

(No Model.)

W. R. COLE.
Electric Annunciator Index.
No. 241,305.
Patented May 10, 1881.

Fig. 1

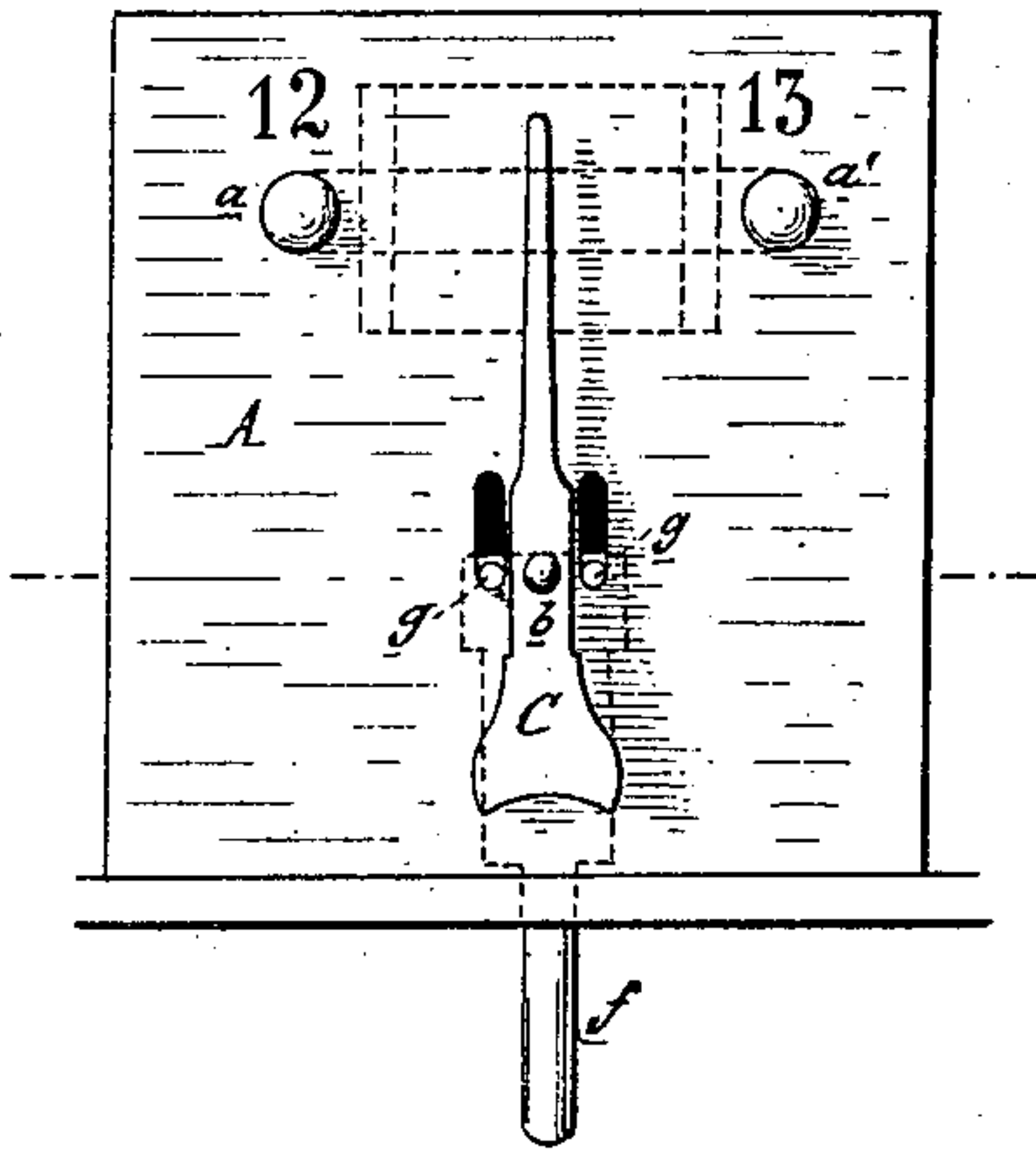


Fig. 2

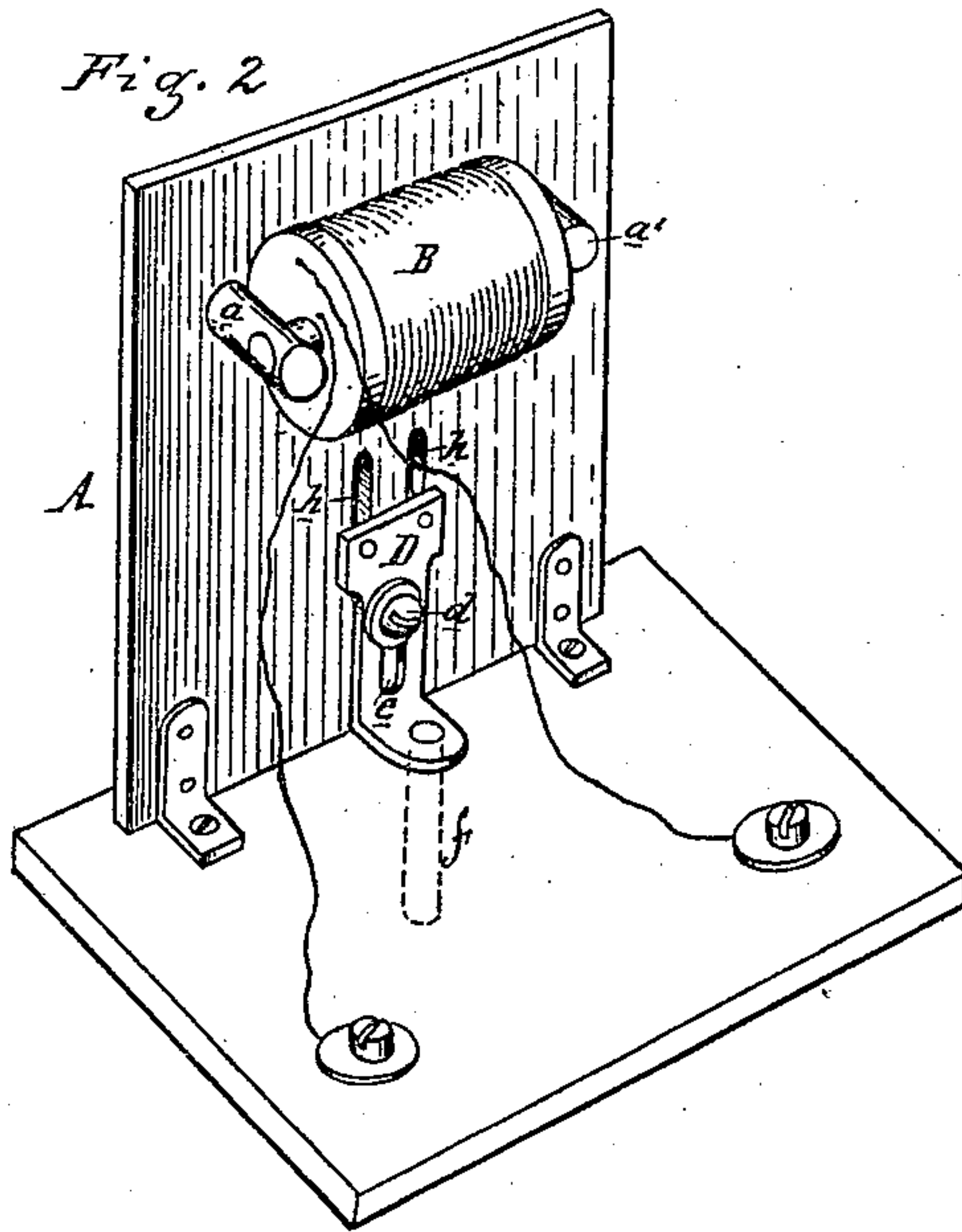


Fig. 3

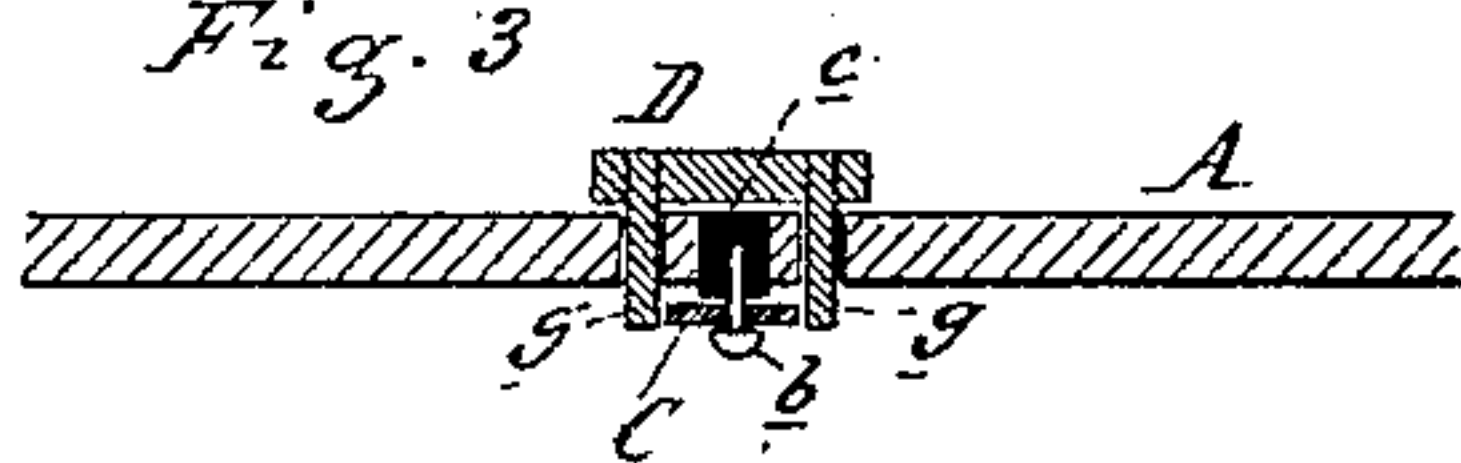


Fig. 4

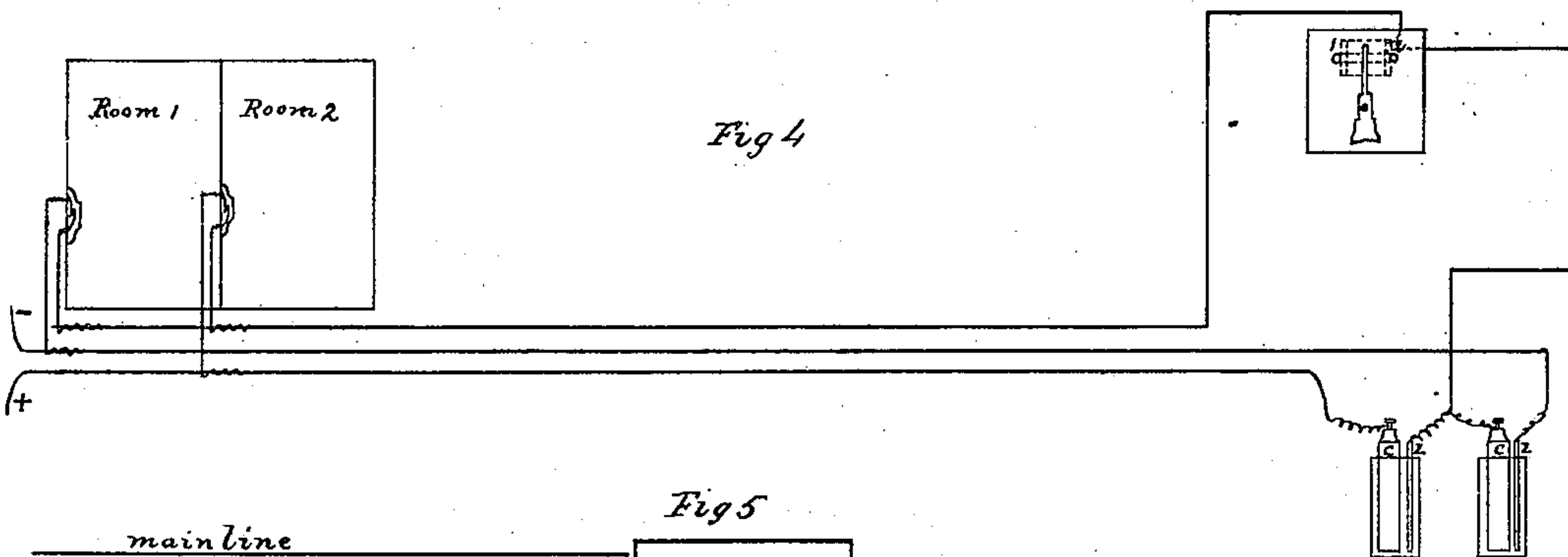
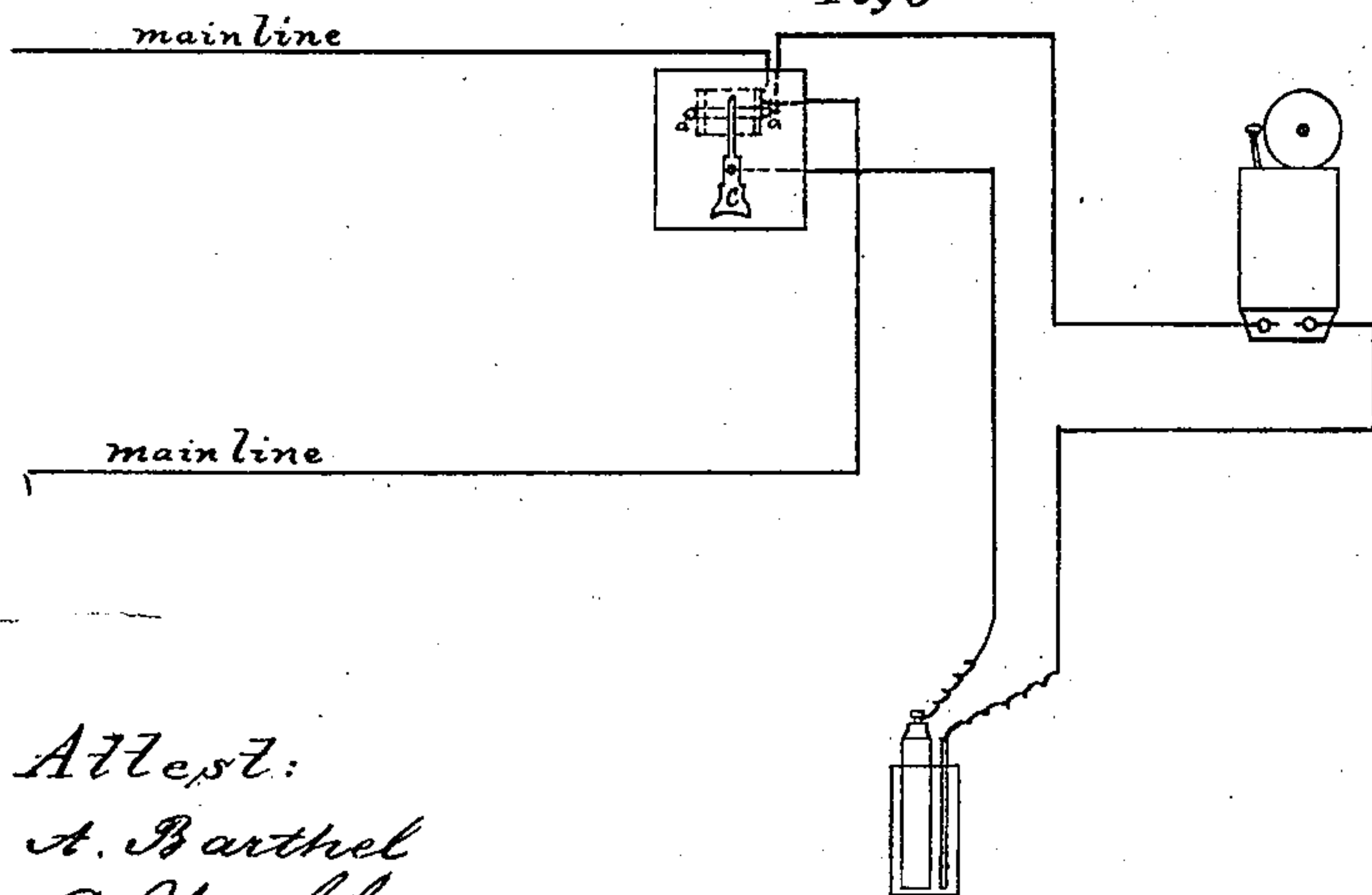


Fig. 5



Attest:

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UNITED STATES PATENT OFFICE.

WILLIAM R. COLE, OF DETROIT, MICHIGAN, ASSIGNOR OF ONE-HALF TO
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ELECTRIC-ANNUNCIATOR INDEX.

SPECIFICATION forming part of Letters Patent No. 241,305, dated May 10, 1881.

Application filed October 8, 1880. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. COLE, of Detroit, in the county of Wayne and State of Michigan, have invented an Improvement in Electric-Annunciator Indexes, of which the following is a specification.

The nature of my invention relates to new and useful improvements in electric annunciators for hotels, private houses, and as an auxiliary for telephone exchanges.

The invention consists in the peculiar construction, combination, and operation of parts, as more fully hereinafter described, and pointed out in the claims.

Figure 1 is a front view of a section of the metallic front of an electric-annunciator case. Fig. 2 is a rear perspective view of the same. Fig. 3 is a horizontal section through the pivotal point of connection between the polarized needle and the front of the case. Fig. 4 is a view of the circuit connecting two rooms with the battery and index. Fig. 5 is a view showing the manner of connecting the index to a signal-bell.

In the accompanying drawings, which form a part of this specification, A represents a section of the metallic front of an annunciator-case, having upon its face figures representing the numbers of the rooms in a hotel which are electrically connected with the case.

To the rear side of the front is secured the spool-magnet B, horizontally, with the two ends of the core *a' a'* projecting through the front of the case, in close proximity to the indicating-numbers.

C is a polarized or magnetic needle, one end of which is overweighted. This needle or index is secured pivotally to the front of the plate A by means of the pin *b*, so that the point, when thrown in either direction, will not only indicate the number of the room from which the call is made, but will also come into contact with that core of the magnet in proximity to the number indicated, and be retained by magnetic attraction in that position until released by the operator, when the needle will resume its vertical position midway between the projecting cores *a' a'*, being overweighted at one end for that purpose. The needle is insulated by placing any insulating material—

such as an india-rubber disk, *c*—between the needle and the face of the annunciator-case, where it may be confined by the pivot-pin *b*.

A slide, D, is secured by a bolt, *d*, passing through a slot, *e*, to the rear face of the case, and has a shaft, *f*, secured to it, which, passing through the bottom of the case, furnishes the means of raising the slide. The upper end of this slide is provided with two projecting points, *g*, which project through the vertical slots *h* in the face. These slots are cut through, one on each side of the pivotal point *b*, and raising the slide brings one or the other of the points or lugs *g* into contact with the side of the needle to break its connection or contact with the core of the magnet. Such case is connected with wires conducted through the house, in the manner well known to all electricians.

As already described, the indicator consists of a series of small electro-magnets in a case, each one to operate a small polarized needle, which acts as an indicator to show from which room in a house the call is made. One spool or magnet is used for two rooms, the magnet being placed horizontal, and the two ends of the core passing through the face of the case to act on the needle when the line is closed. By dividing the battery and running two main wires through the house, and connecting one room to the positive pole of the battery and the next room to the negative pole of the other battery, and running one line from both rooms to one magnet in the annunciator, in the manner represented in Fig. 4 of the drawings, a call in one room will deflect the needle one way, and a call from the other room will deflect it the other way, or from right to left, thus making one line and one magnet answer for two rooms.

The annunciator used in telephone exchanges has the needle insulated from the face of the case, as shown in Fig. 3, so that a local battery may be attached to a series of numbers, so that when a call is made it will ring a small bell to attract the attention of the operator to the call. In this case the circuit for ringing the bell is made as shown in Fig. 5, in which the wires of the local or bell battery pass through the bell and are connected one to the pivot of the in-

dex and the other to the core of the index-magnet, so that the index, in striking either end of the index-magnet core, will complete the local circuit and ring the bell.

5 What I claim as my invention is—

1. In electric annunciators, a polarized needle pivoted to the case and constructed to vibrate between two projecting poles of an electro-magnet, and adapted to be retained by
10 either pole of the said magnet by magnetic influence until released by force, substantially as and for the purpose specified.

2. In an electric annunciator, a polarized needle pivoted to the case thereof and insulated
15 therefrom, in combination with the projecting poles of an electro-magnet, and wires leading

from the needle and from the magnet-core to a battery and an electric bell, whereby the needle, when drawn against either pole of the magnet, will complete a local circuit and ring
20 an alarm, substantially as and for the purpose specified.

3. In combination with a pivoted magnetic index adapted to be held to one side by magnetic attraction, the slide D, having pins *g g*,
25 for releasing said index, substantially as set forth.

W. R. COLE.

Witnesses:

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A. WAHL.