Dec. 17, 1963 M. T. SLIMAN 3,114,905

ALARM SYSTEM

Filed Aug. 13, 1962 2 Sheets-Sheet 1

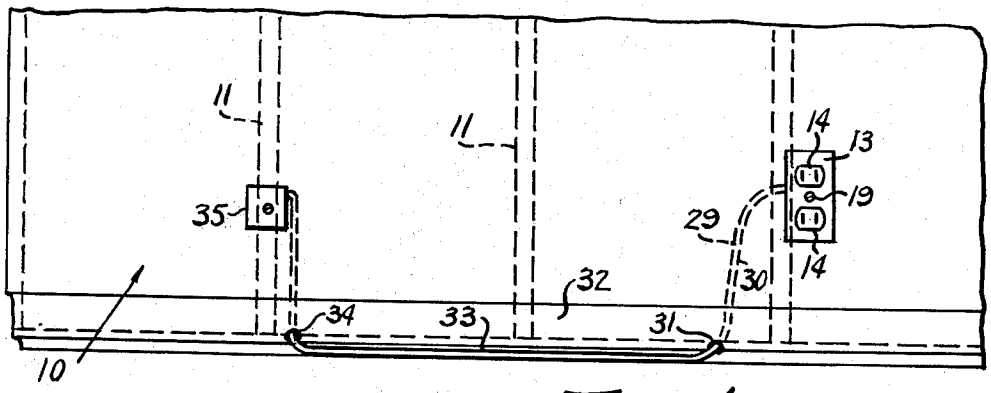


FIG. 1

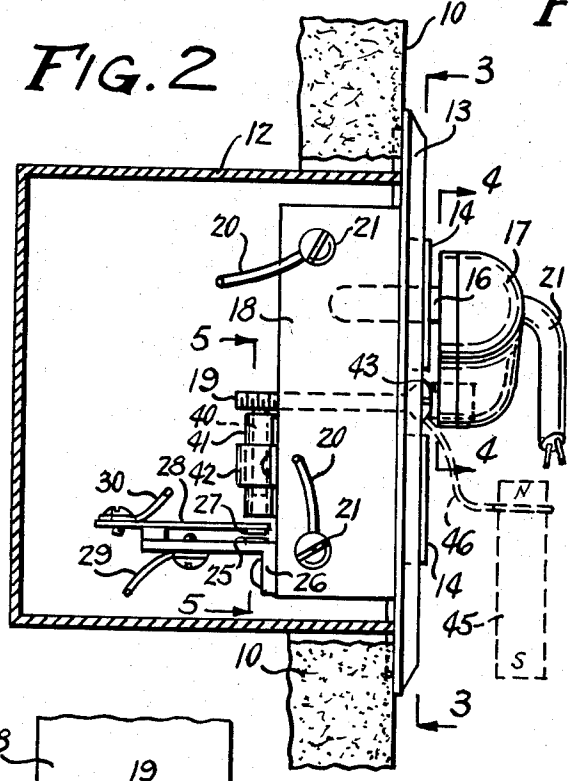


FIG. 2

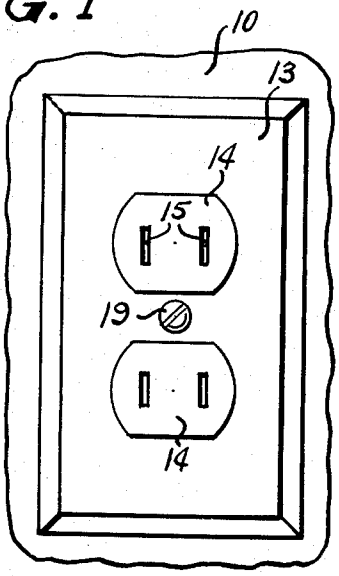


FIG. 3

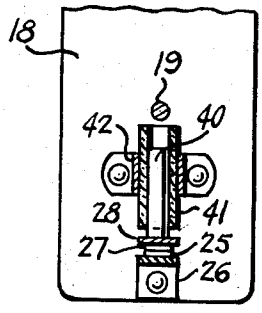


FIG. 5

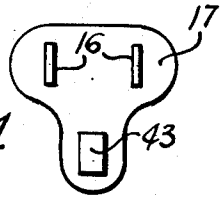


FIG. 4

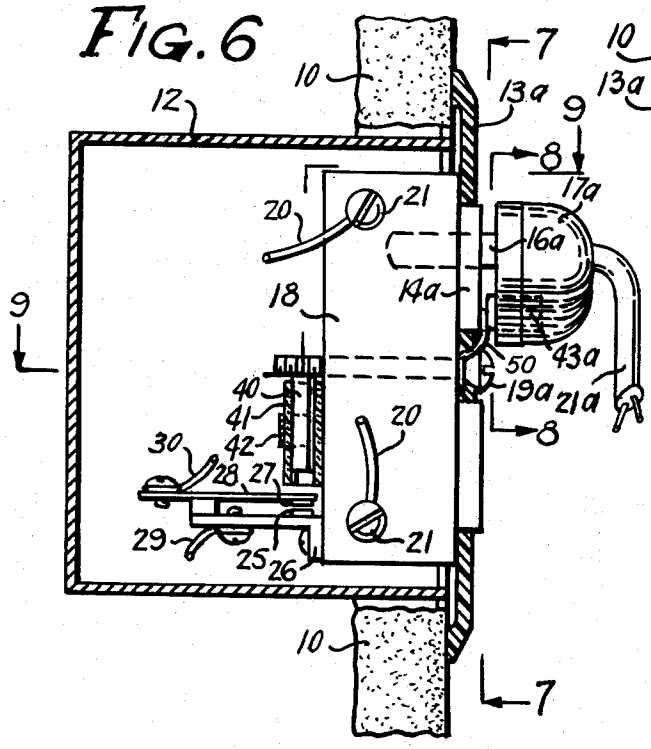
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FIG. 6



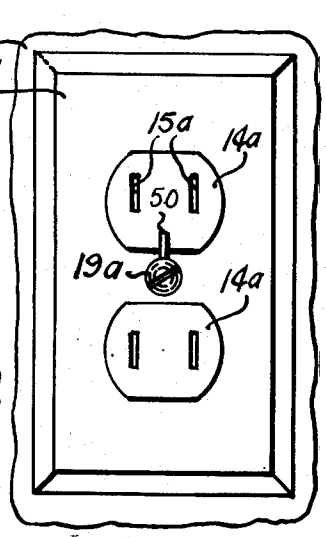


FIG. 7

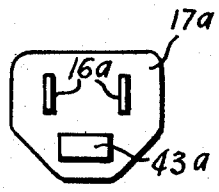


FIG. 8

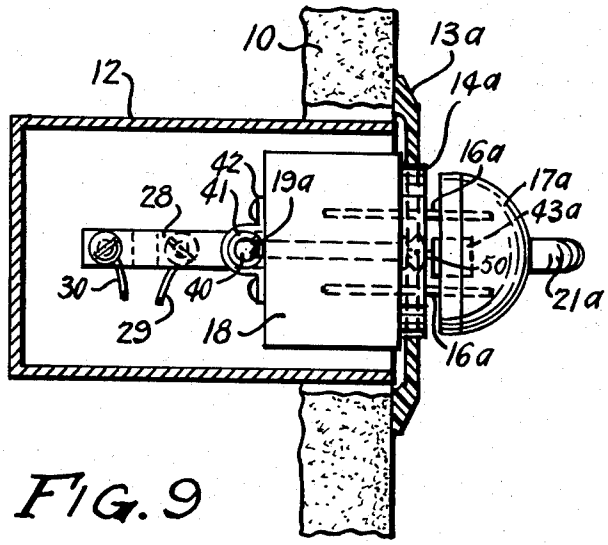


FIG. 9

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3,114,905
ALARM SYSTEM

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5 Claims. (Cl. 340—280)

This invention relates to an alarm system, and has as its primary object the provision of a means whereby the removal, or attempted removal of an electrical appliance such as a television set, a radio, a lamp, or any other normally connected electrical appliance, will cause a visual, audible, or other alarm to be actuated to indicate the potential removal of the appliance.

An additional object of the invention is the provision of an alarm of this character which may be concealed, or semi-concealed, in such manner as not to attract the attention of the potential thief and cause him to take steps to circumvent the alarm.

A further object of this invention is the provision of such an alarm which is contained within an electrical wallbox, and which is so arranged that tampering therewith to render the alarm inoperative is extremely difficult.

Other objects reside in the combinations of elements, arrangements of parts, and features of construction.

Still other objects reside in the provision of a device of this character which is sturdy and durable in construction, reliable and efficient in operation, and which is substantially automatic in operation and requires a minimum of moving parts.

In the drawings:

FIGURE 1 is a fragmentary partially schematic view of the wall of a room to be rented furnished showing the wallbox, and its connection with an alarm system.

FIGURE 2 is a vertical cross-sectional view of one form of outlet box embodying features of the instant invention.

FIGURE 3 is a plan view of the face plate of the outlet box taken substantially along the line 3—3 of FIGURE 2 as viewed in the direction indicated by the arrows.

FIGURE 4 is a plan view of the face of the plug shown in FIGURE 2 taken substantially along the line 2—2 of FIGURE 2 as viewed in the direction indicated by the arrows.

FIGURE 5 is a fragmentary sectional view taken substantially along the line 5—5 of FIGURE 2 as viewed in the direction indicated by the arrows showing certain of the parts in a different position of adjustment.

FIGURE 6 is a view similar to FIGURE 2 but showing a slightly modified form of construction.

FIGURE 7 is a view similar to FIGURE 3 taken substantially along the line 7—7 of FIGURE 6 but showing a modified form of construction.

FIGURE 8 is a view similar to FIGURE 4 taken substantially along the line 8—8 of FIGURE 6 and showing the construction of the plug of FIGURE 6; and

FIGURE 9 is a sectional view taken substantially along the line 9—9 of FIGURE 6 as viewed in the direction indicated by the arrows.

Similar reference characters refer to similar parts throughout the several views of the drawing.

Having reference now to the drawings in detail, and more particularly to FIGURE 1, there is generally indicated at 10 a wall of a room of the type which is rented furnished normally, such as a hotel room, a furnished room, a motel room or the like. The wall includes the usual facing behind which are the studs 11, and is provided with an electrical outlet box, generally indicated at 12, which is closed by a face plate 13 having a pair of female plugs therein as indicated at 14, the plugs being of the usual two prong type and having a pair of

slots 15, for the reception of the prong 16 of an associated male plug 17.

The face plate is connected to the usual electrical outlet box 18 in the usual manner by a screw 19, except that in accordance with the instant invention the screw 19 extends entirely through the box, and is constructed of magnetic or electrically conductive material, rather than the brass screw which is sometimes used in this connection. A pair of electrical wires 20 extends from suitable junctions 21 exteriorly of the box 18, and provide power for the appliance which is connected through plug 17 and cord 22 to the source of electricity.

The alarm of the instant invention comprises a fixed contact member 25 which is mounted on a supporting bracket 26 and a movable contact member 27 which is mounted on a spring arm 28. Wires 29 and 30 extend from contacts 25 and 27, and comprise a part of an electrical alarm circuit which is energized when the contact 27 is moved into engagement with the contact 25 in a manner to be more fully described hereinafter. The wires 29 and 30 extend interiorly of the wall to an opening 31, and thence along the baseboard 32 and beneath the carpet 33 to a second opening 34, from which they extend to a suitable alarm box 35, which may be the telephone junction box, as described in my co-pending application Serial No. 216,495, filed concurrently herewith.

The arrangement is such that as long as the contacts 27 and 25 are separated no alarm is actuated, but that promptly upon the engagement of contact 27 with contact 25, a suitable audible, visual, or other alarm is sounded either adjacent or in the room carrying the outlet box, or at a remote point such as a switchboard.

Contacts 27 and 25 are normally maintained in spaced relation by the normal resiliency of spring finger 28, unless closed by the dropping of a heavy magnetic metal weight 40. Weight 40 is contained in a vertical sleeve 41 which is secured by means of a strap 42 to the rear wall of outlet box 18, and is held in its uppermost position by means of a magnetic charge induced in steel or conductive metal screw 19. The charge in magnetic screw 19 is induced by a permanent magnet 43 which is contained in plug 17, plug 17 being normally of the three prong type, and the magnet 43 being inserted in place of the usual ground prong. In this illustrative embodiment of the invention the plug 17 is of such a shape that the magnet 43 directly engages the head of screw 19, and as long as magnetic force is applied through screw 19 the steel or other magnetic weight is retained in position against the screw 19, as shown in FIGURE 2. Removal of the plug 17, however, will immediately break the magnetic contact permitting weight 40 to drop forcing spring arm 28 downwardly and engaging contact 27 with contact 25 to close the circuit and actuate the alarm.

A relatively heavy duty permanent magnet 45 provided with an extending wire 46 is employed in resetting the device when desired, since the strength of the magnet 43 is insufficient in itself to raise the weight 40. When the alarm is to be reset the permanent magnet 45 is positioned so that the wire 46 contacts screw 19, and the force thereof is sufficient to raise weight 40 to its uppermost position.

FIGURES 6 to 9, inclusive, disclose a similar arrangement wherein a wall 10 contains an outlet box 12 having a face plate 13 and a pair of female plugs 14*a*, which may be, if desired, of the three prong variety, but which in any event are set farther apart than the corresponding plugs 14. Female plugs 14*a* are adapted to be engaged by a male plug 17*a* which is provided with male prongs 16*a* adapted to be inserted in the slots 15*a* of the female plugs or sockets 14*a*. In this modification a magnetic screw 19*a* serves to hold the plugs in related assembly.

The interior mechanism of the box **12** is identical to that previously described, and in consequence identical reference numerals are employed for similar parts, with the exception of the screw **19***a*. When the screw **19***a* is magnetized, in a manner to be more fully described hereinafter, the weight **40** is held in contact therewith, and when the magnetic force is released, weight **40** drops to engage contacts **27** and **25** exactly as in the previous modification.

However, in this form of the invention, because of the spacing of the female plugs **14***a*, or alternatively, because of the configuration of the three prong plug **17***a*, mounted magnet **43***a* is not aligned with screw **19***a*. In order, therefore, to achieve magnetization of the screw **19**, and consequently, hold the weight **40** in elevated position, a wire **50** is looped around the head of screw **19***a* and extended upwardly, as best shown in FIGURES 6 and 7, to a point where it will be readily contacted by the permanent magnet **43***a*. In this manner the screw **19***a* is magnetized, and the steel weight **40** is held closely thereagainst until plug **17***a* is removed for any unauthorized purpose.

From the foregoing it will now be seen that there is herein provided an improved alarm system which accomplishes all the objects of this invention, and others, including many advantages of great practical utility and commercial importance.

As many embodiments may be made of this inventive concept, and as many modifications may be made in the embodiments 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. An alarm system for preventing the unauthorized removal of an electrical appliance, comprising a wall outlet box having a face plate, a magnetic screw securing said face plate to the box and extend therethrough, at least one female socket carried by said box, a fixed contact mounted on said box interiorly of the wall receptacle, a spring arm above said fixed contact, a movable contact on said spring arm, an alarm circuit actuable by engagement of said movable contact with said fixed contact, a magnetic weight normally supported above said spring arm, a male plug connected to an electrical appliance engageable in said female socket, magnetic means carried by said male plug, and means contacting said magnetic screw with said magnetic means when said male plug is inserted in said female plug to magnetize said screw, said screw contacting said weight to hold the same above said spring arm, whereby removal of said plug demagnetizes said screw to permit said weight to fall on said spring arm to close said circuit and actuate an alarm.

2. The structure of claim 1 wherein said magnetic means comprises a permanent magnet mounted in a three prong plug after removal of the ground prong thereof.

3. The structure of claim 2 wherein an open ended sleeve is secured to the rear of said outlet box directly above said spring arm and directly below the extending end of said screw, and said weight comprises an elongated cylindrical steel member vertically slidable in said sleeve.

4. The structure of claim 3 wherein said permanent magnet directly contacts the head of said screw to provide said means for contacting said screw with said magnetic means.

5. The structure of claim 3 wherein an extending magnetic wire is secured to the head of said screw exteriorly of said face plate and extends to a point in contact with said permanent magnet when said male plug is inserted in said female plug to provide said means for contacting said screw with said magnetic means.

References Cited in the file of this patent

UNITED STATES PATENTS

1,992,255	Swadener	Feb. 26, 1935
2,234,982	Ross	Mar. 18, 1941
2,298,313	Ross	Oct. 13, 1942
2,573,920	McLeod	Nov. 6, 1951
2,591,288	Pitchford	Apr. 1, 1952
2,681,443	Caulk	June 15, 1954
2,969,445	Mitchell	Jan. 24, 1961