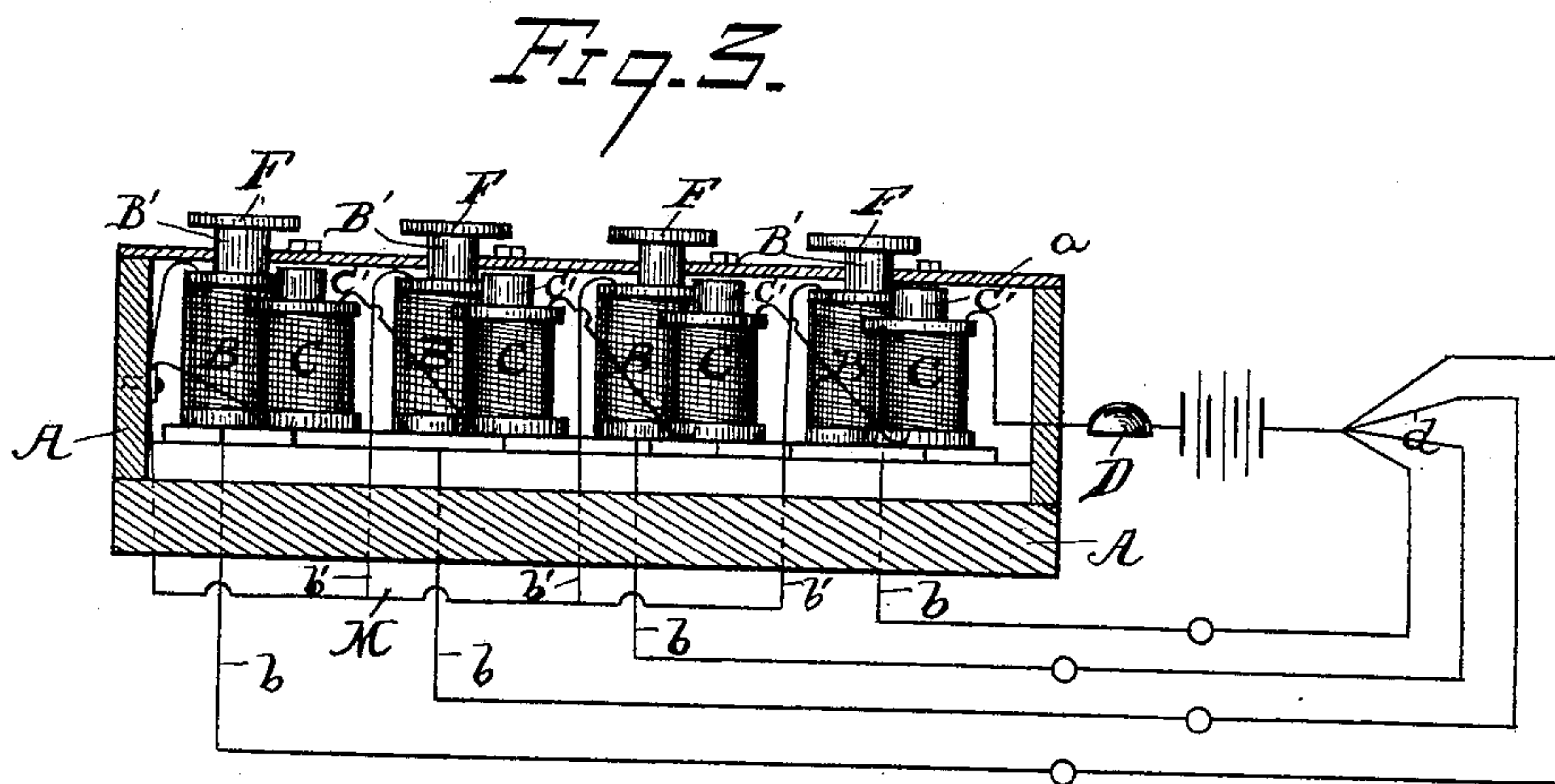
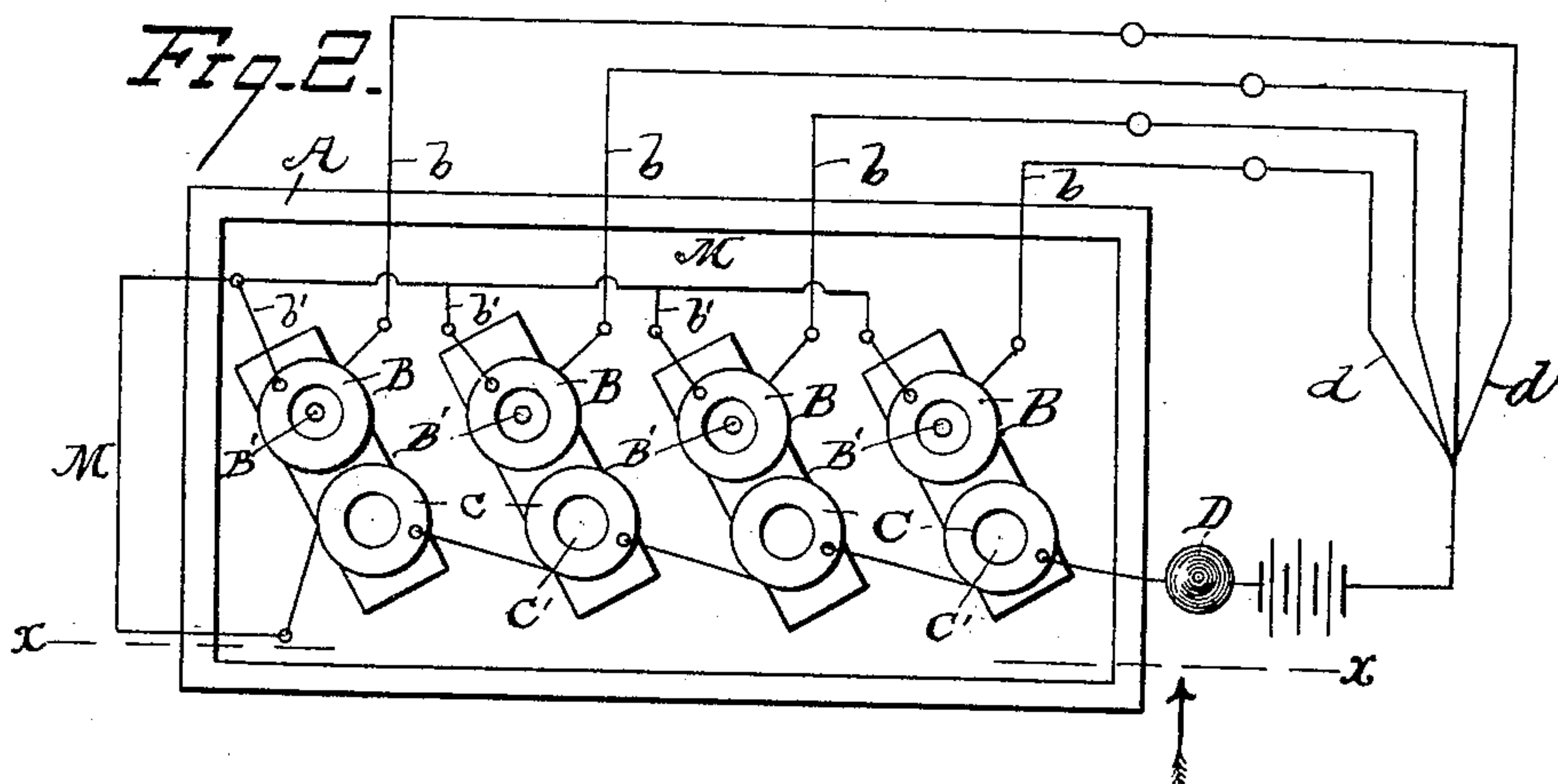
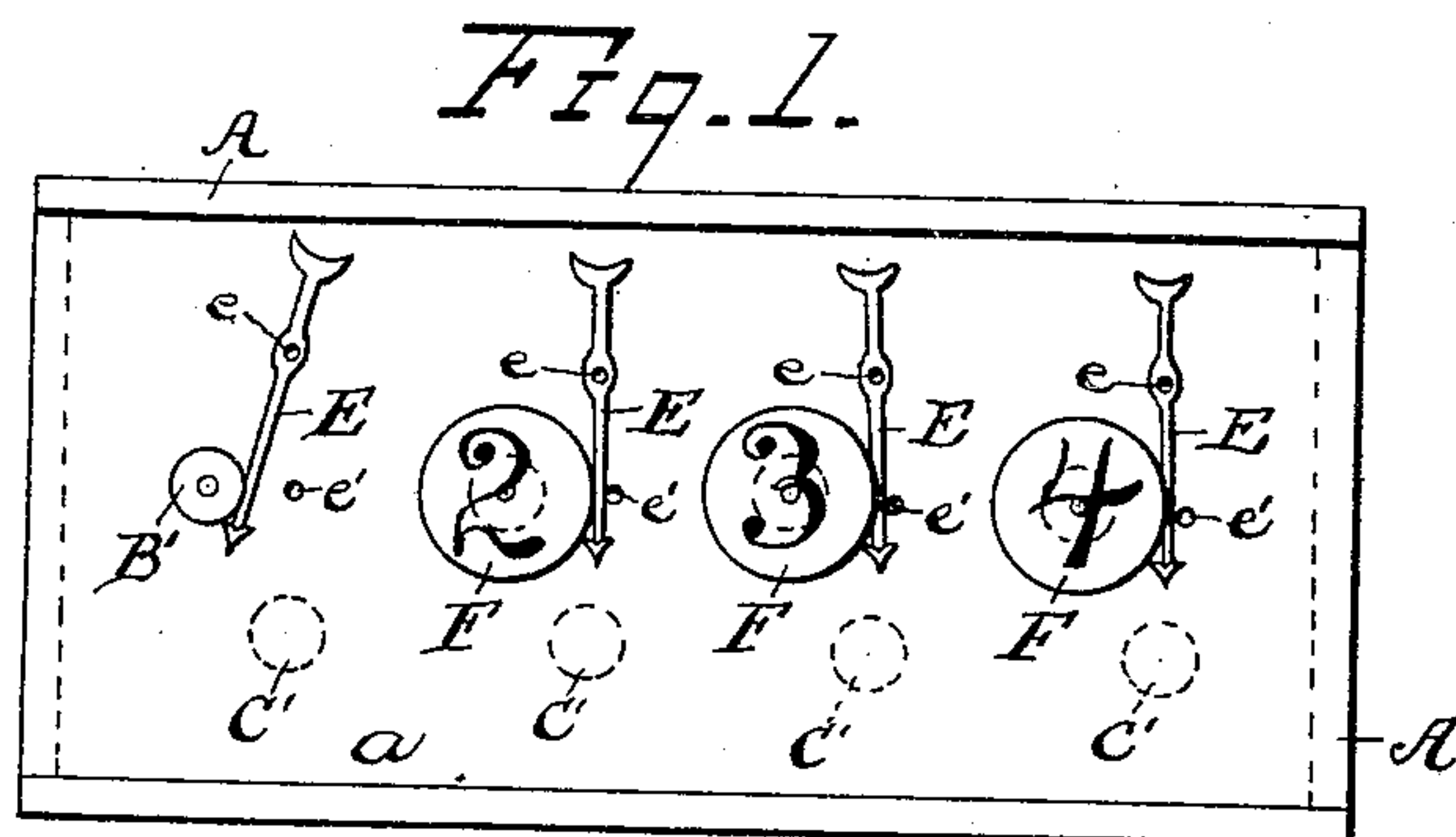


(No Model.)

J. W. LUTHE & A. E. JEAVOUS.
AUTOMATIC ELECTRIC ANNUNCIATOR.

No. 435,440.

Patented Sept. 2, 1890.



Witnesses
Albert Popkine
V. E. Dodge

John W. Luthe Inventors
and
Alfred E. Jeavous
By their Attorneys
Leggett & Leggett

UNITED STATES PATENT OFFICE.

JOHN W. LUTHE AND ALFRED E. JEAVOUS, OF CLEVELAND, OHIO; SAID
JEAVOUS ASSIGNOR OF ONE-HALF TO SAID LUTHE.

AUTOMATIC ELECTRIC ANNUNCIATOR.

SPECIFICATION forming part of Letters Patent No. 435,440, dated September 2, 1890.

Application filed January 23, 1890. Serial No. 337,796. (No model.)

To all whom it may concern:

Be it known that we, JOHN W. LUTHE and ALFRED E. JEAVOUS, of Cleveland, in the county of Cuyahoga and State of Ohio, have
5 invented certain new and useful Improvements in Automatic Electric Annunciators; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in
10 the art to which it pertains to make and use the same.

Our invention relates to improvements in electrical annunciators; and it consists in certain features of construction and in combination of parts, hereinafter described, and pointed out in the claims.

Heretofore electrical annunciators have usually been reset by hand, and this was the source of much annoyance and trouble, more
20 especially in hotels or buildings having many call-buttons and different servants to answer the calls. For instance, suppose a servant was answering a call, and the person whose duty it was to reset the annunciator had neglected to do so, in which case with the second
25 call there would be nothing to indicate which was the last call that required attention. We have therefore devised an annunciator in which the resetting is automatic, each call
30 resetting the pointer of the last previous call or calls.

In the accompanying drawings, Figures 1 and 2 are front elevations, the latter having the face-plate removed. Fig. 3 is a bottom
35 plan, the casing being broken away to show the internal construction.

A represents the casing of the annunciator, and α the face-plate thereof.

B B B represent a primary series of helices
40 secured, preferably, to the back wall of the casing, the cores B' thereof protruding through holes in the face-plate.

C C represent a secondary series of helices secured, preferably, to the back wall of the
45 casing, the respective cores C' thereof extending forward to or near to the face-plate. Each helix B has an opposing helix C, arranged approximately in the relative positions shown more clearly in Fig. 2. Wires b of the differ-
50 ent helices B lead, respectively, for instance,

to the different rooms or stations and connect with the call-buttons. Wires b' of the different helices B connect in common with wire M, the latter leading to the battery, wire M including in the circuit the secondary series of
55 helices, for instance, as shown. Somewhere in the circuit is connected call-bell D, and beyond the battery wires d d branch off to the different call-buttons for the different rooms or stations.

E are pointers or needles pivoted, respectively, at e to the face-plate. Each pointer has a stop e' , and between this stop and the adjacent core B' (to the right hand, as shown
60 in the drawings) the pointer may vibrate. Each pointer in its normal position bears against its stop and points toward the adjacent core C', the relation of parts being such that the pointers when left free will assume their normal positions by gravity.

To the front ends of core B' are removably
70 secured, respectively, small disks F, bearing numbers corresponding with the numbers of the rooms or stations with which the respective helices B are connected. In Fig. 1 the left-
75 hand disk F, supposed to be numbered "1," is omitted or removed. These disks are preferably secured to the respective cores B' by means of small screws, so that the disks may be removed or changed, if need be. This some-
80 times is a very great convenience, for instance, in cases where the numbers of the rooms or stations have been changed. Helices B are much stronger in magnetic force than the opposing helices C. This may be done by wind-
85 ing less wire on helices C or by shunting a portion of the current around the secondary series of helices.

The operation of the device is as follows: Suppose the occupant of room No. 2 presses
90 the call-button, thereby closing the circuit with helix B, No. 2, the electric current of course passing, also, through the secondary series of helices. Core B', No. 2, will attract pointer No. 2, and by reason of its greater
95 magnetic force will draw the needle away from the opposing core C', and by means of the residual magnetism in the core of the primary helix will hold the pointer for some minutes,
100 after which the needle will return by gravity

to its normal position; but suppose, meantime, a second call from some other room—for instance, from room No. 4—in which case pointer No. 4 will respond and indicate such
 5 call; but simultaneously therewith the magnetic force of secondary helix No. 2 will return pointer No. 2 to its normal position. In case two or more calls are simultaneously made, two or more pointers will respond and
 10 indicate the respective rooms, and the next call will return all of the pointers to their normal positions.

What we claim is—

1. An electric annunciator comprising a
 15 series of primary helices and a series of opposing secondary helices, with pointers adapted to vibrate between the cores of opposing helices, primary and secondary, the primary helices being connected, respectively, with the
 20 different call-buttons and connected in common with the battery-wire, the latter including in its circuit the secondary helices and

call-bell, branch wires leading from the battery to the different call-bells, substantially as set forth.

2. In an electric annunciator, the combination, with primary and secondary helices and pointers, substantially as indicated, of removable disks or caps mounted, respectively, on the different cores of the primary helices in
 30 front of the face-plate, such removable caps or disks bearing numbers corresponding with the numbers of the rooms or stations where the call-buttons are located that connect with the respective primary helices, substantially
 35 as set forth.

In testimony whereof we sign this specification, in the presence of two witnesses, this 2d day of December, 1889.

JOHN W. LUTHE.

ALFRED E. JEAVOUS.

Witnesses:

CHAS. H. DORER,
 WILL B. SAGE.