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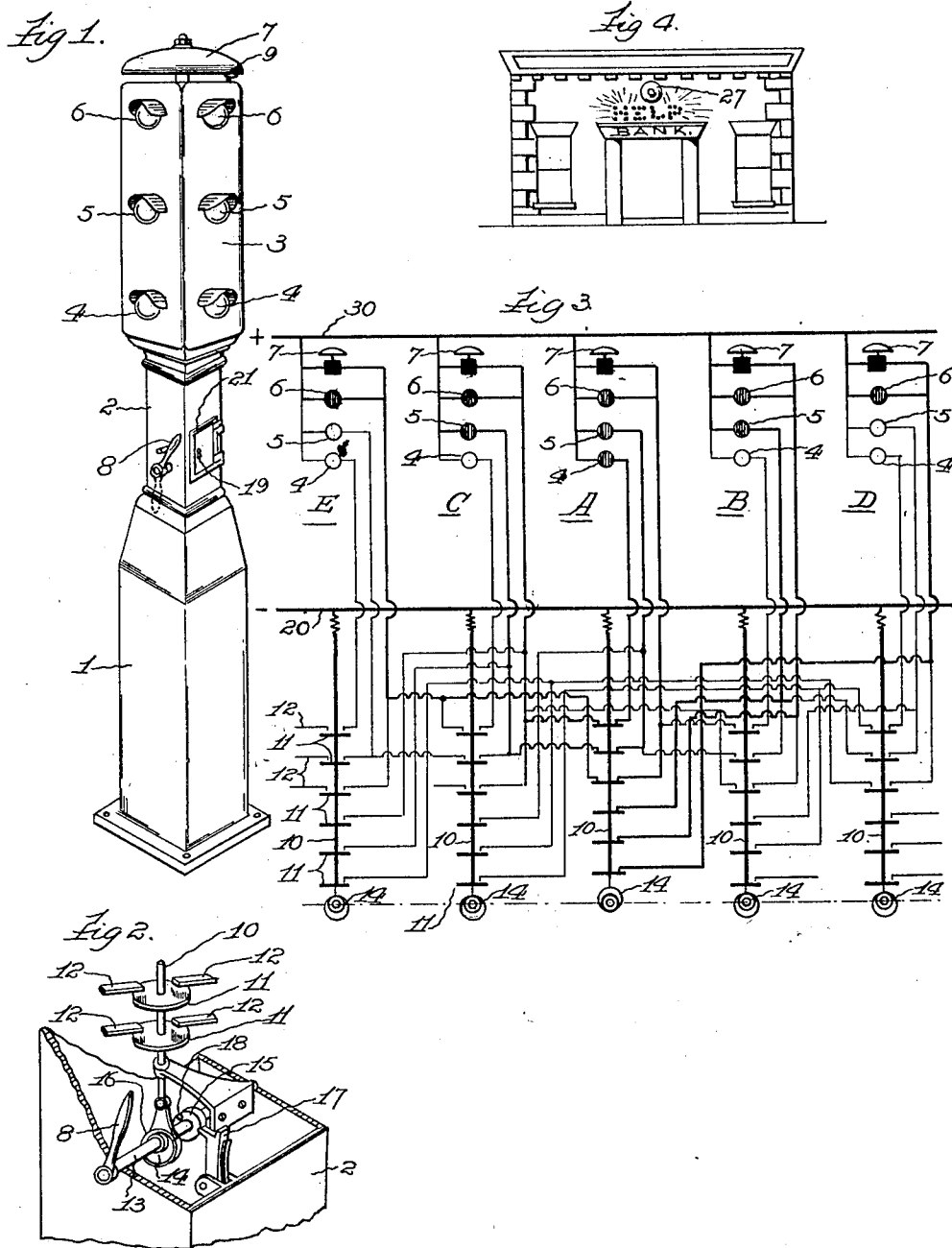
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W. PIJAKOWSKI

ALARM SIGNAL SYSTEM

Filed Sept. 19, 1925

2 Sheets-Sheet 1



Witness.
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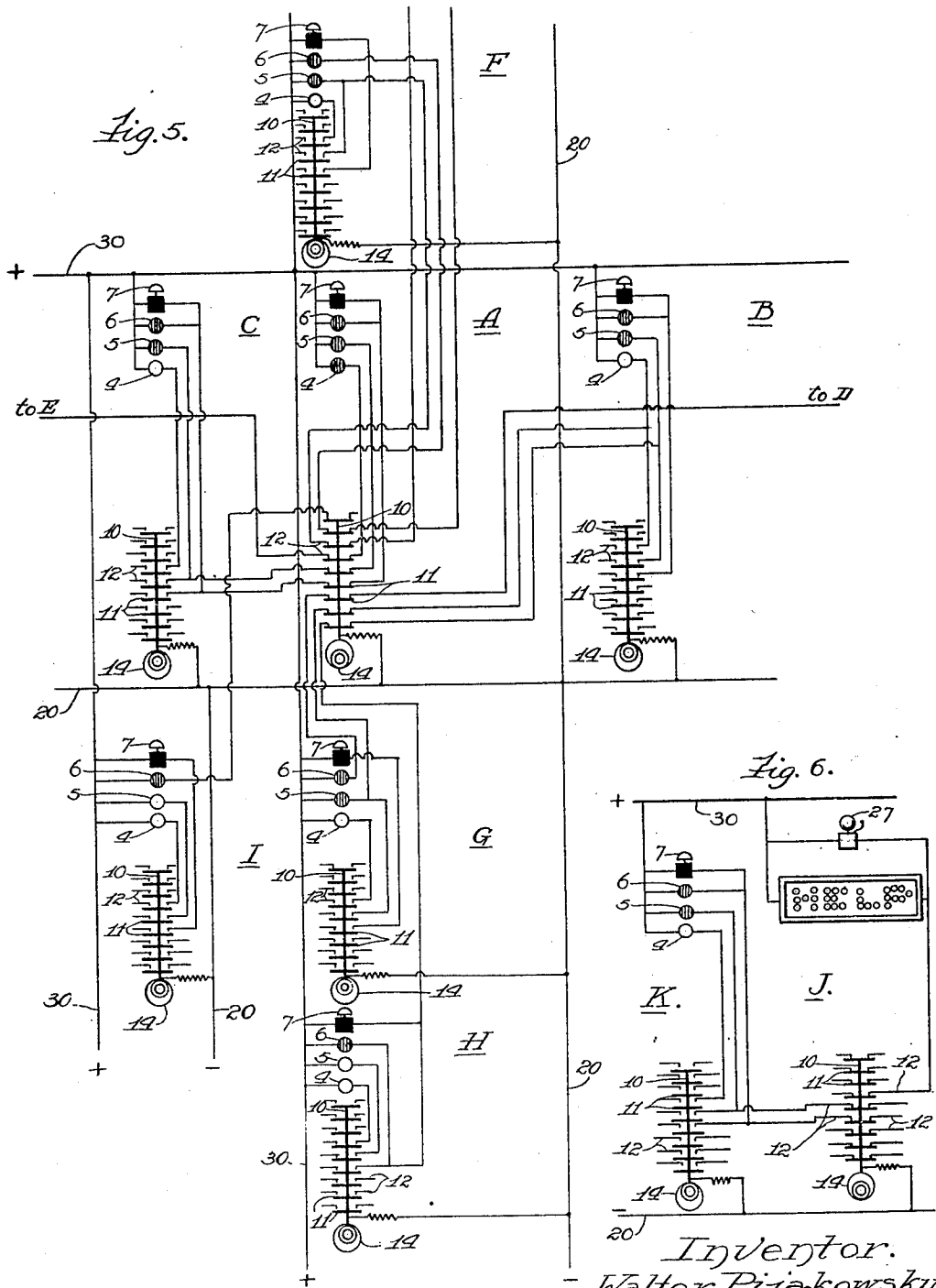
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2 Sheets-Sheet 2



Witness
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UNITED STATES PATENT OFFICE.

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ALARM SIGNAL SYSTEM.

Application filed September 19, 1925. Serial No. 57,446.

The purpose of this invention is to provide a signal system adapted for use either by the public or by the police for summoning aid to any point at which trouble may arise by means of visible and audible signal devices extending in several directions throughout a town or other locality and adapted to be energized from any one of a number of points in the locality as a center of control. For example, in the system as specifically illustrated each signaling unit is electrical in nature comprising a combination of electric lamps and an electric bell and contains as a part of the unit a switch device through which all other signaling units within a given radius may be rendered operative. As a result the general public, as well as all police officers, within the area are simultaneously notified and since the signal units are adapted to indicate from which direction and at approximately what distance the call was turned in, the public and police will tend to congregate promptly at the scene of the trouble or disturbance. As this will render the prompt capture of a miscreant almost certain, it is my belief that the adoption of a system embodying my invention would act as a strong deterrent against the commission of many crimes, particularly those involving assault, robbery, burglary, larceny and the like, in which, although the act itself may be promptly discoverable, the criminal is now able to make his escape before sufficient aid can be summoned.

The invention consists in certain combinations of features and elements as shown and described and as indicated by the claims.

In the drawings:—

Figure 1 is a perspective view of a signal unit suitable for use as a part of my invention.

Figure 2 is a perspective detail view of a part of the control switch for one unit of the system.

Figure 3 is a wiring diagram of a partial system embodying my invention.

Figure 4 is a front elevation of a building or a part thereof provided with a signaling device which may be made a part of my system.

Figure 5 is a wiring diagram using symbols similar to Figure 3, and illustrating a further extension of the system.

Figure 6 is a wiring diagram for the signaling device shown in Figure 4 as asso-

ciated with street corner signals of the type illustrated in Figure 1.

For purposes of illustration I have shown in Figure 1 a signal post comprising a base, 1, surmounted by a stem portion, 2, within which the control switch is located and supporting at a suitable height a chamber, 3, fitted with a plurality of lenses which may preferably be colored red or some other distinctive color adapted to attract prompt attention. It may be understood that each of the four sides of the chamber, 3, displays a plurality of these lenses and for the purpose of further identification, I have indicated them by the reference characters, 4, 5 and 6, in the order of their vertical arrangement, one above the other. At the top of this signal station as shown, or at any other preferred location I provide a signal gong, 7.

As an example of this system it may be supposed that a station of the type shown in Figure 1 is located at each street intersection of a town and with reference to the wiring diagram of Figure 3 we may assume that a disturbance of the peace takes place in the vicinity of the signal station, A. A bystander or police officer noting the trouble turns in an alarm by operating the switch handle, 8, of the station, swinging it down to the position indicated in dotted lines in Figure 1. This actuates the switch device within the stem, 2, and immediately lights all the lamps in that station so that a bright glow is emitted from each of the lenses, 4, 5 and 6, and simultaneously the gong, 7, is sounded by means of a continuously operating clapper at 9.

The next adjacent station at B located a block away or at any other suitable unit of distance is placed in action to the extent that its gong, 7, begins to sound and the lights at 5 and 6 are lighted while the lower lamp at 4 in the chamber, 3, is left dark. This gives notice that this particular station is not the center of the trouble but that it is located at one unit of distance from the point where the alarm was turned in. Likewise the station at C, one block from the station, A, in the opposite direction is similarly set in operation by the energizing of its bell, 7, and the lighting of its lamps at 5 and 6, the lowest lamp of the series at 4 remaining dark. At the distance of two blocks or two units, the stations, D and E, are energized so that their gongs, 7, begin to ring and their lights, 6,

glow. The unlighted lamps at 5 and 4, in these distant stations indicate that they are two units of distance removed from the point at which the control switch has been operated and thus direct the police and the public to look for signal stations at which more of the lights are visible in order to be guided to the scene of the trouble.

If it be assumed that stations A, B, C, D and E are arranged in a straight line or along a continuous street or road, it will be evident that the system can be extended transversely of this line by adding stations at either side of such initially equipped street, as for example, at the corners or intersections of the cross streets. Figure 5 illustrates such an extension of the system. It shows stations A, B and C in the same relation as in Figure 3; stations D and E are omitted to simplify the diagram, although they are taken into account to the extent that signal wires from station A are shown extending toward stations D and E respectively. Station F is indicated for a signal at a distance of one unit or one block from station A on an intersecting street. Station G is one block or unit distant from station A on the same intersecting street in the opposite direction. Station H is two blocks or units distant on the same intersecting street, while station I is one block distant from station C, and with a rectangular street plan would be likewise one block distant from station G. To provide for the necessary number of contact fingers, 12, in a system of this extent I have shown each of the switch devices with nine contact discs, 11, instead of with six discs as in Figure 3. This is only diagrammatic, however, since if the discs, 11, are circular as shown in Figure 2 they can each co-operate with as many as five or six radially arranged contact fingers, 11, for controlling the lights and bells at distant stations. However, in the diagram it is awkward to show more than two contact fingers engaging one of the discs, 11, and I have therefore increased the number of discs for the purpose of the diagram only. In Figure 5 it is assumed that the switch handle, 8, at station A has been actuated to turn its eccentric and raise the stem, 10, of the switch device for bringing the discs, 11, into contact with fingers, 12. This illuminates all three lines, 4, 5 and 6, at station A and rings the bell, 7; and the wiring diagram indicates the connections by which the switch at station A also lights the lamps 5 and 6 at stations B, C, F and G respectively, and lights the lamps, 6, only, at stations H and I, each of which is two units or blocks distant from station A. It will be understood that similar wiring connections extend from each of the stations to those adjacent, so that any station may serve as a signaling center, while throughout a limited area around the center station, the signaling lights will be energized to indicate

the distance from each station to that which is serving as the center and which is nearest the point to which it is desirable to attract attention. Obviously, after noting one of these signals a police officer will also observe the next adjacent signal in some direction in order to learn in what general direction he must travel to reach the scene of the trouble; therefore, ordinarily, he will go first to the location of the signal which he first sees, and adjacent signals in all directions will be so located that they can be seen by a person standing at any one of the signal posts, 1. When the streets are straight and laid out in rectangular arrangement it is obvious that several signals may be observable simultaneously along a given street.

As an example of the type of control switch adapted to operate signals in this manner, Figure 2 shows a vertically movable stem, 10, upon which there may be fixed a plurality of conductor disks, 11. Each circuit to be controlled by the switch terminates in a contact finger, 12, overlapping the area of one of the disks, 11, but normally out of contact therewith. The handle, 8, which is mounted exteriorly on the signal post is attached to a rock shaft, 13, having an eccentric, 14, and a locking disk, 15, fast upon it. An eccentric strap, 16, is coupled to the lower end of the stem, 10, so that as the shaft, 13, is turned the stem, 10, is raised bringing its disk, 11, into contact with the fingers, 12. It may be understood that the stem, 10, and its disks, 11, are connected to one of the circuit feed wires indicated at 20 in Figure 3, while the other feed wire, 30, is suitably coupled to the various signal elements as indicated in the diagram. Thus contact of the disks, 11, with the fingers, 12, simultaneously closes all the circuits to which these particular contact fingers, 12, may lead. A spring detent, 17, is mounted within the hollow stem, 2, of the signal station and engages the notch, 18, in the disk, 15, for holding the switch in closed position. Thereafter it may only be released by insertion of a proper key in the keyhole at 19 and opening the access door, 21, for resetting the parts to their initial position as shown in Figure 2. It may be understood that only police officers will carry keys for this purpose and that of course suitable penalties will be provided for tampering with the signal system or turning in false alarms.

Preferably the necessary cable of wires extending from the control stations throughout the system will be carried in underground conduits.

Since a system of this nature is peculiarly well adapted for the protection of banks against holdups and robberies during business hours, I propose to incorporate in the system suitable control devices located within each bank and readily accessible to the

employees and to place on the outside of the bank building in a conspicuous position an electric sign of any desired form, as for example the illuminated letters spelling the word "Help" as shown in Figure 4 and preferably having an associated signal gong, 27, so that in the event of trouble within the bank an alarm can be promptly turned in which will energize the signal stations for several blocks away from the bank as a center and the illuminated sign and letters on the bank will indicate clearly the source of the call.

Figure 6 presents a wiring diagram to indicate how an illuminated sign and alarm gong may be connected into a system such as that illustrated in Figures 3 and 5. The switch device located within the building may be similar to those provided in the signal posts, 1, having a series of contact disks, 11, and contact fingers, 12. A wire from one of the fingers, 12, extends to the illuminated sign and gong, 27, which are connected in parallel and have one permanent connection to the circuit feed wire, 30. The switch device when operated by rotation of its eccentric, 14, completes the circuit through the other feed wire, 20, as indicated in Figure 6. Additional contact fingers, 12, are connected to the lights, 5 and 6, and gong, 7, of a signal post not far distant from the building from which the alarm originates. Such building is indicated as station J, while the adjacent signal post is marked, K, in Figure 6. Station K is merely typical of other adjacent signal posts on the streets extending in various directions from the building at J. All but one of the lights at K are energized by the switch at J, indicating that the alarm has been turned in from a point one block or unit distant from station K, and serving to guide the observer toward the building at J to which his attention will be further directed by the illuminated sign and gong 27.

I claim:—

1. In an alarm system, a series of fixed stations each of which is visible from an adjacent station of the series and each having a plurality of visual signal elements and a control device operatively connected to one or more of the signal elements at each station of the series in accordance with the distance of the station from the location of the control device.

2. In an alarm system, a plurality of fixed stations each of which is visible from an adjacent station of the series and each having a plurality of signal lights and a control device operatively connected for lighting one

or more of the lights at each station simultaneously, the number of lights at each station controlled by said device being determined by the distance of the station from the control device.

3. An alarm system comprising a plurality of fixed stations each of which is visible from an adjacent station of the series and each provided with a plurality of signal lights and an audible signal, a control device at each station and connections from the control devices to the signals whereby each control device is arranged to energize the audible signals of several stations within a predetermined radius from the control device and to light one or more of the signal lights at said stations in accordance with the distance of each station from the control device.

4. In an alarm system, a plurality of fixed stations, each of which is visible from an adjacent station of the series and each having a plurality of visual signal elements and a control device at one of said stations operatively connected to one or more of the signal elements at several stations for displaying visual signals simultaneously at said stations in accordance with their distance from the location of the control device.

5. In the combination defined in claim 4, an automatic lock for holding the control device in signal operating position, said lock being normally enclosed to render it inaccessible to the public, a locked access door in the station associated with the locking device and means for unlocking the door.

6. In the combination defined in claim 4, an additional control device located elsewhere than at a signaling station connected to effect the display of one or more signals simultaneously at several stations in accordance with the distance of said stations from the location of said control device.

7. In an alarm system, a series of stations, each of which is visible from an adjacent station of the series and each having a plurality of electric signal lights and an electrically operated audible signal, an electric switch device at each station operatively connected to certain of the signal lights at said station and at other stations of the series for displaying different numbers of lights at the different stations in accordance with their distance from the particular control switch which is operated; each switch being also connected for actuating the audible signal at each station at which a signal light is energized.

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