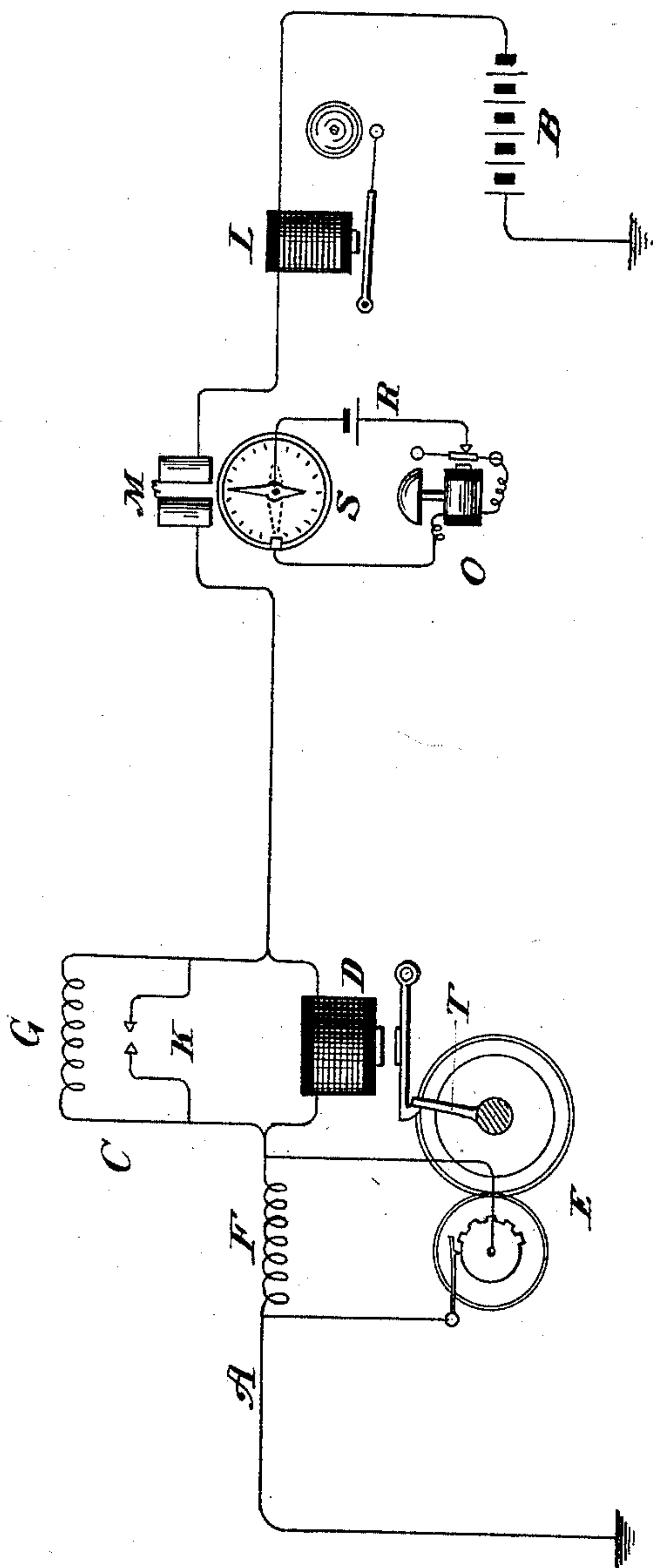


(No Model.)

A. C. ROBBINS.
BURGLAR ALARM.

No. 396,667.

Patented Jan. 22, 1889.



WITNESSES:

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BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 396,667, dated January 22, 1889.

Application filed September 22, 1887. Serial No. 250,410. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR C. ROBBINS, a citizen of the United States, residing in the city of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Burglar-Alarms; and I do hereby declare that the following is a full, clear, and exact description of my invention, such as will enable others, skilled in the art to which it appertains to make and use the same.

My invention consists in certain improvements in burglar-alarms, or rather automatic electro-mechanical signaling apparatus, which will be set forth in the following specification, reference being made to the accompanying drawing.

The figure represents a general plan of the circuits and mechanism.

In the said drawing, A represents the main line of a closed circuit, B being the main battery, and the line having a return-circuit or else being grounded at each end.

E is a clock-work transmitter, which, when released by the energizing of magnet D, closes at given periods the short circuit around resistance F.

D is a magnet whose armature normally engages with the stop T of the transmitter and prevents its operating. Around D is a closed shunt containing a resistance, G, which is less than the resistance F. This resistance is substantially equal to that of the magnet, and in the normal condition of the device the part of the current going through D is not sufficient to attract its armature. The shunt leads to the spot to be protected where the circuit is liable to unlawful interference. At this spot any interference must either break the shunt-circuit or short-circuit the resistance G, which is hidden in the lock or in some suitable position. In the first case the breakage of the shunt causes all of the current to pass through D, and D, attracting its armature, releases the transmitter, which closes the short circuit around resistance F a predetermined number of times. The cutting out of resistance F causes such an increase of the normal current that the bell L is operated. This action will also cause the galvanometer to complete the circuit which it controls and ring bell O; but this will do no harm, as it will be understood in handling the system that the ringing of both bells shall be one signal,

while the ringing of the galvanometer-bell alone shall be another. In the second case, when the resistance G is short-circuited—as by the closing of the circuit at K—the removal of the resistance from the circuit causes such an increase of the normal current that the galvanometer S is so affected by the current through its coils M that its needle closes the local circuit R and sets in action a trembler-bell, O. The bell will ring continuously so long as the circuit is closed, so that it will be distinguishable from the bell L. Both bells may be arranged to drop annunciators or otherwise give a visual as well as an audible alarm.

It will be readily observed that an increase of the current caused by a cutting out of resistance G will not ring the bell L, while the opening of the resistance G and shunting resistance F will cause bell L to operate.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a burglar-alarm, the combination of a transmitter, a closed circuit, a resistance in said circuit, and a normally-open short circuit around the said resistance, in which the transmitter is located, a magnet in said closed circuit controlling the transmitter, a closed shunt around the magnet, a resistance in the shunt, and signaling apparatus at the central station corresponding to the action of the said transmitter, and also to a change in the resistance of the circuit.

2. In a burglar-alarm, the combination of a transmitter, a magnet controlling the same, a closed shunt around the magnet leading to the spot to be protected, a resistance in the said shunt, a galvanometer in the circuit controlling an alarm at the central station, and a second alarm adapted to be operated by the said transmitter.

3. In a burglar-alarm, the combination of a transmitter, a magnet controlling the same, a shunt around the magnet containing a resistance, and distinctive sets of alarms at the central station corresponding one to the said transmitter and the other to a change in the line-resistance.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

Witnesses: ARTHUR C. ROBBINS.
WM. A. ROSENBAUM,
AUGUSTUS MERRITT.