

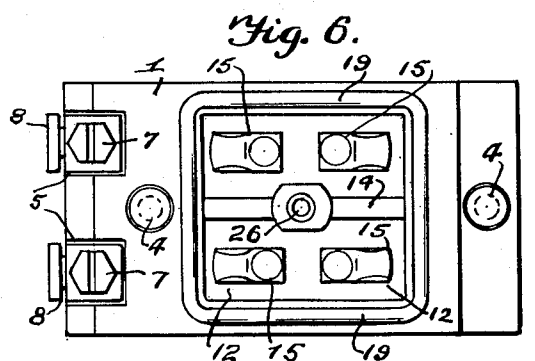
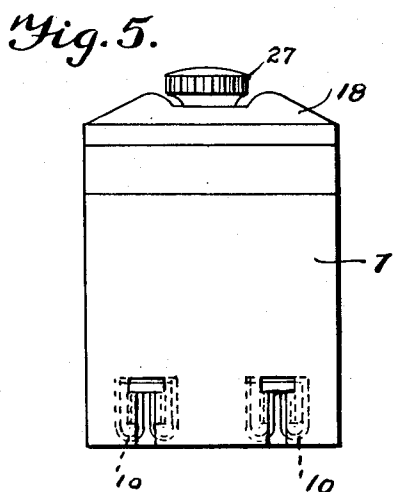
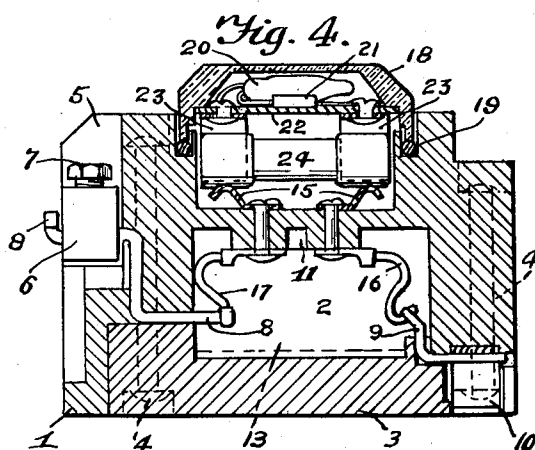
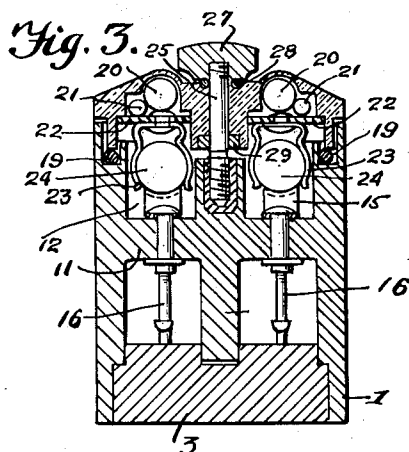
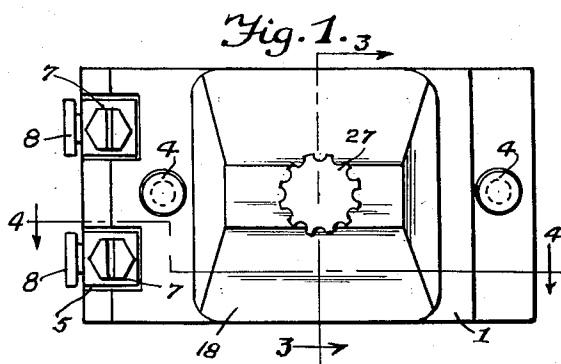
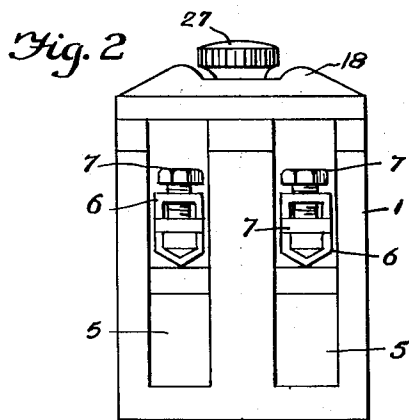
June 30, 1964

F. S. COSGROVE

3,139,499

FUSE ADAPTER

Filed Aug. 5, 1960



INVENTOR

Frederick S. Cosgrove.

BY *Linton & Linton*

ATTORNEYS.

1

3,139,499

FUSE ADAPTER

Frederick S. Cosgrove, Boston, Mass., assignor to Fuse Indicator Corporation, Montgomery County, Md., a corporation of Maryland

Filed Aug. 5, 1960, Ser. No. 47,638

1 Claim. (Cl. 200—121)

The present invention relates to an adapter capable of replacing circuit breakers upon a switchboard or control panel when it is desirable to employ a more positive over-current protection such as a standard cartridge type fuse.

This fuse adapter is exactly the same exterior outline dimensions as that of two single General Electric Company's circuit breaker standing side-by-side on any switchboard or control panel whereon are mounted a number of such circuit breakers. Any block of two parallel circuit breakers can be removed, and in place of them one single fuse adapter can be inserted in their place with the grid holddown and buss bar connections and an object of this invention is to provide a fuse adapter for use on power boards, wheresoever it is desirable to quickly detect a blown fuse in a darkened area or where it might be difficult to quickly find a tripped circuit breaker.

Other objects of the present invention will be in part obvious and in part pointed out hereinafter as the description continues.

In the drawings:

FIG. 1 is a plan view of the adapter embodying the present invention.

FIG. 2 is an end elevation of the same.

FIG. 3 is a vertically transverse section taken on line 3—3 of FIG. 1 in the direction the arrow points.

FIG. 4 is a sectional view taken on the line 4—4 of FIG. 1 in the direction the arrow points.

FIG. 5 is an elevation of the fuse adapter taken at the end opposite to that illustrated in FIG. 2; and

FIG. 6 is a top plan view of the adapter with the cover and fuses removed.

The adapter comprises a body 1 molded from suitable insulating materials having an open end lower cavity 2 closed by means of a block 3 and the same are connected together by means of the rivets 4. One end of the body 1 has the vertically extending grooves 5 and in each of which is arranged a lug 6 having a lug screw 7 and the latter retaining therein one end of a load terminal strap 8. A line terminal strap 9 each have one end leading within the cavity 2 and their opposite ends connected to spring clip 10. These clips are retained within the block 3 and the latter having openings therein in which the line knife blades (not shown) are inserted. This body 1 is of the same design and outside physically the same as that of two Type ALB-1 circuit breakers, as made by the General Electric Company, when placed side-by-side and the lugs 6 as well as the spring contacts 10, as the same are used with these circuit breakers. A load lug 6 and a spring contact 10 are employed with each circuit breaker and as this adapter is to substitute for two circuit breakers, it is necessary to have two lugs and spring contacts in the positions as shown.

A horizontal partition 11 is formed with the body 1 to provide an upper open end recess 12 and a depending partition 13 dividing the lower cavity 2 into two sections having the load terminal strap 8 and line terminal strap

2

extending therein so that each pair will be separated from one another.

A vertically extending partition 14 divides the recess 12 into two separate fuse compartments and extending into each compartment are the spring contacts 15 connected to the line terminal strap 9 by means of the leads 16 and the load terminal strap by means of the leads 17.

The upper open recess 12 closed by means of a cover 18 molded from a translucent material with its lower ends seated upon the O ring 19 arranged with a groove formed in the body 1 so as to form a water-tight seal between the cover and body of the adapter.

The cover has formed therein two separate compartments in which are recessed a lamp 20 and resistor 21 connected in series with one another. An insulating panel 22 closes; the open lower end of each compartment and these insulating panels each have connected thereto a pair of fuse clips 23 and from the foregoing it will be apparent that each fuse 24 is connected in series with the terminals 26 and 10 and also that the lamp and resistor are connected in series with the fuse terminals, but in parallel with the fusible element thereof, whereby when the fuse element is blown the lamp will glow to indicate its blown condition.

The cover 18 is retained upon the adapter body by means of a threaded stem 25 removably engaged into a socket 26 retained in the partition 14. This stem 25 is provided with a knob 27 for manually rotating the same. An O ring 28 seals about this stem 25 so as to prevent moisture passing around the same into the fuse compartments. A lock ring 29 connects the stem 25 to the cover so that upon the removal of the cover 18 the stem and its knob 27 are carried therewith.

When a fuse 24 blows it can be quickly and safely replaced from in front of the panel board upon which the adapter is mounted by simply turning the knob 27 to remove the cap or cover 18 which holds the two fuses 24, replace the blown fuse, return the cap to its place upon the adapter, and secure the cap thereto.

I claim:

A fuse adapter of the character described comprising a rectangular-shaped hollow block of electrical insulating material having a lateral medial interior partition providing separate upper and lower open end recesses in said block, said block having a second partition extending normal from the medial portion of said first partition within said upper and lower recesses towards the open end of said recesses, said block having a pair of recesses in one exterior end thereof, a pair of screw lugs each mounted in one of said block end recesses, a plurality of fuse contacts mounted on said first partition within said upper recess on opposite sides of said second partition, means electrically connecting each of said screw lugs to a different one of said fuse contacts on opposite sides of said second partition and extending through said block to the lower recess thereof on opposite sides of said second partition therein and through said first partition, a second block of electrically insulating material fixedly mounted on said first block completely closing said lower recess open end and abutting said second partition providing a closed chamber on each side of said second partition, said second block having a pair of exterior recesses in an end thereof opposite to said first block exterior end recesses, a pair of spring clips completely mounted in said second block recesses, a second means electrically connecting

3

each of said spring clips to a different one of the remainder of said fuse contacts on opposite sides of said second partition and extending through said second block, said lower recess each through a different one of said closed chambers on a separate side of said second partition and said first partition, said first electrically connecting means for each screw lug extending through a different one of said closed chambers, a detachable cover mounted on said first block for completely closing said upper recess and engaging said second partition providing a pair of separate closed fuse chambers, fuse clips carried by said cover positioned for supporting fuses each in one

4

of said fuse chambers on an opposite side of said second partition and engaging said fuse contacts upon the mounting of said cover on said first block.

References Cited in the file of this patent

UNITED STATES PATENTS

Re. 22,266	Adam et al. -----	Feb. 16, 1943
2,617,847	Cole -----	Nov. 11, 1952

FOREIGN PATENTS

511,378	Great Britain -----	Aug. 17, 1939
---------	---------------------	---------------