Aug. 20, 1929. M. J. CALDWELL 1,725,441

SAFETY SWITCH AND FUSE BOX

Filed June 13, 1927

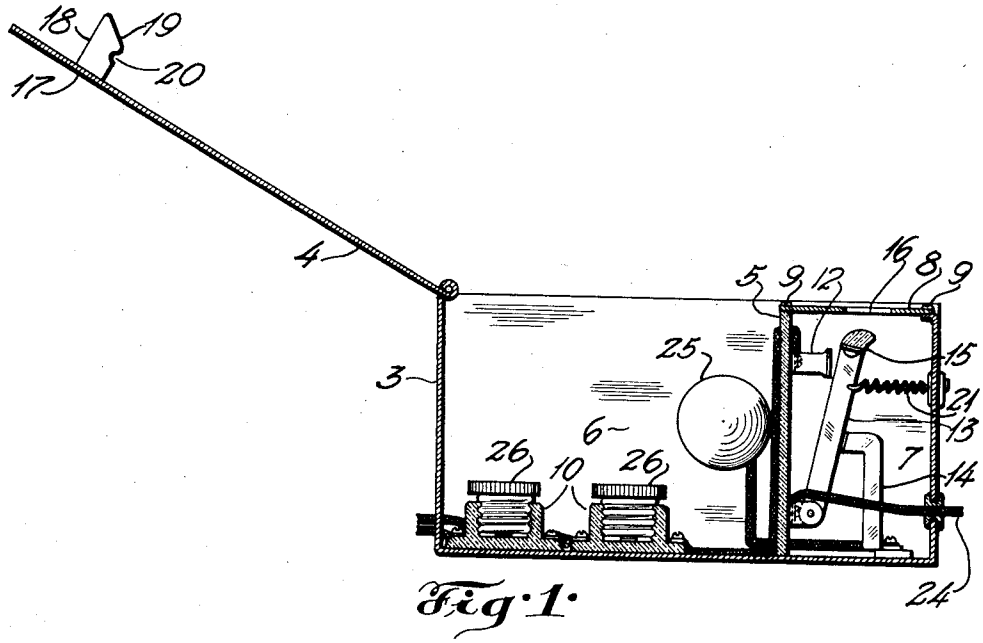


Fig. 1.

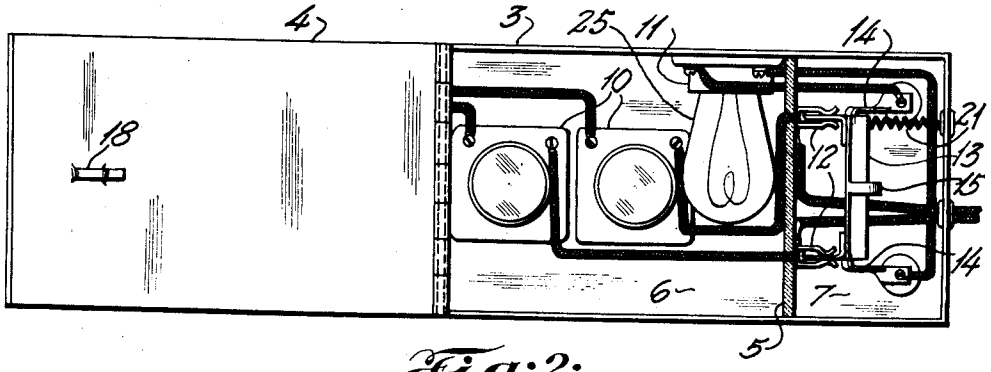


Fig. 2.

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SAFETY SWITCH AND FUSE BOX.

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This invention relates to safety switch and fuse boxes, and has particular reference to such a device that will be adapted for use in residences, barns, stables and like structures, and has for one object to provide a device which will render unnecessary the use of matches or the like for visual aid in replacing the fuses in the box.

Another object is to provide a means whereby the fuses in the box will be automatically disconnected from the supply circuit as soon as the fuse box is opened.

With the above and other objects in view, my invention consists in the combination and arrangement of parts hereinafter described and claimed and more clearly illustrated in the preferred embodiment shown in the accompanying drawings, wherein

Figure 1 is a sectional view through a fuse and switch box and embodying my invention.

Figure 2 is a partly sectional plan view of Figure 1, the electrical circuits being indicated diagrammatically.

Referring now more particularly to the drawings, my invention comprises a housing 3, having a lid 4 hingedly secured thereto, the said housing being divided as by a partition 5 into a fuse compartment 6 and a switch compartment 7. The switch compartment 7 is closed by means of a cover 8 secured to the partition 5 and housing 3 by screws 9. In the switch compartment is mounted a double throw double pole knife switch composed of the horizontally extending double pole elements 12 mounted on the partition 5, the vertically extending double pole elements 14 mounted on the floor of the housing 3, and spring set double pole double throw knife switch blades 13 pivoted to the partition 5 and connected with the front wall of the housing 3 by means of the spring 21. A plurality of fuse receptacles 10 are mounted on the floor of the fuse compartment 6, and a lamp socket 11 is mounted on the wall thereof. In the embodiment shown two receptacles are so mounted in the fuse compartment, so as to control a two wire system, and each receptacle is connected to one of the said poles 12; while the lamp socket is connected across the poles 14. The supply line 24 is connected to the blades 13.

The said knife switch blades 13 are connected by an insulating handle 15, the said handle being so mounted as to be just under the cover 8 and in immediate juxtaposition to an aperture 16 provided in said cover 8. The lid 4 has a cam shaped latch 18 mounted on its free end 17, the said latch being adapted to pass through the said aperture 16 when the lid is closed over the housing. The said latch is provided with a cam face 19 on its lower inside edge and a latch notch 20 on its inside edge adjacent to the said cam face.

In use, when the lid 4 is open, as shown in Figure 1, the spring 21 pulls the blades 13 from the pole elements 12 and causes them to engage the pole elements 14, thus connecting the lamp socket 11 with the supply line 24 and lighting the lamp 25, and at the same time the fuse receptacles 10 are disconnected from the said supply line so that the fuses 26 may be replaced without danger of coming in contact with any "live" wires. The lamp 25, being thus lighted, offers a visual aid in replacing the fuses.

As long as the lid 4 is lifted away from the housing 3, the supply line will be disconnected from the fuses, and the lamp lit; but when the lid is closed, the cam face 19 will push the handle 15 so as to cause the blades 13 to engage the pole elements 12 thereby connecting the supply line 24 with the fuse receptacles 10 and disconnecting the lamp 25 from the said supply line. At the same time, the notch 20 will engage the handle 15, thus releasably latching the lid 4 in its closed position.

I claim:

1. In a device of the kind described, having a housing and a lid hingedly secured thereto, the combination comprising a spring set double throw double pole knife switch, a lamp socket, and a plurality of fuse receptacles, said lamp socket being connected across one pair of the poles of said switch, said fuse receptacles being respectively connected to the other poles of said switch, and means positioned on said lid for operating said switch.

2. A device of the kind described, comprising a housing, a partition positioned in said housing so as to form a fuse compartment and a switch compartment, a lamp socket and a plurality of fuse receptacles positioned in said fuse compartment, a spring set double pole double throw knife switch positioned in said switch compartment, said lamp socket being connected across one pair of the poles of said switch, said fuse receptacles being respectively connected to the

other poles of said switch, and means positioned on said lid for operating said switch.

3. A device of the kind described, comprising a housing, a lid hingedly secured to said housing, a fuse receptacle and a lamp socket mounted in said housing, a spring set double throw switch also mounted in said housing, and having one pole connected to said fuse receptacle and the other pole connected to said lamp socket, and means positioned on said lid for operating said switch.

4. A device of the kind described, comprising a partitioned housing having a fuse compartment and a switch compartment, a lid hingedly secured to said housing, a cover releasably positioned over said switch compartment, said cover having an aperture communicating with said switch compartment, a latch on said lid adapted to pass through said aperture, and a switch in said switch compartment adapted to be operated by said latch.

5. A device of the kind described, comprising a partitioned housing having a fuse compartment and a switch compartment, a lid hingedly secured to said housing, a cover releasably positioned over said switch compartment, said cover having an aperture communicating with said switch compartment, a latch on said lid adapted to pass through said aperture, a double throw switch positioned in said switch compartment and adapted to be operated by said latch, a fuse receptacle and a lamp socket mounted in said fuse compartment, one pole of said switch being connected to said fuse receptacle and the other pole of said switch being connected to said lamp socket.

6. In a device of the kind described in claim 6, means for causing said latch to operate said switch, said means comprising a handle on said switch in juxtaposition to said aperture, a spring having one end secured to said handle and the other end secured to the wall of said housing, said latch having a cam face on its lower inward side, and also having a latch notch immediately above said cam face, for the purposes as described.

In testimony whereof I affix my signature.

MARION JOHN CALDWELL.