United States Patent [19]

Humphreys

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[54] ELECTRICAL OUTLET MEANS AND FUSE THEREFOR

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[21] Appl. No.: **131,655**

[52] **U.S. Cl.** **337/271,** 337/198, 337/262, 337/264

[51] **Int. Cl.**.....**337 268,** H01h 85/14

[58] **Field of Search**.....337/197, 198, 255, 260, 261, 337/262, 263, 264, 268, 269, 271, 297

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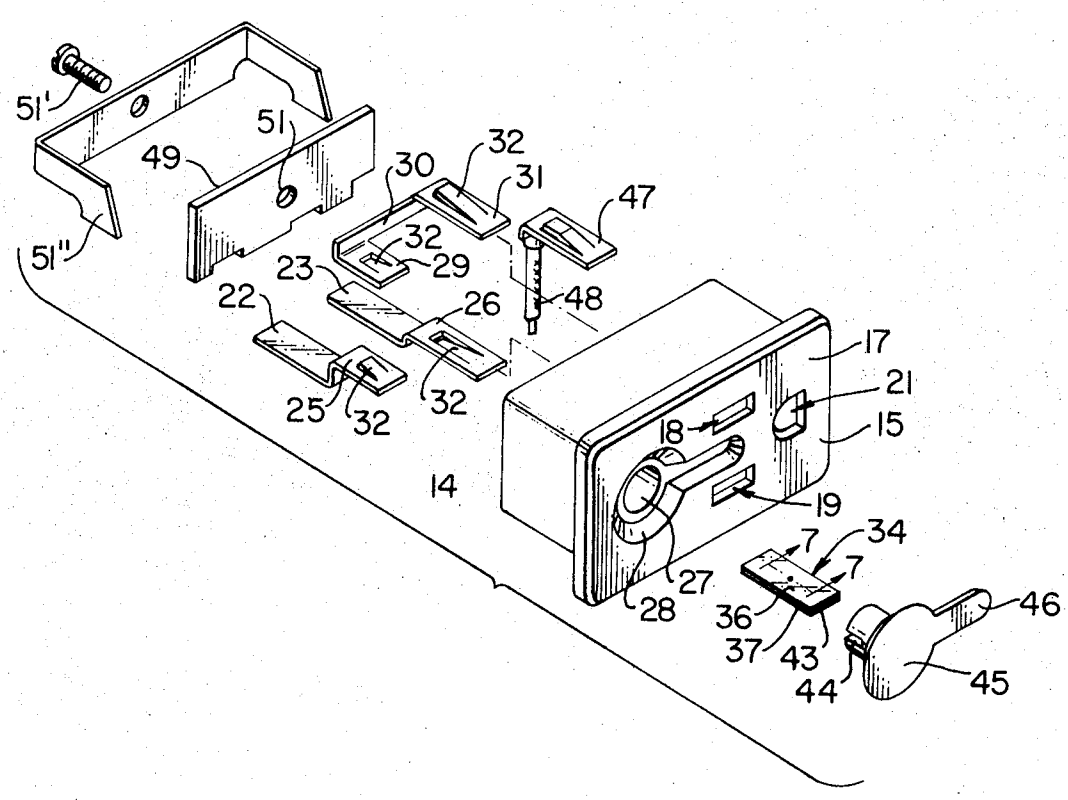
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[57] **ABSTRACT**

A self-contained electrical receptacle having a pair of terminals for respectively being interconnected to an electrical power source and having a pair of opening means for respectively receiving the prongs of an electrical plug of an electrically operated appliance or the like. The receptacle has a pair of lines respectively and electrically leading from the terminals to the opening means to be respectively and electrically interconnected together by the prongs of the plug. A fuse is disposed in one of the lines for opening that one line in a protecting manner when blown whereby the fuse when blown prevents electrical interconnection between the terminals through the opening means. The fuse is changeable through an opening in the receptacle adjacent the plug opening means thereof so that when the fuse is disposed in its opening, a part thereof will be overlapped by the plug when the plug is disposed in the opening means therefor whereby the fuse cannot be changed until the plug is removed from the electrical receptacle.

7 Claims, 12 Drawing Figures



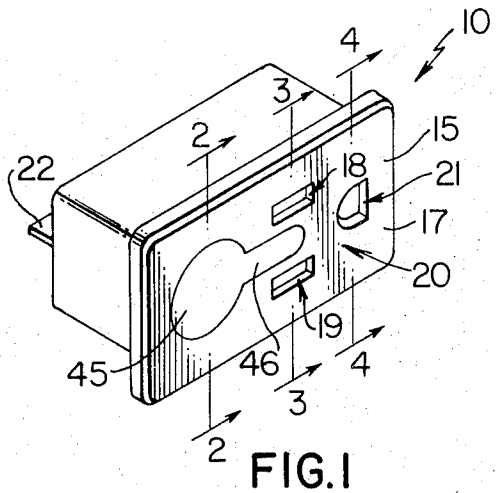


FIG. 1

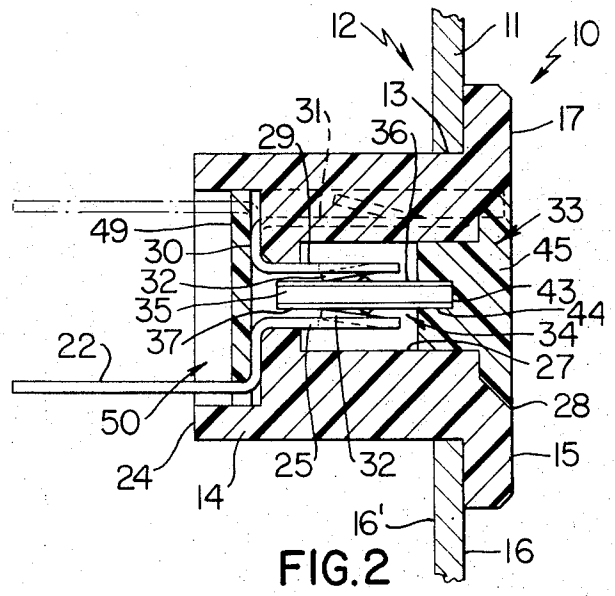


FIG. 2

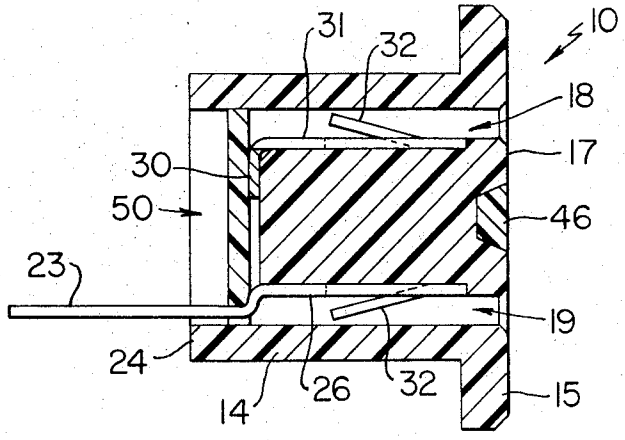


FIG. 3

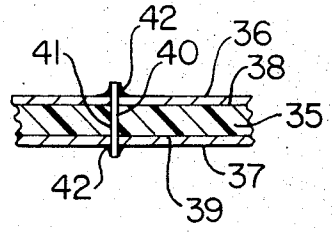


FIG. 7

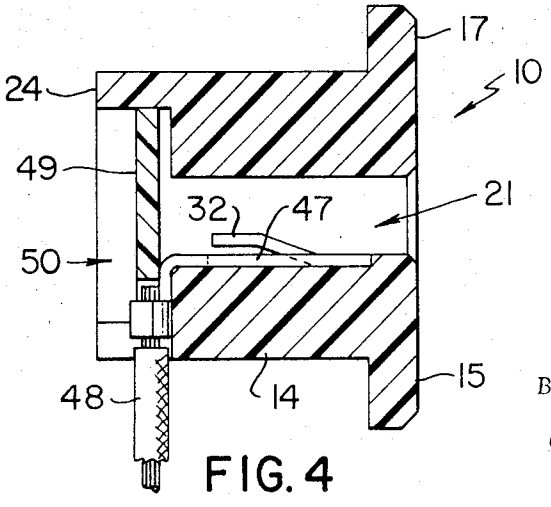


FIG. 4

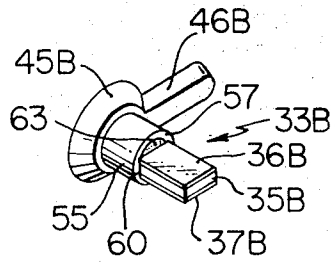


FIG. 9

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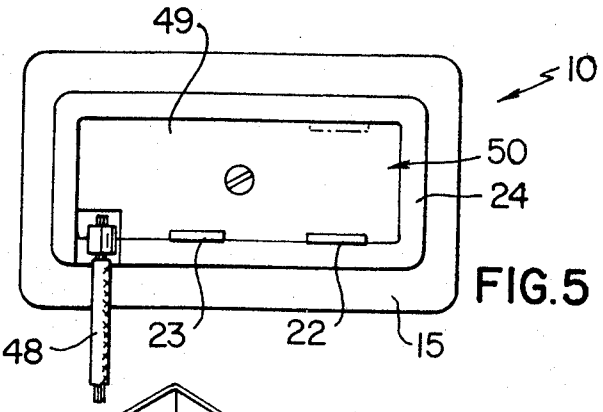


FIG.5

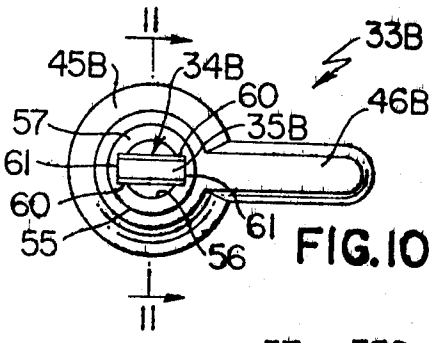


FIG.10

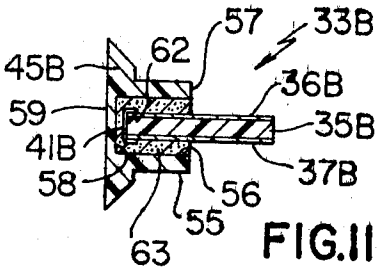


FIG.11

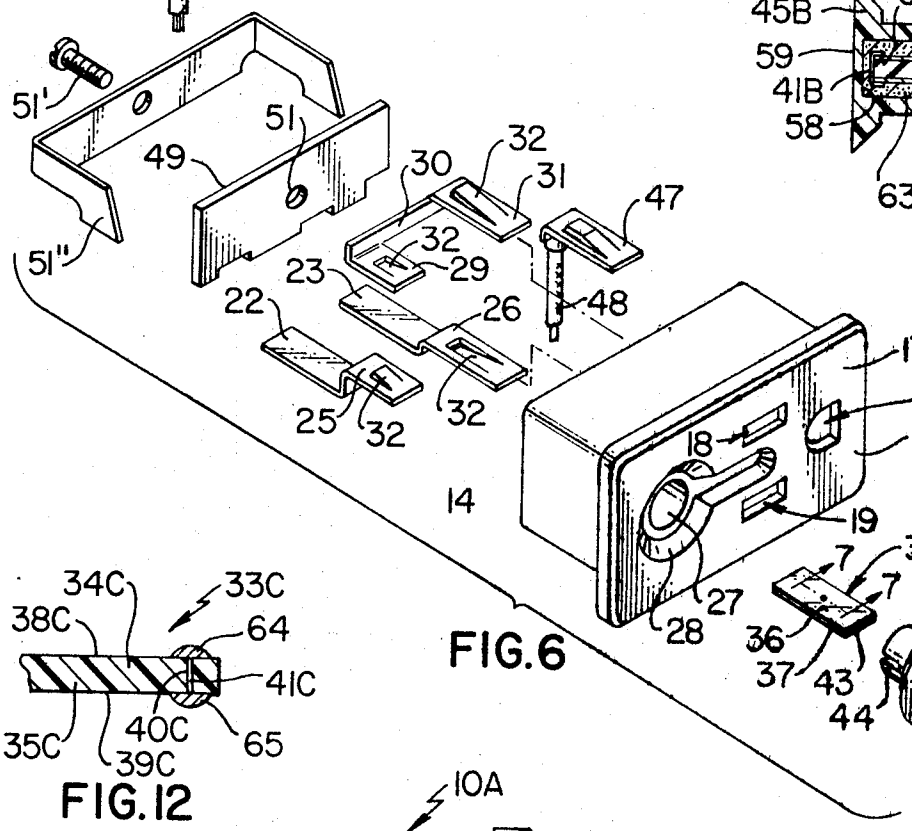


FIG.6

FIG.12

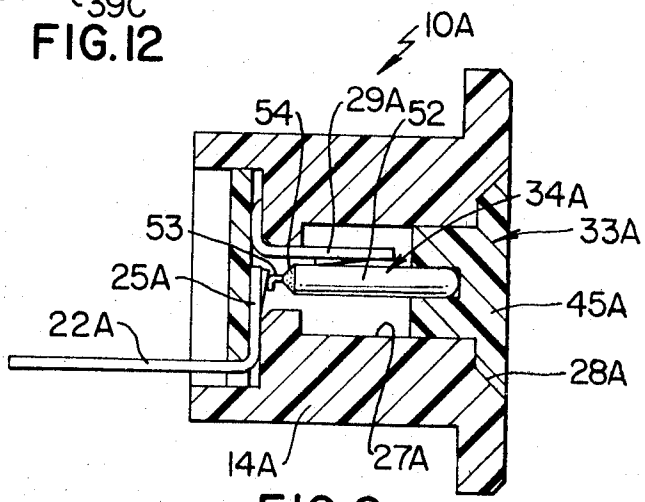


FIG.8

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ELECTRICAL OUTLET MEANS AND FUSE THEREFOR

This invention relates to an improved electrical outlet means as well as to an improved device utilizing such electrical outlet means. This invention also relates to an improved fuse for such an outlet means or the like.

It is well known that cooking apparatus have been provided with electrical outlets on the control panel thereof for permitting the housewife to plug in a small electrical appliance, such as an electrically operated coffee maker and the like, with such electrical outlet on the cooking apparatus merely being for the purpose of convenience and not performing any function in connection with the operation of the cooking apparatus. However, such electrical outlets can also include an interconnection with the timing mechanism of the cooking apparatus so that a timed operation of the electrical outlet will be provided, such as permitting the housewife or the like to plug in the electrically operated coffee maker to begin to operate when a selected time period in the future is reached, such as in the morning, even though she plugs in the coffee maker in the evening before going to bed.

It has been found, according to the teachings of this invention, that the various manufacturers who supply such cooking apparatus normally provide electrical line means between such convenience outlet and the main electrical power source means of the cooking apparatus with such line means having a protective fuse disposed therein so that should an excess of current be drawn by the appliance plugged into such convenience outlet, the fuse on the cooking apparatus will blow without causing the main fuse for the electrical lines leading to the cooking apparatus to be adversely affected. However such fusing of the cooking apparatus is located within the cooking apparatus at the back thereof which not only requires a plurality of expensive parts to provide for such fusing structure, but also provides for a relatively difficult fuse changing operation, which for the housewife may require a service call for a mere fuse changing problem.

It is a feature of this invention to provide improved fusing for such a convience outlet of a cooking apparatus or the like by locating the fuse within a self-contained receptacle for the cooking apparatus with such self-contained receptacle providing one or more convenience electrical outlet means for the cooking apparatus.

Another feature of this invention is to provide the fusing of an electrical outlet means in such a manner that the fuse is readily accessible from adjacent the prong receiving openings of the outlet means for easy fuse insertion and removal.

Another feature of this invention is to provide such an electrical outlet means with the fuse being interlocked in place by the plug which is plugged into the outlet means so that in order to change such fuse, the plug must be first removed from the outlet means whereby a safety feature is provided for the fusing of the electrical outlet means of this invention.

Another feature of this invention is to provide a plug-in blade type fuse for such an electrical outlet means or the like.

In particular, one embodiment of this invention provides a self-contained receptacle having a pair of terminals for respectively being interconnected to an electrical power source and having a pair of opening means for respectively being adapted to receive the prongs of an electrical plug of an electrically operated appliance or the like whereby the pair of opening means define a conventional electrical outlet. The receptacle has a pair of line means respectively and electrically leading from the terminals to the opening means to be respectively and effectively interconnected together by the prongs of the plug when plugged into such opening means. A fuse is disposed in one of the line means for opening that one line means in a protective manner when blown whereby the fuse when blown prevents electrical interconnection between the terminals through the electrical outlet. The surface of the receptacle that has the pair of opening means provided therein also has an opening therein receiving the fuse so as to provide ready access to the fuse for changing thereof. The fuse when closing the opening in the surface has a part thereof adapted to be overlapped by the plug when the plug is plugged into the electrical outlet whereby the plug must be first removed from the electrical outlet before the fuse can be removed from its opening for changing purposes and the like.

Accordingly, it is an object of this invention to provide an improved electrical outlet means having one or more of the novel features set forth above or hereinafter shown or described.

Another object of this invention is to provide an improved apparatus utilizing such an electrical outlet means or the like.

Another object of this invention is to provide an improved plug-in blade type fuse having one or more of the novel features set forth above or hereinafter shown or described.

Other objects, uses and advantages of this in invention are apparent from a reading of this description which proceeds with reference to the accompanying drawings forming a part thereof and wherein:

FIG. 1 is a perspective view of the improved self-contained electrical outlet means of this invention.

FIG. 2 is an enlarged, cross-sectional view taken on line 2—2 of FIG. 1.

FIG. 3 is a view similar to FIG. 2 and is taken on line 3—3 of FIG. 1.

FIG. 4 is a view similar to FIG. 2 and is taken on line 4—4 of FIG. 1.

FIG. 5 is a rear view of the self-contained electrical outlet means of FIG. 1.

FIG. 6 is an exploded, perspective view illustrating the various parts of the electrical outlet means of FIG. 1.

FIG. 7 is an enlarged, fragmentary, cross-sectional view taken on line 7—7 of FIG. 6.

FIG. 8 is a view similar to FIG. 2 and illustrates another embodiment of this invention.

FIG. 9 is a perspective view of another embodiment of the fuse of this invention.

FIG. 10 is an enlarged end view of the fuse of FIG. 9.

FIG. 11 is a cross-sectional view taken on line 11—11 of FIG. 10.

FIG. 12 is a fragmentary, cross-sectional view of another fuse of this invention.

While the various features of this invention are hereinafter described and illustrated as being particularly adapted for providing a convenience electrical outlet on a cooking apparatus, it is to be understood that the various features of this invention can be utilized singly or in any combination thereof to provide an electrical outlet means for other devices as desired.

Therefore, this invention is not to be limited to only the embodiments illustrated in the drawings, because the drawings are merely utilized to illustrate one of the wide variety of uses of this invention.

Referring now to FIGS. 1-6, the improved self-contained electrical receptacle of this invention is generally indicated by the reference numeral 10 and is illustrated in FIG. 2 as being mounted to the control panel 11 of a cooking apparatus that is generally indicated by the reference numeral 12, the receptacle 10 being mounted in a suitable opening 13 of the control panel 11 by having a body portion 14 thereof inserted through the opening 13 while a front integral plate means 15 thereof abuts against the outside 16 of the control panel 11 to have its outer surface 17 exposed on the front surface 16 of the control panel 11. Of course, the receptacle means 10 of this invention could be mounted to the control panel of the cooking apparatus in any other desired manner and could be mounted to the cooking apparatus at a location other than on the control panel thereof, as desired.

The receptacle 10 of this invention can be formed as a one-piece structure by suitably molding electrically insulating material into the configuration illustrated in the drawings. However, the body portion 14 and plate portion 15 of the receptacle could be formed of several parts suitably interconnected together, if desired.

As illustrated in FIGS. 1 and 6, the front surface 17 of the plate means 15 of the self-contained receptacle 10 of this invention is interrupted by a pair of substantially rectangular opening means 18 and 19 to provide plug prong receiving means for electrically interconnecting such electrical plug to a suitable power source in a manner hereinafter described whereby the opening means 18 and 19 define a conventional electrical outlet 20 for the receptacle 10. If desired, a suitable opening means 21 can also be provided in the surface 17 of the plate portion 15 of the receptacle 10 for receiving a prong of the electrical plug which is normally utilized for grounding purposes and the like.

A pair of terminals 22 and 23 formed of electrically conductive material, such as a suitable metal, extend from the rear side 24 of the body portion 14 of the receptacle 10 for being respectively interconnected to suitable power source lines of the cooking apparatus 12 in a conventional manner. The terminals 22 and 23 respectively have contact portions 25 and 26.

The contact portion 26 of the terminal 23 is received in the opening 19 so as to be contacted by the plug prong inserted in such plug receiving opening 19. However, the contact portion 25 of the terminal 22 is disposed in a chamber 27 formed in the body portion 14 of the receptacle 10 and leading to an opening 28 formed in the front surface 17 of the plate portion 15 for a purpose hereinafter described.

Another electrically conductive metal contact member 29 is also disposed in the chamber 27 of the receptacle 10 in spaced relation to the contact portion 25 of the terminal 22 with the contact member 29 having an integral extension 30 thereof leading to another contact member or portion 31 formed integrally therewith and disposed in the prong receiving opening 18 as illustrated in FIG. 3 to be contacted by the plug prong received therein. In order to increase electrical contact between the plug prongs that are received respectively in the openings 18 and 19 and the contact portions 31 and 26 respectively disposed in such openings 18 and 19, the contact portions 26 and 31 respectively have rectangular tangs 32 carved therefrom and bent angularly relative thereto as illustrated so as to provide yielding contact force members for engaging against the plug prongs received in the openings 18 and 19.

Similarly, the contact portion 25 of the terminal 22 and the contact member 29 disposed in the chamber 27 respectively have rectangular tangs 32 carved therefrom and bent toward each other to provide for contact engagement for a fusing action therebetween.

In particular, a fuse member 33 of this invention is adapted to be disposed in the opening 28 of the receptacle 10 to not only close the opening 28 thereof as illustrated, but also to have a fusing portion 34 thereof inserted between the contact portions 25 and 29 as illustrated in FIG. 2 to provide an electrical circuit therebetween leading from the terminal 22 to the contact portion 31 disposed in the prong opening 18. While any suitable fusing portion 34 can be utilized, the fusing portion illustrated in the drawings is best illustrated in FIG. 7 and comprises an electrical insulating board 35 having layers 36 and 37 of conductive material, such as copper or the like, disposed and secured on the opposed sides 38 and 39 thereof while being separated from each other about the side edges of the insulating board 35. However, a suitable opening 40 passes through the outer conductive layers 36 and 37 as well as through the insulating layer 35 to receive a fusible member 41 that electrically interconnects the outer conductive layers 36 and 37 together, the fusible member 41 being suitably secured in the opening 40 and conductively secured to the layers 36 and 37 by securing means 42. For example, such fusible portion 34 of the fuse 33 of this invention can be formed in the manner fully disclosed in applicant's copending patent application, Ser. No. 39,710, filed May 22, 1970, wherein the fuse pin 41 is formed of fine silver and has its opposed ends respectively soldered or brazed to the outer conductive layers 36 and 37.

The fusible portion 34 of the fuse 33 has one end 43 thereof received and secured in a suitable slot 44 formed in an insulating handle or part 45 of the fuse 33 so as to be carried thereby with the insulating part 45 being suitably shaped to be complementary to the opening 28 to fill the same when the fuse 23 is disposed in the opening 28 as illustrated in FIGS. 1 and 2. For example, when the fuse 33 is fully disposed in the opening 28, the outer surface of the insulating part 45 of the fuse 33 is disposed flush with the outer surface 17 of the plate part 15 of the receptacle 10.

When the fuse 33 is disposed in the opening 28 of the receptacle 10 of this invention, it can readily be seen that the fuse portion 34 thereof is inserted between the contact portions 25 and 29 in plug-in blade insertion manner so that the conductive layers 36 and 37 respec-

tively engage against the tangs 32 of the contact portions 29 and 25 as illustrated in FIG. 2 to complete the electrical circuit through the fuse pin 41 and thus between the terminal 22 and the contact portion 31 in the prong opening 18 of the receptacle 10 so that one of the line means of the receptacle 10 between the terminal 23 and the prong opening 18 is protected by the fuse portion 34 of the fuse of this invention.

If desired, the fuse part 34 can have an epoxy coating or shrink sleeve disposed thereon to cover the opposed ends of the fuse pin 41 thereof to confine the arc during the blowing of the fuse inside the fuse sandwich 34 so that such arc cannot reach other parts of the receptacle during blowing of the fuse 33.

The insulating part 45 of the fuse 33 as well as the opening 28 can be so constructed and arranged that a press fit is provided for the part 45 of the fuse 33 so that it requires a knife edge or other suitable means to pry the part 45 from the opening 28 when the fuse 33 is fully disposed in the opening 28 of the receptacle 10. In this manner, tampering with the fuse 33 by children and the like will be duly hampered while still permitting the housewife or other adult to readily change the fuse 33 when a fuse 33 is blown and thereby requires replacement thereof.

However, in order to insure that the fuse 33 will not be replaced while an appliance is plugged into the convenience outlet 20 of the receptacle 10 of this invention, an integral part or extension 46 of the insulating part 45 of the fuse 33 of this invention extends between the prong receiving openings 18 and 19 of the outlet 20 and within the complementarily shaped opening 28 in the manner illustrated in FIGS. 1 and 3 so that when an electrical plug has the prongs thereof plugged into the openings 18 and 19 of the outlet 20, such plug overlaps the part 46 of the fuse 33 whereby the fuse 33 cannot be removed from the opening 28 until the electrical plug in the outlet 20 is completely removed therefrom.

Therefore, it can be seen that the fuse 33 for the self-contained receptacle 10 of this invention is readily accessible from the front of the cooking apparatus 12 in contrast to the normal fusing of such convenience outlet at a point remote from such outlet as in the past. Further, the location of the fuse 33 of this invention in an interlocking manner with the plug of a device plugged into the convenience outlet 20 of the receptacle 10 of this invention prevents the fuse 33 from being changed while a device is still plugged into the outlet 20.

In regards to the ground opening 21 of the receptacle 10 of this invention, it can readily be seen that a contact part 47 is adapted to be disposed in the opening 21 in the manner illustrated in FIG. 4 and be electrically interconnected to a ground line 48 in a conventional manner with the ground line 48 leading from the rear 24 of the receptacle 10. In order to retain the contact parts 47, 26, 31 and 25 in place in the receptacle 10 of this invention, a suitable rear cover 49 can be utilized to close the rear opening 50 in the body portion 14 of the receptacle 10 by being suitably fastened thereto by suitable fastening means passing through an opening 51 in the plate 49. For example, the same threaded fastening member 51' of FIG. 6 that is utilized to fasten the conventional spring mounting clip 51'' to the receptacle 10 for bearing against the inside surface 16' of the control panel 11 when the receptacle is snapped through the opening 13 thereof can be utilized for securing the cover member 49 in place.

While only one type of fuse 33 has been illustrated and described as providing the fusing action between the contact portions 25 and 29 in the manner illustrated in FIG. 2, it is to be understood that other types of fusing structure can be utilized to interconnect the one line between the terminal 22 and the contact portion 31 in the prong receiving opening 18 of the receptacle 10, if desired.

For example, reference is now made to FIG. 8 wherein another embodiment of this invention is generally indicated by the reference numeral 10A and parts thereof similar to the receptacle 10 previously described are indicated by like reference numerals followed by the reference letter A.

As illustrated in FIG. 8, the terminal 22A has the contact portion 25A thereof modified so as to be disposed substantially transverse to the chamber 45A formed in the body portions 14A of the receptacle 10A. However, the contact portion 29A that is also disposed in the chamber 27A is formed in the same manner as the contact portion 29 previously described.

The fuse 33A that is disposed in the opening 28A has the insulating part 45A thereof formed in the manner previously described. However, the fuse portion 34A thereof comprises the thermal type of fuse disclosed and claimed in U.S. Pat. No. 3,180,958 or U.S. Pat. No. 3,519,972 wherein an outer conductive casing 52 is electrically interconnected to an end conductor 53 inserted into the casing 52 through an insulating end closure 54 and being electrically interconnected to the outer conductive casing 52 by an internal mechanism which when subject to an adverse current will break the electrical connection between the conductors 53 and 52 in the manner fully set forth in the aforementioned U.S. patents.

Thus, it can be seen that the fuse 33A is adapted to have the conductor 53 thereof pressed into electrical contact with the contact portion 25A of the terminal 22A when the fuse 33A is fully inserted in the opening 28A as illustrated in FIG. 8 while the outer conductive casing 52 is placed into conductive contact with the contact portion 29A that leads to one of the prong openings of receptacle 10A in the manner previously described.

Therefore, it can be seen that other types of fusible devices can be utilized for providing the fuse of this invention without departing from the scope of this invention.

Another fuse of this invention that is adapted to be utilized with the receptacle 10 of FIGS. 1–6 is generally indicated by the reference numeral 33B in FIGS. 9, 10 and 11 and parts thereof similar to the fuse 33 previously described are indicated by like reference numerals followed by the reference letter B.

As illustrated in FIGS. 9, 10 and 11, the insulating part 45B of the fuse 33B has a cylindrical portion 55 provided with a circular opening 56 interrupting the end 57 thereof and terminating at a bottom wall 58 short of the outer surface 59 of the handle part 45B of the fuse 33B as illustrated in FIG. 11. A pair of notches 60 also interrupt the end 57 of the cylindrical part 55 of the insulating part 45B of the fuse 33B and intercon-

nect with the cylindrical opening 56 in diametrically opposed relation to respectively receive the opposed sides 61 of a fuse part 34B of the blade type of fuse similar to the fuse part 34 of the fuse 33 previously described except that the fusible member 41B of the fuse part 34B for electrically interconnecting together the outer conductive layers 36B and 37B of the fuse part 34B is disposed at the end 62 of the insulating board 35B and is bent around the same to have its opposed ends respectively brazed or soldered to the conductive layers 36B and 37B whereby it can be seen that the fuse pin 41B does not pass through any opening means in the fuse part 34B as provided by the opening 40 in the fuse part 34 previously described. Thus, the fuse part 34B can be made by stamping the same from a larger circuit board sandwich and the fuse pin 41B then can be added at one end of the stamping without requiring the forming of an opening or groove in the fuse stamping.

The notches 60 formed in the cylindrical part 55 of the insulating part 45B of the fuse 33B terminate short of the inner wall 58 of the cylindrical opening 56 so that when the fuse part 34B is inserted into the notches 60, the same bottoms out against the end of the notches 61 before the fuse pin 41B can contact against the end wall 58 of the insulating part 45B so that the fuse pin 41B cannot be jammed against the end wall 58 to be dislodged from the fuse part 34B when the fuse part 34B is assembled into the notches 60 of the insulating part 45B. After the fuse part 34B has been fully inserted into the notches 60 of the insulating part 45B, a suitable epoxy resin or other adhesive means 63 can be disposed into the opening 56 adjacent the fuse part 34B to fully secure the fuse part 34B in place as illustrated in FIG. 9 whereby it can be seen that the fusible part 41B of the fuse 33B of this invention is completely encased within the insulating part 45B and sealed off by the epoxy 63 so that when the fuse part 41B blows because of adverse current flow therethrough, the arcing of such fusible part 41B is completely quenched within the insulating part 45B so that the same will not adversely affect the receptacle 10 receiving the same.

In order to provide for fuses 33B that will have different ampere ratings, the notches 60 in the cylindrical part 55 for different ampere ratings can be disposed at different angles relative to the extension part 46B thereof. For example, for a 15 amp fuse, the fuse part 34B can be disposed substantially in alignment with the extension part 46B thereof as illustrated whereas for a 20 amp fuse, the fusible part 34B could be disposed perpendicular to the extension part 46B whereby it can be seen that fuses 33B of this invention having different ampere ratings can have the fuse part 34B disposed at different angles relative thereto so that the wrong fuse cannot be placed in a receptacle having a particular rating that only will accept the fuse intended to be inserted therein. Of course, such keying of the receptacle 10 and the blade 34B of the fuse 33B for the proper rating can also be provided for the fuses 33 and 33A previously described.

Another fuse construction of this invention is generally indicated by the reference numeral 33C in FIG. 12 and parts thereof similar to parts of the fuse 33, 33A and 33B will be indicated by like reference numerals followed by the letter C.

As illustrated in FIG. 12, the extending fuse part 34C of the fuse 33C which is to be inserted between the contact parts or members 31 and 26 in the same manner as the fuse part 34 previously described is formed from the insulating board 35C. However, the board 35C does not have the layers 36 and 37 of conductive material on the opposed sides 38C and 39C thereof as in the fuse construction 33. Instead, the fuse element or pin 41C passes through an opening 40C formed through the board 35C and the opposed ends of the fuse pin or member 41C is secured directly to opposed contact buttons 64 and 65 disposed on the opposed sides 38C and 39C of the board 35C and secured thereto in any suitable manner so that the conductive buttons 64 and 65 are only at the end of the fuse part 34C which will be received between the contact members 31 and 26 at the openings 18 and 19 of the outlet 20 in the manner previously described. Because the contact buttons completely cover the opposed ends of the pin 41C at the bore 40C through the board 35C, any arcing during the blowing of the fuse pin 41C will be confined within the board 35C.

Thus, it can be seen that it is not necessary to have the fuse part 34 of the fuse 33 of this invention entirely covered with conductive material on the opposed sides thereof to still provide a blade type of fuse insertion between the contact parts or members 31 and 26 previously described as merely contact buttons 34 and 65 need be utilized on the insulation board, if desired.

Of course, it is to be understood that conventional fuse structure can be carried by the handle part 45 to extend therefrom and be adapted to be plugged in a blade type manner similar to the fuse parts 34, 34A, 34B and 34C previously described. For example, the conventional cylindrical fuse having an insulating body and conductive end caps or furrels at the opposed ends thereof for respectively providing the two conductors for the fuse can be carried by the handle part 34 of this invention at one end cap thereof and have the contact members 26 and 31 of the receptacle 10 suitably shaped to respectively contact the end caps or furrels of the fuse structure.

While only one outlet 20 is illustrated for the receptacle 10, it is to be understood that two or more outlets could be provided with each being protected by a fuse structure of this invention or by a single fuse structure because the contact part 31 could have a terminal extension thereof (shown in phantom in FIGS. 2 and 5) for leading to such other electrical outlet.

Therefore, it can be seen that not only does this invention provide an improved electrical outlet means having many unique and novel features, but also this invention provides improved apparatus utilizing such an electrical outlet means and an improved fuse for such an electrical outlet means.

While the forms of the invention now preferred have been disclosed as required by the patent statutes, other forms may be utilized, all coming within the scope of the claims which follow.

What is claimed is:

1. The combination of a self-contained electrical receptacle and a fuse, paid receptacle having a pair of terminals for respectively being adapted to be interconnected to an electrical power source, said receptacle having a pair of opening means for respectively being

adapted to receive the prongs of an electrical plug of an electrically operated appliance or the like whereby said pair of opening means define a conventional electrical outlet, said receptacle having a pair of line means respectively and electrically leading from said terminals to said opening means to be respectively and effectively interconnected together by said prongs of said plug, and a fuse disposed in one of said line means for opening said one line means in a protecting manner when blown whereby said fuse when blown prevents electrical interconnection between said terminals through said outlet, said fuse being insertable in and removable from said one line to permit fuse changing at said receptacle, said receptacle having an exposed surface provided with said opening means therein, said surface having means providing ready access to said fuse for changing thereof and the like, said means of said surface that provide ready access to said fuse comprising an opening in said surface spaced from the pair of openings and having a recessed extension disposed therebetween, said fuse being insertable in said opening to not only be disposed in said one line means, but also to close said opening of said surface, said fuse when closing said opening in said surface having a part thereof disposed in said recessed extension of said opening and being adapted to be overlapped by said plug when said plug is plugged into said outlet whereby said plug must be removed from said outlet before said fuse can be removed from said opening, said part of said fuse and said opening receiving the same being so constructed and arranged that said part postively orients said fuse in said one line means when said part is received in said opening.

2. A combination as set forth in claim 1 wherein said part of said fuse extends transversely to a longitudinal axis of said fuse.

3. A combination as set forth in claim 1 wherein said one line means comprises a pair of contact members having contact portions disposed in spaced relation, said fuse bridging said contact portions.

4. A combination as set forth in claim 3 wherein one of said contact members defines one of said terminals.

5. A combination as set forth in claim 3 wherein one of said contact members has a portion leading to one of said opening means to be contacted by the plug prong received therein.

6. An electrical outlet means having a surface provided with a pair of opening means for respectively being adapted to receive the prongs of an electrical plug of an electrically operated appliance or the like whereby said pair of opening means define a conventional electrical outlet, said outlet means having a pair of line means respectively and electrically leading to said opening means to be respectively and effectively interconnected together by said prongs of said plug, said line means also being adapted to be interconnected to an electrical power source, said surface having an opening with a recessed extension disposed between said pair of openings therein, and a fuse disposed said recessed extension of in said opening and closing the same, said fuse having means disposed in one of said line means for opening said one line means in a protecting manner when blown whereby said fuse when blown prevents electrical interconnection between said line means through said outlet, said fuse when closing said opening in said surface having a part thereof disposed in said opening and adapted to be overlapped by said plug when said plug is plugged into said outlet whereby said plug must be removed from said outlet before said fuse can be removed from said opening, said part of said fuse and said opening receiving the same being so constructed and arranged that said part positively orients said fuse in said one line means when said part is received in said opening.

7. An electrical outlet means as set forth in claim 6 wherein said part of said fuse extends transversely to a longitudinal axis of said fuse.

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