Nov. 2, 1937. R. W. CARNAHAN 2,098,133

AUTOMATIC TELEPHONE ALARM

Filed Feb. 9, 1933 7 Sheets-Sheet 1

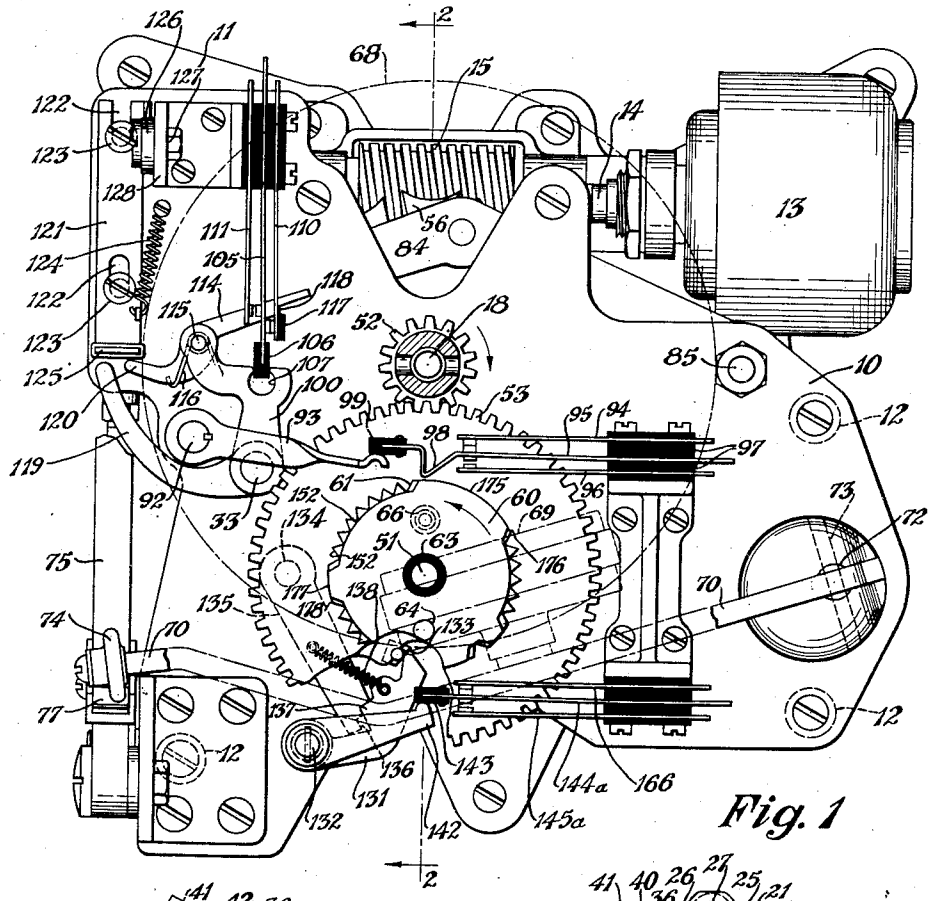


Fig. 1

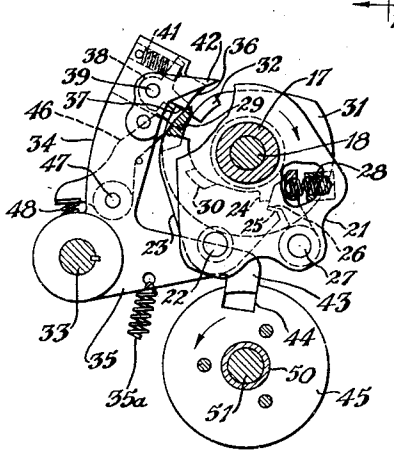


Fig. 6

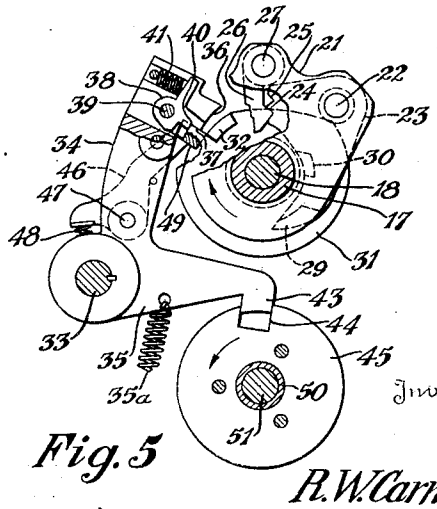


Fig. 5

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AUTOMATIC TELEPHONE ALARM

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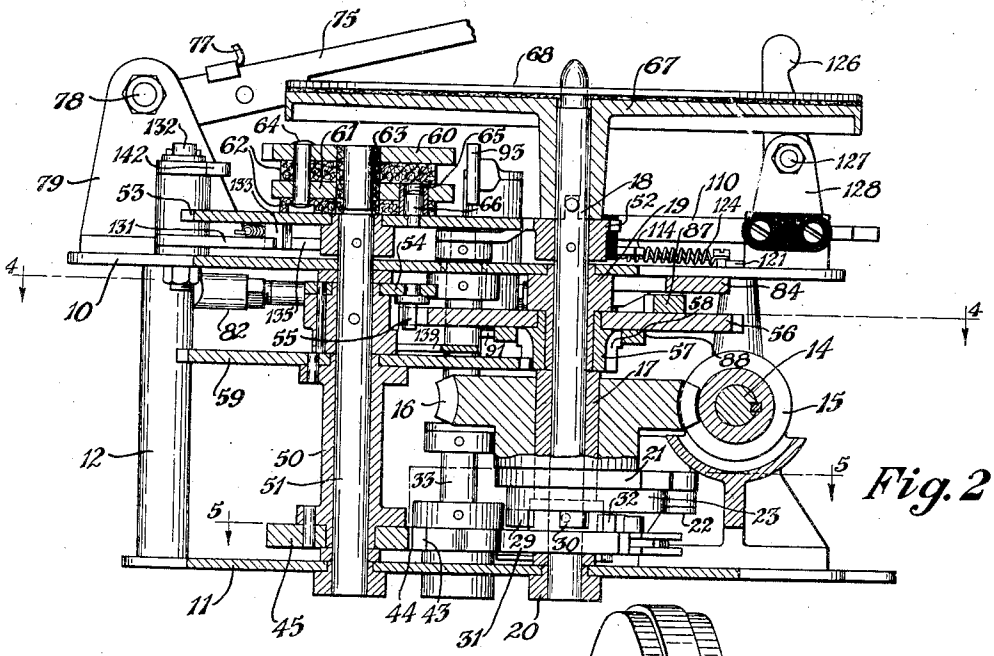


Fig. 2

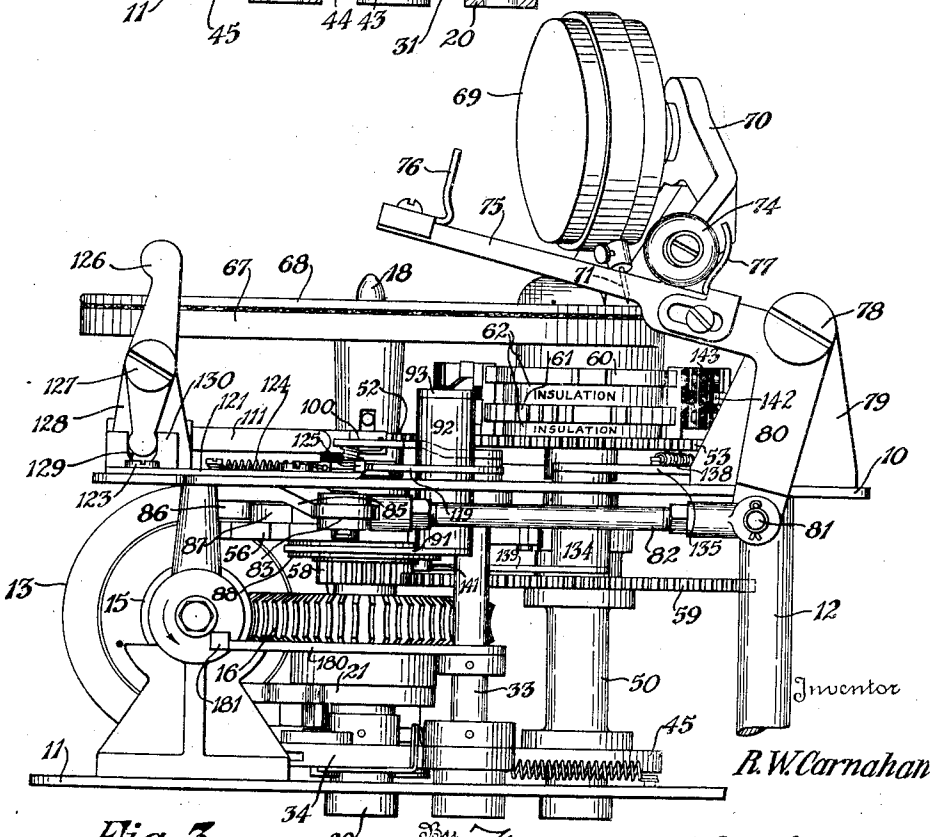


Fig. 3

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AUTOMATIC TELEPHONE ALARM

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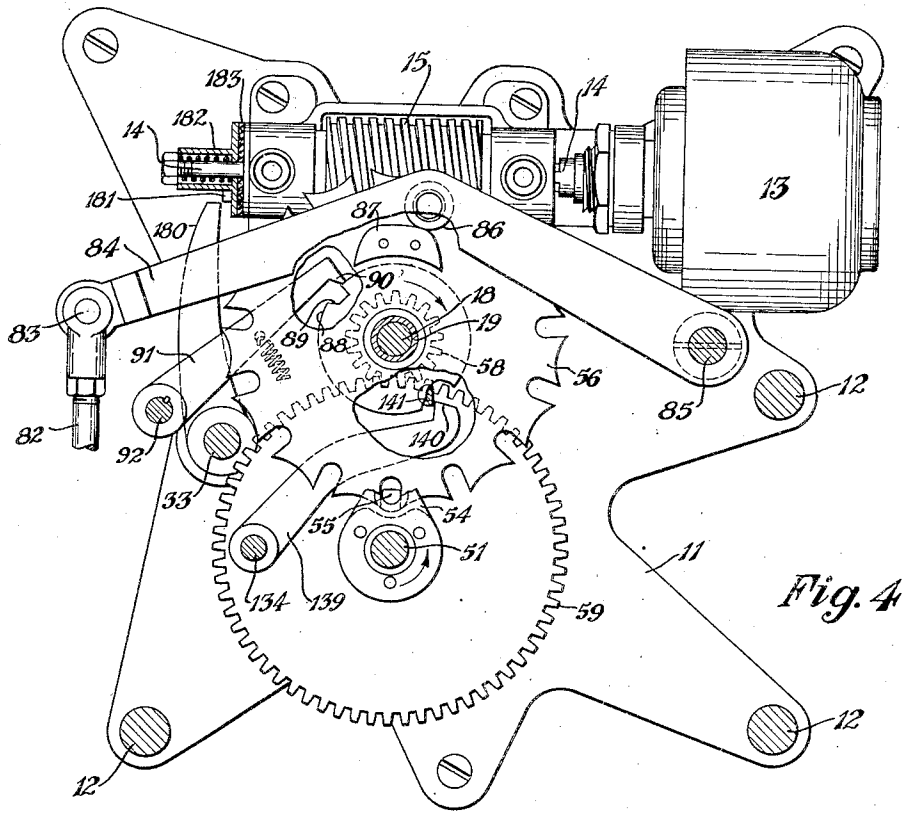


Fig. 4

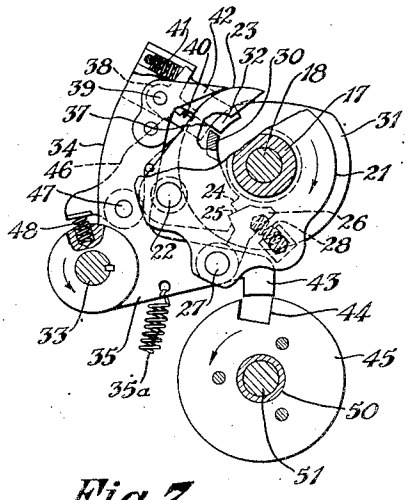


Fig. 7

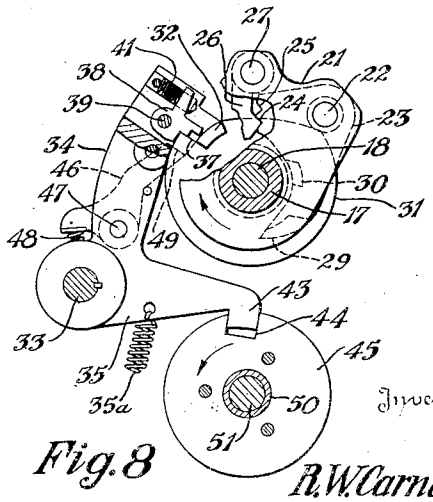


Fig. 8

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AUTOMATIC TELEPHONE ALARM

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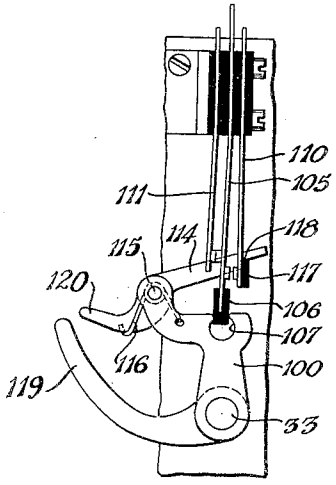


Fig. 9

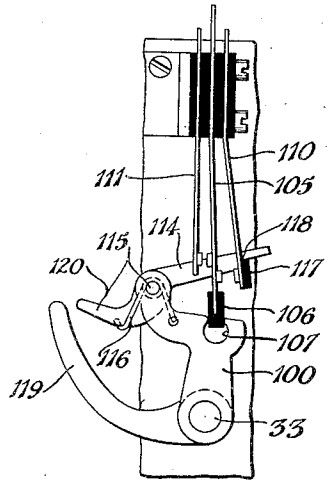


Fig. 10

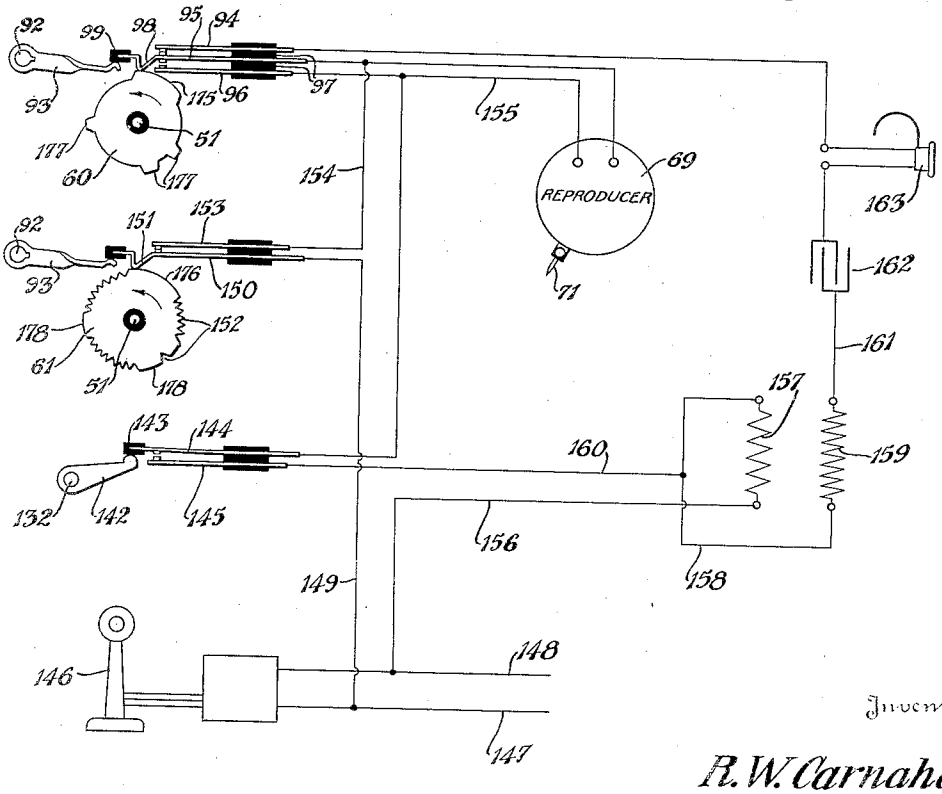


Fig. 11

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AUTOMATIC TELEPHONE ALARM

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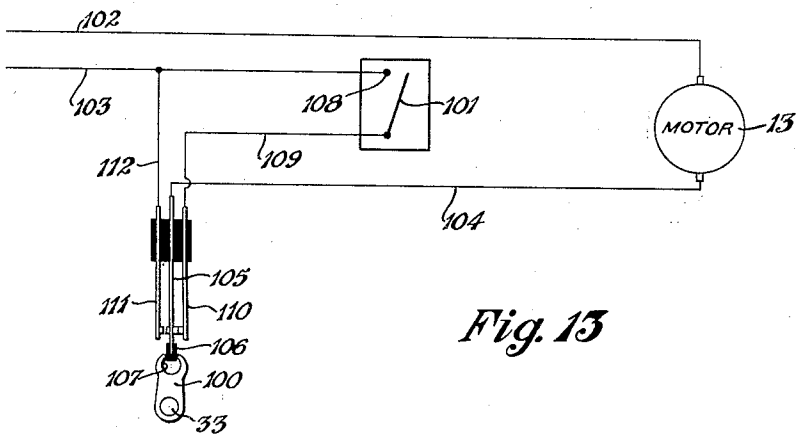


Fig. 13

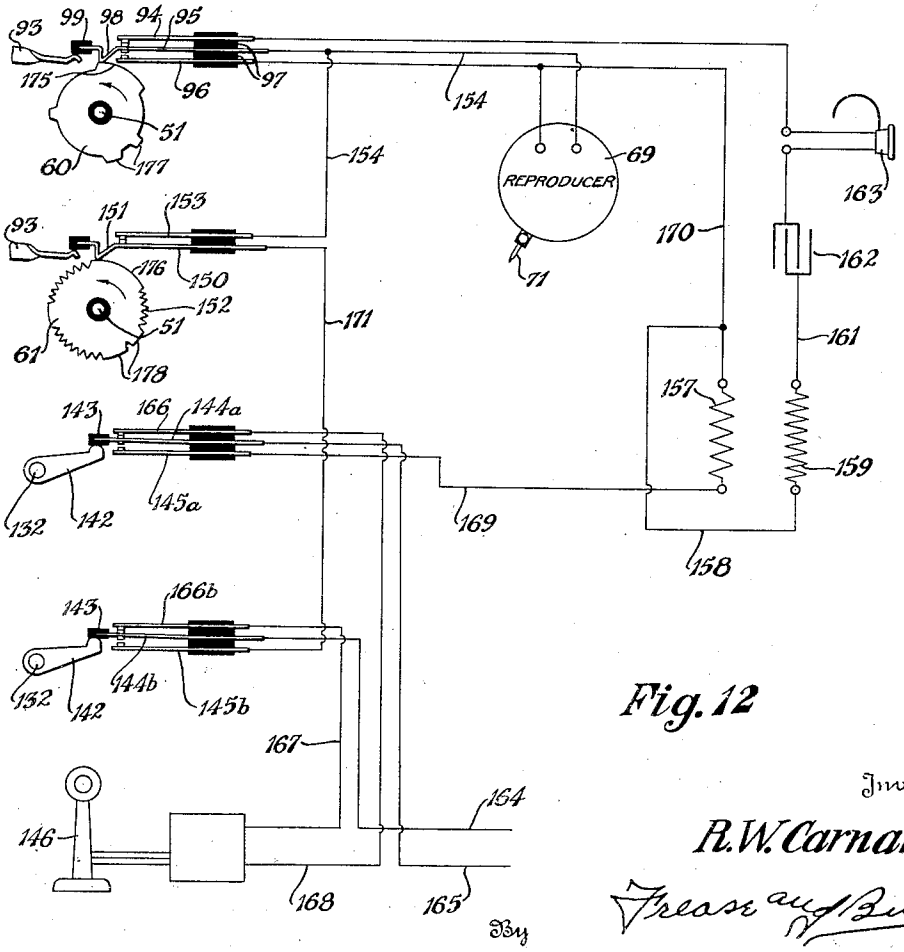


Fig. 12

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AUTOMATIC TELEPHONE ALARM

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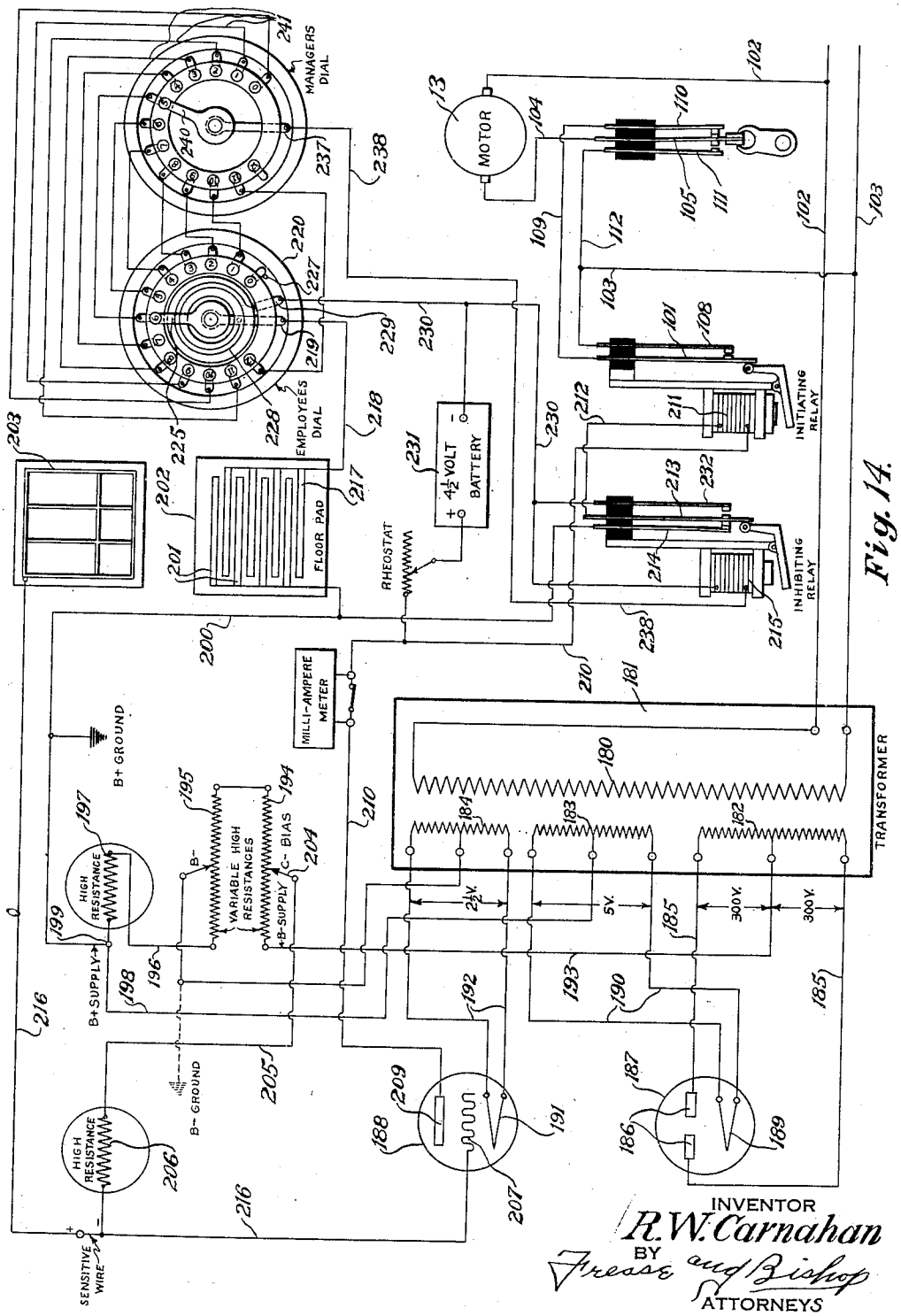


Fig. 14.

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AUTOMATIC TELEPHONE ALARM

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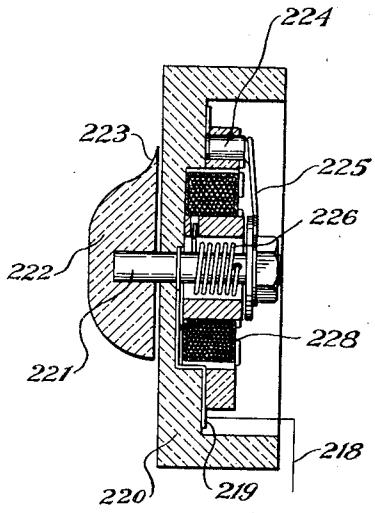


Fig. 16.

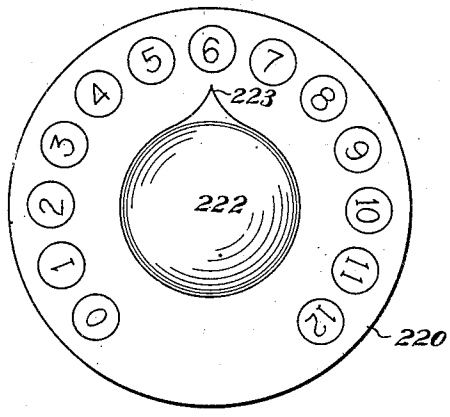


Fig. 15.

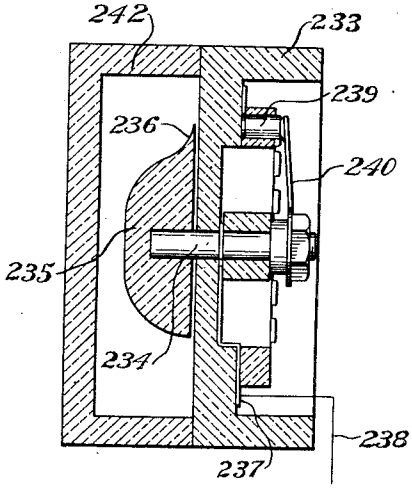


Fig. 17.

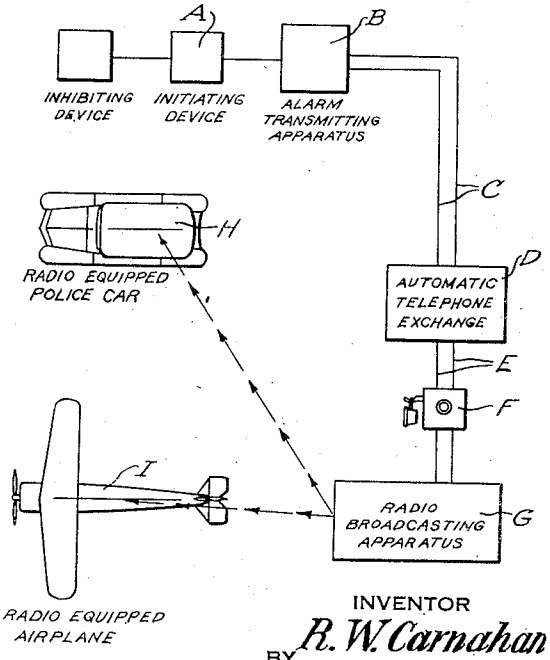


Fig. 18.

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Patented Nov. 2, 1937 2,098,133

UNITED STATES PATENT OFFICE

2,098,133

AUTOMATIC TELEPHONE ALARM

Ralph W. Carnahan, Shaker Heights, Ohio, assignor of one-fourth to Hyman Seegel and Samuel Seegel, both of Cleveland, Ohio; Adolph E. Emerman, executor of said Ralph W. Carnahan, deceased, assignor of three-fourths to Florence Carnahan, Cleveland Heights, Ohio

Application February 9, 1933, Serial No. 655,985

23 Claims. (Cl. 179—6)

The invention relates to a method and apparatus for transmitting burglar and/or fire alarms over a telephone circuit, and is a continuation in part of my prior application for Automatic telephone alarms, Serial No. 637,579, filed October 13, 1932.

It is known that certain attempts have been made to produce means for transmitting such alarms over manually operated telephone systems but such devices depend for their successful operation upon the human element, namely, the operator at the telephone exchange who must receive the predetermined message from the alarm mechanism and either transmit the same to police or fire headquarters or manually make a telephone connection therewith.

It is also known that attempts have been made to produce alarm mechanism for operating upon automatic telephone systems in which automatic dialing mechanism and sound recording transmitters have been associated with and operated upon existing rented telephone instruments.

An object of the present improvement is to provide an alarm mechanism for association with an automatic telephone system and adapted to operate as a telephone but so constructed and operated that it will automatically transmit a predetermined message or signal in such manner that the operation of the mechanism is both inaudible and imperceptible to anyone in the vicinity of the apparatus.

The invention is designed to deal with and combat the methods of present day criminals and to cause the criminal to unknowingly operate an initiating device which inaudibly and imperceptibly, at the point of operation, transmits a predetermined message or signal over an ordinary automatic telephone system to the desired recipient of the message. As is well known, police headquarters in cities where police radio cars or cruisers are used and messages are broadcast thereto from police headquarters, may be provided with means whereby an incoming telephone message may be broadcast directly to the radio cruising cars without the intervention of human operation. With such an arrangement at police headquarters it will be seen that with the present method and apparatus a burglar at the very instant of his attempted burglary will unknowingly cause the inaudible and imperceptible operation of mechanism which will transmit over the telephone system and through the broadcasting apparatus at police headquarters directly to the radio equipped police cars cruising the streets so that any car or cars which might happen to be in the immediate neighborhood of the burglary will be apprised thereof at the very instant the crime is being perpetrated, all of this taking place without any visible or audible warning to the criminal.

The invention contemplates the provision of such automatic alarm transmitting mechanism with an initiating device therefor located adjacent to any place where moneys or other things of value are stored, such as a cash register, cash drawer, safe, vault or the like, the initiating device being so constructed and operated that an unauthorized person in approaching the place where things of value are kept will unknowingly cause the initiating device to operate so as to start the operation of the automatic signal transmitting mechanism.

The invention further contemplates the provision of an inhibiting device which may be operated by an authorized person to momentarily render the initiating device inoperative whereby the authorized person may have access to the cash drawer, cash register or other place where moneys or valuables are kept without initiating the operation of the alarm mechanism.

A further object of the improvement is to provide means whereby this inhibiting device will automatically return to normal or inoperative condition, without the necessity of any manual resetting thereof, the moment the authorized person moves away from the vicinity of the cash drawer or other place where valuables or moneys are kept, whereby the entire device is always normally in condition to be automatically operated to transmit a signal the moment an unauthorized person approaches said point of valuables.

More specifically the initiating and inhibiting means may comprise an initiating relay, the energizing of which places the alarm mechanism in operation, this relay being located in a normally open circuit which is closed through the body of a person approaching the point where moneys or valuables are kept; the inhibiting means including a relay adapted to be energized by the performance of certain operations by an authorized person, the energizing of the inhibiting relay opening the circuit to the initiating relay and preventing the same from being energized.

The initiating and inhibiting means may include a circuit, or series of electric circuits in which the initiating and inhibiting relays are located and in which is located a mat or pad placed upon the floor adjacent to the cash register or other point to be protected and having therein a plurality of electric conductors located in opposite sides of a circuit adapted to be closed by a

metal sole or heel plate or other means upon the shoe of an authorized person.

This, together with a dial device adapted to be manually set each time by the employee or other authorized person approaching the cash drawer or other point to be protected, closes the circuit to the inhibiting relay, energizing the same and opening the circuit to the initiating relay so as to prevent operation of the signal transmitting mechanism.

An unauthorized person stepping upon the mat or pad with or without a metal plate or similar device upon his shoe, and without setting the dial to the proper position, will not cause the inhibiting device to operate, thus rendering the initiating relay operative, and by touching the cash drawer or other place protected by the mechanism, allows a positive current to flow through the floor pad and through his body to the cash drawer, which is electrically connected with the grid of an amplifying tube, thus causing a positive current to oppose the C-bias current normally imposed upon this grid, the positive current being of sufficient strength to change the condition of the grid from a negative to a positive charge and permitting an excess flow of current through the plate circuit of the tube to the initiating relay, energizing the same and starting the operation of the signal transmitting mechanism, all of which is inaudible and imperceptible to the criminal.

A further object of the improvement is to provide an apparatus which as it starts to operate will automatically prepare the telephone line for dialing by cutting out the usual secondary coil and the test phone if one be incorporated in the mechanism, and which will then automatically call the police department or any other station for which the machine may be set, means being provided for dialing the proper telephone number where the apparatus is used in connection with a dial system, a predetermined message being then delivered over the telephone lines by means of a phonograph record and an automatic telephone transmitter or reproducer which are automatically put into operation at the proper time, said message being repeated any desired number of times, means being provided for repeating the call any desired number of times.

Another object of the improvement is to provide mechanism of this character which is driven by an electric motor, spring motor or other suitable source of power, the circuit to which is arranged to be automatically closed by an initiating means which may be so located as to be tripped by an unauthorized person entering the premises, means being actuated by the starting of the motor to automatically cut said initiating means out of the circuit so that tampering with the same will not stop the operation of the motor.

Another object of the improvement is to provide means for automatically shunting out the automatic telephone transmitter or reproducer during the time the telephone number is being dialed.

Another object of the improvement is to provide for the operation of the initiating means by the mere presence of an unauthorized person in the vicinity of the valuables to be protected.

The above and other objects may be attained by providing an apparatus as hereinafter described and illustrated which will automatically accomplish by electrical and mechanical means the same function as a human being in using a telephone of a dialing or nondialing system to call a desired number and deliver a message over the telephone.

An embodiment of the invention thus set forth in general terms is illustrated in the accompanying drawings, in which

Figure 1 is a top plan view of the improved automatic telephone alarm to which the invention pertains, the turn-table for the phonograph record being removed and parts being broken away from the purpose of illustration;

Fig. 2, a vertical sectional view through the apparatus illustrated in Fig. 1, taken as on the line 2—2, Fig. 1;

Fig. 3, a side elevation of the apparatus shown in the previous figures looking from the left as viewed in Fig. 1;

Fig. 4, a plan sectional view taken as on the line 4—4, Fig. 2;

Fig. 5, a plan sectional view of the clutch mechanism and cooperating parts, taken as on the line 5—5, Fig. 2, and showing the parts in the normal or initial position;

Fig. 6, a similar view showing the position of the clutch and cooperating parts immediately after the motor has started to operate and before the alarm operating mechanism has been set into operation by the clutch;

Fig. 7, a similar view showing the position of the parts when the clutch is about to engage the alarm operating mechanism;

Fig. 8, a similar view showing the position of the parts at the end of a complete operation;

Fig. 9, a fragmentary view of the motor contacts immediately after the motor has been started by the trip switch;

Fig. 10, a similar view showing the position of the motor contacts after a complete operation of the apparatus;

Fig. 11, a diagrammatic view of a simple circuit for the apparatus;

Fig. 12, a similar view showing a circuit provided with mechanism for cutting out the ordinary telephone instrument during the operation of the apparatus;

Fig. 13, a diagrammatic view of the motor circuit and trip switch;

Fig. 14, a diagrammatic view of the initiating and inhibiting circuits and devices;

Fig. 15, an elevation of one of the dials of the inhibiting device;

Fig. 16, a transverse sectional view through the employee's magnetic dialing switch;

Fig. 17, a similar view of the manager's control dial setting switch for the inhibiting means; and

Fig. 18, a diagrammatic view of the entire system.

Similar numerals refer to similar parts throughout the drawings.

The mechanism comprising the signal transmitting apparatus is intended to be housed in a suitable case of steel or the like which will prevent tampering with the same and the terminal connections from the mechanism to the outside telephone lines and power lines are also encased so as to prevent cutting of the lines or otherwise tampering therewith. Tampering with the case or terminal connections from the mechanism to outside telephone or power lines or initiating devices will instantly trip the mechanism.

The mechanism may be mounted upon a frame comprising the upper and lower plates 10 and 11 respectively, connected in spaced relation as by the posts 12. A motor 13, which is illustrated

and described herein as an electric motor, is mounted upon the lower plate 11 and the shaft 14 thereof is provided with a worm 15 which meshes with the worm gear 16 fixed upon a bushing 17 which is journaled upon the record shaft 18 vertically mounted through the machine in bearings 19 and 20 carried by the upper and lower plates 10 and 11 respectively. The drive pawl arm 21 is fixed upon the underside of the worm gear 16 and has pivoted to its underside, as at 22, a drive pawl 23 which forms part of the clutch mechanism of the apparatus.

The drive pawl is provided at one end with a spaced pair of notches 24 and 25 for selective engagement by the spring pressed detent 26 pivoted as at 27 upon the underside of the drive pawl arm 21 and normally urged into engagement with said notches as by the spring 28. The opposite end of the drive pawl is provided with the depending tapered cam lug 29 and a second cam lug 30 is fixed upon the underside of the driving pawl at a point intermediate its ends.

The record shaft drive disk 31 is fixed upon the lower portion of the record shaft 18 below the drive pawl 23 and provided upon its upper surface with the lug 32 for cooperation with the lug 29 of the drive pawl for throwing the drive pawl out into driving position so that the driving lug 30 thereon will engage the lug 32 in order to drive the disk 31 and shaft 18 continuously throughout the entire operation of the apparatus.

The stop arm shaft 33 is vertically disposed through suitable bearings in the plates 10 and 11 and has fixed thereon the stop arm which is in the form of a bell crank comprising the arms 34 and 35. The arm 34 of the stop arm is provided with a stop lug 36 for engagement with the stop shoulder 37 of the record shaft drive disk for stopping rotation of the record shaft at the proper time.

A latch 38 is pivoted as at 39 upon the arm 34 of the stop arm for holding the stop arm in the initial or reset position, this latch being provided with a notch 40 for engaging the stop shoulder 37 in this position, a spring 41 being provided for normally urging the latch toward the drive disk 31.

The arm 34 of the stop arm bell crank is provided near its end with the cam portion 42 for engagement with the drive pawl 23 in order to throw the stop arm to the operative position, withdrawing the lug 43, upon the end of the arm 35, from engagement with the notch 44 in the stop disk 45.

A detent 46 is pivoted as at 47 upon the underside of the arm 34 of the stop arm, a spring 48 being provided for normally urging the opposite end of the detent into the path of the lug 49 provided upon the underside of the drive disk 31 in order to prevent the same from being accidentally rotated in the reverse direction.

The stop disk 45 is fixed upon the tubular shaft 50 which may be journaled upon the dialing shaft 51 which is also vertically disposed within the apparatus and journaled through the plates 10 and 11.

A pinion 52 is fixed upon the record shaft 18 and meshes with a gear 53 fixed upon the dialing shaft 51. An arm 54 is also fixed upon the dialing shaft and provided with a depending pin 55 which cooperates with the Geneva wheel 56 fixed upon the tubular shaft 57 which may be journaled upon the record shaft 18, thus imparting intermittent motion to said tubular shaft. This intermittent motion is in turn imparted to the tubular stop shaft 50 through a pinion 58 fixed upon the tubular shaft 57 which meshes with a gear 59 fixed upon the tubular stop shaft 50.

The off-normal break wheel 60 and the dialing break wheel 61 are fixed upon the dialing shaft 51, preferably being insulated from each other and from the shaft as by the insulation disks 62 and insulation bushing 63, and pinned together as at 64, an opening 65 being provided in the lower disk to receive the stud 66 protruding upward from the gear 53.

A turn-table 67 of any usual and ordinary construction such as is ordinarily used upon phonographs may be fixed upon the upper end portion of the record shaft 18 and is adapted to support a phonograph record 68 which may have inscribed thereon any suitable message such as "Police department, robbery, 1940 East 105". This message may be repeated upon the record any desired number of times so as to assure the reception of the message at the police department.

Indicated generally at 69, and hereinafter referred to as an automatic telephone transmitter or reproducer, is a device, mounted upon the arm 70 for silently transmitting the message from the record over the telephone circuit. This device may comprise an electric pick-up such as used in talking pictures; a reproducer and transmitter united in a soundproof case; or a standard automatic telephone transmitter with the arm of the needle 71 attached directly to the center of the diaphragm thereof. One end of the arm 70 is pivoted upon the top plate 10, both vertically and horizontally, as shown at 72 and 73 respectively, and the other end of the arm 70 is provided with a roller 74 which is adapted to ride upon the reproducer return arm 75 provided near opposite ends with stops 76 and 77 for limiting the movement of the reproducer.

The return arm 75 may be in the form of a bell crank pivoted as at 78 to a bracket 79 carried upon the top plate 10. The depending angular arm 80 of said bell crank is pivotally connected as at 81 to one end of a link 82, the other end of which is pivotally connected as at 83 to one end of the arm return lever 84 which is of angular form, the opposite end being pivoted as at 85 upon the top plate 10.

A roller 86 is mounted upon the lever 84, intermediate the ends thereof, and adapted to be engaged by the cam lug 87 fixed upon the upper surface of the Geneva wheel 56. A cam ring 88 is fixed upon the underside of the Geneva wheel 56 and provided with a notch 89 adapted to receive the angular end 90 of the lever 91 which is fixed upon the shaft 92 journaled through the top plate 10 and having the contact lock-out arm 93 fixed to its upper end and arranged to normally hold the off-normal contacts and dialing contacts in the position shown in Fig. 11 of the drawings.

These off-normal contacts comprise three spring contact members 94, 95 and 96 insulated from each other as at 97, the central member 95 being bent to form a tooth 98 adapted to ride upon the surface of the off-normal break wheel 60 and having at its free end an insulation block 99 for engagement with the lock-out arm 93 which, as shown in the drawings, normally holds the tooth 98 out of contact with the periphery of the break wheel 60, the contacts 94 and 95 being closed while the contact 96 is spaced from the adjacent central contact 95.

The stop arm shaft 33 has the contact reset arm 100 fixed to its upper end for cutting the

initiating means or trip switch 101 out of the circuit to the motor 13 as soon as the switch is tripped and the apparatus put into operation, this being for the purpose of preventing the motor from being stopped by anyone opening the switch 101 or tampering with the wiring thereto.

This circuit is shown in Fig. 13 in which the line wires 102 and 103 are shown as supplying current to the circuit. The wire 102 may be connected to one side of the motor 13, the other side thereof being connected as by a wire 104, with the central spring contact 105 which is provided at its free end with an insulation block 106 received in the notch 107 of the reset lever 100. The other line wire 103 leads to one contact 108 of the trip switch 101, which may be located in any suitable position where it may be accidentally tripped by an unauthorized person entering the premises.

If desired, a plurality of these trip switches may be located at different points upon the premises, all being in parallel in the circuit so that the closing of any one of the switches will close the circuit to the motor. A wire 109 leads from the other contact of the switch to the spring contact 110 located upon one side of the contact 105, a contact 111 being located upon the other side thereof and connected by a wire 112 to the line wire 102.

With the apparatus set in position to be operated, the switch 101 is open as shown in Fig. 13 and the contacts 105 and 110 are in contact with each other, the contact 111 being separated from the contact 105.

When the switch 101 is closed, it will be seen that the circuit to the motor is closed through the wire 103, contact 108, switch blade 101, wire 109, contacts 110 and 105, wire 104 to the motor and then to the other side of the line by the wire 102. Immediately upon starting of the apparatus the arm 100 is swung to the left, as will be later described in detail, breaking the contact between the contacts 105 and 110 and moving the contact 105 into contact with the spring contact 111, thus closing the circuit to the motor through the wires 103 and 112, contacts 111 and 105, wire 104 to the motor and then from the other side of the motor to the other side of the line through the wire 102, cutting out the switch from the circuit.

A latch lever 114 is pivoted as at 115 upon the reset arm 100 and provided with a spring 116 to normally urge the right-hand end of the same downward. In the normal reset position as shown in Fig. 1, the edge of the lever rests against the insulation block 117 on the right-hand contact 110 which is in contact with the center contact 105. When the reset arm 100 has been swung to the left as the apparatus starts to operate the shoulder 118 of the latch engages the insulation block 117, holding the contact 110 away from the middle contact 105, thus holding the circuit to the trip switch 101 open.

When the apparatus finishes a complete operation, the reset arm 100 is automatically swung back to the position shown in Fig. 9, as will be later described, breaking the contact between 105 and 111 and holding the contact between 105 and 110 open, as shown in Fig. 10.

The reset lever is provided with a curved finger 119, the end of which is located adjacent to the curved end 120 of the reset arm latch and a reset slide 121 is slidably mounted upon the top plate 10, being provided with longitudinal slots 122 engaged by studs 123 in the plate, a spring 124 normally holding the slide in the inoperative position and out of contact with the reset arm latch and finger, as shown in Fig. 1.

When it is desired to reset the machine for operation, the slide 121 is pushed toward the reset arm latch and finger, the upturned end 125 of the slide engaging both of said members and moving the parts back to the reset position shown in Fig. 1. In order to easily operate the reset slide, a lever 126 may be fulcrumed intermediate its ends, as at 127, upon a bracket 128, the lower end thereof pivotally engaging in the notch 129 in the upturned angular flange 130 upon the reset slide, while the upper end of the lever extends upward above the turn-table where it is easily accessible for manual operation.

For the purpose of operating the line closing contacts, a lever 131 is fixed upon a vertical shaft 132 journaled through the top plate 10, said lever being located beneath said top plate and adapted to be engaged by a depending cam lug 133 fixed upon the underside of the large gear 53. A shaft 134 is also journaled through the top plate 10 and has fixed thereon a lock-out lever 135 provided at its free end with a notch 136 adapted to engage a shoulder 137 upon the lever 131 as will be later described, a pull spring 138 being connected at opposite ends to the levers 131 and 135 for normally holding said levers in contact with each other. A lever 139 is also fixed upon the shaft 134 and provided with the angular end 140 adapted to be engaged by the stud 141 fixed upon the underside of the Geneva wheel 56.

The line closing contact arm 142 is fixed upon the shaft 132 and adapted to contact with the insulated block 143 upon the line closing spring contact 144 to normally hold the same out of contact with the contact member 145. Where it is not desired to cut the regular telephone instrument 146 out of the circuit when the apparatus is put into operation, the circuit may be as shown in Fig. 11 of the drawings. In this figure the wires leading into the telephone instrument 146 are shown at 147 and 148.

A wire 149 leads from the line wire 147 to the movable dialing contact 150 which is a spring contact arranged to normally urge the tooth 151 into the notches 152 upon the dialing contact break wheel 61, said notches being grouped in any necessary arrangement to make the proper number of impulses to connect the circuit with the phone at police headquarters or other desired station in the manner customary in dialing telephone systems. This movement of the spring contact arm 150 makes and breaks the contact with the contact arm 153 which is connected as by a wire 154 with the movable off-normal contact 95 and which also leads to the reproducer 59, the wire 155 leading from the reproducer to the off-normal contact 96.

The line wire 148 is connected by a wire 156 with the usual primary coil 157 of the telephone circuit, a wire 158 leading from the other end of said coil to the secondary coil 159 and being also connected as at 160 to the line closing contact 145. A wire 161 may lead from the other side of the secondary coil 159 to the off-normal contact 94 and the condenser 162 and test phone 163 may be located in said line.

Where it is desired to cut the regular telephone instrument 146 out of the circuit during the operation of the apparatus, in order to prevent interfering with the operation of the alarm mechanism by a person attempting to use the regular telephone instrument or cutting the wires thereto, the circuit may be as shown in Fig. 12.

In this figure the telephone line wires are indicated at 164 and 165. It is necessary in this case to use two sets of line closing contacts, each set comprising three spring contact members. One of these sets of contacts is shown comprising a lower contact 145*a*, a central contact 144*a*, adapted to be operated by the arm 142, and an upper contact 166 which is normally in contact with the central contact 144*a* while the lower contact 145*a* is out of contact with the central contact.

The other set of line closing contacts comprises the lower contact 145*b*, the central contact 144*b* and the upper contact 166*b*, these contacts being normally in the same positions as those above described, the central contact 144*b* being also operated by the arm 142. The line wire 164 is connected to the contact 144*b* and the contact 166*b* is connected by a wire 167 with the telephone instrument 146, a wire 168 leading therefrom to the contact 166.

The contact 144*a* is connected to the line wire 165 and a wire 169 leads from the contact 145*a* to the primary coil 157 which is connected by the wire 158 to the secondary coil 159 which leads to the contact 94 of the off-normal contacts and may have the condenser 162 and test phone 163 interposed therein as in the circuit shown in Fig. 11.

A wire 170 also leads from the primary coil to the reproducer 69 and to the contact 96 of the off-normal contact. The contact 95 of the off-normal contact is connected by the wire 154 to the reproducer 69 and to the contact 153 of the dialing contact. The contact 150 of the dialing contact is connected by a wire 171 with the contact 145*b* of the line closing contact.

In the operation of the apparatus, when the switch 101 is closed the circuit is completed from the line wire 103 through contact 108 and switch blade 101, wire 109, contacts 110 and 105, wire 104 through the motor 113 to the line wire 102, starting the motor. The worm 15 upon the motor shaft immediately rotates the worm gear 16, rotating the bushing or tubular shaft 17 therewith. The drive pawl arm 21, which is carried by the worm gear 16 immediately starts to rotate from the position shown in Fig. 5, through the positions shown in Figs. 6 and 7, carrying with it the drive pawl 23.

The depending lug 29 upon the tapered forward end of the drive pawl rides over the lug 32 upon the record shaft drive disk 31, swinging the pawl outward upon its pivot and permitting the spring pressed detent 26 to become disengaged from the notch 24 in the drive pawl and to enter the notch 25 therein, as shown in Fig. 6. At the same time, the drive pawl contacts with the lug 36 upon the stop arm 34, swinging the stop arm outward and then as shown in Fig. 7, contacts with the cam portion 42 upon the stop arm, further swinging the stop arm sufficiently to withdraw the lug 43 thereon from the notch 44 in the stop disk 45, as shown in Fig. 7.

The stop arm shaft 33 is thus oscillated in the direction of the arrow shown in Fig. 7 and swings the contact reset arm 100, carried thereby, to the left, as viewed in Figs. 1 and 13, breaking the contact between the contacts 105 and 110 and moving the contact 105 into contact with the contact 111, cutting the trip switch 101 out of the circuit to the motor so that the opening of the switch or cutting of the wires thereto will not stop the motor. This position of the reset arm and contacts is shown in Fig. 9 and it will be seen that at this point the latch lever 114 has dropped down upon the insulation block 117 at the end of the contact 110 so as to engage the shoulder 118 of the latch lever with said block.

As the drive pawl continues to rotate past the position shown in Fig. 7, the depending lug 30 thereon engages the lug 32 upon the upper surface of the record shaft drive disk 31, rotating the record shaft 18 therewith. The pinion 52 upon the record shaft, through the gear 53, starts to rotate the dialing shaft 51 and with it the stop disk 45, thus moving the periphery of the same against the lug 43 upon the stop arm and holding the stop arm in the position shown in Fig. 7 throughout a complete revolution of said stop disk.

As the dialing shaft starts to rotate, the break wheels 60 and 61 carried thereby are rotated in the direction of the arrows shown in the drawings. First, the cam lug 133 swings the lever 131 outward against the pull of the spring 138 and permits the spring to pull the lever 135 into position to engage the notch 136 thereof with the shoulder 137 upon the lever 131 so as to hold the parts in this position.

The shaft 132 is thus oscillated in a direction to swing the line closing contact arm 142 away from the contact 144, as shown in Fig. 11, or the contacts 144*a* and 144*b* as shown in Fig. 12, permitting said spring contacts to complete the connection with the telephone exchange. In the circuit shown in Fig. 11, this is done by permitting the spring contact 144 to contact with the other contact 145, thus completing the circuit to the telephone exchange from the line wire 147 through the wire 149, contacts 150 and 153, wire 154, reproducer 69, wire 155, contacts 144 and 145, wire 160, primary coil 157 and wire 156 to the line wire 148. After a moment to allow the connection to be completed at the central telephone exchange the break wheels 60 and 61 have rotated sufficiently, in the direction of the arrows shown in Fig. 11, to start the dialing.

The tooth 98 of the central off-normal contact 95 drops off the high point 175 of the break wheel 60 just prior to the time that the tooth 151 of the dialing contact 150 drops off the high point 176 of the break wheel 61. As the off-normal contact 95 is moved toward the break wheel 60 by this operation, it breaks contact with the contact 94 and closes the circuit through contact 96. The test phone 163, condenser 162 and secondary coil 159 are thus cut out of the circuit and the reproducer 69 is shunted out of the circuit and as the high points 177 upon the break wheel 60 are of less width than the corresponding high points 178 which are located between the groups of teeth on the break wheel 61, both the test phone and reproducer are held out of the circuit during the dialing operation.

It should be kept in mind that immediately upon the starting of the apparatus the pin 55 carried by the dialing shaft 51 will have moved the Geneva wheel 56 sufficiently to permit the tooth 90 upon the arm 91 to drop into the notch 89 in the disk 80 carried by the Geneva wheel, thus rocking the shaft 92 in a direction to move the arm 93 out of engagement with the insulation block 99 upon the contact 95. As the dialing shaft 51 must make one complete revolution before the Geneva wheel is again moved, this arm 93 will remain out of the path of the contacts 95 and 150 during the complete dialing operation.

In the circuit shown in Fig. 12 the operation is

substantially the same excepting that the regular telephone instrument 146 is cut out of the circuit by the line closing contacts and is held out of the circuit during the operation of the apparatus so that an attempt to use the telephone instrument 146 or the cutting of the wires thereto will not interfere with the operation of the apparatus. In this circuit, the movement of the arm 142, as above described moves the line closing contact 144*a* away from the contact 166 and into contact with the contact 145*a*. At the same time the contact 144*b* is moved away from the contact 166*b* and into contact with the contact 145*b*. The telephone instrument 146 is thus cut out of the circuit. The contacts 144*a* and 144*b* and 145*a* and 145*b*, respectively, are then momentarily opened and closed to restore the calling line 164—165 to normal, in case the local phone 146 is or has been busy.

The operation of the break wheels 60 and 61 is then identically the same as described in connection with Fig. 11, the test phone being cut out of the circuit and the reproducer shunted out of the circuit during the dialing of the number. In this manner the apparatus is automatically connected with the police headquarters or other station desired.

The next movement of the Geneva wheel 56 causes the tooth 90 upon the arm 91 to ride out of the notch 89 in the disk 88 and onto the periphery of said disk swinging the arm 93, through the shaft 92, back to its normal position, moving the off-normal contacts and dialing contacts back to the initial position, as shown in Figs. 11 and 12 so that further operation of the break wheels 60 and 61 does not operate these contacts.

A short time after the telephone number has been rung, giving sufficient time to permit someone at police headquarters to answer the telephone, the Geneva wheel 56 will have been moved sufficiently to move the cam 87 thereon out of the path of the roller 86 upon the arm 84, permitting the weight of the arm 75 and the reproducer 69 which is carried thereon, to swing the arm 75 downward upon its pivot 73, causing the roller 74 on the arm 70, which carries the reproducer, to ride downward upon the thus forwardly inclined arm 75 so that the needle 71 of the reproducer 69 contacts with the record near the peripheral portion thereof, as in usual and ordinary practice in the operation of phonographs.

The continued rotation of the record 68 upon the record shaft causes the message thereon to be transmitted through the reproducer to the telephone at police headquarters. It will be understood, of course, that when the arm 93 has moved the contacts 95 and 150 back to the normal position, the reproducer is again placed in the circuit so that the message is transmitted therefrom.

As the reproducer is moved inward to the end of the record, the Geneva wheel will have made one complete revolution, bringing it back to the position shown in Fig. 4 of the drawings, the cam 87 engaging the roller 86 upon the arm 84, and through the link 82 and rock arm 80, the arm 75 will be rocked back to the position shown in Fig. 3, the roller 74 upon the reproducer arm 70 rolling back to the position shown in said figure, thus lifting the reproducer off the record and carrying it back to the starting position.

Substantially at the same time the lug 141 on the underside of the Geneva wheel will pass over the cam end 140 of the arm 139, rocking the shaft 134 and through it the arm 135 in a direction to return the lever 131 to the position shown in Fig. 1. This movement of the lever 131, through the shaft 132, rocks the lever 142 back to the position shown in Fig. 1, breaking the contact between 144*a* and 145*a* and making the contact between 144*a* and 166, breaking the line connection to the telephone circuit.

Immediately after this, the cam lug 133 engages the lever 131, moving the same as described in the beginning of the operation, and swinging the lever 142 outward so as to permit the spring contact 144*a* to again close the line through the contact 145*a*. The line is again closed to the telephone exchange and the number again dialed as above described, after which the reproducer is lowered upon the record and the message again delivered to police headquarters, after which the reproducer is again raised from the record and returned to normal position, and the line closing contacts are again opened, all as above described.

This may be repeated any desired number of times, thus placing several repeated calls to police headquarters and delivering the message each time, this being for the purpose of assuring the delivery of a telephone message to police headquarters. The apparatus as illustrated is adapted to make four separate calls to police headquarters or any other station desired in this manner.

At the end of the fourth repetition of the message to police headquarters, the disk 45 has reached the position shown in Fig. 8, the notch 44 therein registering with the angular lug 43 upon the arm 35. At this point the pull of the spring 35*a* upon the arm 35 pulls the arm 34 against the outer side of the drive pawl 28, swinging the same inward and disengaging the depending lug 33 thereon from the lug 32 upon the drive disk 31. The lug 43 then enters the notch 44 in the stop disk 45 and the lug 36 drops into position as shown in Fig. 8, engaging the shoulder 37 on the driving disk and stopping the rotation thereof.

The shaft 33 is thus rocked by the movement of the arm 35 and rocks the arm 180 to the right as viewed in Fig. 4 and into the path of the lug 181 upon the friction sleeve 182 which is urged into frictional contact with the friction disk 183 fixed upon the motor shaft 14. This stops the motor from coasting, the circuit to the motor having, of course, already been broken by the swinging of the arm 109 upon the shaft 33. In order to reset the mechanism to place it in condition to be automatically operated again, the reset lever 126 is operated, operating the reset slide 121 as above described.

The initiating device and circuit which automatically starts the alarm transmitting mechanism in operation by the approach of a criminal to any protected point, as well as the inhibiting device which permits an authorized person to approach such points without initiating the alarm, are illustrated in Figs. 14 to 17 inclusive, the complete circuits for the initiating and inhibiting devices being shown diagrammatically in Fig. 14.

The A. C. 110 volt supply lines 192 and 193 lead to opposite ends of the primary winding 190 of a transformer indicated generally at 191 and provided with three secondary windings indicated at 192, 193 and 194. Wires 195 lead from opposite ends of the 300 volt secondary winding 192 to the plates 196 of a rectifier tube 197 which is

used to change this voltage current from A. C. to D. C. rectified current.

It should be understood that a local battery may be used to supply the proper current, thus eliminating the transformer and rectifier tube and substituting a D. C. amplifying tube in place of the A. C. amplifying tube 188 which will be later described. As the motor 13 could likewise be operated from the local battery, or by spring power if desired, the entire system could, if necessary, be operated by power contained within itself instead of depending upon an A. C. supply line.

The filament 189 of the rectifier tube is connected by wires 190 with opposite ends of the five volt secondary winding 183 of the transformer. In like manner the filament 191 of the amplifying tube 188 is connected by wires 192 with opposite ends of the two and one-half volt secondary winding 184 of the transformer.

A wire 193 leads from a center tap upon the 300 volt secondary winding 182 to the variable high resistances 194 and 195 of the B— supply, the high voltage then leading through the wire 196 and high resistance 197 to the B+ supply 199 which is connected by a wire 198 with a center tap of the five volt secondary winding 183 of the transformer. A positive current is thus passed through the B+ supply 199, by the wire 200 to the spaced contacts 201 of the inhibiting means floor pad 202 located adjacent to the cash drawer, cash register, safe, vault or other place to be protected which is indicated generally at 203.

A C— bias from the variable arm 204 of the resistance 194 supplies a negative current, by way of the wire 205, through the high resistance 206 to the grid 207 of the amplifying tube 188. The plate 209 of this tube is connected through the wire 210 to the windings 211 of the initiating relay and through the wire 212 and contacts 213 and 214 of the inhibiting relay 215 to the B+ supply 199.

The negative charge allows a minimum flow of plate current through the tube 188 and the plate circuit being connected, as above described, to the initiating relay 211, the same is held inoperative. The grid 207 of the amplifying tube is connected as by the wire 216 with the cash drawer or other point to be protected indicated at 203.

The floor pad 202 is provided with another series of spaced contacts 217 similar to the contacts 211 and spaced therefrom and connected to a wire 218 which leads to the terminal 219 of the employees' dial device indicated generally at 220. This device is housed in an insulation casing as shown in Fig. 16 and the central rotatable shaft 221 is provided with a knob 222 for manually rotating the same and provided with a pointer 223 adapted to be turned to any of the numerals located around the face of the dial and shown in this instance as running from naught to 12. These numerals correspond in position with contact studs 224 located within the insulation housing 220 and adapted to be selectively engaged by the conductor arm 225 carried by the rotatable shaft 221 which is electrically connected to the terminal 218.

A coil spring 226 is adapted to normally return the arm 225 to a neutral position in contact with a stud 227, the arm being adapted to be temporarily held in contact with the proper one of the contact studs 224 when the magnet 228 is energized as will be later described. One end of the magnet coil is connected to the terminal 219, the other end being connected to a terminal 229 which is connected by a wire 230 with the negative side of the battery 231, with the contact 232 of the inhibiting relay 215, and with the winding of said relay.

A manager's dial, somewhat similar to the employees' dial, may be located in connection therewith or at some remote point more convenient for the setting of the same and may comprise an insulation housing 233 having a dial such as 220, thereon, provided with a plurality of numerals corresponding to the numerals upon the employees' dial, a central rotatable shaft 234 being journaled therethrough and provided with an operating knob 235 and an indicating point 236 thereon. This shaft 234 is connected by a terminal 237 to a wire 238 leading to the winding of the inhibiting relay 215.

A plurality of contact studs 239, corresponding to the numerals upon the dial, are located within the housing 233 and adapted to be selectively engaged by the conductor arm 240 carried by the rotatable shaft 234. Each of the contacts 239 of the manager's dial is connected by a wire 241 with one of the contacts 224 of the employees' dial.

In making this connection between the two dials, the wiring may be varied so that in no two sets would the setting number be alike. For example, the dials shown in Fig. 14 are connected in such manner that when the manager's dial is set at 5 the employees' dial must be set at 6, thereby completing the circuit through both dials and holding the circuit as long as the connection is closed to the magnet 228. It should be understood that no magnet or spring is provided in the manager's dial, the conductor arm 240 being frictionally held in contact with any desired contact stud 239.

In order to prevent tampering with the manager's dial by any unauthorized person, a locked cover 242 may be provided to normally cover the dial and operating knob 235 thereof.

Normally the parts would be in the position shown in Fig. 14 with the exception that the arm 225 of the employees' dial would be held against the stud 227 by means of the coil spring 226, the circuit between the two dials being broken.

When the employee or other authorized person desires to have access to the cash drawer or the like indicated at 203, he must first have the sole or heel of his shoe properly prepared as by the provision of a metal plate or the like to make contact between the contacts 201 and 217 in the floor pad 202. The employee places his foot on the floor pad. This closes the circuit from the B+ supply 199 through the wire 200, floor pad contacts 201 and 217, wire 218 and terminal 219 through the magnet 228, terminal 229, wire 230, battery 231 and wire 210 energizing the magnet 228.

The employee, having been previously instructed as to the proper setting for the employees' dial, moves the indicator to the proper position, which in this case would be the contact 6, the magnet holding the arm 225 in this position. This completes the inhibiting circuit from the B+ supply 199, through the wire 200, floor pad contacts 201 and 217, wire 218, terminal 219, arm 225 and contact 6 of the employees' dial, through the proper wire 241 to the contact 5 of the manager's dial, through the arm 240 and terminal 237 thereof, wire 238, inhibiting relay 215, wire 230, battery 231 and back through the

wire 210, energizing the inhibiting relay 215 which breaks the contact between 213 and 214 and closes the contact between 213 and 232, thus breaking the circuit to the coil 211 of the initiating relay and preventing the contacts 101 and 108 from closing. The closing of the contacts 213 and 232 also closes a depolarizing circuit from the battery 231 through the coil 211 of the initiating relay, coming from the positive side of the battery through the wire 210, coil 211, wire 212, contacts 213 and 232 and wire 230 to the negative side of the battery 231.

The employee may thus safely handle the cash drawer 203 and the like while standing upon the floor pad with the specially prepared shoe or shoes and by setting the employees' dial at the proper position which has been previously given to him by the manager or other authorized person in charge of the setting of the manager's dial, without danger of initiating the operation of the alarm transmitting apparatus.

It should be understood that the setting of the dials may be varied as often as desired, to prevent knowledge of the same from being used by an unauthorized person such as a burglar or an employee who has been dismissed.

Should an unauthorized person, without having his shoe or shoes properly prepared to make contact across the floor pad, and without knowing the proper setting for the employees' dial, approach the cash drawer or the like shown at 203 and touch the same, contact is made from the floor pad to the cash drawer through the body of the person connecting a circuit between these two points and allowing the current to flow from the B+ supply 199 through the wire 200 to the floor pad contacts 201, through the body of the person to the cash drawer 203 and from there by the wire 216 to the grid 207 of the tube 188.

In this manner a positive current opposes the C— bias current already imposed upon this grid, and is of sufficient strength to change the condition of this grid from a negative to a positive charge. This permits excess flow of current through the plate circuit by way of the wire 200, contacts 210 and 213, wire 212 and through the initiating relay 211 and back through the wire 210, actuating the initiating relay and closing the contacts 101 and 108 which closes the motor circuit and starts the alarm transmitting apparatus in the manner above described in detail.

The B+ line ground to the floor is sufficiently sensitive that should the unauthorized person be standing away from the pad at any point within reach of the valuables, the same circuit would be completed from the floor and through his body to the cash drawer as above described.

Should an employee while standing upon the floor pad and handling the money or other valuables protected in the cash drawer, be held up, he can instantly, by a slight movement of his foot from the floor pad, which would be unnoticed by the criminal, break the circuit to the magnet 220 in the employees' dial, permitting the coil spring 226 to throw the arm 225 to the neutral position, thus instantly and silently, without any show of resistance upon the part of the employee, restoring the protection of the device to the valuables in the cash drawer, so that should the employee, robber or any other person touch the cash drawer, the alarm would be instantly initiated in a silent and undetectable manner and be transmitted in the form of an oral message over the automatic telephone system, direct to the police department, radio cruiser or other authorized location.

From the above it will be seen that the entire assembly as illustrated and described comprises a number of component parts all working together to constitute a single means for causing the apprehension of a burglar without his knowledge of the same by any visible or audible signs, or any disobedience to his commands that would warn him that an alarm has been given. When an unauthorized person attempts to remove or even touches the valuables thus protected, he instantly completes the circuit as above described, closing the contacts 101 and 108 and starting the operation of the alarm transmitting apparatus.

The burglar thus, without any knowledge that he has done so, starts the silent transmission of a message over the system shown in Fig. 18. In this figure the various parts are indicated only diagrammatically but it will be seen that through the initiating device shown at A, the silently operating alarm transmitting apparatus, indicated generally at B, is operated to prepare the line by the off-normal contacts above described and then close the circuit indicated generally at C, to the automatic telephone exchange indicated at D, the telephone number of police headquarters being dialed as above described, causing the automatic telephone exchange, through the interconnecting links therein, to connect the calling circuit C with the called circuit E leading to the instrument F at police headquarters, the record then operating as above described to silently transmit the spoken message from the alarm transmitting apparatus to the police telephone instrument F. The police telephone F may be connected to a radio broadcasting apparatus, indicated generally at G, which will broadcast the message directly to radio equipped police cars or airplanes, as indicated at H and I respectively. Thus, while the burglar is in the very act of committing a robbery, he has, by means which are inaudible and imperceptible to him, caused the transmission of a message advising of the commission of the crime to a radio equipped police cruiser which may be in the vicinity of the crime at the time.

I claim:

1. In combination with a telephone circuit, alarm transmitting apparatus including means for automatically delivering a predetermined mesage over the telephone circuit, an initiating device for automatically starting the operation of said alarm transmitting apparatus by the presence of a person at a given point, and inhibiting means including a circuit normally open at said given point and a conductor on the shoe of an authorized person for closing said circuit permitting an authorized person to approach said given point without operating said initiating device.

2. In combination with a telephone circuit, alarm transmitting apparatus including means for automatically delivering a predetermined mesage over the telephone circuit, an initiating relay for automatically starting the operation of said alarm transmitting apparatus by the presence of a person at a given point, and inhibiting means including a circuit normally open at said given point and a conductor on the shoe of an authorized person for closing said circuit permitting an authorized person to approach said given point without operating said initiating device.

3. In combination with a telephone circuit,

alarm transmitting apparatus including means for automatically delivering a predetermined message over the telephone circuit, an initiating device for automatically starting the operation of said alarm transmitting apparatus by the presence of a person at a given point, and inhibiting means including a circuit normally open at said given point and a conductor on the shoe of an authorized person for closing said circuit rendering said initiating device inoperative by the mere presence of an authorized person at said given point.

4. In combination with a telephone circuit, alarm transmitting apparatus including means silent at the point of inception for automatically delivering a predetermined message over the telephone circuit, an initiating device for automatically starting the operation of said alarm transmitting apparatus, and a circuit to said initiating device normally open at a given point and adapted to be closed through the body of a person approaching said given point, and means carried by an authorized person for preventing the closing of said circuit when such authorized person is at said given point.

5. In combination with a telephone circuit, alarm transmitting apparatus including means for automatically delivering a predetermined message over the telephone circuit, an initiating device for automatically starting the operation of said alarm transmitting apparatus, a circuit to said initiating device normally open at a given point and adapted to be closed through the body of a person approaching said given point, and inhibiting means including a second circuit normally open at said given point and a conductor on the shoe of an authorized person for closing said last named circuit and preventing the closing of said first named circuit through the body of an authorized person approaching said given point.

6. In combination with a telephone circuit, alarm transmitting apparatus including means for automatically delivering a predetermined message over said telephone circuit, an initiating device for starting the operation of said alarm transmitting apparatus, a circuit to the initiating device, means for normally supplying a minimum flow of current through said circuit whereby the initiating device normally remains inoperative, and means whereby the presence of a person at a given point will cause an excess flow of current through the circuit to operate the initiating device.

7. In combination with a telephone circuit, alarm transmitting apparatus including means for automatically delivering a predetermined message over said telephone circuit, an initiating device for starting the operation of said alarm transmitting apparatus, a circuit to the initiating device, means for normally supplying a minimum flow of current through said circuit whereby the initiating device normally remains inoperative, means whereby the contact of a person at a given point will cause an excess flow of current through the circuit to operate the initiating device, and inhibiting means including contacting means carried by an authorized person at said given point to prevent said excess flow of current to the initiating means.

8. In combination with a telephone circuit, alarm transmitting apparatus including silently operating means for automatically delivering a predetermined oral message over the telephone circuit, an imperceptible silent initiating device and means for automatically starting the operation of said alarm transmitting apparatus by the mere presence of a person at a given point.

9. In combination with a telephone circuit, alarm transmitting apparatus including silently operating means for automatically delivering a predetermined oral message over the telephone circuit, an imperceptible silent initiating device for automatically starting the operation of said alarm transmitting apparatus by the presence of a person at a given point, and inhibiting means including a circuit normally open at said given point and a conductor on the shoe of an authorized person for closing said circuit for rendering the initiating device inoperative by the mere presence of an authorized person at said given point.

10. In an automatic telephone exhange, a crime alarm comprising an alarm signal at a police station, a called line connecting said alarm with the automatic exchange, a guarded station, a calling line leading from the guarded station to the automatic exchange automatically operating connecting links for uniting the calling and the called lines to transmit an alarm, means at the guarded station for detecting the presence of a person at the guarded point, a number transmitting device adapted to operate the automatic apparatus for linking the calling with the called line, and a starting device for the number transmitting device operated by said means for detecting the presence of a person at the guarded point.

11. In a crime announcing system for automatic telephone exchanges in combination a called line from the automatic exchange to a police station, a receiving instrument connected with the line at the police station adapted for receiving spoken messages, a guarded station, a calling line leading from the guarded station to the automatic exchange, a number transmitter at the guarded station for operating the link apparatus in the automatic exchange to connect the calling with the called line, an inaudible spoken message transmitter, means at the guarded point adapted for detecting the bodily presence of a person, a number transmitter, a starting device for the said number transmitter operated by said detecting device and for connecting the spoken message transmitter with the called telephone line.

12. In a crime detecting system for an automatic telephone exchange, a telephone line leading from the exchange to a police station and a spoken message receiver of the line at the police station, a guarded station, a calling line leading from the guarded station to the automatic exchange, interconnecting links in the automatic exchange for uniting the calling with the called line, an inaudible number transmitter at the guarded station for operating the automatic exchange linking, an inaudible spoken message transmitter at the guarded station, detecting means for detecting the bodily presence of a person said detecting means being imperceptible to the person, a starting device for the number transmitter operated thereby and a starting device for the message transmitter, whereby a spoken alarm message is transmitted to the police station through the automatic telephone exchange by the mere bodily presence of an unauthorized person at the guarded station imperceptibly to the person.

13. In an automatic silent alarm transmitting system for automatic telephone exchanges, in combination a telephone circuit extending from the automatic exchange to a called telephone

station and a spoken message receiver of the circuit at the said station, a guarded station, a calling line from the guarded station to the automatic exchange, linking apparatus in the exchange for connecting the calling with the called line, an electrical detecting device at the guarded point for electrically detecting the presence of an unauthorized person, an inhibiting device for preventing the operation of the said detecting device, said inhibiting device including contacting means carried by an authorized person, an inaudible number transmitter at the guarded station connected with the line for operating the automatic exchange links to unite the calling with the called circuit, an inaudible spoken message transmitter at the guarded station for transmitting a spoken message to the called station, a starting device for the number transmitter operable by said electrical detecting means, and means for putting the spoken message transmitter into operation after the operation of the number transmitter whereby the presence of an unauthorized person only at the guarded point is caused to transmit imperceptibly and inaudibly to him a spoken alarm message to the called station.

14. In combination with a telephone circuit, apparatus including means for automatically closing said telephone circuit, means for then momentarily opening and again closing the circuit, off-normal contacts in the telephone circuit, means for automatically operating said off-normal contacts after the circuit has been finally closed, means for automatically dialing a predetermined telephone number after the off-normal contacts have been operated, means for returning the off-normal contacts to normal position after the dialing operation, a message record, means for operating said record, an automatic telephone transmitter in the circuit, and means for operatively associating the transmitter with the record after the return of the off-normal contacts to normal position.

15. In combination with a telephone circuit, apparatus including means for automatically closing said telephone circuit, means for then momentarily opening and again closing the circuit, off-normal contacts in the telephone circuit, means for automatically operating said off-normal contacts after the circuit has been finally closed, means for automatically dialing a predetermined telephone number after the off-normal contacts have been operated, means for returning the off-normal contacts to normal position after the dialing operation, a message record, means for operating said record, an automatic telephone transmitter in the circuit, means for shunting the transmitter out of the circuit during the dialing operation, and means for operatively associating the transmitter with the record after the return of the off-normal contacts to normal position.

16. In combination with a telephone circuit, alarm transmitting apparatus including silently operating means for automatically delivering a predetermined message over the telephone circuit, an initiating device for automatically starting the operation of said alarm transmitting apparatus by the presence of person at a given point, inhibiting means including a circuit normally open at said given point and a conductor on the shoe of an authorized person for closing said circuit permitting an authorized person to approach said given point without operating said initiating device, and means whereby the authorized person may render the inhibiting means inoperative.

17. In combination with a telephone circuit, alarm transmitting apparatus including silently operating means for automatically delivering a predetermined message over the telephone circuit, an initiating device for automatically starting the operation of said alarm transmitting apparatus by the presence of a person at a given point, and inhibiting means including a manually operable switch dial whereby an authorized person may approach said given point without operating said initiating device, and means for holding the switch dial operative during the presence of an authorized person.

18. In combination with a telephone circuit, alarm transmitting apparatus including silently operating means for automatically delivering a predetermined message over the telephone circuit, an initiating device for automatically starting the operation of said alarm transmitting apparatus by the presence of a person at a given point, inhibiting means including a manually operable switch dial whereby an authorized person may approach said given point without operating said initiating device, means for automatically holding said switch dial in operative position while the authorized person remans at said given point, and means for automatically returning the switch dial to neutral position when the authorized person leaves said given point.

19. In combination with a telephone circuit, alarm transmitting apparatus including silently operating means for automatically delivering a predetermined message over the telephone circuit, an initiating device for automatically starting the operation of said alarm transmitting apparatus by the presence of a person at a given point, inhibiting means including a floor pad at said given point having spaced electric contacts therein, a normally open circuit connected to said spaced contacts, and an electrical conductor adapted to be placed upon the shoe of an authorized person for closing said circuit through said spaced contacts when the authorized person stands upon said floor pad.

20. In combination with a telephone circuit, alarm transmitting apparatus including silently operating means for automatically delivering a predetermined message over the telephone circuit, an initiating device for automatically starting the operation of said alarm transmitting apparatus by the presence of a person at a given point, inhibiting means including a floor pad at said given point having spaced electric contacts therein, a normally open circuit connected to said spaced contacts, a manually operable switch dial in said circuit, and an electrical conductor adapted to be placed upon the shoe of an authorized person for closing said circuit through said spaced contacts when the authorized person stands upon said floor pad.

21. The method of protecting valuables which consists in silently and imperceptibly, at the point of inception, transmitting a message audible at the point of reception by the mere presence of a person at a certain location in the vicinity of said valuables, and in inhibiting the transmission of said message by the mere presence of an authorized person at said location in the vicinity of said valuables.

22. Apparatus for protecting valuables comprising means for silently and imperceptibly, at the point of inception, transmitting a message

audible at the point of reception by the mere presence of a person at a certain location in the vicinity of said valuables, and means carried by an authorized person for inhibiting the transmission of said message by the mere presence of such authorized person at said location in the vicinity of said valuables.

23. In combination with an automatic exchange telephone line, an alarm system comprising, a protective circuit, a motor means responsive to the disturbance of said circuit for starting the motor, a phonographic device operated thereby and having an electrical output path adapted to send an alarm message over said line impulsing means for automatically connecting said line to a particular station, said impulsing means being operative to short circuit said output path during station selection, thereby to prevent false dialing impulses and to thereafter remove said short circuit for transmission of the alarm message, and means automatically opening said output path following transmission of said message thereby to release said station and terminate the alarm.

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