July 26, 1949. J. W. BRIGHT 2,477,360

FUSE BOX

Filed Oct. 15, 1948

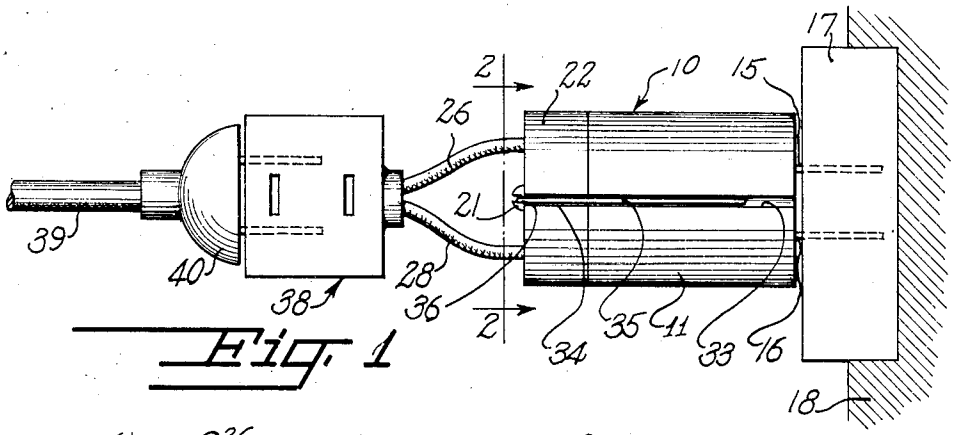



Fig. 1

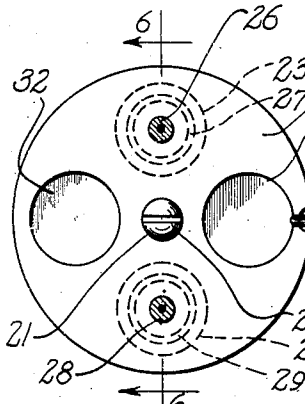



Fig. 2

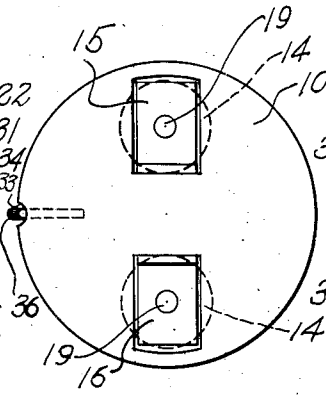



Fig. 3

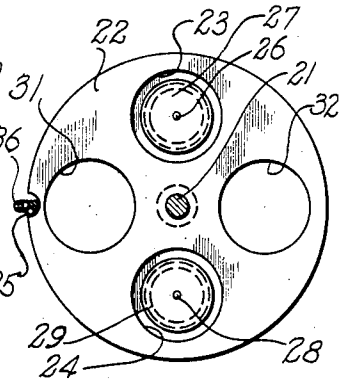



Fig. 4

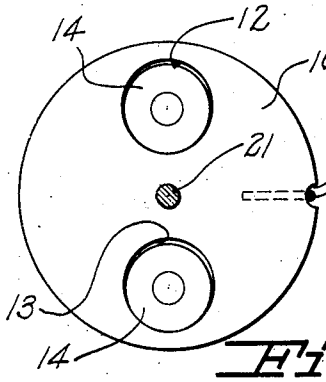



Fig. 5

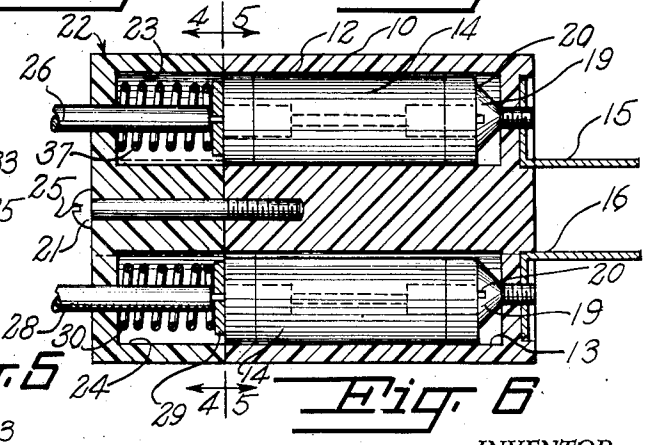



Fig. 6

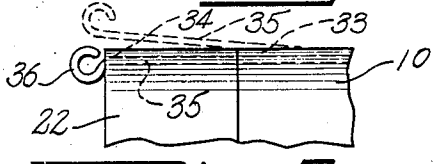



Fig. 7

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## FUSE BOX

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4 Claims. (Cl. 200—115.5)

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This invention relates to electrical equipment, and more particularly to a fuse box.

The object of the invention is to provide a fuse box for use in connecting a lamp or similar device to a line carrying electrical energy for preventing the main fuse in the line from blowing out in the event of a failure or overload in the lamp.

Another object of the invention is to provide a fuse box wherein the fuses contained therein can be quickly and easily replaced as desired.

A further object of the invention is to provide a fuse box which is extremely simple and inexpensive to manufacture.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings forming a part of this application, and in which like numerals are employed to designate like parts throughout the same:

Figure 1 is a side elevational view illustrating the fuse box electrically connecting fixture wires to a wall outlet box;

Figure 2 is a sectional view taken on the line 2—2 of Figure 1;

Figure 3 is an end elevational view of the fuse box;

Figure 4 is a sectional view taken on the line 4—4 of Figure 6;

Figure 5 is a sectional view taken on the line 5—5 of Figure 6;

Figure 6 is an enlarged vertical sectional view of the fuse box;

Figure 7 is an enlarged fragmentary view illustrating the spring for retaining the movable cap immobile on the housing.

Referring in detail to the drawings, the fuse box is preferably fabricated of transparent plastic so that the fuses therein can be readily observed. The fuse box is designated broadly by the numeral 10 and comprises a cylindrical housing 11 provided with a pair of spaced parallel open-ended compartments 12 and 13 therein for holding fuses 14. Projecting from one end of the housing 11 is a pair of spaced, L-shaped metal contacts 15 and 16 for insertion in an outlet 17 supported on the wall 18. A metal headed screw 19 provided with a kerf 20, Figure 6, projects through the housing 11 for electrically connecting one end of the fuses 14 to the complemental contacts 15 and 16.

A bolt 21 having a tool-engaging kerf 25 extends through a cylindrical cap 22 and into the housing 11 for rotatably connecting the cap 22 to the housing for a purpose to be subsequently described. The cap 22 is provided with a pair of spaced, parallel, open-ended chambers 23 and 24

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which are adapted to be moved into and out of registry with the compartments 12 and 13 in the housing 11 upon rotation of the cap 22. A cable 26 projects through the chamber 23 and has a plate 27 secured to the end thereof for normally abutting the other end of the fuse 14. For biasing the end of the cable 26 into electrical contact with the fuse 14, a coil spring 37 is positioned within the chamber 23 and is circumposed on the cable 26. A second cable 28 projects through the other compartment 24 and has a plate 29 secured thereto, there being a coil spring 30 normally biasing the cable 28 into electrical contact with the other fuse 14.

The cap 22 is also provided with a pair of spaced, parallel bores 31 and 32, Figures 2 and 4, which extend longitudinally through the cap 22, the bores being open at both ends. Upon rotation of the cap 22, the bores 31 and 32 are moved into and out of engagement with the compartments 12 and 13 so that the fuses 14 contained therein may be removed and replaced as desired.

For preventing rotation of the cap 22 with respect to the housing 11, Figure 7, a manually operable means is provided and comprises a longitudinally-extending groove 33 arranged in the exterior surface of the housing 11. A second longitudinally-extending groove 34 is arranged in the exterior surface of the cap 22 for movement into and out of alignment with the groove 33 upon rotation of the cap 22. A flat spring 35 is arranged in groove 33 and has one end secured to the housing 11, while the other end of the spring 35 is provided with a finger-engaging loop 36 for lifting the spring out of the groove 34 in the cap 22 when the cap is to be rotated.

In use, the fuse box is shown in Figure 1 interposed in the electrical circuit between a lamp (not shown) and a wall outlet 17. Thus, the metal contacts 15 and 16 are inserted in the wall outlet 17, and the cables 26 and 28 lead from the fuse box 10 to a three-way plug 38 which receives therein a plug 40 on a line 39 leading from a lamp or other device. In case of a failure in the lamp, one of the fuses 14 in the fuse box 10 will burn out, but the main fuse (not shown) located in the main electrical line will not be affected. The fuse box 10 is transparent so that the burned fuse can be seen and to replace the bulb, the spring 35 is lifted, and the cap 22 rotated to move out of the bores 31 and 32 in the cap into engagement with the proper fuse-containing compartment in the housing, and the fuse can be removed. A new fuse is then inserted and the cap 22 rotated to

again establish electrical contact between the fuses 14 and the cables 26 and 28.

As many embodiments may be made of this inventive concept, and as many modifications may be made in the embodiment hereinbefore shown and described, it is to be understood that all matter herein is to be interpreted merely as illustrative and not in a limiting sense.

I claim:

1. In a fuse box, a housing, a pair of spaced metal contacts projecting from one end of said housing for insertion in a wall outlet, a pair of spaced, parallel, open-ended compartments arranged in said housing for holding fuses therein, means for electrically connecting each of said fuses at one end to one of said contacts, a cap rotatably connected to the other end of said housing, a pair of spaced, parallel, open-ended chambers arranged in said cap and mounted for movement into and out of registry with the compartments in said housing upon rotation of said cap, a cable projecting through each of said chambers and electrically connected to the other end of one of said fuses, means for biasing said cables into electrical contact with the other end of said fuses, and means facilitating the removal of the fuses from their compartments upon a partial rotation of the cap.

2. In a fuse box, a cylindrical housing fabricated of transparent plastic, a pair of spaced metal contacts projecting from one end of said housing for insertion in a wall outlet, a pair of spaced, parallel, open-ended compartments arranged in said housing for holding fuses therein, means embodying headed screws for electrically connecting an end of each of said fuses to one of said contacts, a cap rotatably connected to the other end of said housing, a pair of spaced, parallel, open-ended chambers arranged in said cap and mounted for movement into and out of registry with the compartments in said housing upon rotation of said cap, a cable projecting through each of said chambers and electrically connected to the other end of one of said fuses, means for biasing said cables into electrical contact with the other end of said fuses, and means facilitating the removal of the fuses from their compartments upon a partial rotation of the cap.

3. In a fuse box, a cylindrical housing fabricated of transparent plastic, a pair of spaced metal contacts projecting from one end of said housing for insertion in a wall outlet, a pair of spaced, parallel, open-ended compartments arranged in said housing for holding fuses therein, means embodying headed screws for electrically



connecting an end of each of said fuses to one of said contacts, a cap rotatably connected to the other end of said housing, a pair of spaced, parallel, open-ended chambers arranged in said cap and mounted for movement into and out of registry with the compartments in said housing upon rotation of said cap, a cable projecting through each of said chambers and electrically connected to the other end of one of said fuses, means for biasing said cables into electrical contact with the other end of said fuses, said last-named means comprising a plate positioned within said chamber and secured to said cable, a coil spring circumposed on said cable and abutting said plate for biasing the latter into contact with said fuse, and a pair of passages through the cap through which said fuses may be removed upon a partial rotation of the cap.

4. In a fuse box, a cylindrical housing fabricated of transparent plastic, a pair of spaced metal contacts projecting from one end of said housing for insertion in a wall outlet, a pair of spaced, parallel, open-ended compartments arranged in said housing for holding fuses therein, means embodying headed screws for electrically connecting one end of said fuses to said contacts, a cap rotatably connected to the other end of said housing, a pair of spaced, parallel, open-ended chambers arranged in said cap and mounted for movement into and out of registry with the compartments in said housing upon rotation of said cap, a cable projecting through each of said chambers and electrically connected to the other end of said fuses, means for biasing said cables into electrical contact with the other end of said fuses, said last-named means comprising a plate positioned within said chamber and secured to said cable, a coil spring circumposed on said cable and abutting said plate for biasing the latter into contact with said fuse, there being a pair of spaced, parallel bores in said cap for movement into and out of registry with said compartments upon rotation of said cap for removing and replacing said fuses, and manually-operable resilient means for preventing rotation of said cap with respect to said housing.

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