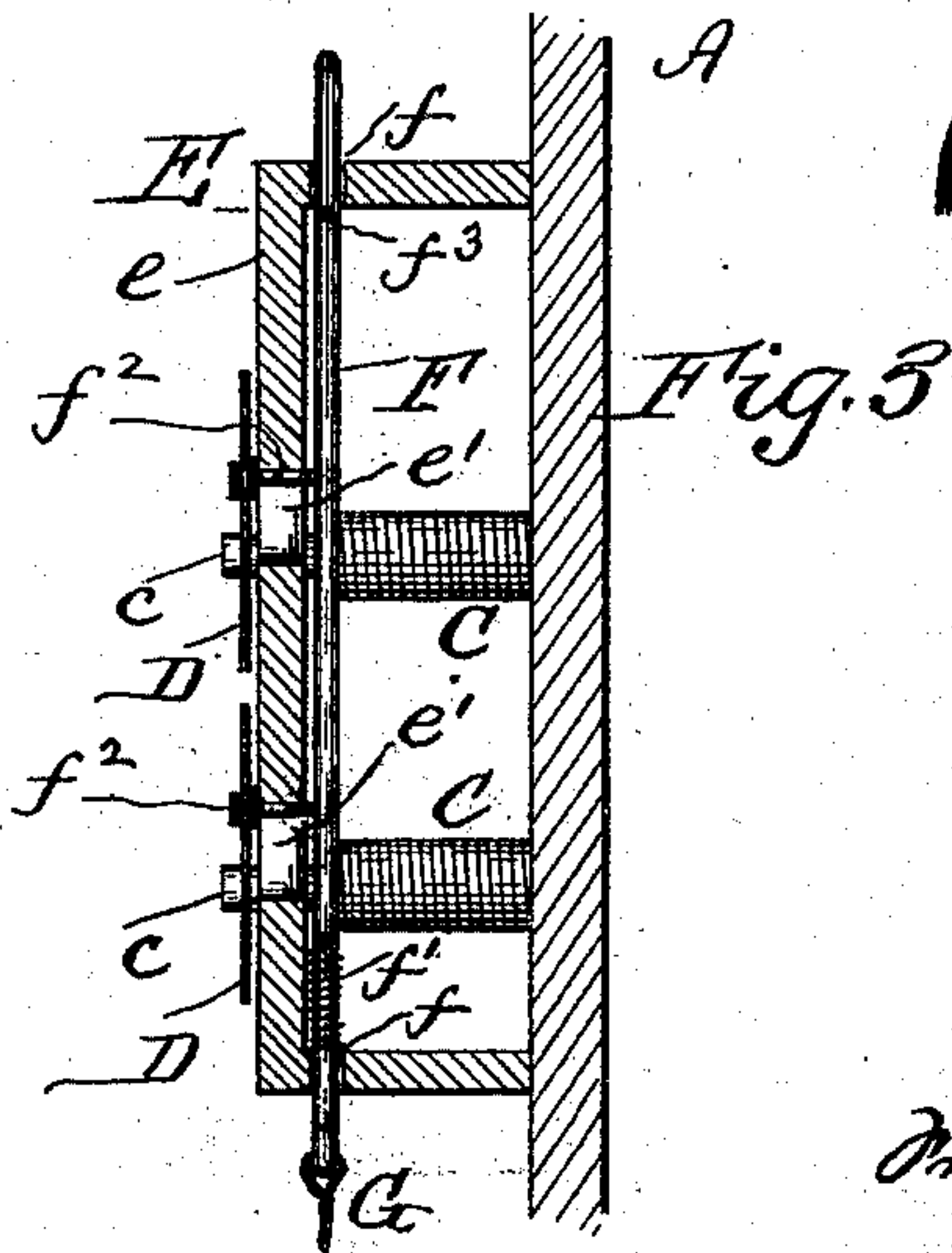
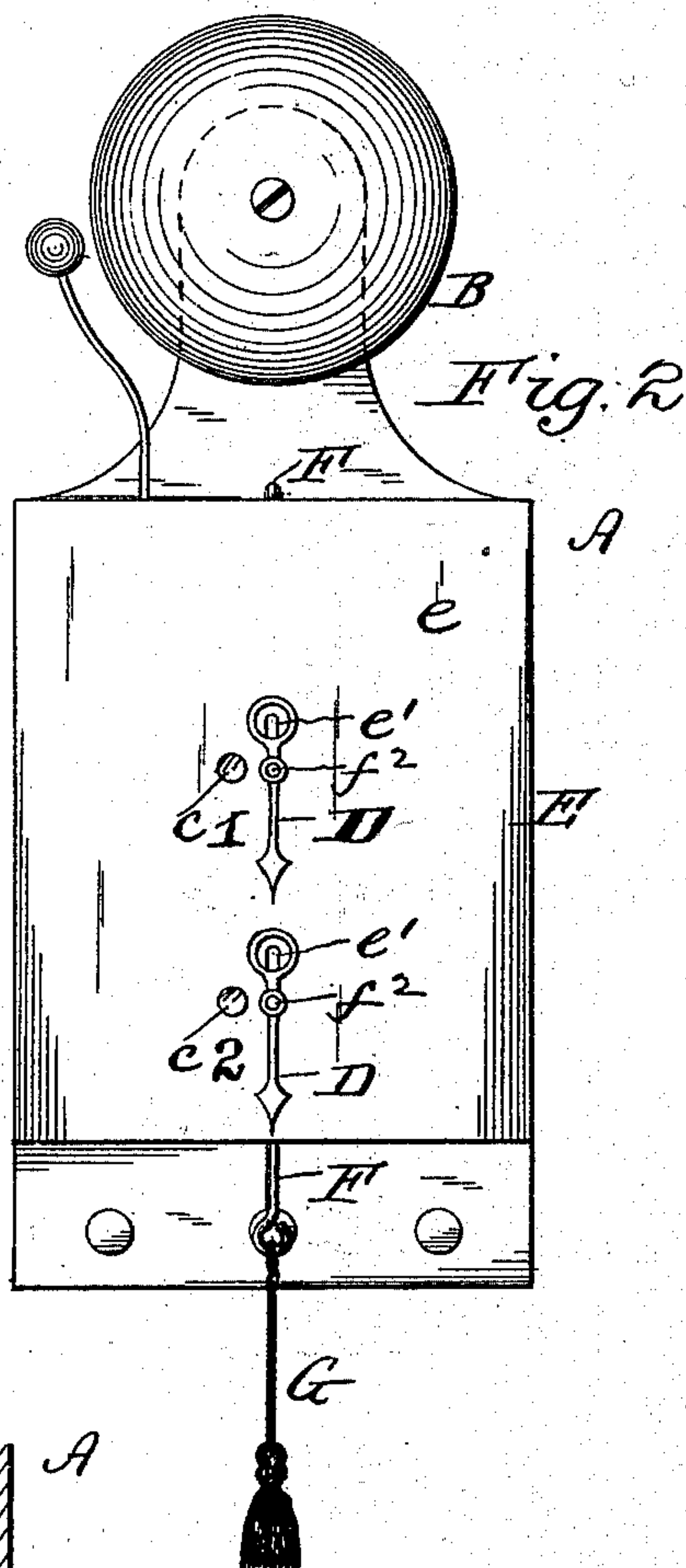
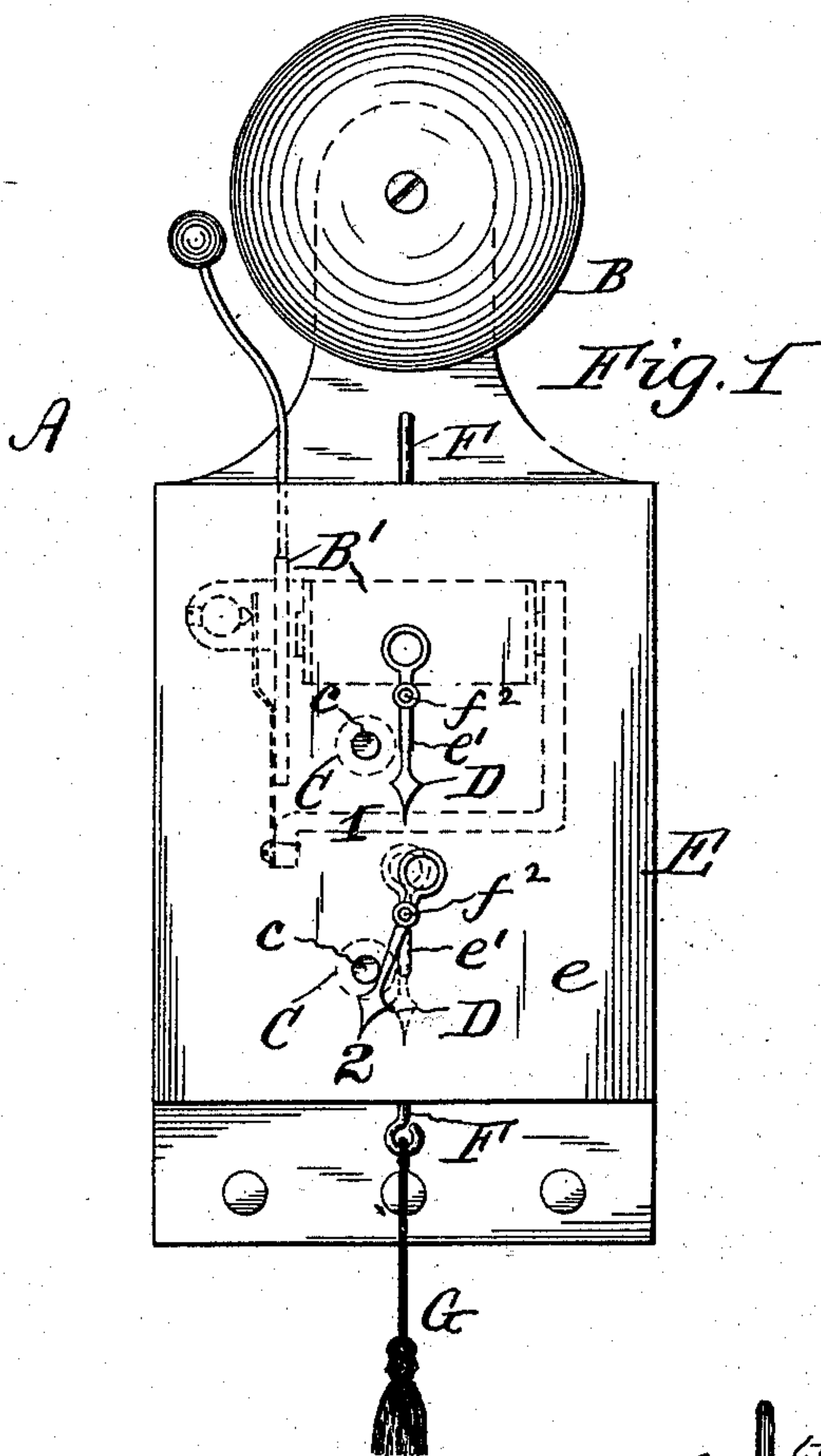


(No Model.)

F. S. CARTER.
ELECTRICAL ANNUNCIATOR.

No. 416,712.

Patented Dec. 10, 1889.



WITNESSES:
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UNITED STATES PATENT OFFICE.

FRANKLIN S. CARTER, OF BURLINGTON, NEW JERSEY.

ELECTRICAL ANNUNCIATOR.

SPECIFICATION forming part of Letters Patent No. 416,712, dated December 10, 1889.

Application filed April 12, 1889. Serial No. 306,971. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN S. CARTER, of Burlington, in the county of Burlington and State of New Jersey, have invented a new and valuable Improvement in Electric Annunciators; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

My invention has relation to electric annunciators of the form wherein the poles of the actuating-magnets for the indicating or annunciating needles or pointers project through and beyond the face of the dial, as shown, described, and claimed in Letters Patent of the United States, dated February 16, 1875, No. 159,901; and it has for its object a simple, economical, and durable setback or tripping mechanism for the annunciation or indicator needles or pointers, whereby the hinged or movable dials, or the movable pointer-actuating magnets, or the bar-rods with pins or other projections, heretofore used for setting back or tripping the indicators, are dispensed with.

My invention accordingly consists of the combination, construction, and arrangement of parts, as hereinafter more particularly described in the specification and pointed out in the claims, reference being had to the accompanying drawings, wherein—

Figure 1 is an elevation of an annunciator embodying my improvements, and showing one of the indicators or pointers attracted by its respective magnet to indicate a call. Fig. 2 is a like view showing the operation of setting back or tripping the indicators or pointers; and Fig. 3 is a vertical section, partly in elevation, of a form of dial and my improved setback or tripping motion for the indicators.

A represents the annunciator, consisting, essentially, of an electric bell B and actuating-magnets C for the pointers or indicators D. The electric actuating-magnet B' for the bell and the magnets C are included in suitable circuit-connections, (not shown in the drawings,) as they form no part of my invention and may be provided for as desired or the demands of the service require.

E represents the dial, which may be of any suitable construction and configuration. In the form of an annunciator shown it comprises a box-like form or cover for the electric devices of the annunciator. The dial E on its face *e* is provided with suitably-disposed openings *e'*, through which project the poles *c* of the magnets C, and adjacent to these poles are the indicators or pointers D. The latter are not pivoted or secured directly to the face of the dial, but to a rod F, which has suitable bearings *f f* on the dial and a spring *f'* for returning it to its normal position after it is pulled down or otherwise operated to set back or trip the indicators or pointers D. The pivot pins or supports *f²* on the rod or bar F may be of any desired kind, and they project through elongated slots *e'* in the face of the dial to admit of a longitudinal movement of said rod F and the pointers, in order to trip or set back the latter.

The lower end of the bar F depends below the dial, and may, if desired, be provided with a pull button or cord G.

The operation is as follows: When a call is made, the bell B rings and a pointer or indicator D is attracted by the pole *c* of its respective magnet C, and holds itself or is held to said pole in the usual manner, and as indicated at 2, Fig. 1. By pulling down the rod F all the pointers or indicators pivoted or secured thereto are moved downwardly, to release, trip, or set back any of the pointers D from the magnet-poles *c*, as shown in Fig. 2. The cord G being pulled quickly, the pointers are jerked free from the poles of the magnets, and thereafter, as said pointers descend, the attraction exerted by said magnets on the upper ends of said pointers will balance more and more the attraction exerted on their lower ends or points, although the rapid downward motion will make such action imperceptible. When the pivot of the pointer, as shown in Fig. 2, is opposite the pole of the magnet, the attraction of said pole is equal on the two ends of the pointer and the latter remains vertical. After the rod F is released it, together with the indicators, is returned to its normal position by the reaction of spring *f'*. A suitable pin or collar *f³* is secured to the rod F, for limiting its upward or return movement.

From the foregoing it will be noted that the essence of my invention is the securement of the indicators or pointers to the setback or tripping rod F, and as the construction of the rod, the manner of securing it to the dial, the attachment of the indicators thereto, and their location in relation to the magnets C may be variously made without departing from the spirit of my invention, I do not limit myself to the same as shown and described.

What I claim is—

1. In an annunciator, the combination of setback or tripping mechanism and pointers or indicators having their pivots connected to and moving with said tripping mechanism independent of the dial-plate, substantially as set forth.

2. In an annunciator, a setback or tripping bar F, independent of the dial-plate, and pointers or indicators mounted on pivots projecting from said bar, substantially as set forth.

3. In combination with the dial of an annunciator, the tripping or setback bar F, located to the rear of the dial, and pointers or indicators mounted on pivots which are secured to and moving with said bar, substantially as set forth.

4. In an annunciator, a dial provided with elongated slots, a trip or setback mechanism to the rear of said dial, pointers or indicators in front of the dial, and mechanism con-

necting the indicators to the trip or setback bar, and passing through said slots to cause the pointers to move with said bar, substantially as set forth.

5. In an annunciator, a dial provided with slots through which the pivots of the pointers or indicators pass, in combination with the setback-bar to which said pivots are attached, and the aforesaid pointers, substantially as set forth.

6. In an annunciator, pointers or indicators mounted on pivots which are secured to a movable bar or rod independent of the dial-plate, substantially as set forth.

7. In an annunciator, a longitudinally sliding trip or setback bar having an actuating-spring for returning it to its normal position, and indicators or pointers mounted on pivots which are secured to and move with said trip-bar, substantially as set forth.

8. In an annunciator, a dial having slots, magnet-poles projecting beyond said dial, movable trip mechanism F, and pointers or indicators which are mounted on pivots secured to and moving with said trip mechanism, substantially as set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

FRANKLIN S. CARTER.

Witnesses:

GEORGE W. SELTZER,
AUGUSTUS H. BECKMANN