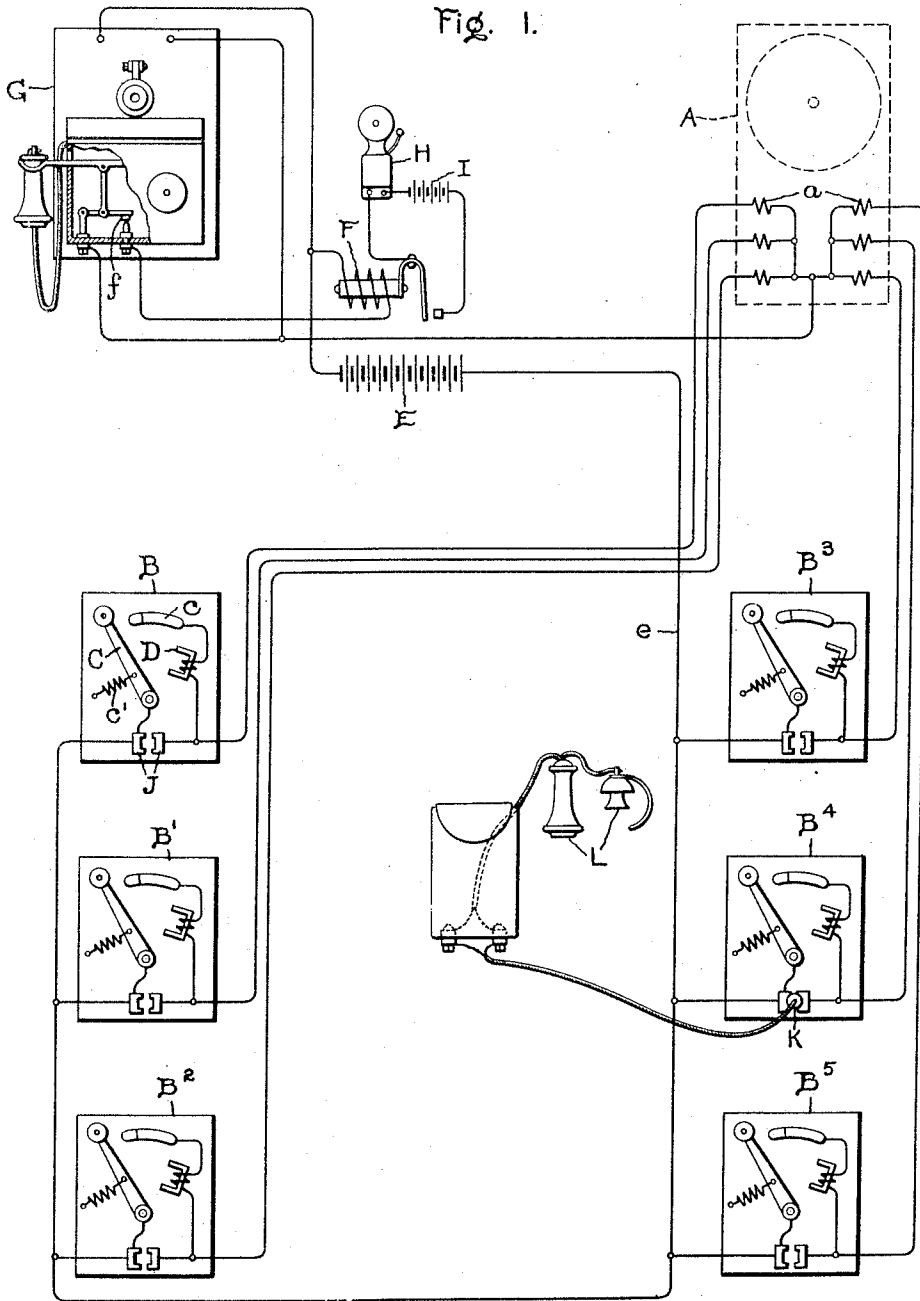


F. G. DURYEE.
 COMBINED WATCHMAN'S CLOCK AND TELEPHONE SYSTEM.
 APPLICATION FILED MAR. 8, 1910.

1,010,415.

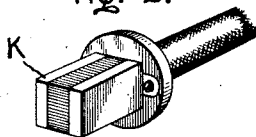
Patented Dec. 5, 1911.



WITNESSES:

Heater H. Friedman.
 J. Ellis Elm.

Fig. 2.



INVENTOR

FRED. G. DURYEE.

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UNITED STATES PATENT OFFICE.

FREDERICK G. DURYEE, OF FORT WAYNE, INDIANA, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

COMBINED WATCHMAN'S CLOCK AND TELEPHONE SYSTEM.

1,010,415.

Specification of Letters Patent.

Patented Dec. 5, 1911.

Application filed March 8, 1910. Serial No. 548,037.

To all whom it may concern:

Be it known that I, FREDERICK G. DURYEE, a citizen of the United States, residing at Fort Wayne, county of Allen, State of Indiana, have invented certain new and useful Improvements in a Combined Watchman's Clock and Telephone System, of which the following is a specification.

My invention relates to watchman's clock recorder systems, such as are in common use to enable a watchman to record at a central point the times when he passes different stations in making his rounds, and the object of my invention is to adapt such a system for use also as a telephone system to enable the watchman on his rounds to communicate from any one of the stations with the head watchman, or other person, at the central office.

The ordinary watchman's clock recorder system comprises a clock recorder at the central office, a number of circuits extending from the clock recorder to the several stations, and means at each station for closing the circuit at that station to actuate the clock recorder. A common return is ordinarily employed for the several circuits.

My invention consists in placing in circuit with each station a time limit device with signaling means controlled thereby so as to be actuated when the circuit at any station is kept closed for a predetermined time, together with means for cutting a telephone into circuit at any of the stations. A single time limit device may be placed in the portion of the circuit common to all the circuits, so as to be operable from all the stations. With the watchman's system thus arranged, if a watchman passing the station merely wishes to actuate the recording clock, he closes the circuit at that station momentarily. If he wishes to talk with the head watchman, he closes the circuit for a longer time so as to actuate the time limit device and the signaling means controlled thereby. The head watchman is thus notified that he is wanted, and cuts his telephone into circuit. This reduces the current in the circuit, since the telephone is of high resistance,

and I preferably employ indicating means at each station, responsive to this decrease in current, for indicating that the telephone at the central office is cut into circuit. The watchman at the station then cuts his telephone into circuit and communicates through it with the central office.

My invention will best be understood by reference to the accompanying drawings in which—

Figure 1 shows diagrammatically a combined clock recorder and telephone system arranged in accordance with my invention, and Fig. 2 shows a detail of the plug for making the telephone connection.

In the drawings, A represents the clock recorder, which is merely indicated in outline, since the structure of such devices is well understood in the art and forms no part of my invention. Certain of the actuating magnet coils of the clock are indicated at *a*. These coils are included in the circuits which run to the several stations, of which I have indicated six on the drawing, numbered B to B⁵. Of course, the number of stations may be very much larger than this. At each station is a pivoted arm C which may be moved into engagement with a contact *c* so as to close the circuit at that station. The arm is normally held in "off" position by a spring *c'*. This spring also serves to return the arm to "off" position after it has been moved into engagement with the contact *c* and released. Thus, if the arm C is simply moved to a mid position, that is, to an approximately vertical position and then released, the circuit at that station is momentarily closed and the recording clock actuated in the usual manner. If the arm C is moved to the extreme "on" position, it is held in that position by a magnet D which is in series with the circuit. The several circuits have a common portion consisting of the common return wire *e*, a battery E, the heating coil F of a thermostat, and contacts *f* actuated by the hook supporting the receiver of a telephone G. When the arm C is moved to the extreme "on" position and held there by its magnet D, the current

flowing through the heating coil F causes the thermostat, after a predetermined time, to close a local circuit containing a bell H and source of current I. This notifies the head watchman that some other watchman wishes to speak to him. When he moves the receiver of the telephone G from the hook, the circuit of thermostat F is opened at contacts *f* and the telephone G cut into circuit in its place. The resistance of the telephone is much higher than that of the thermostat, so that the current is greatly reduced when the head watchman takes the receiver from the hook. This decrease in current causes the magnet D to release the arm C at the station, so that the arm is pulled back to "off" position by the spring *c'*. The watchman at the station now cuts in the portable telephone which he carries with him by means of a plug K (shown at station B*) and contacts J. This plug, as is shown in Fig. 2, comprises simply two contact pieces separated by a strip of insulation so that the portable telephone apparatus L is cut into circuit between the contacts J. As soon as the conversation is over, the plug K is withdrawn and the receiver of telephone G replaced on the hook, and the system is restored to its former condition. Thus, it will be seen that by means of my invention, without in any way interfering with the normal operation of the system as a watchman's clock system, simple and ready means for telephonic communication is provided between each of the stations and the central office.

I do not desire to limit myself to the particular arrangement of parts shown and described, but aim in the appended claims to cover all modifications which are within the spirit and scope of my invention.

What I claim as new and desire to secure by Letters Patent of the United States, is,—

1. A combined watchman's clock and telephone system, comprising a watchman's clock recorder, a plurality of circuits extending from said recorder to the several stations, means at each station for closing the circuit at that station to actuate the recorder, a time limit device included in said circuit, a signaling device controlled by said time limit device so as to be actuated when said circuit is kept closed a predetermined time, and means at each station for cutting a telephone into the circuit at that station.

2. A combined watchman's clock and telephone system, comprising a watchman's clock recorder, a plurality of circuits extending from said recorder to the several stations, said circuits having a common return, means at each station for closing the circuit at that station to actuate the recorder, a time limit device included in the

portion of the circuit common to all the circuits, a signaling device controlled by said time limit device so as to be actuated when any one of said circuits is kept closed a predetermined time, and means at each station for cutting a telephone into the circuit at that station.

3. A combined watchman's clock and telephone system, comprising a watchman's clock recorder, a plurality of circuits extending from said recorder to the several stations, said circuits having a common return, means at each station for closing the circuit at that station to actuate the recorder, a time limit device included in the portion of the circuit common to all the circuits, a signaling device controlled by said time limit device so as to be actuated when any one of said circuits is kept closed a predetermined time, means at said signaling device for cutting a telephone into said common portion of the circuit, means at said station for indicating the cutting in of said telephone, and means for cutting into circuit a telephone at said station.

4. A combined watchman's clock and telephone system, comprising a watchman's clock recorder, a plurality of circuits extending from said recorder to the several stations, said circuits having a common return, means at each station for closing the circuit at that station to actuate the recorder, a time limit device included in the portion of the circuit common to all the circuits, a signaling device controlled by said time limit device so as to be actuated when any one of said circuits is kept closed a predetermined time, means at said signaling device for cutting a telephone into said common portion of the circuit, indicating means at said station responsive to the decrease of current incident to the cutting in of said telephone, and means for cutting into circuit a telephone at said station.

5. A combined watchman's clock and telephone system, comprising a watchman's recorder, a plurality of circuits extending from said recorder to the several stations, said circuits having a common return, a movable switch member at each station, means for normally holding said member in "off" position and returning it to said position when released, a contact adapted to be engaged by said member to close the circuit at said station to actuate said recorder when the member is moved to extreme "on" position or to a mid position, a magnet in said circuit for retaining said member in extreme "on" position, a time limit device included in the portion of the circuit common to all the circuits, a signaling device controlled by said time limit device so as to be actuated when any one of said movable members is maintained in "on" posi-

tion, means at said signaling device for
cutting a telephone into circuit, the retain-
ing magnet for the movable member being
adapted to release said member upon the re-
duction of current incident to cutting said
5 telephone into circuit, and means for cut-
ting a telephone into circuit at any station.

In witness whereof, I have hereunto set
my hand this 4th day of March, 1910.

FRED. G. DURYEE.

Witnesses:

JAMES J. WOOD,

EDWARD A. BARNES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."