely covered or enclosed, thereby to minimize the formation of ice deposits which might interfere with downward swinging movement of the arm 35.

After the fuse tube assembly is thus freed for swinging movement away from the insulating support 10, gravitational pull upon this assembly and the spring 14 coact to produce a wide separation between the terminal 32 and the terminal member 18. The manner in which the spring 14, in reacting between the tongue 28a and the terminal member 12, contributes to this swinging movement of the assembly 24 will be readily apparent. In respect to the gravity component of the force acting upon the assembly 24, it is pointed out that the insulating support 10 is held by the bracket 11 in a vertical position and that the lengths of the arm 12, the arm 32, and the resilient elements 44a and 44b are so proportioned as to provide for vertical positioning of the fuse tube 25 when the assembly 24 is mounted upon the insulating support. Further, the center of gravity of the assembly 24 is displaced radially from the axis of the tube 25 along the arm 32, i. e., toward the insulating support 10. Accordingly, and in the absence of the biasing action of the spring 14, gravitational pull upon the assembly 24 has the effect of swinging this assembly to an inclined position away from the insulating support 10 to produce the desired separation by the terminal 32 and the terminal member 18. This isolation of the identified terminal parts serves to prevent leakage current flow between the terminal members 18 and 12. After the fuse tube assembly is thus swung away from the insulating support 10 to its open circuit position, the hook of a switch stick may be reengaged with the loop 28c to disengage the assembly from the terminal member 12 for refusing.

While there has been described what is at present considered to be the preferred embodiment of the invention, it will be understood that various modifications may be made therein which are within the true spirit and scope of the invention as defined in the appended claims.

I claim:

1. In a fused cutout which comprises insulating supporting means provided with a terminal member and a fuse tube provided with a terminal at one end pivotally engageable with said terminal member to support said tube for swinging movement of the other end thereof; a second terminal member carried by said supporting means, a second terminal mounted upon said other end of said tube and comprising a spring biased pivotally supported fuse extracting member, said second terminal member and said extracting member respectively including complementary parts engageable in response to swinging movement of said tube toward at least a part of said supporting means to latch said second terminal and second terminal member in engagement, at least one of said parts being resiliently deformable to permit latching engagement between said parts, and a fuse disposed within said tube to be tensioned by said extracting member, to normally hold said extracting member in a position such that said complementary parts are engaged and to have a part thereof extracted from said tube by said extracting member upon rupture thereof, said extracting member including a part adjacent the pivoted end thereof for reacting against the complementary part of said terminal member to disengage said complementary parts in response to the movement of said extracting member which results from rupture of said fuse, thereby to permit swinging motion of said tube away from said supporting means.

2. In a fused cutout which comprises insulating supporting means provided with a terminal member and a fuse tube provided with a terminal at one end pivotally engageable with said terminal member to support said tube for swinging movement of the other end thereof; a second terminal member comprising a resilient element projecting from said supporting means and provided with a catch part adjacent the end thereof, a second terminal mounted upon said other end of said tube and comprising a spring biased pivotally supported fuse extracting arm having a latch part engageable with said catch part to latch said second terminal member and second terminal in engagement as said tube is swung toward at least a part of said supporting means, said resilient element being deformed to permit latching engagement of said catch and latch parts as said parts are engaged, and a fuse disposed within said tube to be tensioned by said arm, to normally hold said arm in a position such that said latch part is engageable with said catch part and to have a part thereof extracted from said tube by said arm upon rupture thereof, said arm having a part adjacent the pivoted end thereof for reacting against said catch part to disengage said catch and latch parts in response to the movement of said arm which results from rupture of said fuse, thereby to permit swinging motion of said tube away from said supporting means.

3. In a fused cutout which comprises an insulating support provided with a terminal member and a fuse tube provided with a terminal at one end pivotally engageable with said terminal member to support said tube for swinging movement of the other end thereof; a second terminal member comprising substantially parallel resilient elements projecting from said support and provided with oppositely extending catch parts at their ends, a second terminal mounted upon said other end of said tube and comprising a spring biased pivotally supported fuse extracting arm having a pair of jaws engageable with said catch parts to squeeze the ends of said elements toward each other and then interlock with said catch parts as said tube is swung toward said support, thereby to latch said second terminal member and second terminal in engagement, and a fuse disposed within said tube to be tensioned by said arm, to normally hold said arm in a position such that said jaws are engageable with said catch parts and to have a part thereof extracted from said tube upon fuse rupture, said arm having a part for disengaging said catch parts from said jaws in response to the movement of said arm which results from rupture of said fuse, thereby to permit swinging motion of said tube away from said support.

4. In a fused cutout which comprises an insulating support provided with a terminal member and a fuse tube provided with a terminal at one end pivotally engageable with said terminal member to support said tube for swinging move-

ment of the other end thereof; a second terminal member comprising substantially parallel resilient elements projecting from said support and provided with oppositely extending catch parts at their ends, a second terminal mounted upon said other end of said tube and comprising a spring biased fuse extracting arm having a pivotally supported end remote from said other end of said tube, said arm having at its pivoted end a pair of jaws engageable with said catch parts to squeeze the ends of said elements toward each other and then interlock with said catch parts as said tube is swung toward said support, thereby to latch said second terminal member and second terminal in engagement, and a fuse disposed within said tube to be tensioned by said arm, to normally hold said arm in a position such that said jaws are engageable with said catch parts and to have a part thereof extracted from said tube upon rupture thereof, said arm having a part adjacent the pivoted end thereof for disengaging said catch parts from said jaws in response to the movement of said arm which results from rupture of said fuse, thereby to permit swinging motion of said tube away from said support.

5. In a fused cutout which comprises an insulating support provided with a terminal member and a fuse tube provided with a terminal at one end pivotally engageable with said terminal member to support said tube for swinging movement of the other end thereof; a second terminal member comprising substantially parallel resilient elements projecting from said support and provided with oppositely extending catch parts at their ends, a second terminal mounted upon said other end of said tube and comprising a spring biased fuse extracting arm having a pivotally supported end remote from said other end of said tube, said arm having at its pivoted end a pair of jaws engageable with said catch parts to squeeze the ends of said elements toward each other and then interlock with said catch parts as said tube is swung toward said support, thereby to latch said second terminal member and second terminal in engagement, and a fuse disposed within said tube to be tensioned by said arm, to normally hold said arm in a position such that said jaws are engageable with said catch parts and to have a part thereof extracted from said tube upon rupture thereof, said arm having a part adjacent the pivoted end thereof for flexing said resilient elements to disengage said catch parts from said jaws and for concurrently reacting against said resilient elements to swing said tube away from said support in response to the movement of said arm which results from rupture of said fuse.

6. In a fused cutout, the means for detachably and pivotally supporting a fuse tube which comprises, a terminal mounted upon one end of said fuse tube and provided with a laterally extending tongue, a supporting terminal member comprising a pivot part engageable by said tongue pivotally to support said tube and having walls defining a partial housing for said pivot part and said tongue, one of said walls having an angularly disposed camming surface engageable by said tongue to cam said tongue into engagement with said pivot part, and a reversely bent biasing spring mounted upon said terminal member and having an arm forming a continuation of said surface to assist in camming said tongue into engagement with said pivot part and to provide a biasing reaction between said tongue and said terminal member as said fuse tube is pivoted about said pivot part.

7. In a fused cutout, the means for detachably and pivotally supporting a fuse tube at the upper end thereof which comprises, a terminal mounted upon said upper end of said fuse tube and provided with a laterally extending tongue, a horizontally disposed channel-shaped terminal member supported with its open side down and comprising a pivot part engageable by said tongue pivotally to support said tube, said member having end skirts and a top wall defining a partial housing for said pivot part and said tongue, and said top wall having an angularly disposed bottom surface engageable by said tongue to cam said tongue into engagement with said pivot part, and a reversely bent biasing spring mounted upon said member within the channel thereof and mounted within said channel shaped terminal member and having an arm forming a continuation of said surface to assist in camming said tongue into engagement with said pivot part and to provide a biasing reaction between said tongue and said terminal member as said fuse tube is pivoted about said pivot part.

8. In a fused cutout which comprises insulating supporting means provided with a terminal member and a fuse tube provided with a terminal at one end pivotally engageable with said terminal member to support said tube for swinging movement of the other end thereof; a second terminal member comprising a resilient element projecting from said supporting means and provided with a laterally extending catch shoulder at the extended end thereof, a second terminal mounted upon said other end of said fuse tube and comprising a laterally extending supporting arm, a spring biased fuse extracting arm pivotally supported upon said supporting arm adjacent the extended end thereof, one of said arms having a latching shoulder adjacent the extended end of said supporting arm engageable with said catch shoulder to latch said second terminal member and second terminal in engagement as said other tube end is swung toward said second terminal member, said resilient element being deformed to permit latching engagement of said catch and latching shoulders as said other tube end is swung toward said second terminal member, and a fuse disposed within said tube to be tensioned by said extracting arm and to have a part thereof extracted from said tube by said extracting arm upon rupture thereof, said extracting arm having a part adjacent the pivoted end thereof for reacting against the extended portion of said resilient element to disengage said catch and latch shoulders in response to the movement of said extracting arm which results from rupture of said fuse, thereby to permit swinging motion of said other tube end away from said second terminal member.

EDWARD H. YONKERS.

REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
2,212,633	Bodendieck	Aug. 27, 1940
2,296,991	Fox	Sept. 29, 1942