

E. J. KINGSLEY, J. GREENE & W. G. SADLEIR.
POLICE SIGNAL DEVICE.

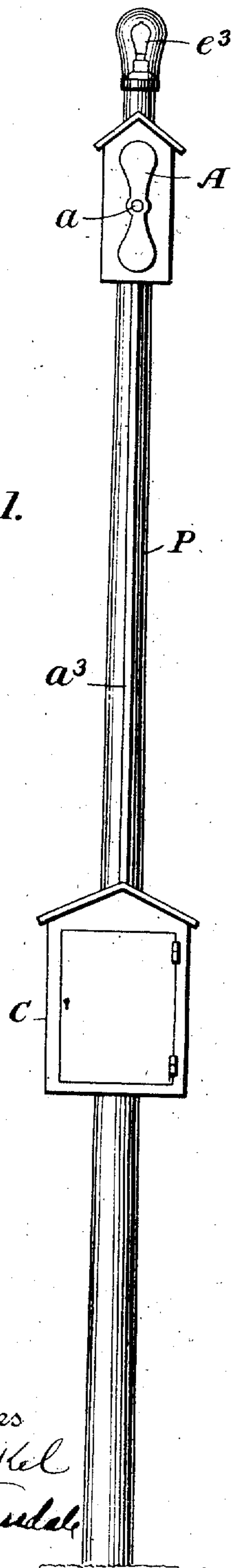
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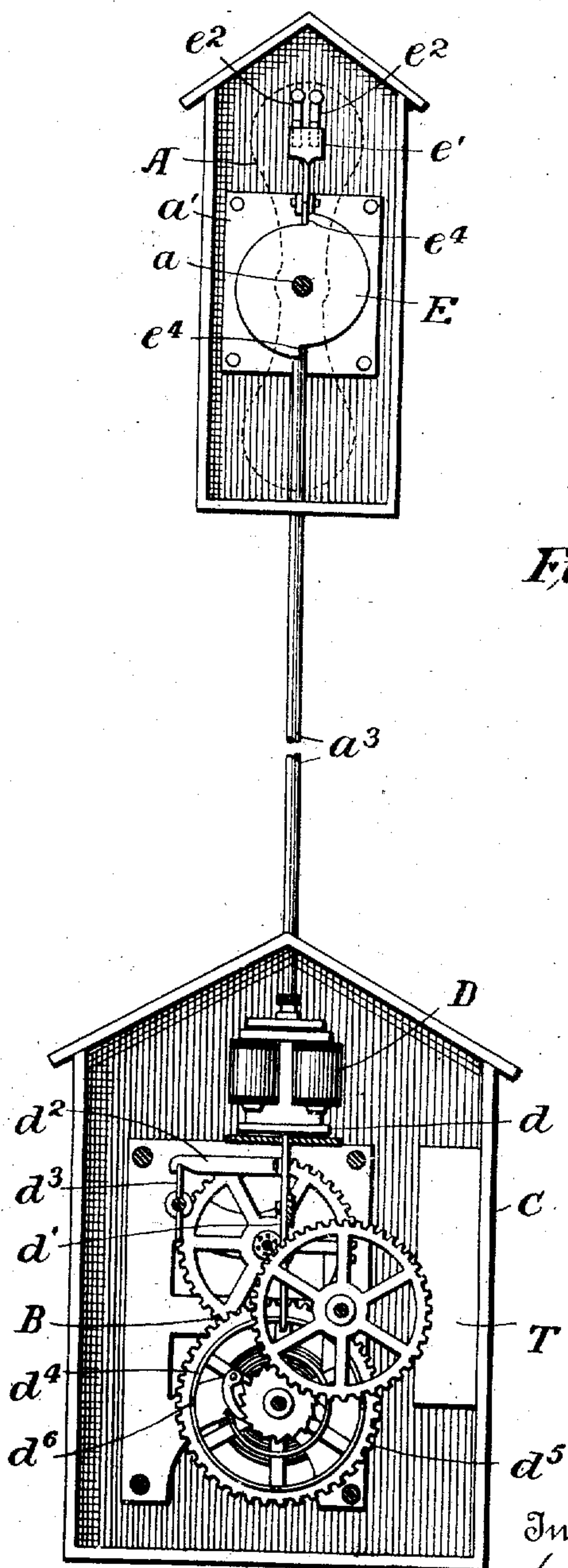
2 SHEETS—SHEET 1.

Fig. 1.



Witnesses
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Fig. 2.



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2 SHEETS—SHEET 2.

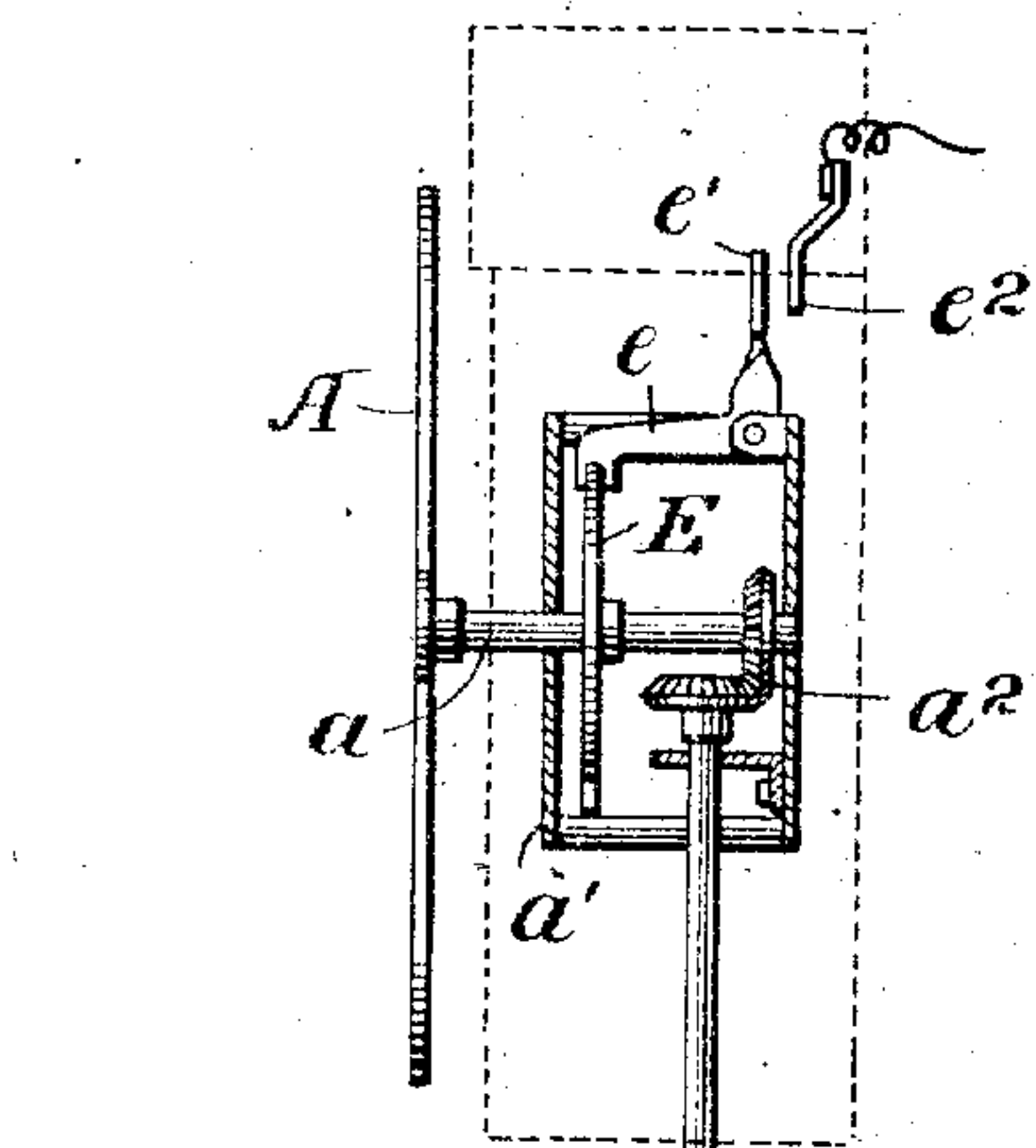
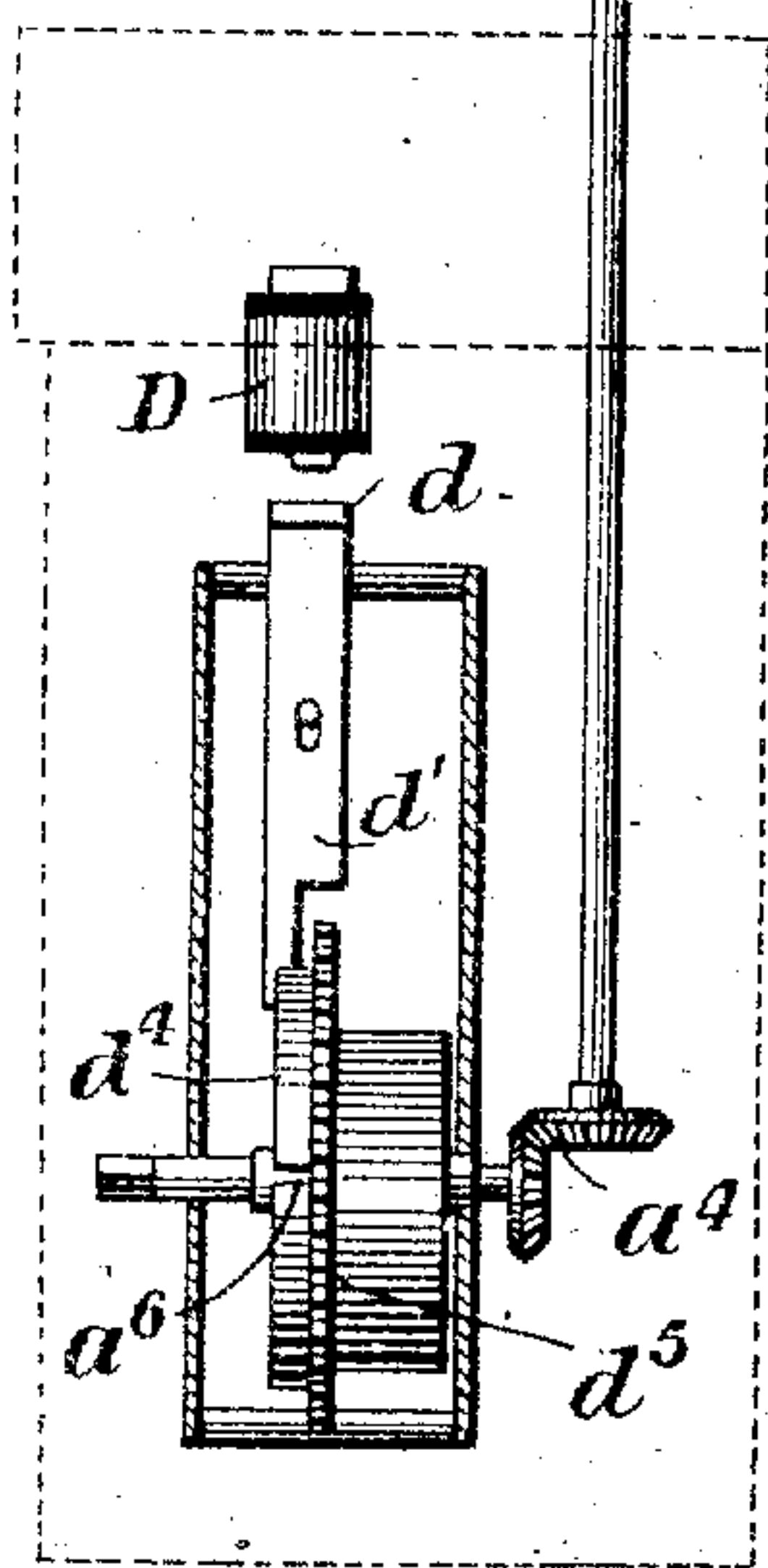


Fig. 3.



Witnesses
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H. L. Sausdale

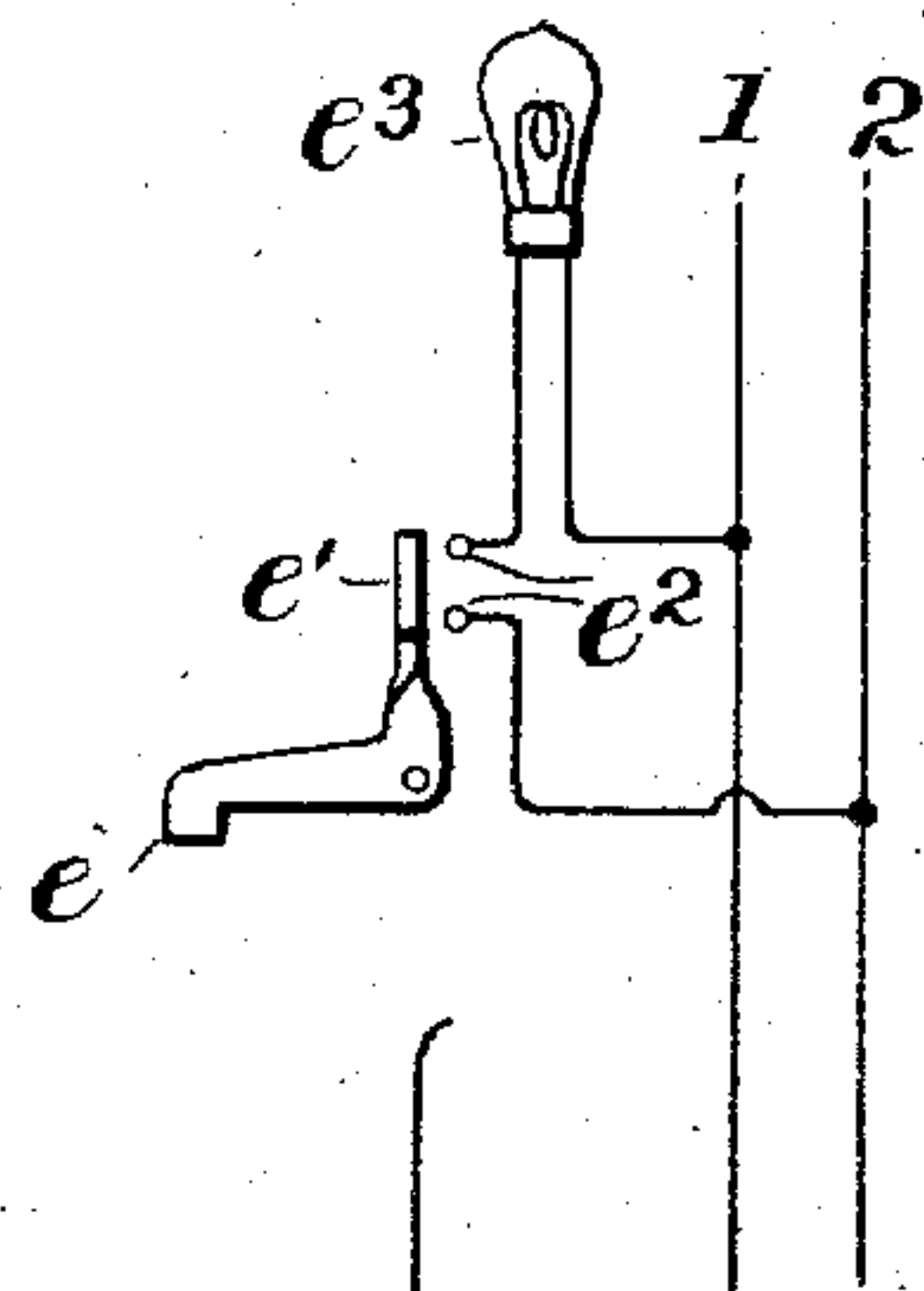
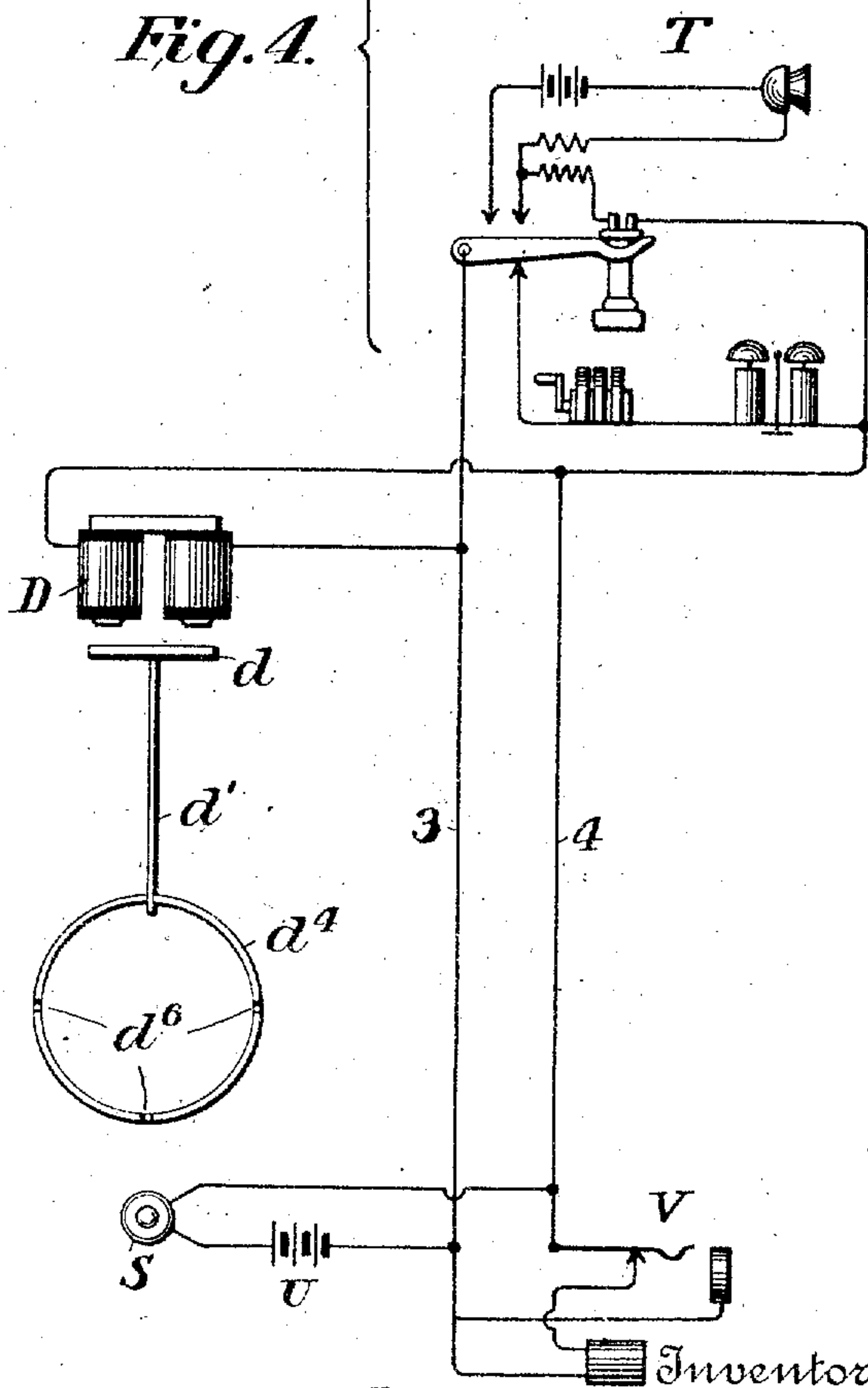


Fig. 4.



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UNITED STATES PATENT OFFICE.

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POLICE SIGNAL DEVICE.

976,578.

Specification of Letters Patent.

Patented Nov. 22, 1910.

Application filed December 13, 1907. Serial No. 406,370.

To all whom it may concern:

Be it known that we, EARL J. KINGSLEY, JOHN GREENE, and WILLIAM G. SADLEIR, citizens of the United States, residing at Salt Lake City, in the county of Salt Lake and State of Utah, have invented certain new and useful Improvements in Police Signal Devices, of which the following is a specification.

Our invention relates to transmitting signals to a distance, and more particularly signaling from a central police station or office to a patrolman or officer upon a beat in order to attract his attention and cause him to communicate with the central station at times other than his regular time to report.

Our invention has for its object the provision of efficient and reliable apparatus at the patrol station, controlled from the central station, to notify the patrolman to communicate with the central station and receive instructions.

The invention is illustrated in the accompanying drawings, and will be understood by reference thereto in connection with the following description and appended claims.

In the drawings, Figure 1 is a general view showing a patrol station equipped in accordance with the invention; Fig. 2 is a front view on an enlarged scale, the pole being omitted and the fronts of the casings removed to show the construction and arrangement of the apparatus; Fig. 3 is a view in side elevation of the apparatus shown in Fig. 2, the wheels of the clock train being omitted to avoid complication; and Fig. 4 is a diagram of circuits.

Referring to the drawings, A is a signal arm mounted upon shaft *a* journaled in frame *a'* which is mounted in a suitable housing, in some conspicuous place such as near the top of a pole P. Shaft *a* is operated through bevel gears *a²*, rod *a³* and bevel gears *a⁴*, by suitable driving mechanism, such as a clock train B located in a convenient place upon the pole accessible from the ground and protected by a suitable housing C. The rod *a³* may be any desired length, according to the distance between the driving mechanism and the signal arm, and enables us to vary this distance and the height of the pole at will.

Mounted upon the frame of the clock

train B is a controlling electro-magnet D, the armature *d* of which is connected to a bar *d'* which carries a detent *d²* engaging the fly *d³* of the clock train. The lower end of bar *d'* is arranged to ride upon and be supported by a cylindrical surface *d⁴* carried by wheel *d⁵*, or to drop into the notches *d⁶*.

Shaft *a* of signal arm A carries a cam E which engages arm *e* of a bell-crank lever, to force the other arm *e'* thereof into engagement with contacts *e²*, *e²* to complete the electrical circuit of a signal lamp *e³* which may be located in some conspicuous place, such as the top of the pole, for night indication. Lamp *e³* may be red and may be supplied with current from any suitable source, such as the nearest light mains 1, 2, led up through the pole. When signal arm A is in the displayed position, cam E will close the circuit of light *e³*, and when in the undisplayed position, arm *e* will drop off one of the cam shoulders *e⁴* and the lamp circuit will be opened by a quick movement of arm *e'*.

Magnet D is in circuit with push button or other switch S at the central station by line conductors 3, 4, and is energized from a suitable source, such as battery U. A telephone set T may be arranged at the patrol station, in bridge or otherwise, to the line, the line terminal at the central station being conveniently represented at V. These may be of any preferred type.

The signal arm A may be of any preferred shape, and may be arranged within the casing of the cam and switch, when it would be displayed through an opening in the casing. The telephone set may be arranged either within casing C, as shown at T, Fig. 2, or in a separate box.

The operation of the device will be readily understood from the foregoing. When the device is in its normal position ready to receive and indicate a call, the spring of clock train B being wound, the parts are in the position shown in Fig. 2. The operator at the central station closes switch S and thereby sends current over the line to one (or more) patrol stations, when the magnet D is energized to attract its armature *d*. This lifts bar *d'* which raises latch *d²* out of engagement with fly *d³*, which immediately begins to revolve. At the same time the lower end of bar *d'* clears the notch *d⁶* with which

it was in engagement, and the circuit of magnet D should be kept closed long enough to allow this notch to pass beyond the bar end, which will then rest upon and be supported by the surface d^4 on wheel d^5 . The motion of the clock train, thus released, rotates the signal arm A and cam disk E through gears a^2 , a^4 and rod a^3 , until arrested by bar d^7 dropping into the next notch d^6 thus bringing latch d^2 into engagement with fly d^8 and stopping the clock train. These notches are shown as four in number, so that wheel d^5 , signal arm A, and cam disk E are moved one-quarter of a revolution before being stopped. The signal arm A will then occupy the horizontal or displayed position, and contacts e^2 will be bridged by arm e^1 , to light lamp e^3 . The patrolman may now talk to central and receive his orders; and the apparatus restored to normal by another impulse through magnet D.

Claims.

1. In a signal device, a signal arm, driving mechanism therefor, an electric circuit including a source of current and a light, a cam actuated from the shaft of said signal arm and arranged to open said circuit suddenly and to close said circuit, and means for controlling said driving mechanism.

2. In a signal device, a rotatable signal arm, driving mechanism comprising a clock train operatively connected thereto, an electric circuit including a source of current and a light, a switch for opening and closing said circuit, a cam actuated from the shaft of said signal arm and arranged to open said circuit suddenly and to close said circuit,

and means for releasing and arresting said clock train.

3. In a signal device, a supporting pole, a signal arm and a lamp mounted near the top of said pole, driving mechanism comprising a clock train located near the bottom of said pole, an electro-magnetically controlled detent for said clock train, a circuit for said lamp including a source of current and a switch, a cam coöperating with said signal arm for controlling said switch, and a drive-rod extending between said signal arm and driving mechanism and geared to said parts.

4. In a signal device, a patrol station, a signal arm thereat, driving mechanism for said signal arm comprising a clock train, a detent for said clock train, an electro-magnet to control said detent, an electric circuit including a source of current and a light, a switch for opening and closing said circuit, a cam for controlling said switch simultaneously with the movement of said signal arm and arranged to open said circuit suddenly and to close said circuit, a central station having a circuit connection with said electro-magnet and a source of current, and a circuit closer at the central station for completing the circuit through said electro-magnet.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

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JOHN GREENE.

WILLIAM GUY SADLEIR.

Witnesses:

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