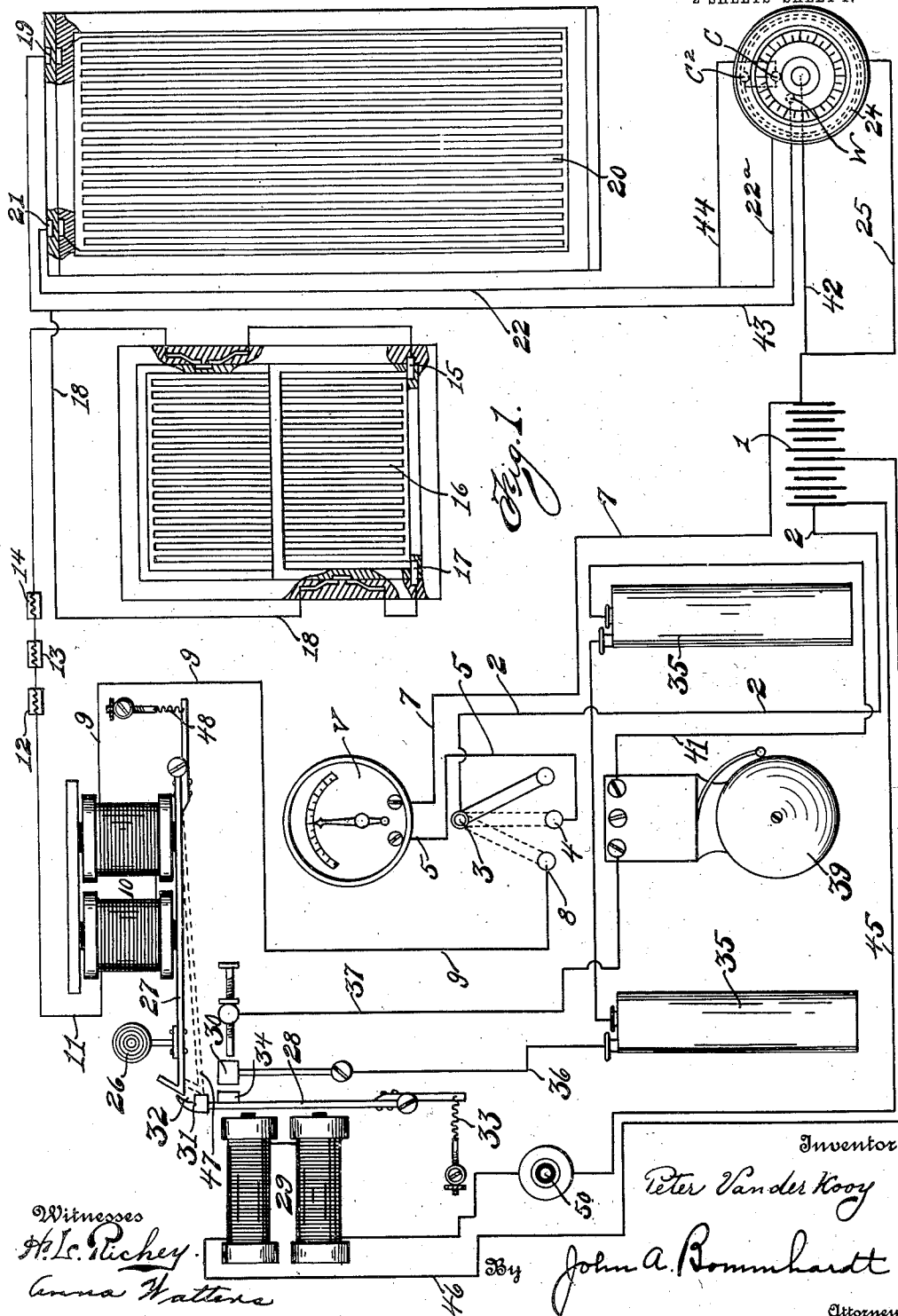


P. VAN DER KOOY.
ELECTRIC BURGLAR ALARM SYSTEM.
APPLICATION FILED OCT. 6, 1913.

1,115,879.

Patented Nov. 3, 1914.

2 SHEETS-SHEET 1.



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Witnesses

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Anna Watters

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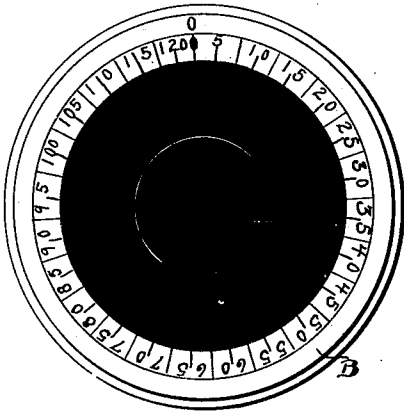


Fig. 2.

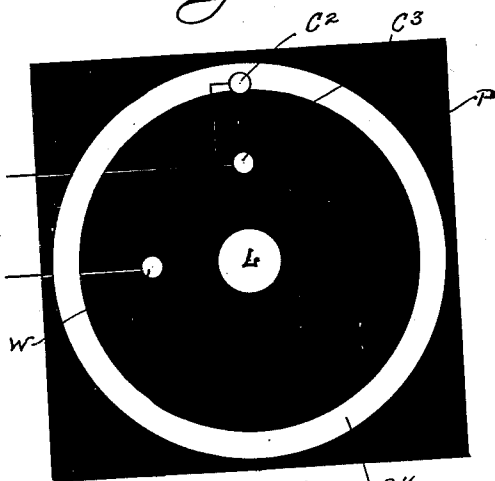


Fig. 4.

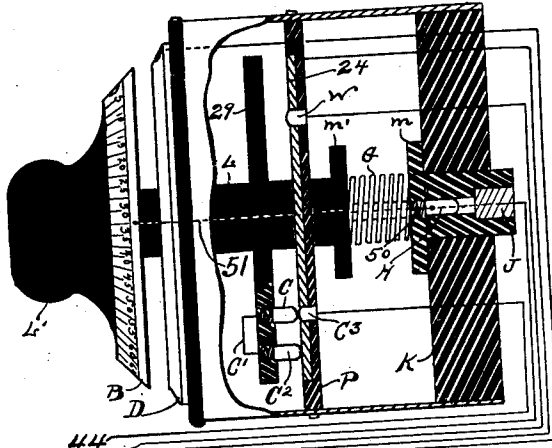


Fig. 3.

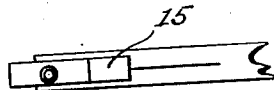


Fig. 5.

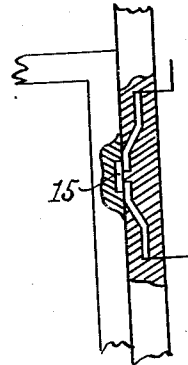


Fig. 6.

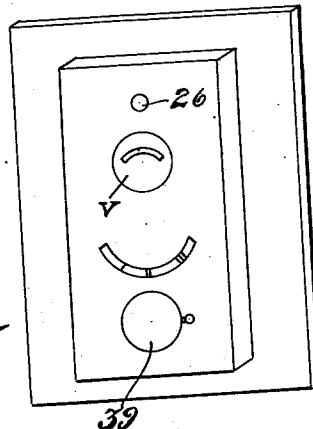


Fig. 7.

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UNITED STATES PATENT OFFICE.

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ELECTRIC BURGLAR-ALARM SYSTEM.

1,115,879.

Specification of Letters Patent.

Patented Nov. 3, 1914.

Application filed October 8, 1913. Serial No. 782,602.

To all whom it may concern:

Be it known that I, PETER VAN DER KOOY, citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Electric Burglar-Alarm Systems, of which the following is a specification.

This invention relates to electric burglar alarm systems, and particularly to such systems employing a closed circuit containing the contacts, and a relay actuated thereby, which controls the bell or signal circuit, but which closes when the first mentioned circuit is broken. Also, an improved door switch is employed, for controlling the operation of the system and permitting authorized persons to enter and leave the building or protected structure without operating the signal devices.

Various other improvements in details will be apparent from the following description and the accompanying drawings.

In the drawings—Figure 1 is a diagram of the system. Fig. 2 is a front elevation of the door switch. Fig. 3 is a section of the door switch. Fig. 4 is a diagram of the door switch contacts. Fig. 5 is a plan of one of the shade or window contacts. Fig. 6 is a sectional view of another of said contacts. Fig. 7 is a perspective view of the relay and bell casing.

The construction of the system will be apparent from the following description which also embodies a description of its operation.

The current from battery 1 follows a wire 2 to a triple pole switch 3, the arm of which when in contact with point 4 causes the current to flow over wire 5 to voltmeter V and then through wire 7 back to the battery 1, forming a testing circuit to indicate the voltage of the battery.

By moving the arm of the switch 3 to contact point 8 the current follows the wire 9 to electromagnet 10 and through the wire 11 and fusible fire alarm plugs 12, 13, and 14 to window shade contacts 15 and through the wire 16 which is woven in the shade to contact 17, wire 18, door shade contacts 19, wire 20, which is woven in the door shade, contacts 21, and wire 22 to contact C³ of a selective door switch. When the knob of the door switch is set at 0 the current flows through a contact point C, connection C' contact point C², ring 24 and wire 25 to the

negative pole of the battery 1, thereby completing a closed circuit through the protective devices. When said circuit is closed the semaphore 26 is lifted and exposed indicating the closed or set circuit, and at the same time the armature 27, to which the semaphore is attached, contacts with the poles of the electromagnet and forms a latch for the piece 31 at the end of an armature 28 of an electromagnet 29, so as to prevent the swing of said armature under the influence of the spring 33. When the circuit is opened by breaking one of the contacts 12, 15, 19, etc., or by turning the door switch, or by cutting the wire, the armature 27 will drop into the notch 32 of the piece 31, permitting the spring 33 to swing said armature 28 to the right, closing the contacts 34 and 30, which are in the circuit of the bell 39, said circuit including batteries 35 and wires 36, 37 and 41, whereby the bell is caused to ring when the main circuit is opened. To stop the ringing of the bell the button switch 50 is pressed closing a circuit from the battery 1 through wires 45 and 46 and magnet 29, which attracts its armature 28 and opens the contacts 30 and 34 and permits the armature 27 to drop to the position shown in dotted lines at 47 which locks the armature and prevents closing of the bell circuit until the main circuit is reestablished.

When the owner or authorized person of the protected building desires to enter the same without operating the alarm the door switch is properly manipulated. A wire 22^a from the door line 22 is connected to an outer metal ring D of the door switch, and a wire 42 from the battery 1 is connected to a contact plug J in line with the axis of the shaft of the door switch. The shaft L has a knob L' which can be pushed in to cause a conducting ring B, carried by the knob, to contact with the ring D. The inner end of the shaft L has a contact point H connected by a spring 50 and wire 51, extending through the shaft, to the ring B, said point H working in an insulating bushing M in the base K of the switch, and when the knob is pushed in a circuit is closed through wire 42, contacts J and H, spring 50, wire 51, ring B, ring D, and wire 22^a and thence through the main circuit back to the battery. The switch knob may then be turned without breaking the circuit, the knob being held pressed in.

A spring G, coiled between the bushing M

and a collar M', tends to force the knob outwardly. The dial of the switch is provided with a series of numbers, one of which is selected, and a contact point W, corresponding to said selected number, is supported by a plate P in the switch casing and is connected by a wire 43 to the main circuit between the magnet 10 and the door contacts. When the knob is turned to the selected number the current flows and the circuit remains closed through the wire 25, ring 24, contact C², connection C', contacts C and W and wire 43 to the line, the contact W being located in the same circumferential line as the contact C, so that the main circuit is maintained in closed condition in the new position of the knob, and the knob can be released and allowed to spring out without breaking the circuit. The contacts C and C² are carried on a plate 29 of insulating material mounted on the shaft L.

When the knob is turned as above described and the new circuit established through the branch line 43, the door can be opened and the door contacts opened, without opening the main circuit, said contacts being cut out. The knob switch will be located in the outside of the building, so that it can be operated before the door is opened.

What I claim as new is:

1. The combination of a normally closed circuit including an electromagnet and protective contact devices, a second circuit including an electromagnet, the armatures of the first mentioned magnet being arranged to lock the armature of the other magnet when attracted, an alarm circuit including a contact adapted to be closed by movement

of the last mentioned armature when it is unlocked by release of the first mentioned magnet incident to opening the circuit thereof, and means to close the second circuit to prevent movement of the armature of the magnet therein.

2. The combination of a normally closed circuit including protective contact devices and an electromagnet, an alarm circuit including a contact member, a third circuit including an electromagnet, and an armature for the last mentioned electromagnet, said armature being arranged to close the contact of the alarm circuit when released and being locked against such movement by the armature of the magnet in the first mentioned circuit when it is closed.

3. The combination of a normally closed circuit including protective contact devices and an electromagnet, an alarm circuit including a contact member, a third circuit including an electromagnet, and an armature for the last mentioned electromagnet, said armature being arranged to close the contact of the alarm circuit when released and being locked against movement by the armature of the magnet in the first mentioned circuit when it is closed, and a manually operated circuit closer arranged to close said third circuit and hold the armature of the magnet therein against movement when desired.

In testimony whereof, I do affix my signature in presence of two witnesses.

PETER VAN DER KOOY.

Witnesses:

JOHN A. BOMMARDT,
F. M. TAGGETT.