United States Patent [19]

Urani

[11] **3,828,291**

[45] **Aug. 6, 1974**

[54] **PROTECTOR FOR ELECTRIC CIRCUIT**

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[73] Assignee: **McGraw-Edison Company**, Elgin, Ill.

[22] Filed: **June 14, 1973**

[21] Appl. No.: **370,148**

[52] **U.S. Cl.**..... **337/201**, 200/168 C, 337/207

[51] **Int. Cl.**..... **H01h 85/02**

[58] **Field of Search**..... 200/168 C; 337/201, 207; 339/125 R

[56] **References Cited**

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Primary Examiner—J. D. Miller
Assistant Examiner—Fred E. Bell

[57] **ABSTRACT**

A mounting, for a front-mounted fuseholder, has a generally-annular body portion which permits the front portion of that front-mounted fuseholder to be telescoped rearwardly into it, and also has inwardly-extending lips that can be spread apart as that front portion is telescoped rearwardly into that generally-annular body portion but that subsequently move toward each other to hold that front portion within that generally-annular body portion. Thereafter, that mounting and that front-mounted fuseholder can be telescoped forwardly, from a point rearwardly of a panel, into position within an opening in that panel. That mounting has fingers that are bendable to permit that mounting to be moved forwardly into position within that opening but that subsequently prevent accidental movement of that mounting rearwardly of that panel.

19 Claims, 13 Drawing Figures

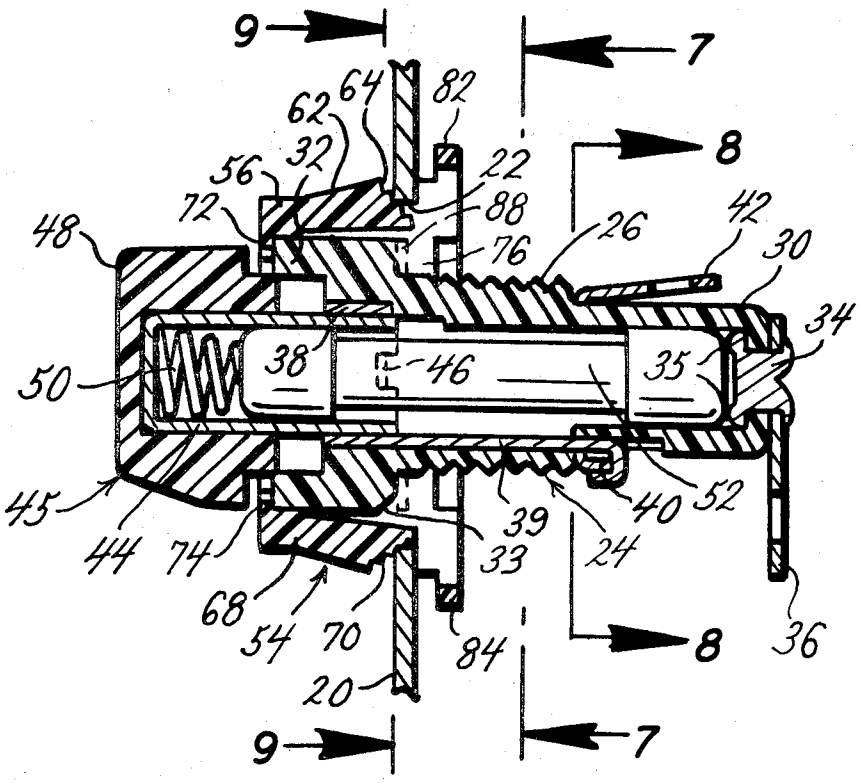


FIG. 1.

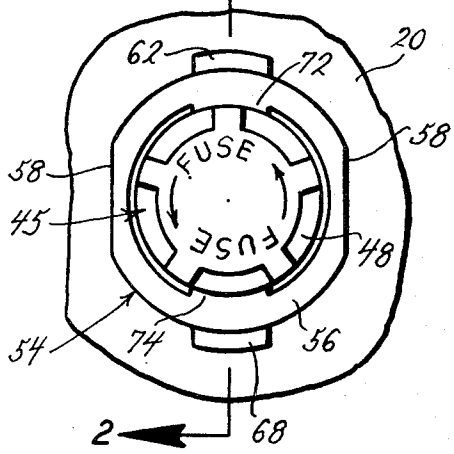


FIG. 2.

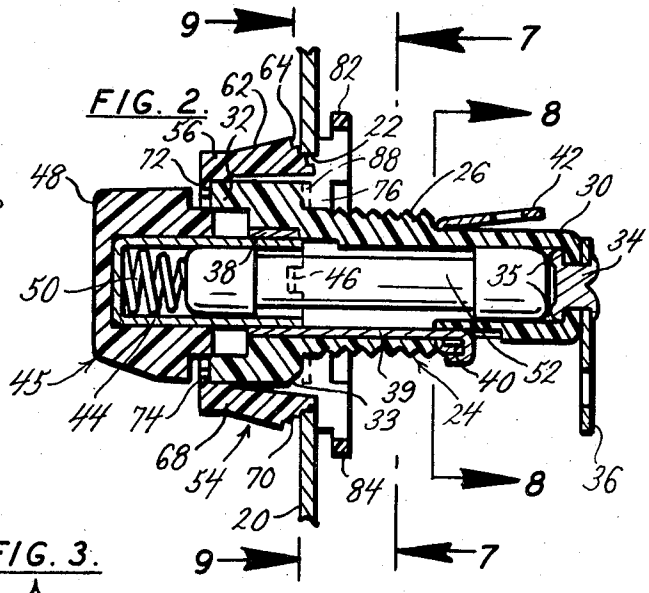
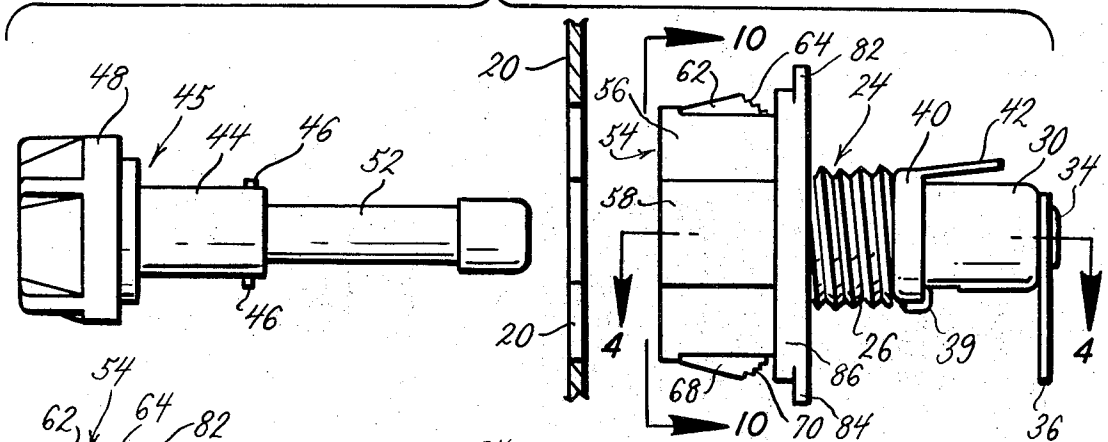


FIG. 3.



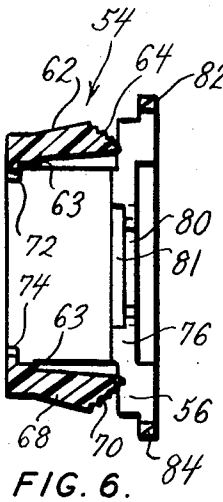


FIG. 6.

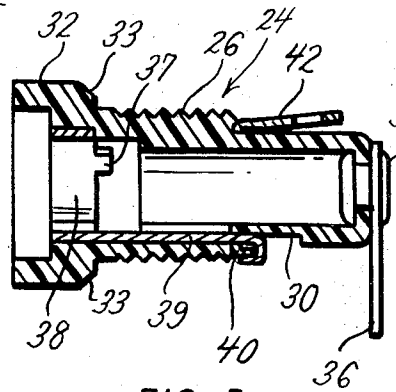


FIG. 5.

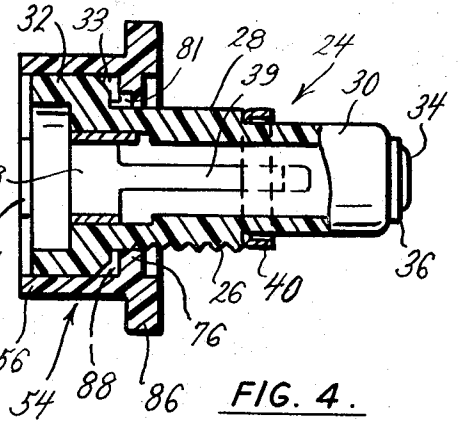


FIG. 4.

FIG. 7.

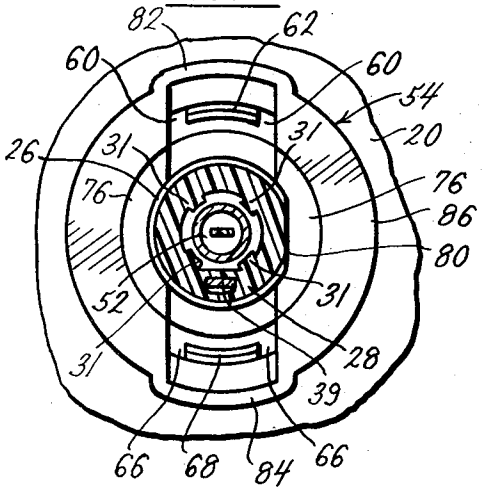


FIG. 8.

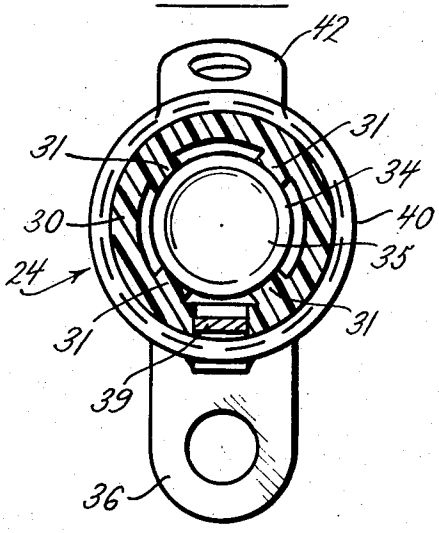


FIG. 11.

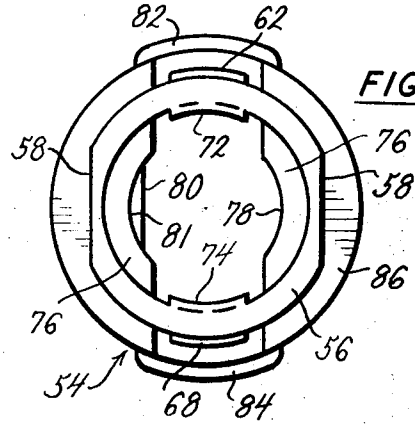


FIG. 10.

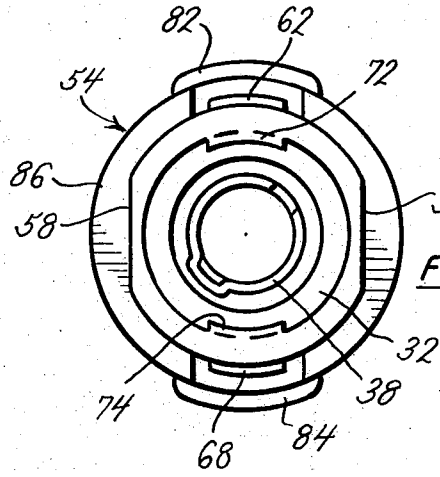


FIG. 13.

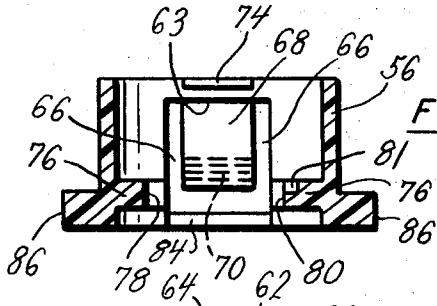
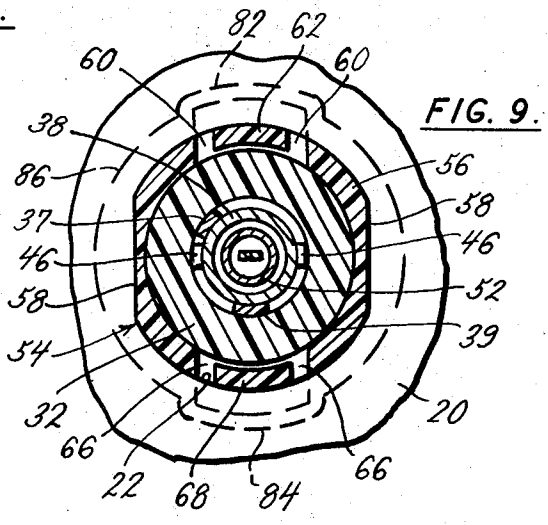


FIG. 9.



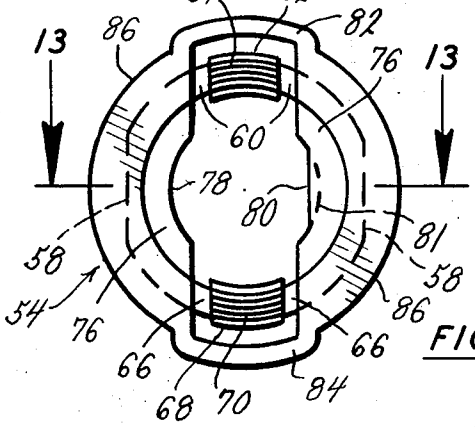


FIG. 12.

PROTECTOR FOR ELECTRIC CIRCUIT

FIELD OF THE INVENTION

Panel-mounted fuseholders usually are made so the front portions thereof are disposable forwardly of the openings of the panels in which those fuseholders are mounted, and so the rear portions thereof are disposable rearwardly of those openings. Because the bayonet joints or other securing joints, which releasably hold the fuse carriers in position within the fuseholders, are located in the front portions of those fuseholders, those front portions usually are larger in the transverse direction than are the rear portions of those fuseholders. Consequently, panel-mounted fuseholders customarily are moved rearwardly into position within openings in panels from points located forwardly of those panels.

DESCRIPTION OF THE PRIOR ART

Many prior panel-mounted fuseholders have been provided with rear portions that were dimensioned to telescope rearwardly through openings in panels, and also were provided with larger transverse dimension front portions. Those prior panel-mounted fuseholders have had the rear portions thereof telescoped rearwardly through openings in panels until the rear surfaces of the front portions thereof abutted the front surfaces of those panels; and then conductors were connected to electric terminals on those rear portions.

SUMMARY OF THE INVENTION

The mounting provided by the present invention has a front portion, which can accommodate the front portion of a front-mounted fuseholder, and which can be telescoped forwardly, from a point located rearwardly of a panel, into an opening within that panel. That mounting makes it possible to incorporate the front-mounted fuseholder into a wiring harness, which is intended to be disposed rearwardly of the panel, before that front-mounted fuseholder is assembled with that panel. As a result, the mounting of the present invention makes it possible to assemble a front-mounted fuseholder with a wiring harness more quickly and with less cost than such a fuseholder could be assembled with such a harness after that front-mounted fuseholder had been assembled with a panel. Once that front-mounted fuseholder has been suitably assembled with the wiring harness, the front portion of the mounting for that fuseholder can be telescoped forwardly, from a point located rearwardly of that panel, into an opening within that panel. Resilient fingers on that mounting will yield to permit the front portion of that mounting to be telescoped through that opening; but thereafter those fingers will coact with the opening-defining portions of the panel to prevent accidental separation of that mounting and of that front-mounted fuseholder from that panel.

BRIEF DESCRIPTION OF THE DRAWING

In the drawing, FIG. 1 is a front elevational view of the fuse carrier of a front-mounted fuseholder, of the front portion of a mounting for that front-mounted fuseholder, and of part of a panel in which that mounting is held.

FIG. 2 is a sectional view through the front-mounted fuseholder, the mounting and the panel of FIG. 1, and it is taken along the plane indicated by the line 2—2 in FIG. 1,

FIG. 3 is a side elevational view of the fuse carrier and the rear portion of the front-mounted fuseholder and of the mounting of FIG. 1 and is a secional view through the panel of FIG. 1,

FIG. 4 is a partially-sectioned plan view of the front-mounted fuseholder and of the mounting of FIG. 1, and it is taken along the plane indicated by the line 4—4 in FIG. 3,

FIG. 5 is a sectional view, at right angles to the sectional view of FIG. 4 through the female part of the front-mounted fuseholder of FIG. 1,

FIG. 6 is a sectional view through the mounting of FIG. 1, and it is taken along the plane indicated by the line 2—2 in FIG. 1,

FIG. 7 is a sectional view through the female part of the front-mounted fuseholder of FIG. 1 and through the fuse of FIG. 2, and it is taken along the plane indicated by the line 7—7 in FIG. 2,

FIG. 8 is a sectional view, on a larger scale, through the female part of the front-mounted fuseholder of FIG. 1, and it is taken along the plane indicated by the line 8—8 in FIG. 2,

FIG. 9 is a sectional view, on the scale of FIG. 1, through the mounting, the front-mounted fuseholder, and the fuse of FIG. 2, and it is taken along the plane indicated by the line 9—9 in FIG. 2,

FIG. 10 is a front elevational view of the mounting and of the female part of the front-mounted fuseholder of FIG. 1, and it is taken along the plane indicated by the line 10—10 in FIG. 3,

FIG. 11 is a front elevational view of the mounting of FIG. 1, and it is taken along the plane indicated by the line 10—10 in FIG. 3,

FIG. 12 is a rear elevational view of the mounting of FIG. 1, and

FIG. 13 is a sectional view through the mounting of FIG. 1, and it is taken along the plane indicated by the line 13—13 in FIG. 12.

PREFERRED EMBODIMENT OF THE INVENTION

Referring to the drawing in detail, the numeral 20 denotes a panel which has an opening 22 therein that is intended to accommodate a front-mounted fuseholder. As shown particularly by FIG. 9, the opening 22 has an arcuate upper portion, an arcuate lower portion and straight sides. The opening 22 can, if desired, be the only opening in the panel 20, or it can be just one of a large number of identical openings in that panel. The panel can be part of a vehicle or can be part of a housing for, or which is part of, a piece of equipment.

The numeral 24 generally denotes the female part of a front-mounted fuseholder of standard and usual design. Although many different front-mounted fuseholders of standard and usual design could be supported and held by the mounting provided by the present invention, the front-mounted fuseholder which is shown in the drawing is an HTA 15 ampere 250 volt front-mounted fuseholder manufactured by the Bussmann Mfg. Division of the McGraw-Edison Company, assignee of this application. The female part 24 has an externally-threaded annular portion 26 that has one plane side 28, as indicated particularly by FIGS. 4 and 7. The female part 24 has a reduced-diameter portion 30 of annular form which is contiguous to, and which

extends rearwardly from, the externally-threaded annular portion **26**; and it has an elongated, generally-cylindrical recess therein with four elongated, shallow guiding surfaces. Also, that female part has a large-diameter front portion **32** of annular form which is contiguous to, and which extends forwardly from that externally-threaded annular portion. A chamfer **33** is provided on the rear edge of that large-diameter front portion.

A rivet-like contact **34** secures a plate-like electric terminal **36** in position at the rear of the female part **24.** As shown by FIG. **2,** an annular ridge **35** projects forwardly of the front surface of that rivet to define a shallow central recess. A split-annulus electric contact **38** is disposed within the large-diameter front portion **32;** and that split annulus electric contact has a locking projection **37** which is shown in FIG. **5** and which extends into a complementary recess in the female part **24,** and it also has an elongated tang **39** which extends into an elongated complementary groove within the externally-threaded annular portion **26.** An annular electric terminal **40** surrounds the reduced-diameter rear portion **30** and is connected to the rear end of the tang **39** of the split-annulus electric contact **38,** as shown particularly by FIGS. **2** and **5.** A tang **42** extends rearwardly from the annular electric terminal **40.**

The numeral **44** denotes a cup-like contact of the fuse carrier **45** of the front-mounted fuseholder; and ears **46** project radially outwardly from the free edge of that cup-like contact. A knob **48** of insulating material is fixedly secured to the closed end of the cup-like contact **44,** as by molding that knob onto that cup-like contact. The numeral **50** denotes a helical compression spring which is disposed within the cup-like contact **44,** as shown particularly by FIG. **2.** The numeral **52** denotes a self-contained cartridge-type electric fuse which has a tubular casing of insulating material and which has ferrule-like terminals at the opposite ends of that casing.

The panel **20,** the female part **24** of the front-mounted fuseholder, the fuse carrier **45** of that front-mounted fuseholder, and the self-contained cartridge-type electric fuse **52** are of standard and usual design, and they are not, per se, parts of the present invention. Different panels, different front-mounted fuseholders, and different self-contained cartridge-type electric fuses could be used with the mounting provided by the present invention.

The numeral **54** generally denotes one preferred embodiment of mounting that is made in accordance with the principles and teachings of the present invention; and that mounting has an annular portion **56.** As indicated particularly by FIG. **9,** that annular portion has an arcuate upper part, an arcuate bottom part, and plano-concave sides **58.** As indicated particularly by FIG. **13,** as well as by FIG. **9,** axially-extending slots **66** are provided in the annular portion **56** of the mounting **54** to define a finger **68.** As shown by FIGS. **2, 3, 6** and **12,** the lower rear face of that finger has a number of steps **70** thereon; and, as indicated by FIG. **6,** the front end of that finger is thinner than the annular portion to define a step **63.** As indicated by FIGS. **9** and **12,** slots **60** also are provided in the annular portion **56** of the mounting **54** to define a finger **62.** As shown by FIGS. **2, 3, 6** and **12,** the upper rear face of that finger has a number of steps **64** thereon.

The numeral **72** denotes an arcuate lip which extends a short distance radially inwardly of the forward end of the annular portion **56** of the mounting **54,** and that lip is generally in register with the finger **62.** The numeral **74** denotes an arcuate lip which is similar to the lip **72,** which extends a short distance radially inwardly of the forward end of the annular portion **56** of the mounting **54,** and which is generally aligned with the finger **68.** The inner diameter of the annular portion **56** is dimensioned to accommodate and confine the large diameter front portion **32** of the female part **24** of the front-mounted fuseholder, as shown particularly by FIGS. **2, 4** and **9.** The lips **72** and **74** confront each other; and they normally coact to define a space which is smaller than the outer diameter of of the large-diameter front portion **32** of the female part **24** of the front-mounted fuseholder but which is larger than the small diameter of the chamfer **33** on that large-diameter front portion. That chamfer will coact with the lips **72** and **74** to stress the annular portion **56** of the mounting **54** sufficiently to permit the large-diameter front portion **32** of the female part **24** of the front-mounted fuseholder to be moved between the confronting faces of those lips and then inwardly beyond those lips into position within that annular portion.

The numeral **76** denotes a wall which is close to the rear of the mounting **54;** and, as shown particularly by FIG. **12,** that wall consists of two spaced-apart portions that are essentially plano-convex in elevation and that are interconnected at the tops and bottoms thereof by connectors **82** and **84.** An arcuate notch **78** is provided in the inner edge of one of the spaced-apart portions of the wall **76,** while a chord-like notch **80** is provided in the inner edge of the opposite of those spaced-apart portions. A shallow recess **81,** which has the same radius as the notch **78,** is provided in the front face of that opposite of those spaced-apart portions of wall **76.** As indicated particularly by FIGS. **4** and **13,** the wall **76** has a rearwardly-offset, increased-thickness, outwardly-extending flange **86** thereon. The numeral **88** denotes a washer-like shim which is shown by dotted lines, which is dimensioned to fit within the annular portion **56** of the mounting **54,** and which can abut the front faces of the spaced-apart portions of the wall **76,** as shown particularly by FIGS. **4.** That shim will not be used when the mounting **54** is used to support an HTA fuseholder; but it will be used when that mounting is used to support an HKP 30 ampere 250 volt front-mounted fuseholder manufactured by the Bussmann Mfg. Division, because the axial dimension of the large-diameter front portion of the latter fuseholder is shorter than that of the former fuseholder.

Although the female part **24** of the front-mounted fuseholder will preferably be made from a rigid and substantially-non-yielding thermosetting resin, the mounting **54** preferably will be made from a resilient thermo-plastic material. One such thermo-plastic material, that can be used in making the mounting **54,** is nylon. As a result, the annular portion **56** of the mounting **54** will be sturdy enough and resilient enough to permit the chamfer **33** on the large-diameter front portion **32** of the female part **24** of the front-mounted fuseholder to force the lips **72** and **74** far enough apart to permit that large-diameter front portion to be passed between those lips and into position within that annular portion. A small press can be used to force that large-diameter portion inwardly between those confronting faces and

into position within the annular portion **56** of the mounting **54**; and the insertion of that large-diameter portion into position within that annular portion will be done before the combination of mounting and fuseholder are packaged and shipped from the factory. As a result, the user need only handle one component rather than two components. Where the externally-threaded portion **26** of the female part **24** is formed without the plane side **28**, and where that plane side is subsequently formed by a grinding operation, the shallow-recess **81** will accommodate the forward end of any part of that externally-threaded portion which was inadvertently not ground away.

The electric terminal **36** is dimensioned so it can readily be passed through the annular portion **56** as the reduced diameter rear portion **30**, the externally-threaded annular portion **26** and the large-diameter front portion **32** of the female part **24** of the front-mounted fuseholder are successively telescoped through the front of the annular portion **56** of the mounting **54**. If, as is the case with the HTA fuseholder, the axial dimension of the large-diameter front portion **32** is effectively the same as the distance between the lip **72** and the wall **76** of the mounting **54**, it will not be necessary to insert the washer-like shim **88**. However if, as is the case with the HKP fuseholder, the axial length of the large-diameter portion **32** is appreciably shorter than the axial distance between the lip **72** and the wall **76** of the mounting **54**, one or more of the washer-like shims **88** will be telescoped into position within the annular portion **56** of that mounting before the female part **24** of that front-mounted fuseholder is telescoped into position within that annular portion.

After the female part **24** of the front-mounted fuseholder has been telescoped into position within the annular portion **56** of the mounting **54**, that female part will be suitably incorporated into a wiring harness — as by having appropriate conductors of that wiring harness electrically connected to the electric terminal **36** and to the tang **42** of the electric terminal **40**. Because the female part **24** of the front-mounted fuseholder can be incorporated into that harness while that female part is remote from the panel **20**, the assembler can have ample room to perform the requisite assembling operations.

After the female part **24** of the front-mounted fuseholder has been incorporated into the wiring harness, that wiring harness will be disposed rearwardly of the panel **20**, and the annular portion **56** of the mounting will be set in register with the opening **22**. At such time, the plano-concave sides **58** of that mounting will be alined with the plane sides of that opening; and then that annular portion will be moved forwardly into that opening. Shortly after the front of the annular portion **56** is moved forwardly into the opening **22**, the outer surfaces of the fingers **62** and **68** will engage the arcuate upper and lower portions of that opening. However, because the outer surfaces of those fingers incline outwardly, at very shallow angles, to the axis of that mounting, those outer surfaces will act as inclined planes; and thus will readily cause those fingers to bend inwardly toward the axis of that mounting as the annular portion **56** of that mounting is moved further and further inwardly of the opening **22**. As various of the steps **64** and **70** on the fingers **62** and **68**, respectively, are moved forwardly of the forward face of the panel **20**, the resilience of the material of the mounting **54** will cause those fingers to move outwardly toward their original un-stressed positions — thereby moving those steps into position to block rearward movement of that mounting relative to that panel. The mounting **54** will be moved forwardly relative to the opening **22** in the panel **20** until the forward face of the annular flange **86** abuts the rear face of that panel. At such time, that annular flange will prevent movement of the mounting **54** forwardly relative to the panel **20**, and the steps **64** and **70** will prevent rearward movement of that mounting relative to that panel. Consequently, the mounting **54** will be held solidly in position relative to the panel **20**, and thus will be able to hold the female part **24** of the front-mounted fuseholder solidly in position relative to that panel. The provision of a number of steps **64** and the provision of an equal number of steps **70** enable the mounting **54** to be disposed within openings in panels that range in thickness from twenty-five thousandths to eighty-five thousandths of an inch.

No tools are needed to dispose the mounting **54** in position within the opening **22** in the panel **20**. Instead, the assembler need only align the front of the annular portion **56** of that mounting with the opening **22**, and then push that annular portion forwardly through that opening until the front face of the annular flange **86** abuts the rear face of that panel. The fingers **62** and **68** will automatically respond to the forward movement of the annular portion **56** of the mounting **54** to bend far enough inwardly to permit that annular portion to pass through the opening **22**, and then will automatically move outwardly to dispose the steps **64** and **70** in position to block rearward movement of that mounting relative to that panel. This means that the female part **24** of the front-mounted fuseholder can be incorporated into a wiring harness while that front-mounted fuseholder is remote from the panel **20**; and then that front-mounted fuseholder, and the other front-mounted fuseholders which have been incorporated into that wiring harness, can readily be telescoped into position within appropriate openings in the panel **20**. The fuse carrier **45** will usually be assembled with the female part **24** of the front-mounted fuseholder before the mounting **54** is telescoped into its position within the opening **22** in the panel **20**. However, if desired, that fuse carrier can be assembled with that female part after the mounting **54** has been set in position within the opening **22**.

Not only does the mounting **54** of the present invention make it possible to pass the female part **24** of the front-mounted fuseholder forwardly, from a point at the rear of the panel **20**, through the opening **22** in that panel, but it also increases the effective "tracking" distance between the electric terminal **40** and that panel. This means that if it should ever become desirable to do so, it would be possible to dispose the electric terminal **40** closer to the large-diameter front portion **32** of the female part **24** of the front-mounted fuseholder.

The engagements between the straight sides of the opening **22** and the plane outer faces of the plano-concave sides **58** of the annular portion **56** of the mounting **54** prevent appreciable rotation of that mounting relative to that panel. The engagement between the plane side **28** of the externally-threaded annular portion **26** of the female part **24** and the chord-like notch **80** in one side of the wall **76** of the mounting **54** prevents appreciable rotation of the female part **24** relative to that mounting. As a result, that female part will be held against appreciable rotation relative to the

panel **20**. This means that the ears **46** on the cup-like contact **44** of the fuse carrier **45** can readily be rotated relative to the split-annulus electric contact **38** within the female part **24** of the front-mounted fuseholder without causing that female part to rotate relative to the panel **20**. Those ears and that split-annulus electric contact constitute a bayonet joint which selectively holds the fuse carrier **45** in assembled relation with the female part **24** of the front-mounted fuseholder.

The provision of two straight sides for the opening **22** in the panel **20**, and the provision of two plano-concave sides **58** for the annular portion **56** of the mounting **54**, make it possible for the female part **24** of the front-mounted fuseholder to be disposed within that opening in normal position or in inverted position. This is desirable, because it enables that female part to be disposed within the opening **22** in the panel **20** whether that female part is wired into a wiring harness in normal position or in inverted position.

The mounting **54** can be made in different sizes; but, in the preferred embodiment of the present invention which is dimensioned to accommodate the said HTA 15 ampere 250 volt fuseholder, the outer diameter of the annular portion **56** is approximately seven-eighths of an inch and the axial length of that annular portion is approximately three-eighths of an inch. This means that the portion of the mounting **54** which extends forwardly of the panel **20** is just slightly larger than the large-diameter portion **32** of the female part **24** of the front-mounted fuseholder.

The use of the mounting **54** to hold the female part **24** of the front-mounted fuseholder within the opening **22** makes it possible to fabricate that fuseholder of one type of insulating material and to fabricate that mounting of a different type of insulating material. That mounting preferably will be made from a tough, shock-resistant material; because such a material makes the combination of fuseholder and mounting strongly resistant to shearing forces which could develop if transversely-directed blows were applied to the forwardly-extending portion of that combination. The use of the mounting **54** to hold the female part **24** of the front-mounted fuseholder within the opening **22** also increases the total outer surface area, within the opening **22** in the panel **20**, which is available to distribute and absorb any shearing forces which could develop if transversely-directed blows were applied to the forwardly-extending portion of that mounting. Additionally the total cross section of the mounting **54** which is in register with the panel **20** is larger than the total cross section of the portion of the female part **24** of the front-mounted fuseholder which is in register with that panel. All of this means that the use of the mounting **54** to hold the female part **24** provides a three faceted increase in resistance to shearing forces: (1) that mounting is made of tougher, more shock-resistant material, (2) that mounting has a larger outer surface area to distribute and absorb shearing forces, and (3) that mounting has a larger cross section and thus has a greater mass to resist shearing forces.

Whereas the drawing and accompanying description have shown and described a preferred embodiment of the present invention, it should be apparent to those skilled in the art that various changes can be made in the form of the invention without affecting the scope thereof.

What I claim is:

1. A mounting, which can accommodate a front-mounted fuseholder and which can be telescoped forwardly into an opening in a panel from a point rearwardly of said panel, that comprises a generally-annular body portion which is dimensioned to accommodate the forward portion of said front-mounted fuseholder, locking means on said mounting which will permit said forward portion of said front-mounted fuseholder to be telescoped rearwarldy into said generally-annular body portion from a point forwardly of said mounting but which will thereafter resist separation of said forward portion of said front-mounted fuseholder from said generally-annular body portion, a resilient portion that is disposable in register with a part of said panel which helps define said opening, said resilient portion being bendable inwardly relative to said opening to enable said resilient portion to pass into said opening, a flange that is disposable in register with a part of said panel which helps define said opening, said flange being disposable rearwardly of said panel to limit movement of said mounting forwardly relative to said panel, a surface on said mounting which can coact with a complementary surface on said panel to prevent rotation of said mounting relative to said panel, and a further surface on said mounting which can coact with a complementary surface on said front-mounted fuseholder to prevent rotation of said forward portion of said front-mounted fuseholder relative to said mounting.

2. A mounting as claimed in claim **1** wherein a wall is spaced rearwardly of said locking means, and wherein said wall limits movement of said forward portion of said front-mounted fuseholder rearwardly relative to said mounting.

3. A mounting as claimed in claim **1** wherein a wall limits movement of said forward portion of said front-mounted fuseholder rearwardly relative to said mounting, whereby said locking means and said wall coact to prevent shifting of said forward portion of said front-mounted fuseholder forwardly or rearwardly relative to said mounting.

4. A mounting as claimed in claim **1** wherein a wall limits movement of said forward portion of said front-mounted fuseholder rearwardly relative to said mounting, and wherein said further surface is on said wall.

5. A mounting as claimed in claim **1** wherein a wall has an opening therein to accommodate a rearwardly-extending portion of said front-mounted fuseholder, and wherein said wall limits movement of said forward portion of said front-mounted fuseholder rearwardly relative to said mounting.

6. A mounting as claimed in claim **1** wherein said generally-annular body portion is bendable to permit said locking means to move out of the path of said forward portion of said front-mounted fuseholder as said forward portion of said front-mounted fuseholder is telescoped rearwardly into said generally-annular body portion from a point forwardly of said mounting.

7. A mounting as claimed in claim **1** wherein said locking means includes an inwardly-extending lip on said generally-annular body portion.

8. A mounting as claimed in claim **1** wherein said resilient portion is a finger that is part of, but that extends outwardly of, said generally-annular body portion.

9. A mounting as claimed in claim **1** wherein said resilient portion is a finger that is part of, but that extends outwardly of, said generally-annular body portion, and

wherein the outer surface of said finger acts as an inclined plane while said finger is being passed into said opening.

10. A mounting as claimed in claim 1 wherein said resilient portion is a finger that is part of, but that extends outwardly of, said generally-annular body portion, and wherein said generally-annular body portion has slots at each side of said finger.

11. A mounting as claimed in claim 1 wherein said locking means is adjacent the front of said generally-annular body portion, wherein said flange is adjacent the rear of said generally-annular body portion, and wherein said resilient portion is intermediate said locking means and said flange.

12. A mounting, for a fuseholder which has a rear portion of limited transverse dimension and a front portion of larger transverse dimension and which enables said front portion of said fuseholder to be passed forwardly through an opening in a panel and to be held securely in assembled relation with, but forwardly of, said panel, that comprises an essentially-annular body portion having a generally-transverse wall with an opening therein dimensioned to accommodate said rear portion of said fuseholder but to prevent the passage therethrough of said front portion of said fuseholder, a surface which is disposed forwardly of said generally-transverse wall and which normally lies in the path of said front portion of said fuseholder, said surface responding to pressures, which are applied to said fuseholder in a direction generally axially of said essentially-annular body portion and which tend to force said front portion of said fuseholder rearwardly past said surface toward said generally-transverse wall, to permit said front portion of said fuseholder to move past said surface and into engagement with said generally-transverse wall, said surface thereupon automatically moving back into said path of said front portion of said fuseholder to resist accidental separation of said fuseholder from said essentially-annular body portion, said essentially-annular body having an outer surface dimensioned to permit the front of said essentially-annular body portion to be passed forwardly through said opening in said panel but having an outwardly-extending projection adjacent the rear thereof which extends outwardly beyond the periphery of said opening in said panel to limit movement of said essentially-annular body portion forwardly relative to said panel, and a locking means on said essentially-annular body portion which can be passed forwardly through said opening in said panel but which will thereafter resist movement thereof and of said front portion of said essentially-annular body portion rearwardly through said opening in said panel, said fuseholder being inserted into said essentially-annular body portion by being telescoped through said front portion of said essentially-annular body portion but said front portion of said essentially-annular body portion and said front portion of said fuseholder being insertable through said opening in said panel by being telescoped forwardly through said opening in said panel from a point rearwardly of said panel.

13. A mounting as claimed in claim 12 wherein said surface is an inwardly-extending lip, and wherein said essentially-annular body portion is bendable to permit said lip to move out of the path of said front portion of said fuseholder.

14. A mounting which can be telescoped forwardly into an opening in a panel from a point rearwardly of said panel and a front-mounted fuseholder which has a forward portion and a rear portion, said mounting having a generally-annular body portion and said forward portion of said front-mounted fuseholder being disposed within and held by said generally-annular body portion, locking means on said mounting which was moved to permit said forward portion of said front-mounted fuseholder to be telescoped rearwardly into said generally-annular body portion from a point forwardly of said mounting but which resists separation of said forward portion of said front-mounted fuseholder from said generally-annular body portion, a resilient portion of said mounting that is disposable in register with a part of said panel which helps define said opening, said resilient portion being bendable inwardly relative to said opening to enable said resilient portion to pass into said opening, a flange on said mounting that is disposable in register with a part of said panel which helps define said opening, said flange being disposable rearwardly of said panel to limit movement of said mounting forwardly relative to said panel, a surface on said mounting which can coact with a complementary surface on said panel to prevent rotation of said mounting relative to said panel, and a further surface on said mounting which can coact with a complementary surface on said front-mounted fuseholder to prevent rotation of said forward portion of said front-mounted fuseholder relative to said mounting.

15. A mounting and front-mounted fuseholder as claimed in claim 14 wherein a wall is spaced rearwardly of said locking means, and wherein said wall limits movement of said forward portion of said front-mounted fuseholder rearwardly relative to said mounting.

16. A mounting and front-mounted fuseholder as claimed in claim 14 wherein a wall limits movement of said forward portion of said front-mounted fuseholder rearwardly relative to said mounting, and wherein said further surface is on said wall.

17. A mounting and a front-mounted fuseholder as claimed in claim 14 wherein said locking means includes an inwardly-extending lip on said generally-annular body portion.

18. A mounting and front-mounted fuseholder as claimed in claim 14 wherein said resilient portion is a finger that is part of, but that extends outwardly of, said generally-annular body portion, and wherein said generally-annular body portion has slots at each side of said finger.

19. A fuseholder which can be telescoped forwardly into an opening in a panel from a point rearwardly of said panel and that has a rear portion and a front portion, said front portion of said fuseholder being dimensioned to be passed forwardly through said opening in a panel, means extending laterally outwardly of said fuseholder to engage a part of said panel, which helps define said opening in said panel, and to thereby limit the extent to which said front portion of said fuseholder can be telescoped forwardly relative to said opening, spaced-apart electric terminals mounted on said rear portion of said fuseholder, said laterally outwardly extending means on said fuseholder engaging said part of said panel while said spaced-apart electric terminals are disposed rearwardly of said panel, and thereby keeping said spaced-apart electric terminals rearwardly

of said panel, resilient means that is movable forwardly with said fuseholder as said front portion of said fuseholder is telescoped into said opening in said panel, said resilient means being dimensioned to enter said opening in said panel as said front portion of said fuseholder is telescoped into position within said opening in said panel, said resilient means permitting said front portion of said fuseholder to be telescoped far enough forwardly relative to said opening in said panel to enable said laterally outwardly extending means on said fuseholder to engage said part of said panel and to thereby limit the extent to which said front portion of said fuseholder can be telescoped forwardly relative to said opening, said resilient means thereafter preventing accidental movement of said front portion of said fuseholder rearwardly relative to said opening in said panel, and complementary interacting surface means that prevent rotation of said fuseholder relative to said panel after said front portion of said fuseholder has been telescoped forwardly into said opening in said panel.

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