

(No Model.)

2 Sheets—Sheet 1.

C. BARTLETT.
CIRCUIT CLOSER.

No. 281,603.

Patented July 17, 1883.

Fig. 1.

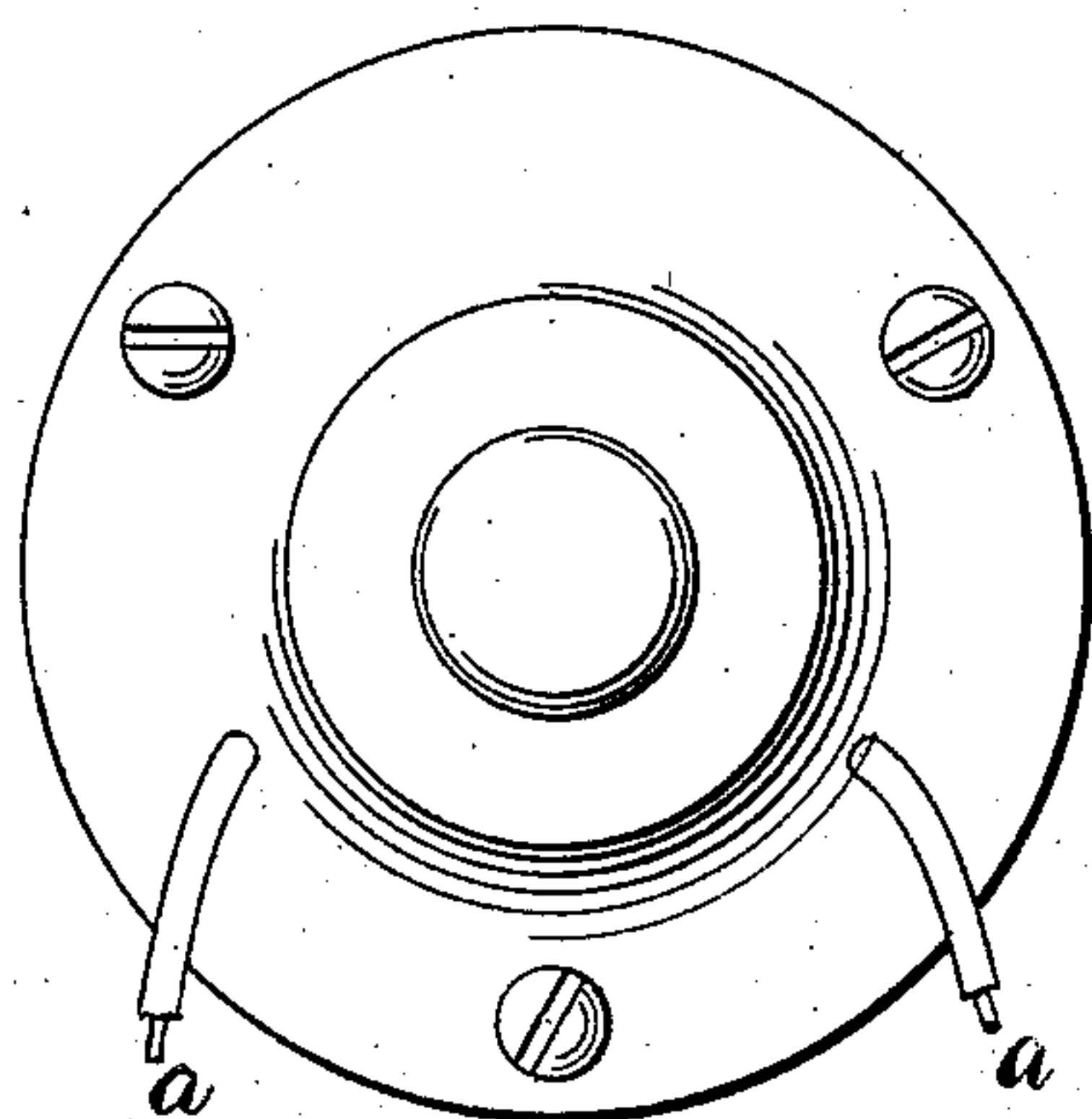


Fig. 2.

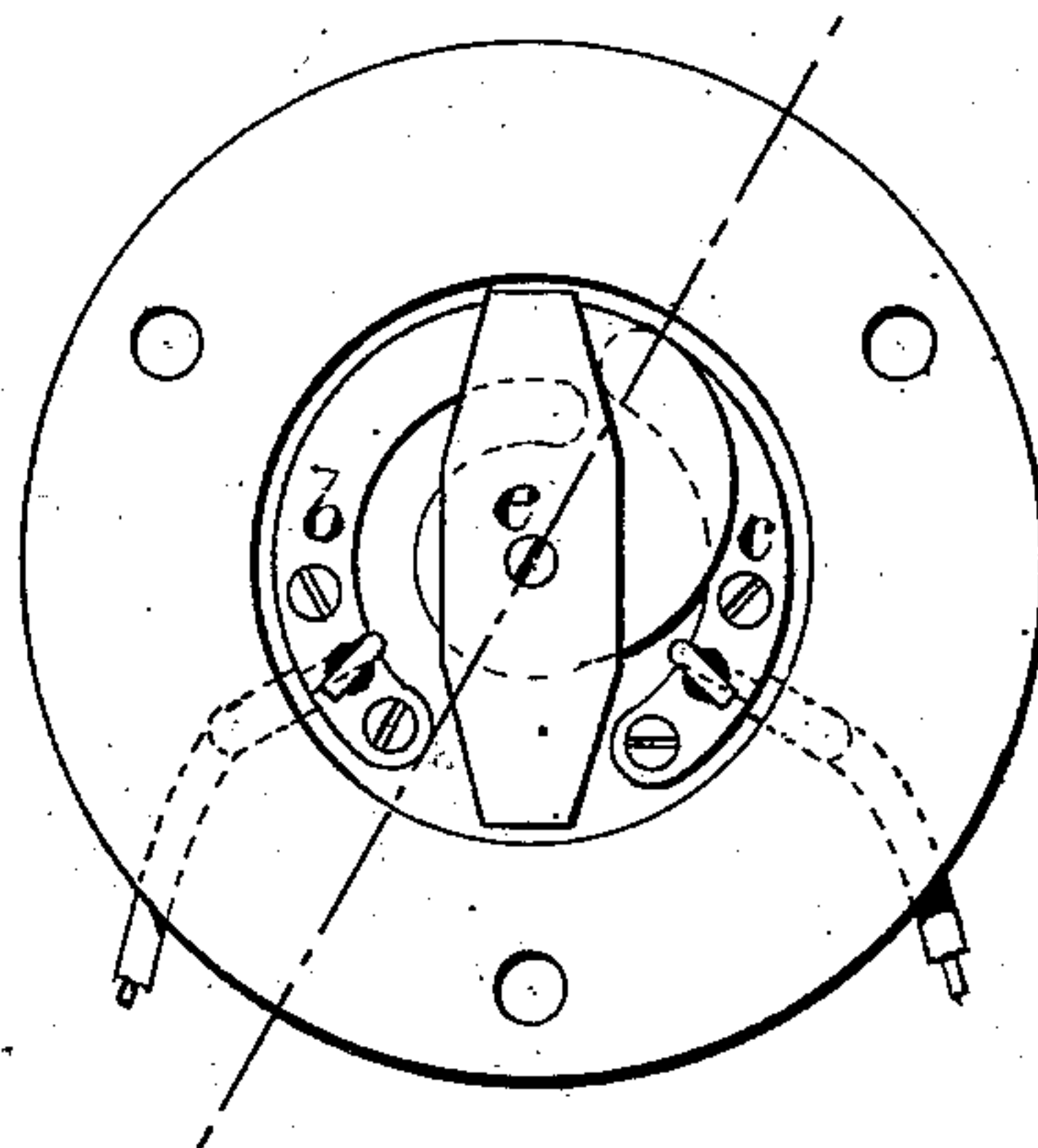


Fig. 3.

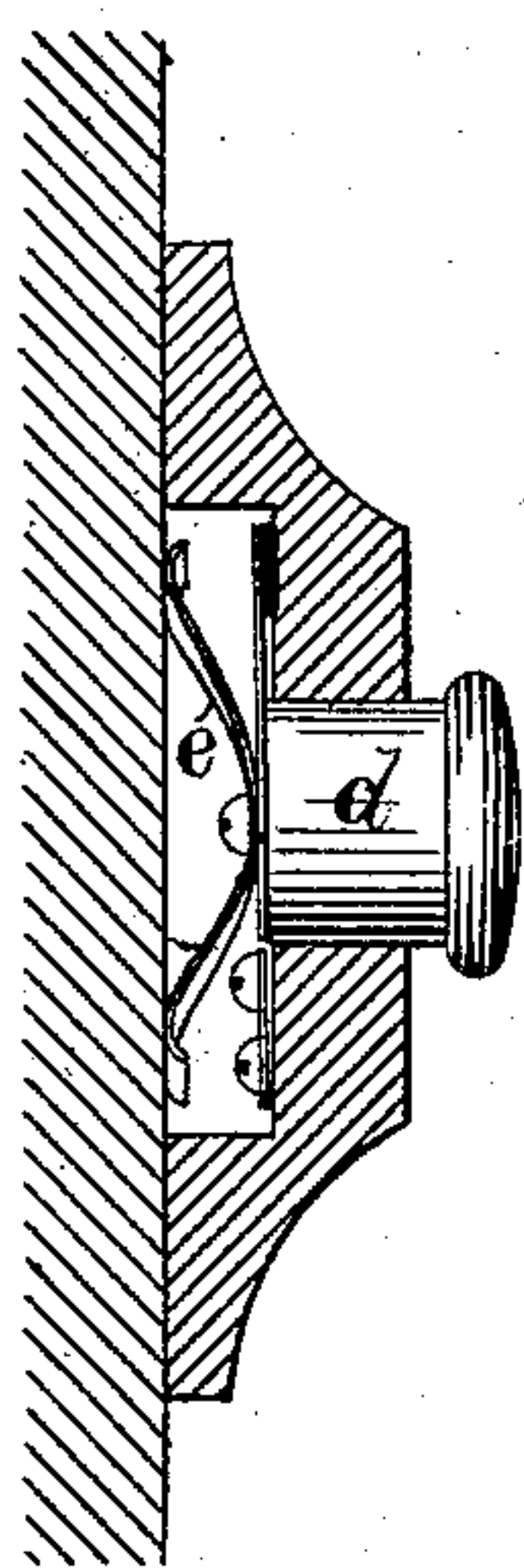
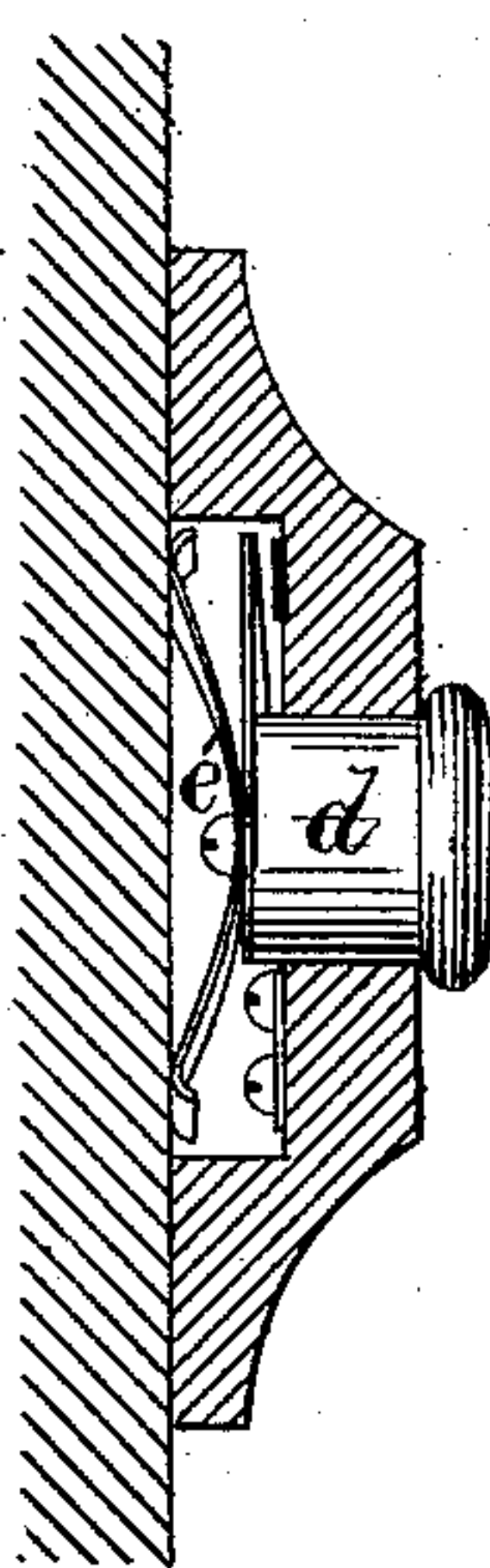


Fig. 4.



WITNESSES:

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(No Model.)

2 Sheets—Sheet 2.

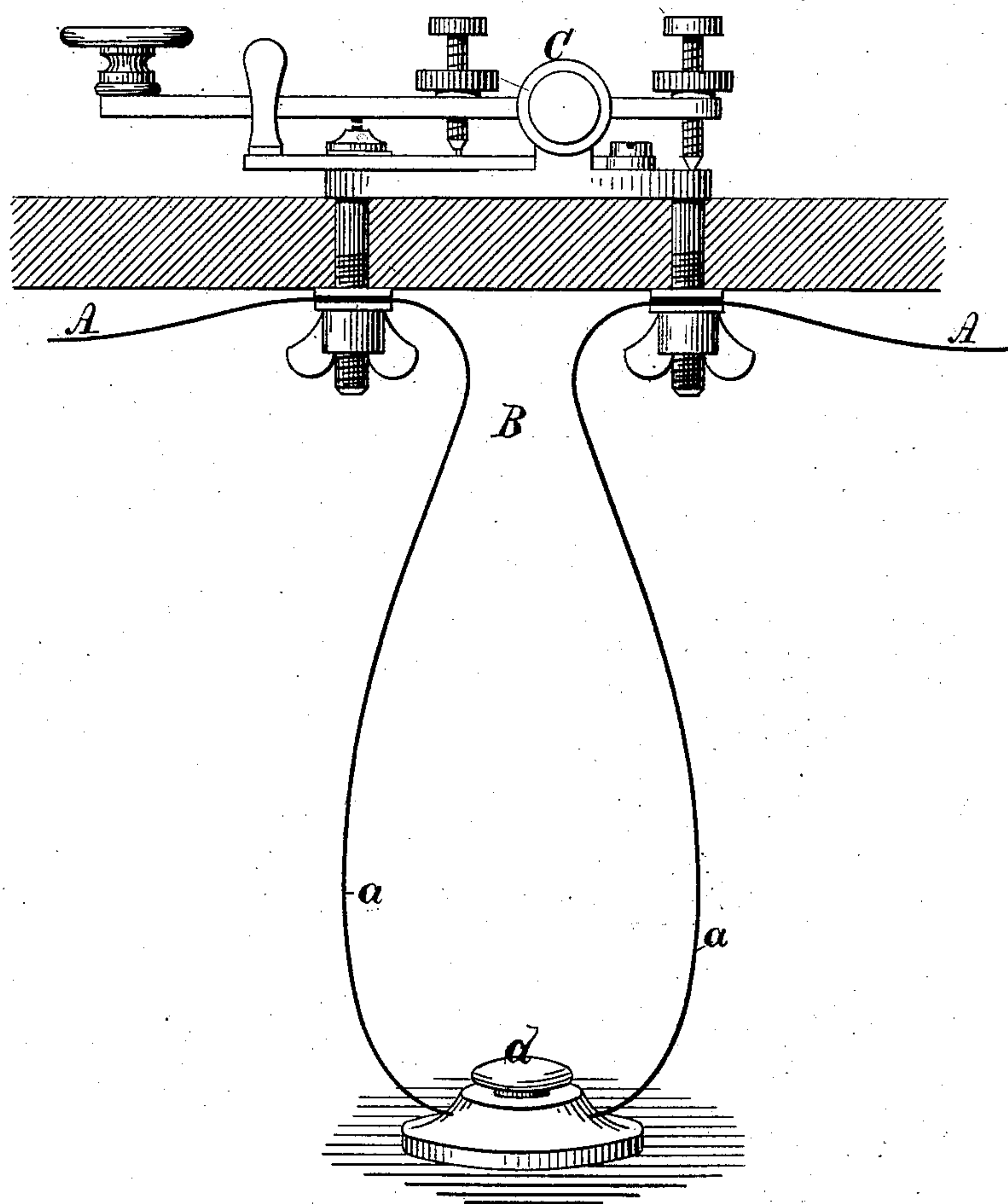
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Fig. 5.



WITNESSES.

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INVENTOR:

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UNITED STATES PATENT OFFICE.

CHARLES BARTLETT, OF PROVIDENCE, ASSIGNOR OF ONE-HALF TO FRANK J. SPENCER, OF PAWTUCKET, RHODE ISLAND.

CIRCUIT-CLOSER.

SPECIFICATION forming part of Letters Patent No. 281,603, dated July 17, 1883.

Application filed January 22, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES BARTLETT, of the city and county of Providence, and State of Rhode Island, have invented a new and useful Improvement in Circuit-Closers; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

10 The liability on the part of telegraph-operators to leave the transmitting-key open, and thus shut off the whole line in which their keys are located, has been a source of great annoyance. This invention has reference to a device for overcoming that difficulty.

15 The invention consists in the provision of an independent loop connecting the line-wire or any two points on opposite sides of the key, and of an automatic circuit-closer, which keeps the loop-line always closed until it is purposely thrown open, as hereinafter set forth.

25 Figure 1 is a view of a disk provided with a button and two line-wires, constructed so that the circuit is closed until the button is depressed. Fig. 2 is a reverse view of the same, showing the two metal connecting-plates and the spring for operating the button. Fig. 3 is a sectional view of the device, showing the button forced out by a spring and the two plates in contact. Fig. 4 is a sectional view of the device, showing the button depressed and the plates separated. Fig. 5 is a view of the line-wires and a connection around the telegraph or telephone instrument by means of the loop.

35 A A are the line-wires.

40 B is the loop, composed of wires *a a* and connections. These wires *a a* are connected with the main line at each side of the instrument C, which may be either a telegraph-key or a telephone-instrument.

45 *d* is a button, which serves as a circuit-breaker. The circuit through wires *a a* is normally kept closed by means of switch-plates *b* and *c*, one lying underneath the other, and

held in contact by spring *e* until thrown apart to break circuit by the operation of button *d*.

50 It will be seen that the direct course of the current will be through the instrument C, and that when this is closed, and the loop also is closed, the current may pass by either line. Should the instrument C be left open, however, the loop B, which is normally closed, will still complete the circuit, and a message would pass along the line A A through said loop. 55 When the operator sits down to transmit a message by means of key C, he breaks the circuit in loop-line B by pressing in the button *d* with his foot or knee, or in other convenient manner. When he steps away from the instrument, he removes the pressure from button *d*, and although the instrument C be left open, the circuit along the main line and loop is complete by the automatic closing of the circuit-closer in the loop. 65

It is obvious that various devices for operating button *d* may be devised, so as to be convenient to the foot, knee, or hand.

What I claim is—

1. The combination, with a telegraph or telephone instrument and the line-wires, of the loop connected with the wires at each side of the instrument and provided with an automatic circuit-closing key, substantially as described. 75

2. The combination, with the line-wires and a telegraph or telephone instrument, of a loop connected with the line at each side of the instrument and a spring-pressed key in said loop to maintain the loop-line normally closed, substantially as stated. 80

3. The combination of the line-wire, the instrument, the loop-wires connected as described, the switch-plates *b c*, and the spring *e*, with the button *d*, all being relatively arranged, substantially as stated. 85

CHARLES BARTLETT.

Witnesses:

M. F. BLIGH,

J. A. MILLER, Jr.