

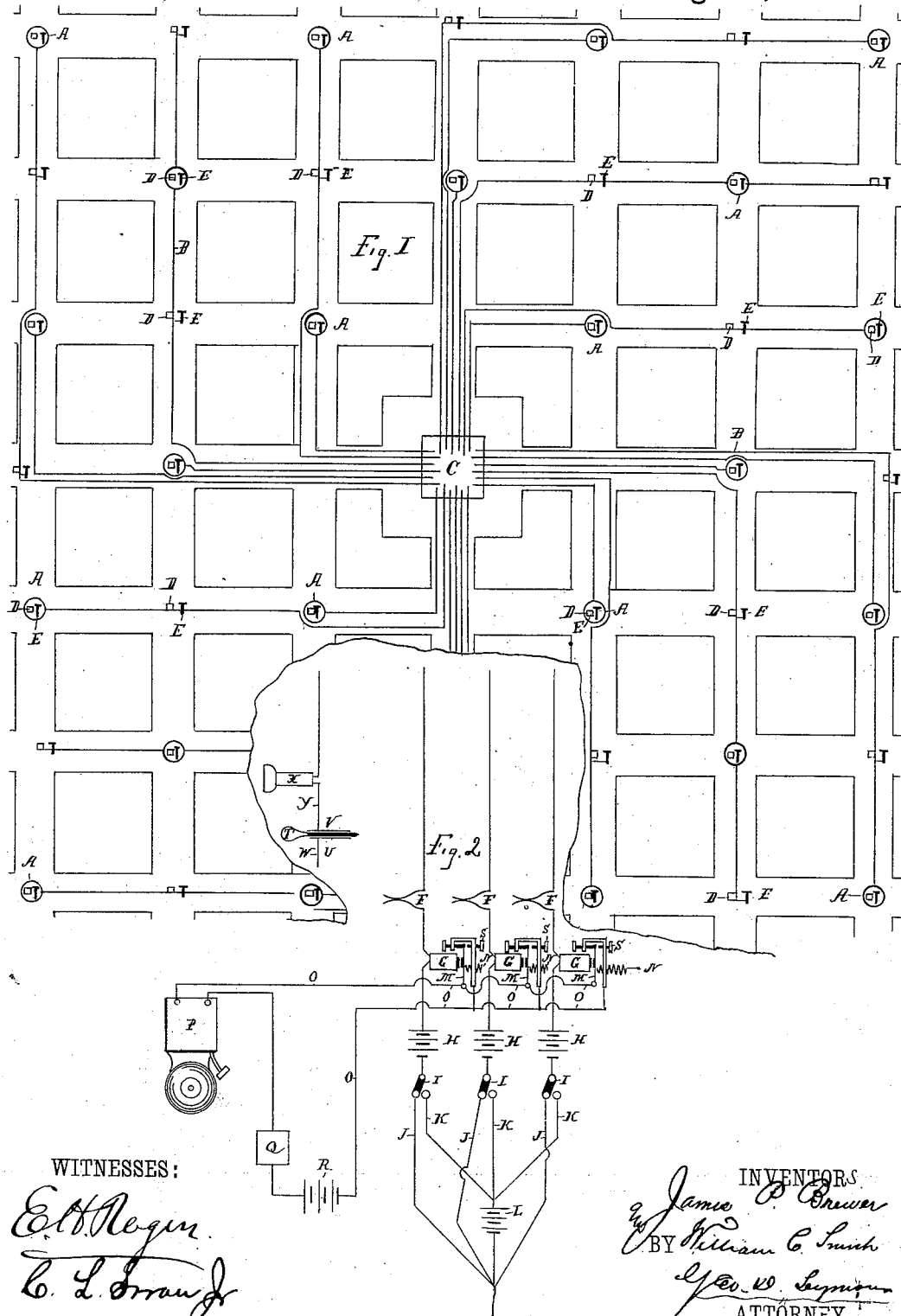
(No Model.)

2 Sheets—Sheet 1.

J. P. BREWER & W. C. SMITH.  
APPARATUS FOR SIGNALING POLICEMEN.

No. 347,318.

Patented Aug. 17, 1886.



WITNESSES:

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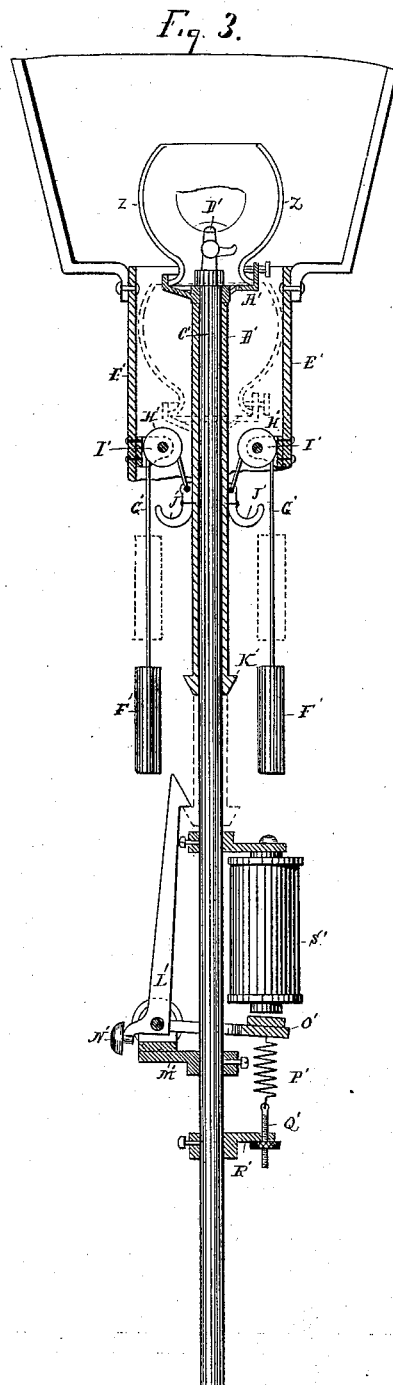
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WITNESSES:

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# UNITED STATES PATENT OFFICE.

JAMES P. BREWER AND WILLIAM C. SMITH, OF NEW HAVEN, CONN.

## APPARATUS FOR SIGNALING POLICEMEN.

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SPECIFICATION forming part of Letters Patent No. 347,318, dated August 17, 1886.

Application filed April 28, 1885. Serial No. 163,779. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES P. BREWER and WILLIAM C. SMITH, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Apparatus for Signaling Policemen; and we do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, which form a part of this specification.

Our invention relates to improved apparatus for communicating with policemen while on their beats from a directing-station, the object being to improve the general efficiency of police service.

With this end in view our invention comprehends an apparatus consisting of visual signals distributed throughout a field under surveillance and adapted to be electrically operated, a common directing-station, and electrical connections for the operation of the signals therefrom.

Our invention further comprehends visual signals distributed throughout a field under surveillance and adapted to be electrically operated, a common directing-station for the signals, electrical connections for the operation of the signals therefrom, annunciating apparatus located at the station and connected with the field, and telephonic or equivalent means for communication between the station and field.

Our invention further consists in an apparatus having certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a diagram showing visual signals distributed throughout a field of surveillance, connections between the several signals and a directing-station, and call-boxes and telephones located in such connections, both at the signals and at other points therein. Fig. 2 is a detail diagram showing one arrangement for the connections within the directing station; and Fig. 3 is a view, partly in elevation and partly in vertical central section, of one form which our improved signal may assume.

The diagram shown by Fig. 1 of the drawings represents signals A, located at the inter-

sections of the streets of a field of surveillance, and each provided with independent electrical connection, through lines B, with a directing-station, C, preferably located in the center of the field. Call-boxes D and telephones E are located in the several lines B, both at the signals and at other points along the lines, which, as shown, are in some cases extended and grounded beyond the signals.

As shown by Fig. 2 of the drawings, each line leads into a spring-jack, F, thence through relay-magnets G, and thence to a light battery, H, connected with a switch-key, I, arranged for engagement with a terminal of a line, J, leading to the ground, and with a terminal of a line, K, leading to a heavy battery, L, from which lines are extended within the range of the switch-keys of all the lines leading to the signals. The terminals of the said ground and heavy-battery lines are placed so that the switch-keys engage with one before entirely leaving the other, whereby interruption of the circuits is avoided. Each of the relay-magnets controls an armature, M, provided with a spring, N, and located in a local circuit, O, including a bell, P, a register, Q, and a battery, R, and closed through terminals S, with which the armatures are engaged when released by the demagnetization of the relay-magnets. The spring-jacks are used in conjunction with a plug, T, having plates U and V, insulated from each other, and respectively grounded through a line, W, and connected with a telephone, X, through a line, Y, as shown.

That form of signal represented in Fig. 3 of the drawings is provided with a colored glass globe, Z, secured to a fixture, A', located upon a tube, B', fitting over and adapted to be vertically adjusted upon the supply-pipe C' of a gas-burning street-lamp, the burner D' of which is inclosed by the globe when the tube is raised, and exposed when it is pulled down, in which latter adjustment of the tube the globe is retired within the casing E' of the signal. Weights F', connected with the tube by means of cords G', running over pulleys H', mounted in brackets I', secured to the said casing, are employed for raising the tube for displaying the globe, and hooks J', secured to the tube, are provided for drawing it down for

retiring the globe. The lower end of the said tube is provided with a collar, K', which is engaged, when the tube is pulled down and the globe retired, by a latch, L', pivotally mounted in a frame, M', secured to the pipe C', and provided with a button, N', as shown. An armature, O', connected with the latch aforesaid, and controlled by a spring, P', attached to an adjustable screw, Q', mounted in a frame, R', secured to the said pipe, is located in the presence of the poles of an electro-magnet, S', included in the circuit through the directing-station and signal. A circuit is normally closed through the said electro-magnet, the call-boxes on the line, the spring-jack, the relay-magnet, the light battery, and the ground, and the latch is normally engaged with the collar of the tube, whereby the globe is kept out of sight within the casing, as shown by the broken lines in Fig. 3 of the drawings.

The current of the light battery is not sufficiently powerful to cause the electro-magnet to operate its armature in disengaging the latch from the collar of the tube, but only powerful enough to operate the relay located in the line. Therefore when it is desired to operate one of the signals the officer on duty at the directing-station momentarily shifts the switch-key of such signal to close a circuit, through the heavy battery, without, however, breaking the circuit through the line of the signal. With the heavy battery in the circuit, the electro-magnet of the signal attracts its armature, and thus operates the latch in releasing the tube, which is at once raised by the weights for displaying the globe, which surrounds the burner of the lamp. As soon as a policeman sees the signal, to which his attention will be attracted, if at night, by the color of the light, he at once operates the call-box at the signal, or the call-box most convenient at the time, and thus breaks the circuit through the line in which the call-box operated is located, and demagnetizes the relay-magnet in such line and releases the armature held by the same, permitting it to close the local circuit, which is followed by the sounding of the bell and the operation of the register, which indicate to the officer by the number of strokes upon the bell and the number recorded the location of the call-box being operated, for the several call-boxes are constructed and adapted to strike a different number upon the bell and record a different number on the register for each box. After receiving the policeman's signal through the bell and register the officer inserts the plug into the spring-jack of the line in use, and thus connects the telephone with such line and cuts off the relay-magnet and light battery from it without interrupting the circuit through the former. Then the officer talks with the policeman signaled, who has meanwhile placed a telephone in connection with the directing-station. After the policeman has received instructions the telephones are taken out of cir-

cuit, the globe of the signal operated is retired by the policeman, who pulls the tube down, by means of the hooks, until the latch re-engages with the collar located upon its lower end, and the signal is left with a circuit closed through its electro-magnet, the call-boxes on the line, the relay-magnet, the light battery, and the ground.

Upon occasion the policeman may operate the signals direct, and the buttons upon the latches are provided for facilitating such operation. Upon occasion, also, the policeman may call up the directing-station by operating the call-boxes at the several signals, or in the lines of the same. The utilization of the line-wires for the location of call-boxes and telephones or call-boxes alone at convenient points increases the efficiency of the service and promotes the public safety generally, and arrangements may be made for their use by citizens, as well as by members of the police and fire service.

It will thus be seen that by means of our invention policemen may be speedily and silently signaled and directed while in any part of the field under surveillance from the directing-station, and also that upon occasion the directing-station may be communicated with from the field by members of the police or fire service, or by citizens.

It is apparent that the apparatus herein shown and described may be modified without departing from our invention. Thus several signals may be located upon one line, instead of each signal having independent connection with the directing-station, and instead of operating the signals on closed circuits they may be operated upon open circuits. The call-boxes and telephones may be dispensed with, if desired, or the former may be used in conjunction with a code of signals without the telephones. Again, when a signal is located near a telephone, such telephone may be used, instead of locating a special telephone at the signal. The signal proper may be retired, as well as displayed, by the use of suitable mechanism set into operation by an electric current controlled at the directing-station. Furthermore, our invention comprehends all forms of visual signals when distributed throughout a field of surveillance and arranged to be operated electrically from a directing-station, whether the signals are designed for use by day or by night, or both, and whether the signal is made of glass or other material, or is given by the modification of the flame of a light. We would therefore have it understood that we do not limit ourselves to the exact construction shown and described, but hold ourselves at liberty to make such changes and alterations as fairly fall within the spirit and scope of our invention.

We reserve the right to claim the method disclosed herein, having made the same the subject-matter of an application filed by us on or about the 24th day of August, 1885, and serially numbered 175,128.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. An apparatus for communicating with policemen while on their beats from a directing-station, consisting in electro-magnetically-operated visual signals distributed throughout the field under surveillance, a common directing-station, and electrical connections between such signals and the directing-station, substantially as set forth.

2. An apparatus for communicating with policemen while on their beats from a directing-station, consisting in visual signals distributed throughout the field under surveillance, and adapted to be electrically operated, electrical connections between the signals and a directing-station, annunciating apparatus located at the station and connected with the field, and telephonic or equivalent means of communication between the station and field, substantially as set forth.

3. An apparatus for communicating with policemen while on their beats from a directing-station, consisting of visual signals distributed throughout the field under surveillance, and adapted to be electrically operated, electrical connections between the signals and the directing-station, call-boxes and telephones located in said connections, and annunciating and telephonic apparatus located at the directing-station and connected with the said call-boxes and telephones, substantially as set forth.

4. An apparatus for communicating with policemen while on their beats from a directing-station, consisting of visual signals distributed throughout the field of surveillance, and adapted to be electrically operated, electrical connections between the signals and a directing-station, call-boxes and telephones located in such connections, annunciating and telephonic apparatus located at the station, light batteries for operating the said annunciating apparatus, and a heavy battery for

operating the signals, and switched into circuit upon occasion, substantially as set forth.

5. An apparatus for communicating with policemen while on their beats from a directing-station, consisting of visual signals employing colored lights distributed throughout a field under surveillance, and adapted to be electrically operated, a common directing-station, and electrical connections between the signals and the directing-station, substantially as set forth.

6. An apparatus for communicating with policemen while on their beats from a directing-station, consisting of visual signals employing colored shades adapted to be electrically operated, and applied to street-lamps distributed throughout the field under surveillance, a common directing-station for such signals, and electrical connections between the signals and the directing-station, substantially as set forth.

7. A visual signal consisting of a movable globe, a burner, electrically-controlled mechanism for keeping the globe in normal retirement, and weights for operating the globe to inclose the burner when it is released through the said mechanism, substantially as set forth.

8. A visual signal consisting of a globe attached to a fixture located upon a movable tube inclosing the supply-pipe of a gas-burning street-lamp, a burner, a latch engaging with the tube for holding the globe without the range of such burner, electro-magnets, and an armature for controlling the latch in its engagement with the tube, and means for raising the tube for inclosing the burner by the globe, substantially as set forth.

In testimony whereof we sign this specification in the presence of two subscribing witnesses.

JAMES P. BREWER.  
WM. C. SMITH.

Witnesses:

WM. N. BUCKLEY,  
GEO. D. SEYMOUR.