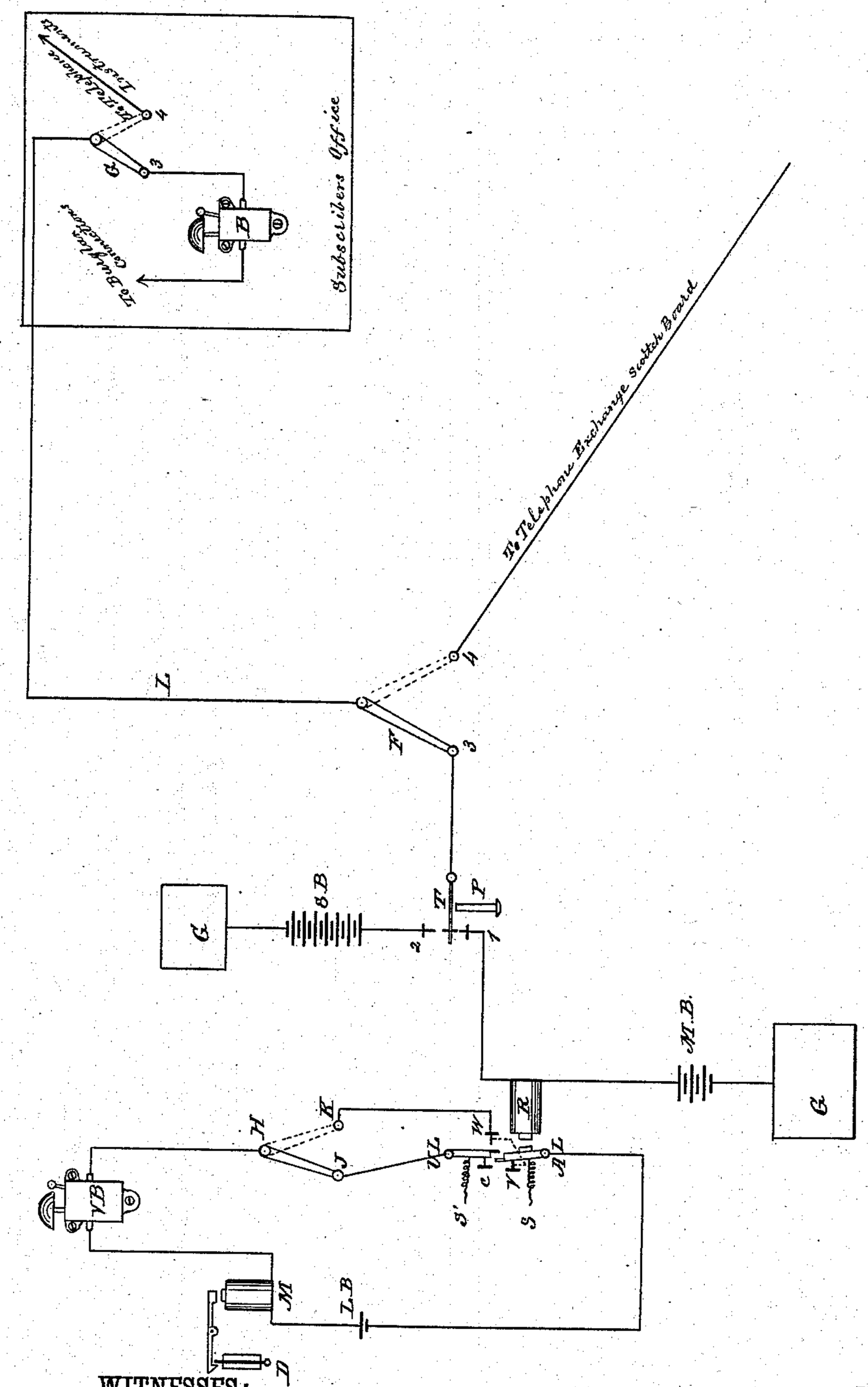
(No Model.)

B. F. DILLON.

COMBINED BURGLAR ALARM AND TELEPHONE SYSTEM.

No. 291,310. Patented Jan. 1, 1884.



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BENJAMIN F. DILLON, OF SAVANNAH, GEORGIA.

COMBINED BURGLAR-ALARM AND TELEPHONE SYSTEM.

SPECIFICATION forming part of Letters Patent No. 291,310, dated January 1, 1884.

Application filed May 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. DILLON, of Savannah, in the county of Chatham and State of Georgia, have invented a new and useful Improvement in Combined Burglar-Alarm and Telephone System; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which the figure is a diagram view of the central office connected with a single subscriber's office.

The invention relates to an improvement in burglar-alarm apparatus, and its adaptation to telephone-exchanges which employ a separate wire to each subscriber for communications between its members, and another wire common to a number of subscribers for ordinary connections made with subscribers at the exchange, commonly known as the "Law" system.

I will first explain the workings of the apparatus, and afterward show its application to telephone-exchanges.

All that part of the apparatus on the left of the line L represents the central office, while that shown on the right of said line represents a subscriber's station. Starting from main battery M B, the circuit passes through relay R to point 1, which is normally in contact with key T, thence through line L to single-stroke bell B in subscriber's premises, and on through the usual circuit-closing springs located in the various doors, windows, &c., to the earth. Local battery L B is in connection with magnet M and vibrating bell V B, its line terminating at the back of the movable lever H on the one side, and at the fulcrum of armature-lever A L on the other. Upper lever, U L, is electrically connected with J, and V, W, and K are in electrical connection with each other. As shown in the diagram, the main-line circuit is supposed to be broken in one of the circuit-breaking springs inside the protected building of the subscriber, and lever H is resting on J, so as to break the local circuit L B. Upon the completion of main-line circuit, relay R will attract armature-lever A L against the lip of upper lever, U L, (which is held against insulated limiting-screw C by the tension of spring S′,) thus completing local circuit, causing vibrating bell to ring and the drop D to fall, exposing the number of the subscriber, indicating in the central office that said subscriber has closed his premises. Lever H is then shifted to K, so as to break local circuit. The operator then pushes key T against contact 2, throwing main line direct to a suitable signal-battery, S B, which has the effect of causing subscriber's single-stroke bell B to respond, thereby notifying him that his closing has been observed at the central office, and that the circuit is intact. Now, the key T having returned to its normal position of rest on stop 1, should an attempt be made to ground or short-circuit the line, bell B, which performs the double office of a signaling apparatus and a resistance-coil, would be cut out of the circuit, and the decreased resistance of line would cause relay R to exert a stronger magnetic effect upon armature-lever A L, sufficient to overcome the tension of springs S and S′, which are adjustable, and pulling upper lever, U L, against contact-stop W would again complete local circuit and absolutely indicate that the wire was "grounded." Upper lever, U L, being pressed against W by armature-lever A L, and W being in connection with K, it will readily be seen that the local circuit would be closed whether lever H was on J or K—a condition which could exist under no other circumstances.

The application to telephone-exchanges is made in the following manner: A two-point switch, F, is placed in the telephone-exchange and one, G, in the subscriber's office. To the levers of both the main or subscriber's private wire is connected, and to points 3 the wires leading to the burglar-connections, and to 4 the telephone-switch in the central office or exchange is connected, while in the subscriber's office the telephone-instrument is connected to this point. During the day these levers at both places are upon 4. When the subscriber desires to leave his office at night, he notifies the exchange through the call-wire of his intention to leave and desires the burglar-connection made, at the same time shifting his switch to point 3. The exchange immediately makes the same change, and after exchanging signals, as before explained, is satisfied that the system is all right.

Vibrating bell V B, signal-battery S B, and local battery L B are common to a great number of subscribers.

This application of telephone-wires to burglar-connections will effect a wonderful saving of wire and great obstructions to streets of cities using these systems.

Having thus described my invention, what I claim as new is—

1. A combined telephone system and burglar-alarm, consisting of a telephone-line. burglar-connections at the subscriber's office, a subscriber's telephone, a two-point switch connecting alternately with the subscriber's telephone-instrument or his burglar-connections, and a central office having a telephone switch-board and local battery with burglar-alarm circuit worked by relay, as described, and a two-point switch connecting the line alternately with the telephone switch-board and the relay of the burglar-alarm circuit, substantially as set forth.

2. The combination, with the relay R, operated by the main battery and adapted to be influenced by the surreptitious grounding or breaking of the main circuit in one of the subscribers' offices, of the vibrating bell and local-battery circuit, the electrically-connected contact-points V W K, the armature-lever A L, forming one of the terminals of the local-battery circuit, the switch-lever H, forming the other terminal, and the lever U L, electrically connected to point J, and provided with spring S′, and arranged, as described, to be struck and deflected by the armature-lever A L, as and for the purpose described.

BENJAMIN F. DILLON.

Witnesses:

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