(No Model.)

F. DRAKE.

COMBINED TELEPHONE AND DISTRICT ALARM SYSTEM.

No. 565,202. Patented Aug. 4, 1896.

Fig. 1.

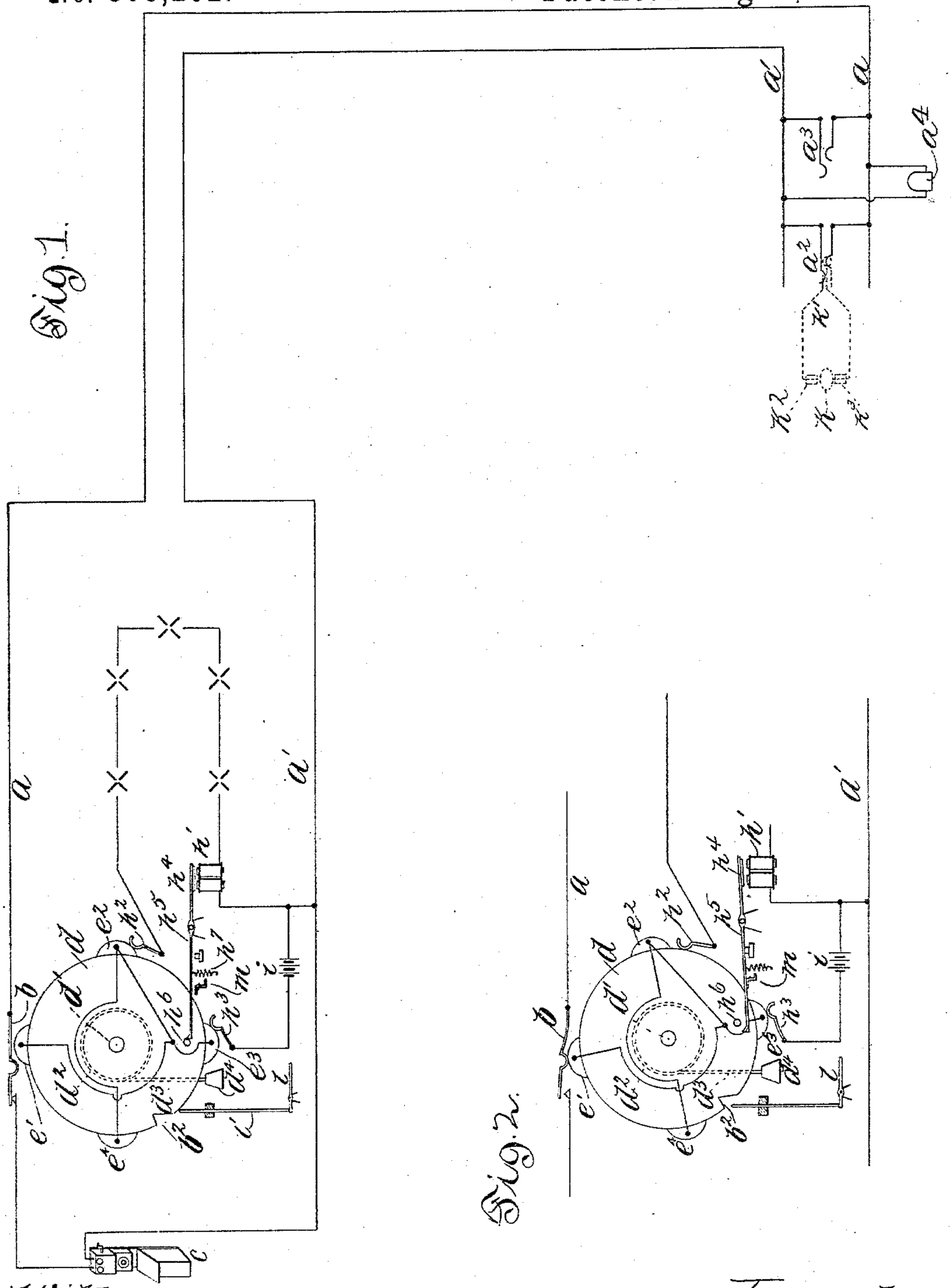

Fig. 2.

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UNITED STATES PATENT OFFICE.

FLEMON DRAKE, OF SAN FRANCISCO, CALIFORNIA.

COMBINED TELEPHONE AND DISTRICT ALARM SYSTEM.

SPECIFICATION forming part of Letters Patent No. 565,202, dated August 4, 1896.

Application filed September 26, 1894. Serial No. 524,130. (No model.)

To all whom it may concern:

Be it known that I, FLEMON DRAKE, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented a certain new and useful Improvement in a Combined Telephone and District Alarm System, (Case No. 1,) of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to a combined telephone and district alarm system, and its object is the provision of means whereby a district alarm system may be associated with a telephone-line to convey to the central station a burglar, fire, or other alarm without impairing the use of the line for talking purposes.

My invention in its preferred form comprises a telephone-line extending from a substation to the central station, a local protecting-circuit extending throughout the district to be protected, and an electromagnet or other device, through the agency of which, when the protecting-circuit is subjected to abnormal conditions, a source of electricity is thrown into circuit with the telephone-line to transmit to the central station a current which serves to actuate a bell or other device to sound an alarm.

I will describe my invention more in detail by reference to the accompanying drawings, in which—

Figure 1 is a diagram illustrating my invention. Fig. 2 is a similar view showing the telephone cut from line and the source of electricity thrown into circuit with the central station.

Like letters refer to like parts in both figures.

The limbs a a' of the telephone-line extend to the central station, where they terminate in the usual spring-jack switches a^2 a^3 and individual annunciator a^4. In one limb a of the telephone-line is provided a switch-lever b, which is adapted to open the circuit through the telephone set c. A disk d is journaled to rotate about an axis d' and is secured to a drum d^2, about which is wound a cord d^3, to the end of which is attached a weight d^4, which tends to rotate the disk d. The disk is made of insulating material and provided with peripheral projections e' e^2 e^3 e^4, adapted as the disk rotates to engage the lever b and open the circuit through the telephone set. The opposite projections are electrically connected together, as shown, while projections e^2 and e^3 are also electrically connected. Upon the projections e^2 and e^3 normally rest spring-contacts h^2 h^3, connected together through the protective circuit h, an electromagnet h', and a battery i. The protective circuit is normally closed, and the magnet h' is thus energized to attract its armature h^4, mounted upon the end of pivoted lever h^5, to thereby maintain the opposite end of said lever in engagement with a pin h^6 on the disk to prevent the rotation thereof. A spring h^7 acts to move the end of said lever h^5 out of engagement with pin h^6 when magnet h' is deënergized. If for any reason the protective circuit be opened, the magnet h' is deënergized, and the disk being thus released rotates about its axis. The projection e' comes in contact with switch-lever b to raise the same and open circuit through the telephone set, as shown in Fig. 2. By the time the disk has rotated far enough to raise lever b projection e^2 has moved out of contact with spring-contact h^2, but spring-contact h^3 still remains in contact with projection e^3, circuit being thus closed from lever b to projection e^3, spring-contact h^3, through battery i to limb a' of the telephone through central station, and back by limb a.

The annunciator a^4 may be employed to receive the signal, or preferably a bell k is included in the strands of a plug and cord k', adapted to be inserted into one of the spring-jacks during the night or other time when the protective circuit is to be used. To prevent generator calling-currents from passing through bell k, retardation-coils k^2 k^3 may be included in circuit therewith. When the weight, in descending, strikes the end of the pivoted lever l, the vertical rod l', pivoted thereto, is raised to engage by its end the notch b^2 in the disk to prevent its further rotation. A key m may be provided, adapted to be turned to engage lever h^5 and lock the same in position when it is desired to throw the protective circuit entirely out of operation.

It is evident that my invention is susceptible of numerous embodiments, and I do not therefore desire to limit myself to particulars, but,

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a combined telephone and alarm system, the combination with a telephone-line extending from the substation to the central station, of a telephone set at the substation, a responsive device or indicator at the central station, a switch included in one limb or side of the telephone-circuit for opening the circuit through the telephone set, a rotating disk carrying projections or contact-terminals arranged at intervals around the periphery of the disk and adapted to successively engage and open the switch as the disk rotates, said contact-terminals being electrically connected in pairs, a spring or contact-brush adapted to make electrical contact with said contact-terminals and adapted to engage one of the contact-terminals at the same time that the terminal electrically connected therewith engages the switch controlling the continuity of the circuit through the telephone set, a battery included in circuit between said spring and the second side or limb of the telephone-line, whereby the circuit of the battery may be closed over the limbs of the telephone-line and through the indicator at the central station, a second spring or contact-brush adapted to engage said contact-terminals, a protective circuit, and an electromagnet included between said second spring and the second side or limb of the telephone-line, a lock for maintaining the disk against rotation, said lock being controlled by said electromagnet, the contact-terminals upon which said springs normally rest being electrically connected, whereby the electromagnet, battery and protective circuit are normally included in a local circuit and any disturbance of the protective circuit actuates the electromagnet to release the rotating disk and transmit a signal to the central station; substantially as described.

In witness whereof I hereunto subscribe my name this 20th day of September, A. D. 1894.

FLEMON DRAKE.

Witnesses:
A. E. COCHRAN,
THOS. M. O'BRIEN.