

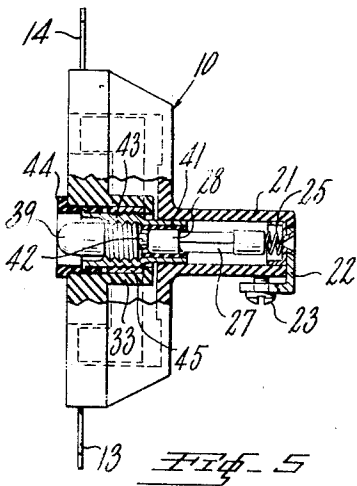
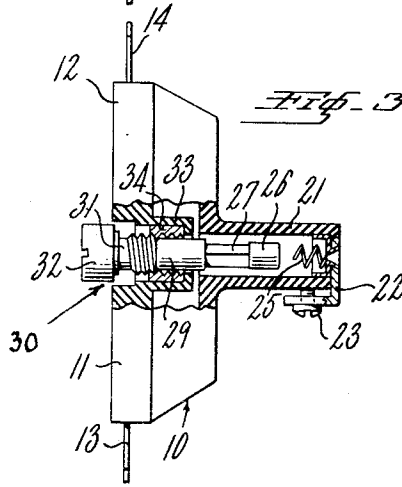
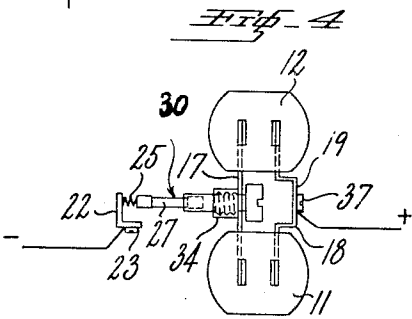
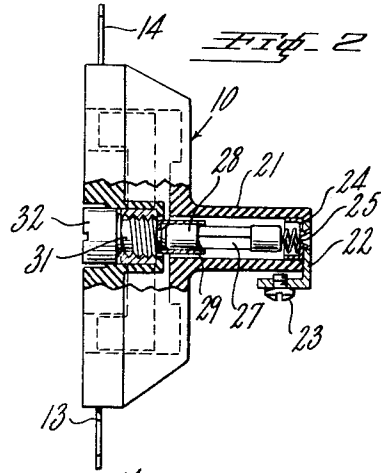
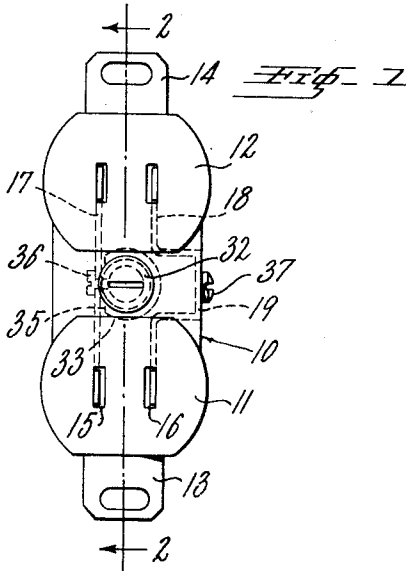
Aug. 7, 1951

J. S. RICHARD ET AL

2,562,947

FUSE ARRANGEMENT FOR ELECTRIC WALL OUTLETS

Filed Sept. 8, 1949



INVENTORS
JOHN S. RICHARD
CARL YOUNGQUIST
BY *Leon M. Kraus*

UNITED STATES PATENT OFFICE

2,562,947

FUSE ARRANGEMENT FOR ELECTRIC WALL
OUTLETSJohn S. Richard and Carl Youngquist, Brooklyn,
N. Y.; Geraldine Youngquist administratrix of
said Carl Youngquist, deceased

Application September 8, 1949, Serial No. 114,496

2 Claims. (Cl. 200—115.5)

1

This invention relates to electric wall receptacles or outlets and more particularly to a fuse arrangement therefor.

It is one of the objects of the invention to provide means facilitating ready access to and operation of the fuse arrangement in electric wall receptacles and affording an increased safety in handling such receptacles, whether they are of the single or double outlet type.

It is another object of the present invention to provide means ensuring easy and convenient insertion of a fuse arrangement in an electric wall receptacle and for removal therefrom, said fuse arrangement being so constructed as to establish contact only after an extreme position in the receptacle is reached.

It is still another object of the present invention to provide in a wall receptacle a fuse device or unit which will consume little space, access being had to the fuse at the location of the receptacle without having to reach for the fuse box located elsewhere and in an out-of-the-way place in the premises and wherein each receptacle in the household will contain its own fuse.

It is a further object of the present invention to provide in a wall receptacle an arrangement for containing a cartridge type fuse which is placed in a sleeve member extending parallel to the prongs of the plug to be inserted in the receptacle, said sleeve member substantially not interfering with the plug, so that a new cartridge can be received and introduced in the body of the wall receptacle as a unit independently of the insertion of the plug in the wall receptacle.

Other objects of the present invention are to provide a wall receptacle with fuse arrangement which is of simple construction, inexpensive to manufacture, has a minimum number of parts, is compact and consumes little space, wherein a single fuse may serve two outlets forming a part of the same receptacle, is convenient to replace and efficient in operation.

Further objects and for a better understanding of the invention reference may be had to the following detailed description taken in connection with the accompanying drawing in which:

Fig. 1 is a front plan view of the receptacle embodying features of the present invention.

Fig. 2 is a vertical sectional view of the receptacle taken on line 2—2 of Fig. 1 and looking in the direction of the arrows thereof.

Fig. 3 is a sectional view similar to Fig. 2 but with the fuse partly retracted from the body of the receptacle.

Fig. 4 is a skeletonized view showing the wire hook-up therefor.

2

Fig. 5 is a fragmentary and sectional view of a modified form of the invention using a lamp indicator to indicate whether or not the fuse has been blown.

Referring now more particularly to the drawing, there is shown a main body 10 of the receptacle or casing having two plug receiving portions 11 and 12. Extending from these plug receiving portions are respectively slotted projections 13 and 14 for the connection of the receptacle body within the wall casing, not shown. Each of the portions 11 and 12 have a pair of laterally spaced slots 15 and 16 adapted to receive the prongs of an electric plug on the end of a lamp cord or the cord of some other device. Extending between the slots 15 is a terminal strip 17. Extending between the slots 16 is a terminal strip 18 having an outwardly struck portion 19 intermediate its length thereof (Fig. 1).

Extending rearwardly from and centrally of the main casing or body 10 is an extension casing or hollow projection 21 of insulating material which is preferably integral with the body to thereby form a T-shaped housing. On one end of the extension casing is a terminal strip 22 having a terminal screw 23 by which a wire can be connected thereto. This strip 22 has a cup-shaped member 24 connected thereto and adapted to extend into the sleeve projection opening. This member 24 houses a contact spring 25 connected to the same with which a terminal 26 of a cartridge fuse 27 may engage. The opposite terminal as indicated at 28 of the fuse 27 is contained in a cap or cup-shaped member 29 articulated and fixed to a metallic threaded member 31 and adapted to receive the fuse and to pull the fuse from the contact spring 25 upon the threaded member 31 being turned for disengagement from the receptacle. The threaded member has an insulated turning knob 32 while its main part is of metal so as to conduct electric current to the fuse 27. Within the main body 10 is an integral depressed insulated portion 33 which contains an internally threaded metal ring 34 which receives the threaded member 31. This insulated depressed portion 33 is cut away as indicated at 35 (Fig. 1) to permit the terminal strip 17 to have direct contact with the exterior of the internally threaded ring 34 and to be secured thereto by a set screw 36. A terminal screw 37 is connected to the offset portion 19 of the terminal strip 18 and to this terminal strip there is connected by means of the screw 37 one of the wires for supplying current to the receptacle. Unless the member 31 is screwed home, no contact is made of the fuse

with the contact spring 25. The fuse 27 can easily be pulled from the cap 29 upon the screw member 31 being removed from the receptacle. With a new fuse in place within the cap 29 the fuse can be inserted by means of the knob 32 and threaded member 31 and when the screw member 31 is fully inserted (with knob 32 substantially flush with the front face of casing 10, as seen in Fig. 2) current will be passed through the receptacle.

In the form of the invention shown in Fig. 5, the body 10 is similarly constructed and is provided with the usual sleeve projection 21 and the associated parts thereof. According to this form of the invention a lamp 39 is provided to give an indication as to whether or not the fuse has been blown. The fuse 27 has its terminal 28 lying in an insulating sleeve 41 and engages with the end of the lamp bulb as indicated at 42. The lamp bulb is threaded into a metal ring 43 which contains the insulated sleeve 41. On the other end of this sleeve there is tight fitted, an insulating hollow knob 44. The threaded sleeve is held in place in the body by an internal threaded metal ring 45 imbedded in the depressed insulated portion 33. By turning the insulating knob 44, the entire assembly including the lamp bulb and the fuse 27 can be removed from the receptacle body. The terminal strips 17 and 18 are similarly connected to the metal threaded ring 43 and to terminal wires leading from the receptacle. When the lamp bulb 39 fails to glow, this will be an indication that the fuse has been blown. Accordingly the assembly will be removed and the fuse element 27 replaced in the same manner as above described.

It will be apparent that the arrangement can be constructed so that a double set of fuse wires can be provided in a single fuse unit or cartridge fuse in order to separately serve two different plugs. In all these cases, the fuse unit always extends parallel to the prongs of the plug or plugs to be inserted in openings 15, 16 of receptacle parts 11, 12. The elongated fuse unit 30 is positioned intermediate the receptacle portions 11 and 12 and preferably does not interfere with the operation of the plug or plugs (not shown), as may be easily realized from the drawing.

It is to be noted that signal or pilot light bulb 39, which may also serve as an emergency light, can be arranged so as to signal to the operator only if and when a fuse has been blown.

It is further contemplated by this invention to operate the readily removable fuse unit as a safety key or device which will only be inserted in the receptacle when same is to be used.

While various changes may be made in the detailed construction, it shall be understood that such changes shall be within the spirit and scope of the invention as defined by the appended claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent, is:

1. In a wall receptacle having a main casing of insulating material with a front face having two pairs of openings for the insertion of the prongs of plug means; a hollow insulating extension casing positioned intermediate said pairs of openings and projecting from said main casing cen-

trally and rearwardly thereof, whereby a T-shaped housing is achieved with the prongs of said plug means when inserted in said openings extending substantially in the same direction as that of said extension casing, a first terminal strip leading to one of the openings of each pair of openings, a second terminal strip leading to the other opening of each pair of openings, a terminal element connected to said first terminal strip, a threaded metal ring member inserted in said main casing and coaxial with said extension casing and connected to the second terminal strip, a threaded metal member having an insulated knob at one end and a cup-shaped metal member at the opposite end, said cup-shaped member being shaped to engage with one end of a fuse, a spring contact supported by said extension casing and adapted to contact with the other end of said fuse when said threaded member is screwed home on said threaded ring member whereby said knob becomes substantially flush with the front face of said main casing and a further terminal element connected to said spring contact and through said fuse to said second strip.

2. In a wall receptacle having a main casing of insulating material with a front face and at least two openings for the insertion of the prongs of a plug; a hollow extension casing directed at substantially right angles to and positioned to project from said main casing rearwardly thereof and substantially parallel to the prongs of the plug when inserted in said openings, said main casing being provided with a bore which is positioned adjacent said two openings and communicates with said hollow extension casing, a first terminal strip leading to one of said openings, a second terminal strip leading to the other opening, a terminal element connected to said first terminal strip, a threaded metal ring member connected to said second terminal strip and disposed in said bore of said main casing and coaxial with said extension casing, a threaded metal member having an insulated knob at one end and a cup-shaped metallic member at the opposite end, said cup-shaped member being adapted to receive one end of a fuse, a spring contact arranged in said hollow extension and for contact with the other end of said fuse when said threaded member is inserted through said bore for threaded engagement with said threaded ring member, whereby said knob extends into said bore and becomes substantially flush with said front face, said spring contact including a terminal element for connection by means of said fuse with said second terminal strip.

JOHN S. RICHARD.

CARL YOUNGQUIST.

REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
2,256,716	Klanchnik	Sept. 23, 1941
2,258,231	Alden	Oct. 7, 1941
2,316,163	Hignutt	Apr. 13, 1943
2,437,802	Adler	Mar. 16, 1948
2,448,389	Powell	Aug. 31, 1948