March 17, 1959 G. J. AGULE 2,878,315

TELEPHONE ALARM DEVICE

Filed June 24, 1952 2 Sheets-Sheet 1

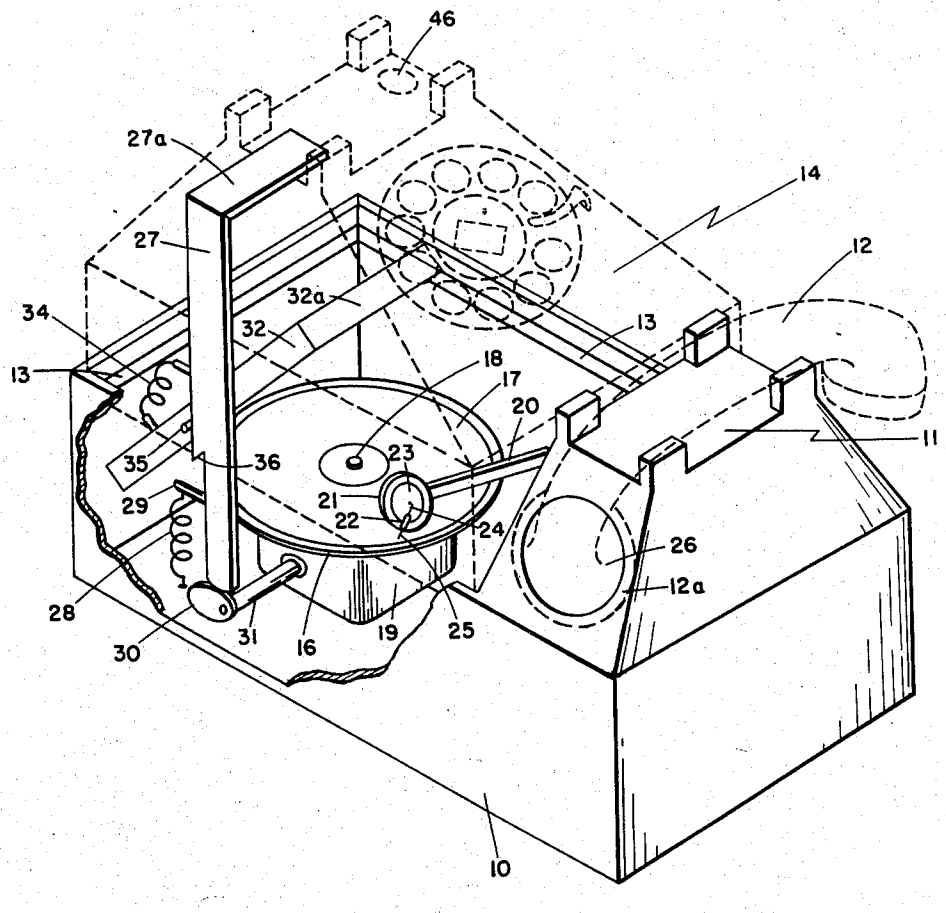


FIG. 1

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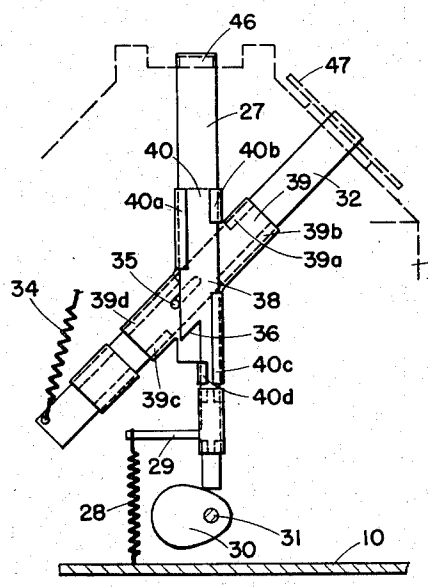


FIG. 2

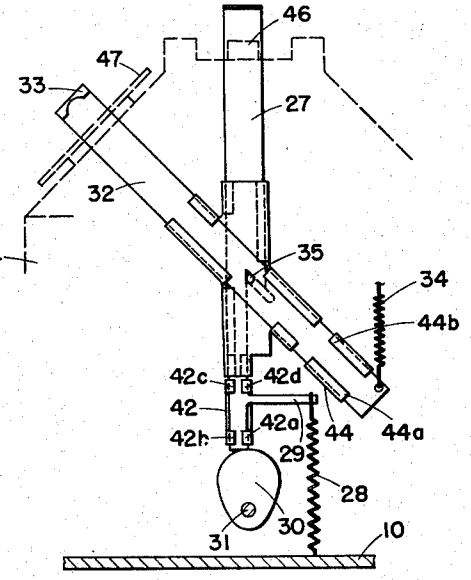


FIG. 3

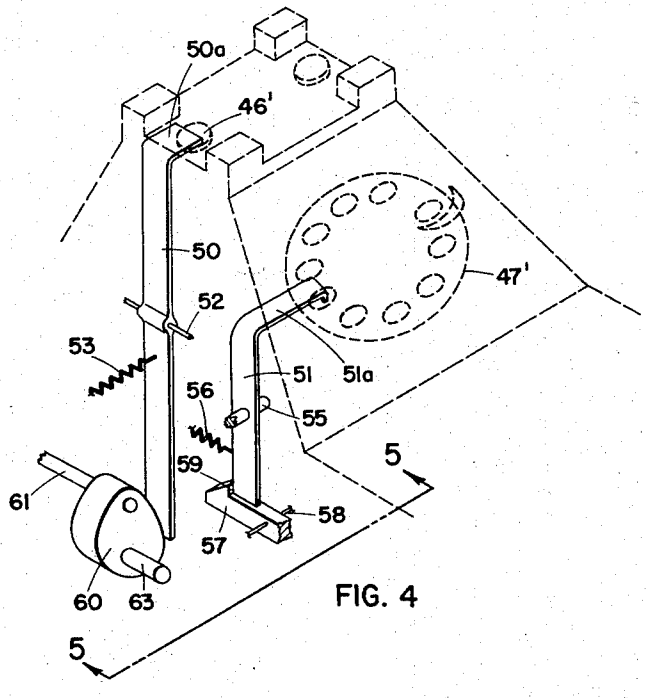


FIG. 4

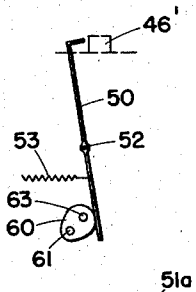


FIG. 5

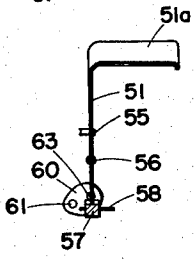


FIG. 6

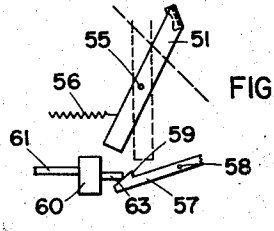


FIG. 7

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2,878,315

TELEPHONE ALARM DEVICE

George J. Agule, Stamford, Conn.

Application June 24, 1952, Serial No. 295,223

12 Claims. (Cl. 179—5)

This invention concerns a telephone alarm device which will respond to an anticipated condition of danger by giving a recorded warning message over a telephone. More specifically, this invention concerns a device which may be used with the various types of conventional telephones, and particularly with dial telephones, to give warning in the event of fire or burglary.

Many devices have been conceived for the purpose of warning the proper authorities in the event of fire or burglary of a building. For the most part these devices have been extremely complicated and very bulky. Because of their bulk and because of their cost, such devices have not been widely used by the ordinary home owner.

My device is neither bulky nor complicated. It may be employed wherever a telephone is available. Furthermore, it is unnecessary to modify the telephone in any manner in order to use my device. My device may be made pleasing in appearance so that when in place, even when it is not in use, it will not prove esthetically offensive. The operational mechanism by which my device is coupled to the telephone may be designed to be readily removed from its operating position so that it will not interfere with the normal use of the telephone. Moreover, resetting or arranging my device for operation is a very simple process, so that any unskilled person can prepare it for operation.

In addition to being easily prepared for operation, my device is extremely simple in its construction and, hence, relatively easy to fabricate. Accordingly, my device lends itself to production in quantity at low cost. Also, because of its simplicity my device may be made very compactly so that it occupies little space, an important factor where the space allocated to the telephone is small. Furthermore, the connection between the drive actuator means of my device and the anticipated point of danger may be made with small gauge wiring materials, such as those normally used for door bell wiring. This wiring may be done inconspicuously by passing it either through the building walls or outside the walls along molding, etc. At the point of danger, switch means is introduced into the circuit such that, upon the occurrence of the anticipated danger, the switch will close the circuit, thereby actuating the drive means which causes operation of my device. If my device is to be used for protection in the event of fire the switch in question should be a thermally actuated switch, such as a bi-metal switch, located in a position where fire is likely to start, as near a furnace. On the other hand, if my device is to be used for protection in the event of burglary a mechanical switch which will be closed by the movement of some part of the building, in the event of breaking or other improper entry, should be employed. No matter which type of danger is anticipated, however, a plurality of electrically paralleled switches located at all possible danger points may be placed in the circuit with the drive actuation means so that danger at any one of the anticipated points will actuate my device.

Structurally my device is contained in a box housing, which preferably provides a mount for the telephone. Within the housing, a rotatable record mount is coupled to drive means which produces rotation of the record mount. Pick-up transducer means picks up a recorded message from a record on the record mount and converts the recorded message to a sound signal. An amplifying device, which may be part or all of the cavity within the housing, then amplifies the sound signal received from the transducer. An arm is arranged mechanically to overlie the telephone switch hook plunger, which in turn is coupled to the telephone circuit connection switch. When the switch hook plunger is depressed, the switch is in open circuit position. The record mount drive, or a separate drive means similarly actuated, causes the arm to be removed from the switch hook plunger, thereby closing the telephone circuit. When used in conjunction with a dial telephone, a second arm is also mounted on the device in such a manner that it will be able to hold the dial in a pre-determined and pre-set position until the telephone circuit connection switch has been closed. The dial is then released as the second arm moves away from the dial. The first and second arms are time delay coupled to provide time for the circuit to be completed to the exchange before dialing is begun.

In the operation of my device the switch remote from my device is closed by the occurrence of the dangerous conditions for which it was designed to close. Closing the switch permits the rotatable record mount within the housing to be moved, thereby also moving the record mounted thereon. As the record moves, the pick-up means picks up the message from the record and, by means of conventional transducer techniques, converts the intelligence to sound. This sound is in turn advantageously mechanically or electrically amplified. The amplified sound may then be picked up by the telephone transmitter. The same signal which starts the record mount rotating, also actuates a drive means which moves the first arm away from the switch hook plunger, thus closing the telephone circuit to the local exchange. If the telephone is connected to an exchange where no dialing is involved, the operator will connect in and hear the recorded message. If a dial type telephone is employed, a predetermined time after the circuit is closed, the dial itself is released from the "O," or other operator position, thereby automatically dialing the operator who will connect in and receive the message.

For a better understanding of my invention reference will be made to the following drawings:

Fig. 1 is a perspective view, partially in section, illustrating my novel device and showing how it may be employed with a dial telephone.

Fig. 2 illustrates in elevation and in greater detail the arm members of Fig. 1, which are employed in order to couple said device to the telephone.

Fig. 3 is an elevational view of the same arm members shown in Fig. 2 from the other side of said arms, showing how the arms are affixed to the housing sidewall of my device.

Fig. 4 illustrates in perspective an alternative type of arm arrangement for coupling my device to a telephone.

Fig. 5 shows schematically the action of that arm of the structure of Fig. 4 which acts to depress the switch hook plunger of the telephone.

Fig. 6 is a schematic view of the dial holding arm illustrated in Fig. 4, taken in the same direction as the view of Fig. 5.

Fig. 7 is a schematic side view representation showing the action of the arm of Fig. 6.

Referring to Fig. 1 it may be seen that my device is largely contained by a box-like housing 10. The hous-

ing may be composed of any suitable material, such as wood, metal, or plastic, or a combination of materials. As illustrated this box-like housing is open on its top side, save for a telephone handset cradle, generally designated **11**, which extends above the housing and which accommodates handset **12**. Just below the opening a ledge **13** is advantageously formed, which ledge extends all the way around the opening within the hollow of the box. The ledge may be made by decreasing the thickness of the housing side walls, or in other suitable ways. This ledge supports the base of the telephone, generally designated **14**. Accordingly, this open portion of the box is advantageously made the same size as the telephone base so that the telephone will fit snugly within the opening with its base resting on ledge **13**. In other cases a support shelf or other means of mounting or supporting a telephone may be substituted for the ledge **13**.

Within the housing is placed a rotatable record mount **16**, which, in this case, is advantageously a planar turntable. This turntable supports a disk type phonograph record **17**. The turntable turns about the shaft **18**. The turntable is advantageously driven by a motor **19**, which may be directly coupled or indirectly coupled, as by use of gears, belts, etc., to the record turntable in order to produce rotation thereof at the proper sound reproduction speed. The drive motor **19** may be of any suitable type, including a mechanical spring wound motor, but it is advantageously an electric motor which is supplied energy by means normally available in the home. A tone arm **20** is so mounted that the pick-up transducer means which it supports is movable across the record to pick up the message. An annular support member **21** fixed to the end of the tone arm **20** provides support for the other members of the pick-up transducer unit. A needle support **22** is pin or pivotally mounted on said annular support member **21** in such a manner as to extend in a generally radial direction but to be movable so as to accommodate lateral movement of the needle in the record grooves. Supported within the annular support **21** is a flexible sound producing diaphragm **23**. The needle support **22** is connected to the center of the diaphragm **23** by an extension member **24**. Thus as needle **25** moves laterally within the grooves, the needle support **22** pivots laterally about its support at the annular support and, through the lever arm of its extension member **24**, produces flexing of the diaphragm **23**. The flexing of the diaphragm **23** reproduces the sound mechanically recorded in the record grooves. With this type of pick-up transducer means, it is advisable that the sound be collected and reinforced or amplified by the use of a resonant cavity, which, in this case, is provided by the housing **10** or a portion of said housing of suitable size. The sound produced and amplified within the housing is able to escape through opening **25** in the wall of the housing, which opening is so arranged that it is opposite the telephone transmitter.

It is possible to employ other types of pick-up transducer means with my invention. For instance, a crystal or reluctance type pick-up may be employed. However, they are not favored because of the necessity of also employing an electronic amplifier, which complicates my otherwise simple device.

The coupling of my device to a telephone is accomplished by the use of arm members. The telephone is advantageously held in fixed position relative to my device and the arms by that portion of the top of housing **10** above the ledge **13** upon which ledge the telephone rests. Such a mounting is not essential in my device, but it is highly desirable to insure correct relative positioning between the housing and the telephone. The arms themselves are advantageously flat, elongated members slidably mounted on the housing sidewall to move only in the direction of their length. A first arm **27** is so mounted that it may move vertically up and down. A portion **27***a* at one end of arm **27** is bent laterally so that it overlies the switch hook plunger, which, in this case, is a plunger button extending beyond the housing in position to be depressed when the telephone handset is in the telephone cradle rather than in cradle **11**. When it overlies the switch hook plunger, portion **27***a* tends to depress said plunger because of the force exerted up member **27** tending to urge it downward. This force is advantageously supplied by resilient means, such as spring **28**, connected between the arm, or a projection **29** from the arm, and the bottom of the housing. The bottom end of arm **27** advantageously rests against cam member **30**. Cam **30** is driven at a relatively very slow speed by a shaft **31** which is advantageously geared or otherwise appropriately connected to the drive motor **19**. Drive means, which is separate from motor **19** but which is actuated by the same signal that actuates movement of the record mount, may be supplied in an alternative structure. The cam **30** forces arm **27** upward in opposition to spring **28**, thereby releasing the switch hook plunger and closing the switch connecting the telephone to the local exchange.

A second arm **32** is arranged transverse to the first arm **27**. This second arm has a portion **32***a* which overlies and bears against the telephone dial and holds it in any pre-set position. This arm may be terminated by a finger or fingers **33** (see Fig. 3) which are engaged in finger holes in the dial. A spring **34** or other resilient means is connected between the sidewall of housing **10**, or between arm **27**, and arm **32** in such a manner as to urge portion **32***a*, overlying the dial, away from the dial. A pin **35**, or similar means, connected to arm **32** bears against arm **27**. Arm **27** has its width reduced at a shoulder **36**, which is at an oblique angle with respect to the edge of arm **27**. The urging of spring **34** is opposed by pin **35** as it bears against arm **27**. As arm **27** is driven upward in response to the movement of cam **30**, however, shoulder **36** is passed. As shoulder **36** passes, arm **32**, under the urging of spring **34**, springs forward to release the dial. The shoulder **36** is made oblique and at a sufficient angle to permit arm **32** to move its maximum distance away from the dial immediately so that the dial is permitted to return from its pre-set to its rest position at a normal rate. This will be the case since the shoulder **36** is cut so that the pin **35** will be unable to follow it in adjusting from one width of arm **27** to the other. Once arm **32** moves to release the dial, it will be unable to return to its original position because it is restrained by spring **34**. Likewise, arm **27** is prevented from returning to its initial position, and thereby depressing switch hook plunger under the urging of spring **28**, because pin **35** bears against shoulder **36** to oppose such return. It will also be noted that a time delay is provided between the time the plunger is released and dial is freed, which delay corresponds to the time delay between the point of rise of arm **27** at which the telephone circuit connection switch is closed and the point at which shoulder **36** passes pin **35**, thereby releasing arm **32**. Thus, this arrangement constitutes an effective and necessary time delay coupling between arms **27** and **32**. This time delay coupling may be achieved in many ways, within the scope of my invention. Likewise, the mutual locking feature of the arms in their different proper relative positions may be achieved by means other than that illustrated and described. For instance, a groove in arm **27** to accommodate pin **35** might be employed instead of the edge of arm **27**, provided the bearing surface for the pin remained essentially the same shape. On the other hand, the pin might be placed in arm **27** to bear against arm **32** in opposite fashion from that described. All such modifications, which would occur to one skilled in the art, are within the scope of my invention.

Referring specifically to Figs. 2 and 3, elevational views showing the means of support of the arms **27**

and 32 are provided. In each of these views the components are generally the same as those shown in Fig. 1. In Fig. 2, however, an additional member 38 of generally X shape is shown. The legs 39 and 40, which cross one another to form the X, extend in the general direction of the arms 32 and 27, respectively. Member 38 is placed between arms 32 and 27 and the edges of leg 40 enfold arm 27 over a portion of its length in folds 40*a*, 40*b*, 40*c* and 40*d*. Assuming that member 38 is fixed in position, this member 27 is thus restricted in its lateral movement but not in its lengthwise movement, other than whatever lengthwise movement restriction may be imposed by fold 40*d*, which movement is beyond the scope of that necessary for the operation of the device. Thus, in effect, the leg 40 provides a slide for arm 27. In similar manner, the edges of leg 39 are folded like those of leg 40 but in the opposite direction so that arm 32 is thereby enfolded by folds 39*a*, 39*b*, 39*c* and 39*d*. Provision for the movement of pin 35 is also made in member 38 by forming a slot therein, the length of which parallels the length of member 39. This slot is of sufficient length to direct the lengthwise movement of arm 32 for the operation of my device.

In addition to the X-shaped guide member 38, a guide member 42 is employed which enfolds arm 27 in folds 42*a*, 42*b*, 42*c* and 42*d*. This guide member 42 is advantageously permanently affixed to the housing sidewall by rivets or other appropriate means. Guide 42 is of such a shape that it permits free movement of arm 27 over the full distance necessary for operation of my device in a direction parallel to the length of said arm.

A guide 44, similar to guide 42, and likewise affixed to the housing sidewall, needs have only two fold members 44*a* and 44*b*. As in the case of guide 42, guide 44 permits movement of arm 32, which it enfolds, in the direction of the length of said arm for the full distance necessary to the proper functioning of my device.

In the operation of my device as illustrated in Figs. 1–3, a danger-detecting switch member is placed remote from my device in a location of anticipated danger. Said danger-detecting switch is connected into the circuit of the motor 19 in such a manner that closing the switch will produce movement of the motor. As previously mentioned, the switch should be chosen in accordance with the use to which my device, and the system in which it is used, is to be put.

In the event that the switch remote from the device is closed the record turntable will begin to turn and the record thereon will be turned. If the tone arm has been correctly positioned, the pick-up transducer head will be at the edge of the record so that upon rotation of the turntable the message recorded on the record may be picked up. As the needle is moved laterally within the grooves on the surface of the record sound is produced in the cavity formed by housing 10 and the bottom of telephone 14. If this cavity is of an optimum size the resultant resonant effect will amount to an amplification of the sound, so that the sound emerging through opening 26 will be sufficiently loud to be easily picked up by transmitter 12*a* of the telephone handset which is placed over said opening.

Just as the motor initiates movement of the turntable it will also cause rotation of the cam member 30. As the cam member rotates it will cause arm 27 to raise despite the opposition offered by spring 28. Raising arm 27 will cause that portion of arm 27 which overlies the switch hook plunger 46 to be raised from the position in which said plunger 46 has been depressed. As the plunger 46 raises the circuit will be completed to the local exchange. When raised sufficiently high, the oblique shoulder 36 will pass pin 35, and arm 32, under the urging of spring 34, will be driven upward and away from the dial 37. The dial which has been previously set in position to dial operator thus is freed and returns to its normal rest position thereby automatically dialing the operator. The operator will then cut into the circuit and receive the message recorded on record 17.

In resetting the device the telephone is removed from ledge 13. The tone arm is moved to place pick-up transducer means at the edge of the record, and the cam 30 is turned so that its enlarged radius is away from arm 27. The telephone is then replaced on ledge 13. The dial is turned to "O" the operator position, and arm 32 is depressed until fingers 33 at the end of portion 32*a* fit within the finger holes on the dial 47 to hold said dial in place. Depression of member 32 to this position will remove pin 35 beyond shoulder 36 so that member 27 will be pulled downward under the urging of spring 28 and so that member 27*a* which overlies switch hook plunger 46 will depress that member. Spring 28 will hold member 27 down in this position so that pin 35 bears against the side of arm 27 at its widest place. Thus the urging of spring member 34 cannot cause arm member 32 to move forward. Again, as previously stated, it is seen that the arm members 27 and 32 are mutually self-securing in either of their proper positions.

It should be noted that various components may be modified in the structure as described. For instance, motor 29 might be of the manually wound spring variety. In that event, the danger-detecting switch remote from the device might then be used in a circuit to energize a release mechanism which would remove the means theretofore holding the motor against rotation. Similarly, a disk type recording need not be employed. For instance, a tubular type of record or a wire or tape record of one type or another might be employed. Modification of the type of record and record mount would necessitate modification of the type of pick-up transducer means employed. For some types of pick-up, it is possible that no great amplification of sound would be necessary. For other transducer means mechanically resonant amplification of sound is difficult to obtain and electronic amplifier and speaker units would necessarily have to be used.

The drive means which causes movement of the arm need not be the same means which actuates the rotatable record mount. However, in the event that separate means for driving the record mount and releasing the arms are employed, the danger-detecting switch remote from the device would either have to be connected to both such drives or to one of the drives in such a manner that it would connect in the other drive.

Just as other components of my novel device may be modified, so also may be the movable arms employed with the telephone. Fig. 4 together with Figs. 5–7 show one possibility for modified arms wherein said arms are made rotatable rather than slidable and the arms are independent of one another, save for common time delay coupling between them.

The arms in Fig. 4 are plunger depressing arm 50 and dial holding arm 51. Plunger depressing arm 50 has a portion 50*a* which overlies plunger 46′. Dial depressing arm 51 has a portion 51*a* which bears against dial 47′ to hold it in a predetermined position. Arm 50 is rotatably supported by the housing 10′ upon pin means 52 extending across the width of arm 50, parallel to the housing sidewall. A spring 53, or other tension applying device, is attached below said pin 52 between arm 50 and the housing 10′ sidewall, thereby applying pressure upon plunger 46′ to hold it in depressed position. Arm 51 is rotatable around pin 55 which is mounted on the housing sidewall perpendicular thereto. A spring 56, or other resilient member, is connected below pin 55 to the housing sidewall in such a manner as to apply tension which tends to remove the arm portion 51*a* from the dial. Rotatable catch member 57, which is mounted on pin 58 perpendicularly secured to the sidewall of housing 10′ has a shoulder 59 which engages the bottom of

arm 51 in a manner which opposes the action of spring 56. Thus portion 51*a* of arm 51 is kept in place, thereby preventing, in turn, rotation of the dial. Cam member 60 is mounted eccentrically on shaft 61 which may or may not be driven by the same drive as drives the record mount. Cam 60 rotates, as may be seen in Figs. 5–6, in such a manner as to produce some rotation of arm 50 around pin 52, thereby releasing plunger 46' and connecting the telephone circuit to the telephone exchange. After the cam member passes, the circuit cannot again be opened as arm portion 50*a* is unable to press downward on button 46' and instead merely presses futilely upon the side thereof. Thus, arm 50, without arm 51, may be used with a non-dial type telephone in order to contact the operator to whom is given the emergency message. Where a dial telephone is employed, however, arm 51 is removed from the dial by extension 63 to cam member 60 which moves catch 57 and thereby removes shoulder 59 from member 51. Thus spring 56 is left free to exert the force necessary to remove portion 51*a* from the dial.

No matter what type of arm structure is employed, it is advantageous to mount the arm structure on a portion of the housing wall and bottom which is hinged or otherwise arranged so that the arm structure may be moved away from the telephone when my novel device is not in use. In the alternative, the arms may be composed of hinged or detachable sections which may be removed from the region in which they would interfere with normal use of the telephone.

It will be recognized by those skilled in the art that the arms may be mounted on any base member other than a housing containing sound reproducing and amplifying means. Spring connections for urging the respective arms in their proper directions will ordinarily be connected at one end to the base, be it a housing or another type of base, but springs may also be connected to some means ultimately attached to the base. It will, of course, be understood that the described types of arm movement relative to the telephone are by way of example only, and other types of relative movement are intended to be within the scope and spirit of the present invention.

I claim:

1. A telephone alarm device for use in combination with a handset-cradle type telephone having a cradle wherein the handset when not in use rests atop a switch hook plunger, said device comprising a housing having its walls arranged to form a resonator chamber, means within the housing for reproducing a recorded message of alarm which will be amplified by the resonator, a cradle on the housing for holding the telephone handset when removed from the telephone cradle, an opening in the resonator wall opposite the position occupied by the transmitter portion of the handset when the handset is placed on the cradle on the housing, a support for the telephone on the housing, another opening in the housing wall below the support for the telephone, through which opening the reproduction means may be adjusted, an arm movable with respect to the telephone affixed to the housing in such a manner as to hold depressed the telephone switch hook plunger, signal responsive means which produces movement of the arm relative to the telephone to release the switch hook plunger at a signal which also acts to cause reproduction of the recorded message.

2. The device of claim 1 in which the means depressing the switch hook plunger is an arm slidably mounted on the housing and having a portion which overlies the switch hook plunger.

3. The device of claim 1 in which the means depressing the switch hook plunger is an arm rotatably mounted on the housing and having a portion which overlies the switch hook plunger.

4. A telephone-alarm device for use in combination with a telephone having a transmitter, a receiver, a dial and a switch hook plunger, on which the receiver normally rests when the telephone is not in use but from which said receiver is removed during use of the device, said device comprising means for converting a recorded message of alarm to sound which may be picked up by the telephone transmitter, a movable first arm having a portion adapted to depress the telephone switch hook plunger, means adapted to hold said first arm in position to depress said plunger, means movable at a signal to cause the removal of the first arm from said plunger in order to release said plunger, a second arm having a portion adapted to bear against the telephone dial in order to hold it in a pre-set position, a member adapted to cause release of the second arm member from the dial, and a common coupling means between the two arms which permits release of the second arm from the restraining means a predetermined length of time after the removal of the first arm from the plunger.

5. A telephone-alarm device for use in combination with a telephone having a transmitter, a receiver, a dial and a switch hook plunger, on which the receiver normally rests when the telephone is not in use but from which said receiver is removed during use of the device, said device comprising means for converting a recorded message of alarm to sound which may be picked up by the telephone transmitter, a movable first arm having a portion adapted to depress the telephone switch hook plunger, resilient means affixed to the said first arm and adapted to hold said first arm in position to depress said plunger, means movable at a signal to cause the removal of the first arm from said plunger in order to release said plunger, a second arm having a portion adapted to bear against the telephone dial in order to hold it in a pre-set position, a resilient member affixed to said second arm urging the removal of the second arm from the dial, means restraining the removal of the second arm from the dial and a common coupling means which permits release of the restraining means a predetermined length of time after the removal of the first arm from the plunger.

6. A telephone-alarm device for use in combination with a telephone having a transmitter, a receiver, a dial and a switch hook plunger, on which the receiver normally rests when the telephone is not in use but from which said receiver is removed during use of the device, said device comprising means for converting a recorded message of alarm to sound which may be picked up by the telephone transmitter, a slidably movable first arm having a portion adapted to depress the telephone switch hook plunger, resilient means adapted to hold said first arm in position to depress said plunger, means movable in response to a signal to cause the removal of the arm from said plunger in order to release said plunger, a second slidable arm having a portion adapted to bear against the telephone dial in order to hold it in a pre-set position, a resilient member affixed to said second arm urging the removal of the second arm from the dial and a common coupling means between the arms which permits the release of the restraining means from the second arm a predetermined time after the removal of the first arm from the plunger.

7. A telephone-alarm device for use in combination with a telephone having a transmitter, a receiver, a dial and a switch hook plunger, on which the receiver normally rests when the telephone is not in use but from which said receiver is removed during use of the device, said device comprising a base, means for converting a recorded message of alarm to sound which may be picked up by the telephone transmitter, a slidably movable first arm having a portion adapted to overlie the telephone switch hook plunger, spring means extending between the first arm and the base in such a manner as to hold said first arm in position to depress said plunger, cam means movable to remove the first arm from said plunger in order to release said plunger, a second slidable arm mounted transversely to the first arm and having a por-

tion adapted to bear against the telephone dial in order to hold it in a pre-set position, spring means affixed to the second arm and the base urging removal of said second arm from the dial and common coupling means between the arms including means restraining the removal of the second arm from the dial which means is released a predetermined time after the removal of the first arm from the plunger.

8. A telephone-alarm device for use in combination with a telephone having a transmitter, a receiver, a dial and a switch hook plunger, on which the receiver normally rests when the telephone is not in use but from which said receiver is removed during use of the device, said device comprising a base, means for converting a recorded message of alarm to sound which may be picked up by the telephone transmitter, a slidably movable, vertically extending, elongated first arm mounted for vertical movement, which first arm has laterally extending portion adapted to overlie the telephone switch hook plunger, spring means between the first arm and the base, said spring means tending to hold said first arm in position to depress said plunger, cam means movable to cause the removal of the first arm from said plunger in order to release said plunger by the raising of said first arm, a second elongated slidable arm mounted for movement transversely to that of the first arm, which second arm has a portion adapted to bear against the telephone dial in order to hold it in a pre-set position, spring means affixed between said second arm and the base, said spring means urging the removal of the second arm from the dial and common coupling means, including means on the second arm bearing against a portion of the first arm and thereby restraining the removal of the second arm from the dial, a bearing surface on the first arm against which said means on the second arm bears which bearing surface parallels the direction of motion of said first arm to the point of release of the second arm, at which point said bearing surface is discontinued on the first arm, a shoulder at said discontinuity, which shoulder is shaped to prevent the return of the first arm to its initial position once the second arm has been released to a positon where the means on the second arm bears against said shoulder.

9. A telephone-alarm device for use in combination with a telephone having a transmitter, a receiver, a dial and a switch hook plunger, on which the receiver normally rests when the telephone is not in use but from which said receiver is removed during use of the device, said device comprising a base, means for converting a recorded message of alarm to sound which may be picked up by the telephone transmitter, a strip-like vertically arranged first arm, a slide for said first arm which slide is affixed to the base and permits the first arm slidable movement relative to the base in the direction of elongation, a laterally extending portion on the first arm adapted to overlie and depress the telephone switch hook plunger, spring means between the first arm and the base tending to hold said first arm in position to depress said plunger, cam means movable to cause vertical movement of the first arm and consequent removal of the lateral extending portion from said plunger in order to release said plunger, a strip-like second arm arranged transversely to the first arm, a slide for said second arm which slide is affixed to the base and permits the second arm slidable movement relative to the base in the direction of elongation of said second arm, an extension of the second arm adapted to overlie and bear against the telephone dial in order to hold it in a pre-set position, spring means affixed between said second arm and the base which spring urges removal of the extension from the dial, a pin-like bearing member on the second arm which bears against the first arm, a discontinuity in the bearing surface of the first arm at that point where release of the second arm is intended, said discontinuity consisting of a shoulder at such an oblique angle to the bearing surface that the shoulder will not affect the release of the second arm yet will prevent the return of the first arm to its initial position once the second arm has been released.

10. A telephone-alarm device for use in combination with a telephone having a transmitter, a receiver, a dial and a switch hook plunger, on which the receiver normally rests when the telephone is not in use but from which said receiver is removed during use of the device, said device comprising means for converting a recorded message of alarm to sound which may be picked up by the telephone transmitter, a rotatably movable first arm having a portion adapted to depress the telephone switch hook plunger, a resilient member tending to hold said first arm in position to depress said plunger, means movable in response to a signal to cause the removal of the first arm from said plunger in order to release said plunger, a second rotatably mounted arm having a portion adapted to bear against the telephone dial in order to hold it in a pre-set position, a resilient member affixed to said second arm urging the removal of the second arm from the dial, means restraining the removal of the second arm from the dial and a common coupling means between the arms which permits the release of the restraining means from the second arm a predetermined time after the removal of the first arm from the plunger.

11. A telephone-alarm device for use in combination with a telephone having a transmitter, a receiver, a dial and a switch hook plunger, on which the receiver normally rests when the telephone is not in use but from which said receiver is removed during use of the device, said device comprising a base, means for converting a recorded message of alarm to sound which may be picked up by the telephone transmitter, a rotatable first arm having a portion adapted to overlie the telephone switch hook plunger, spring means extending between the first arm and the base in such a manner as to hold said first arm in position to depress said plunger, cam means movable to remove the first arm from said plunger in order to release said plunger, a second rotatable arm having a different axis of rotation from the first arm and having a portion adapted to bear against the telephone dial in order to hold it in a pre-set position, spring means affixed to the second arm and the base urging removal of said second arm from the dial and means restraining the removal of the second arm from the dial which means is arranged to be released a predetermined time after the removal of the first arm from the plunger.

12. A telephone-alarm device, for use in combination with a telephone having a transmitter, a receiver, a dial and a switch hook plunger, on which the receiver normally rests when the telephone is not in use but from which said receiver is removed during use of the device, said device comprising a base, means for converting a recorded message of alarm to sound which may be picked up by the telephone transmitter, a rotatably movable, vertically extending, elongated first arm mounted for movement about a horizontal axis, which first arm has laterally extending portion adapted to overlie the telephone switch hook plunger, spring means between the first arm and the base, said spring means tending to hold said first arm in position to depress said plunger, cam means movable to cause the removal of the first arm from said plunger by the rotation of said first arm away from the plunger in order to release said plunger, a second elongated rotatable arm having a horizontal axis of rotation in a plane perpendicular to the plane of the axis of the first arm, which second arm has a portion adapted to bear against the telephone dial in order to hold it in a pre-set position, spring means affixed between said second arm and the base, said spring means urging the removal of the second arm from the dial, a hook-like member arranged to hold the second arm in place against the urging of the spring, means acting to cause release of the

hook-like member from the second arm a predetermined time after the first arm is released.

References Cited in the file of this patent

UNITED STATES PATENTS

1,505,326	Field	Aug. 19, 1924
1,627,612	Luse	May 10, 1927
2,188,055	Marsh et al.	Jan. 23, 1940
2,261,420	Shively	Nov. 4, 1941
2,335,039	Bright	Nov. 23, 1943
2,371,051	Kendig	Mar. 6, 1945
2,518,174	Picking	Aug. 8, 1950