

(No Model.)

2 Sheets—Sheet 1.

J. F. GILLILAND.

TELEGRAPHIC SOUNDER.

No. 315,763.

Patented Apr. 14, 1885.

Fig. 1.

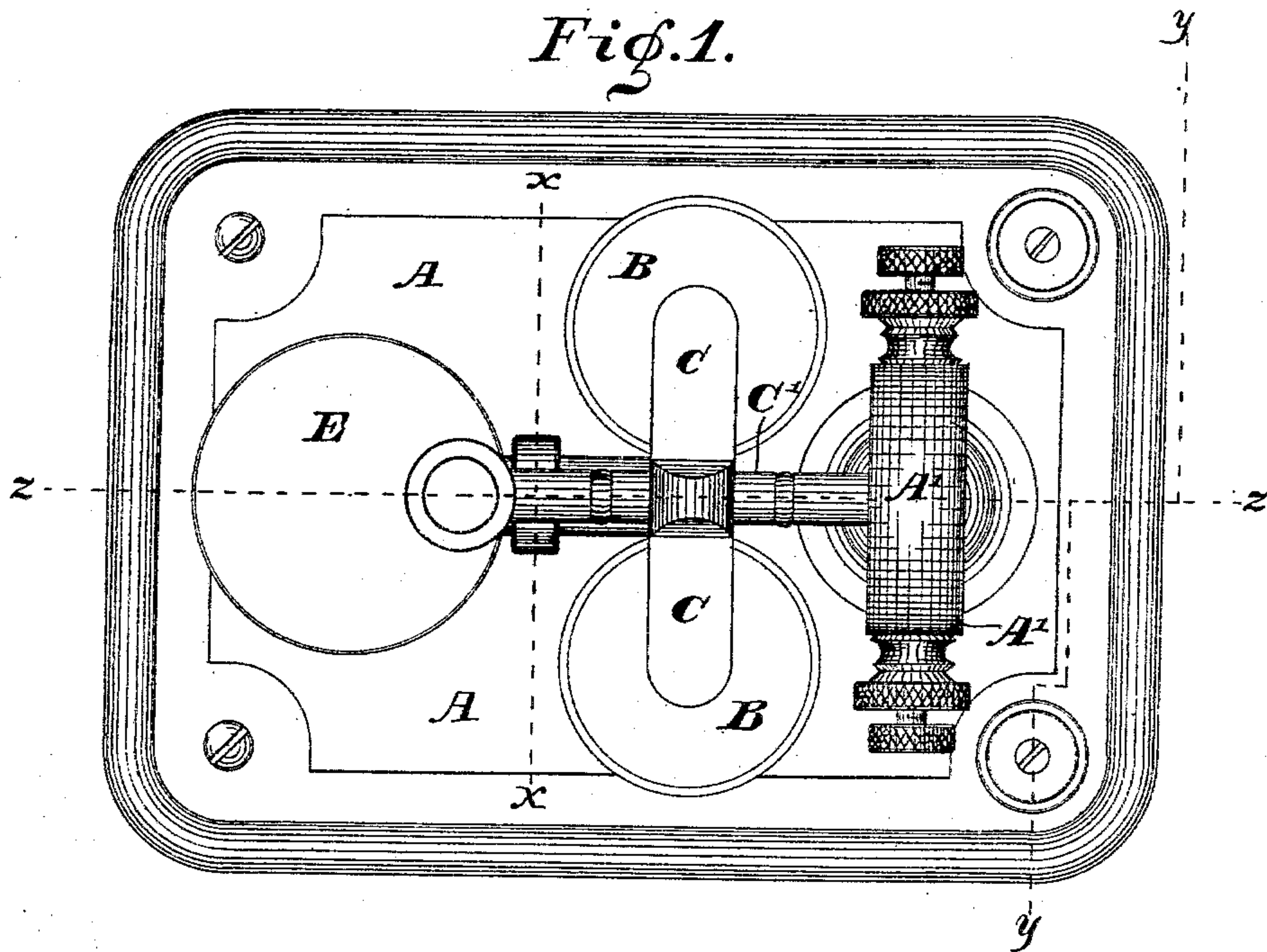
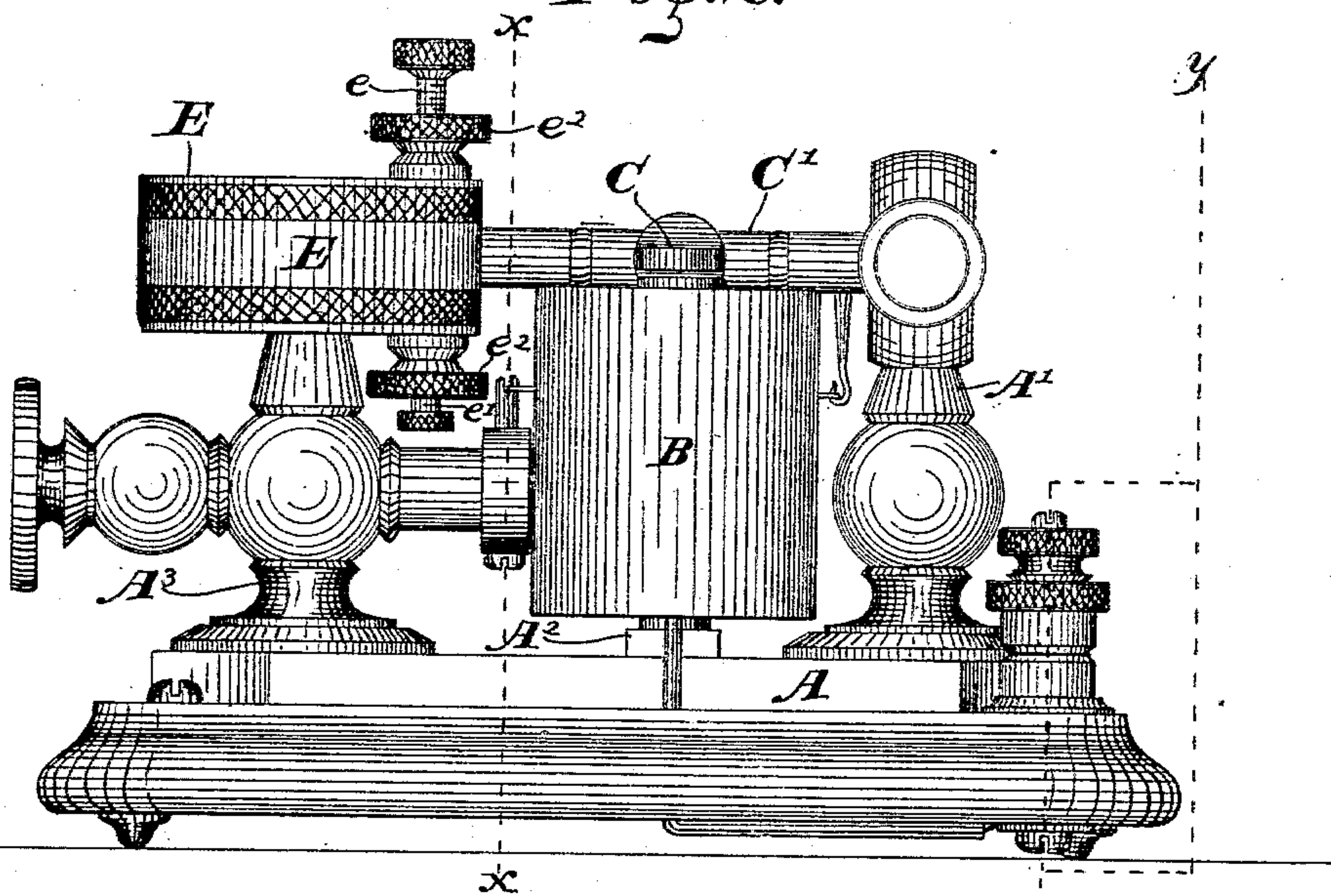


Fig. 2.



WITNESSES

INVENTOR.

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2 Sheets—Sheet 2.

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Fig. 3.

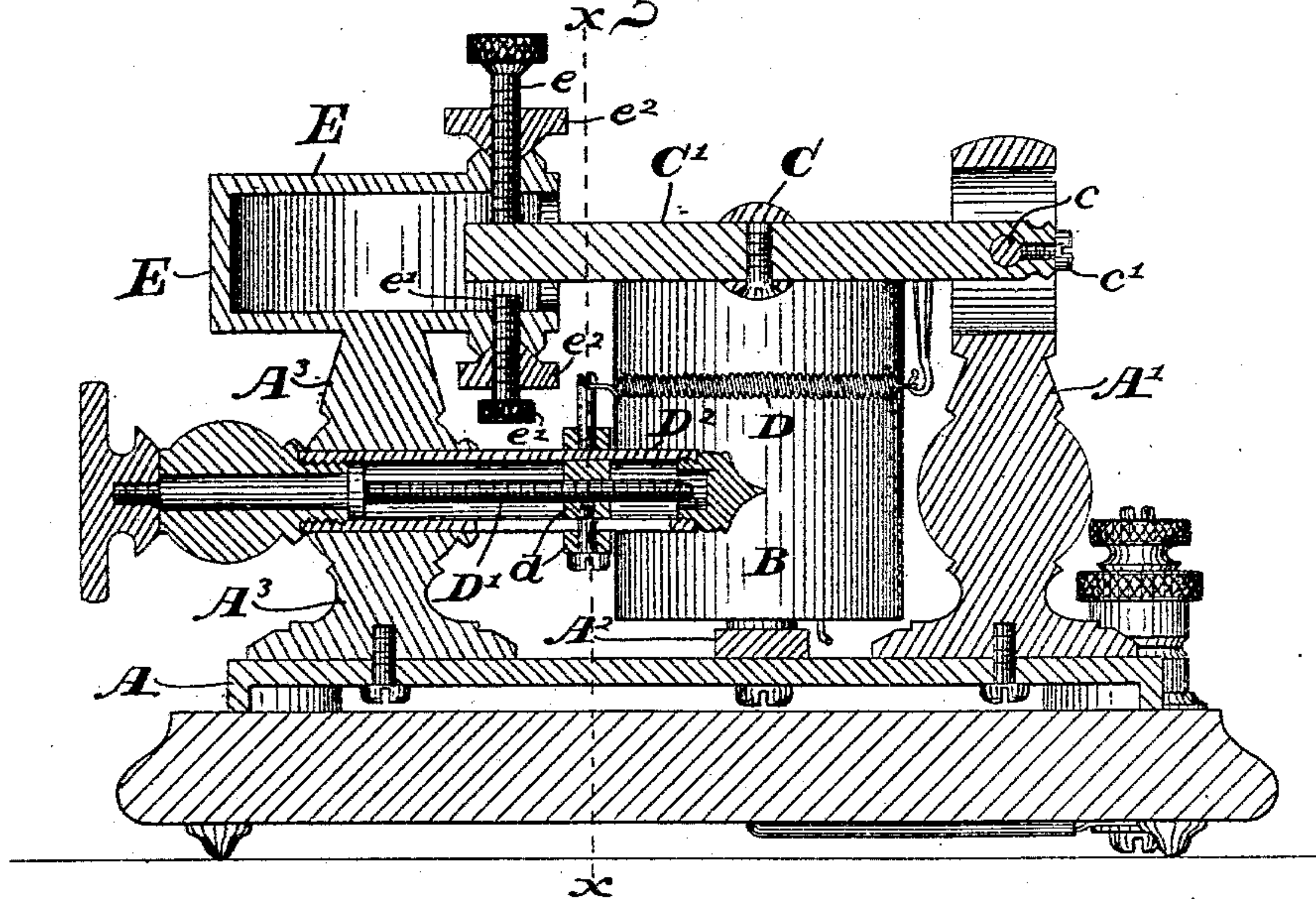
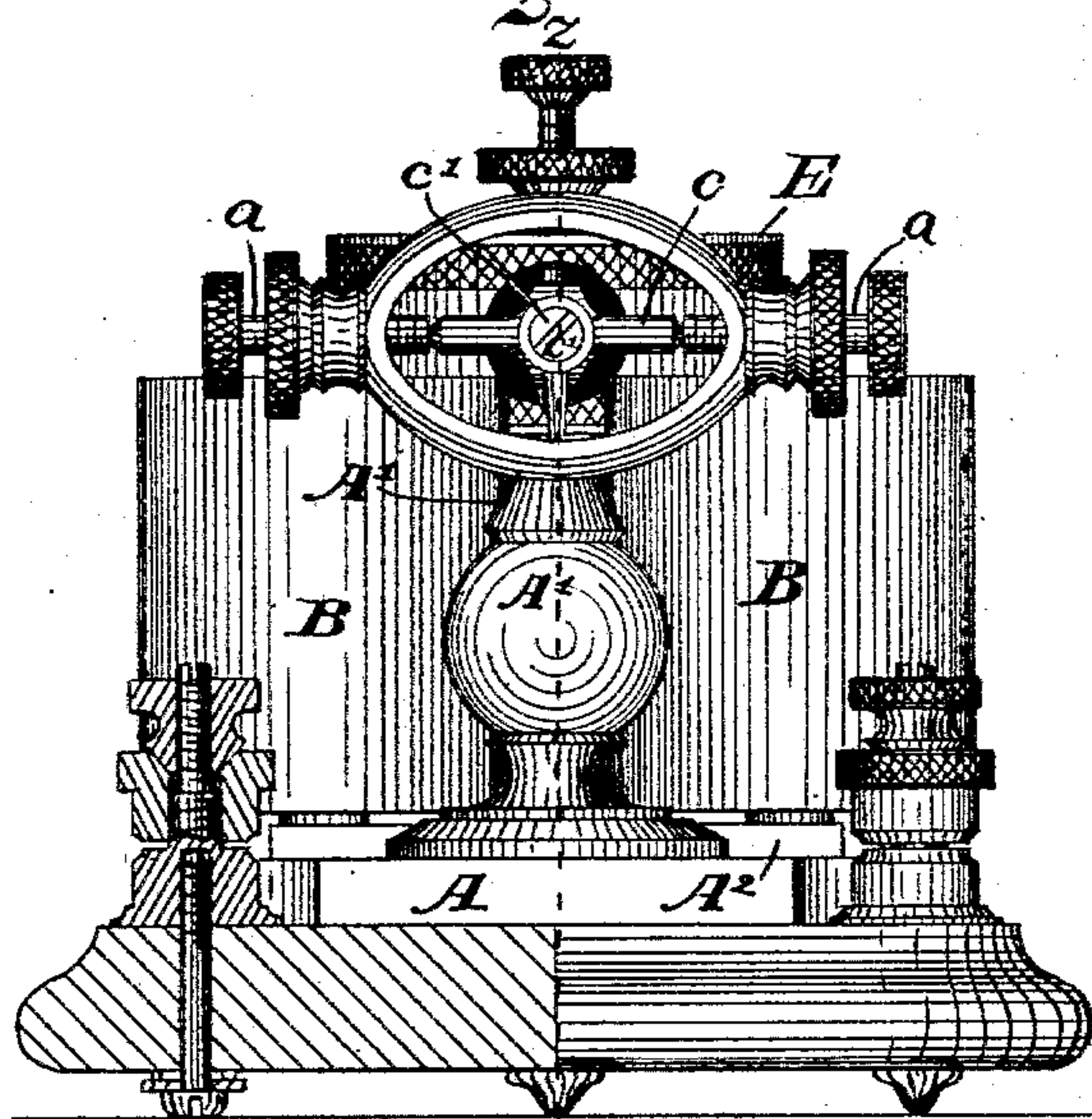


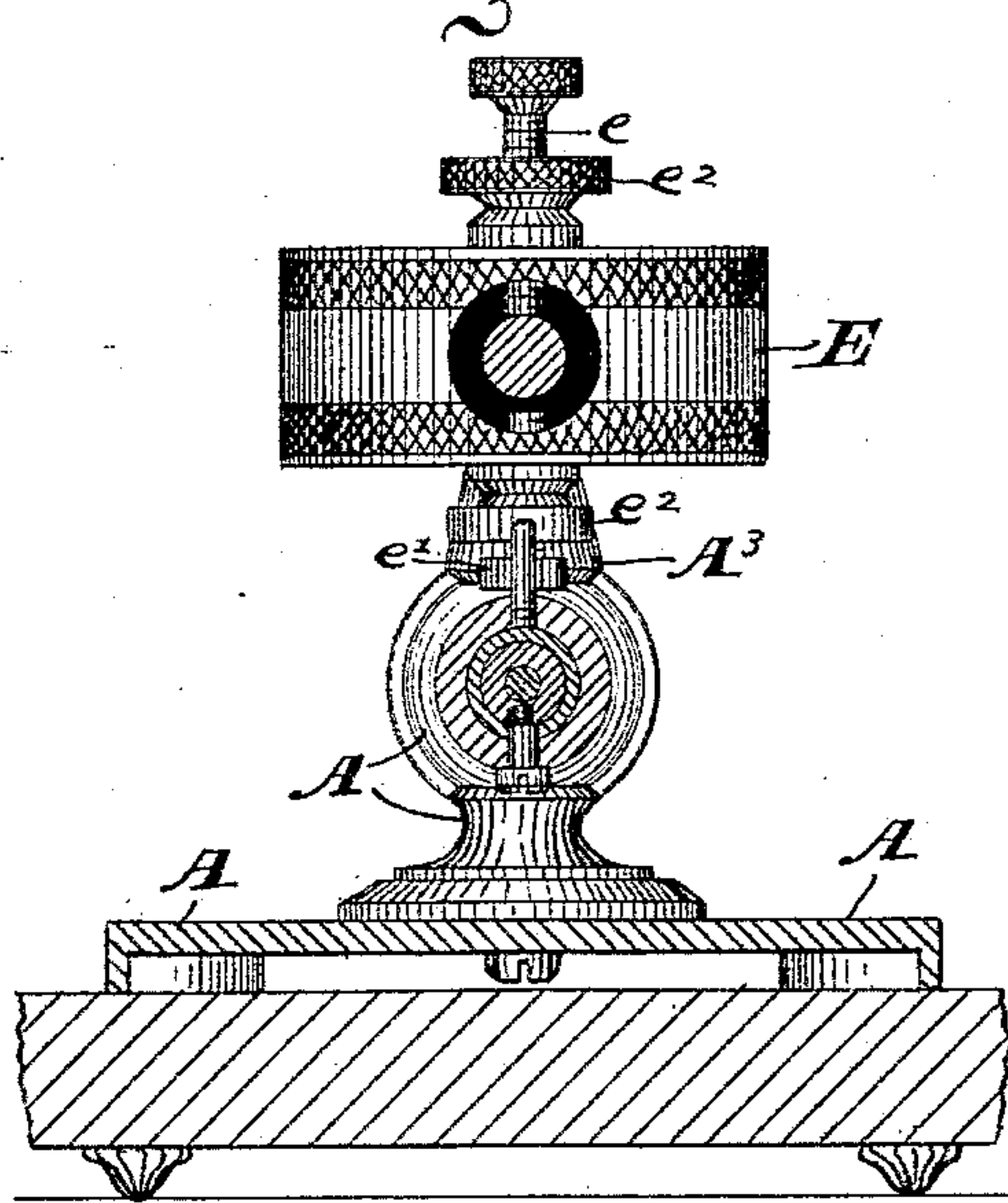
Fig. 4.



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Fig. 5.



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UNITED STATES PATENT OFFICE.

JAMES F. GILLILAND, OF INDIANAPOLIS, INDIANA.

TELEGRAPHIC SOUNDER.

SPECIFICATION forming part of Letters Patent No. 315,763, dated April 14, 1885.

Application filed June 17, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES F. GILLILAND, of the city of Indianapolis, county of Marion, and State of Indiana, have invented certain new and useful Improvements in Telegraph-Sounders, of which the following is a specification.

My said invention consists in certain improvements in the construction and arrangement of parts of a telegraph-sounder, whereby an instrument is produced capable of giving a clear and distinct sound, and of being certainly and accurately adjusted.

The principal advantage gained by the invention claimed in this present case is incident to the relative location of the sounder-bar and the drum. Said bar passes through a hole in the side of said drum to a point practically equidistant from the heads, and thus, as the sounder is operated, clear, distinct, and uniform-toned sounds are produced, which is not done by telegraph-sounders which contain drums located wholly to one side of the sounder-bar.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a top or plan view of an instrument embodying my invention; Fig. 2, a side elevation of the same; Fig. 3, a longitudinal vertical section on the dotted line $z z$; Fig. 4, an end elevation of the instrument as seen from the dotted line $y y$, showing one of the binding-posts in section; and Fig. 5, a transverse vertical sectional view, looking to the left from the dotted line $x x$.

In said drawings the portions marked A represent the base of the instrument; B, the magnets; C, the armature; D, the armature-spring, and E the sounder-drum. The base A carries the pivot-post A' , on which the armature is mounted, the base-bar A^2 of the magnets, and the drum-post A^3 , each being secured thereto by screws, as shown, or otherwise. The magnets B are the usual electro-magnets commonly used in similar instruments, and are mounted in the ordinary or any approved manner. The armature C is mounted on the sounder-bar C' , which is in turn mounted on the pivot-bar c , supported by the pivot-screw a , which passes through its end, and is secured

in position by the set-screw c' . Said sounder-bar enters the hole in the side of the sounder-drum, and is adapted to vibrate between the sounding-points, as it is drawn in one direction by the magnets or in the other by the armature-spring. The armature-spring D is arranged to operate reversely to the magnets, as is usual, and is adapted to be adjusted by means of the sliding nut d and the screw D' , whereby it is operated, said nut being mounted on a preferably hollow rod, D^2 , and said screw being journaled in a bearing at the outer end of said rod and entering said nut, a portion of which is preferably within said hollow rod. This forms a superior means of adjustment, as it is not liable to accidental variation, and by it the spring can be easily and quickly given the desired tension to properly act reversely to the magnetic force. The sounder-drum E is mounted on the post A^3 , and is provided with sounding-points $e e'$, which extend inwardly from the two sides. These points are preferably in the form of adjusting-screws, and bear jam-nuts e^2 , as shown, whereby they are adjusted and secured in any desired position. I do not, however, desire to limit myself to these points, as the device would operate if the points were integral with the drum, or if the sounder-bar were arranged to come in immediate contact with the internal surfaces of the drum-heads; but adjustable points have manifest advantages, and I therefore prefer to use them. This arrangement of a hollow sounder-drum with the sounder-bar projecting through an opening into said drum between points within its barrel produces when the sounder is operated, as I have found by practical tests, a very clear and distinct sound, easily distinguished from the ordinary noise produced by telegraph-instruments.

The means of adjusting the tension of the armature-spring shown in this case is not claimed herein, but is claimed in my application No. 134,008.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a telegraph-sounder, the combination of a hollow sounder-drum, and a vibrating sounder-bar extending through a hole into said drum, and adapted as it vibrates to come in

contact with the inner sides of said drum or with points arranged therein, substantially as set forth.

2. In a telegraph-sounder, the combination of the magnets, the armature, the sounder-bar, and the hollow sounder-drum, said bar extending through a hole in the side into said drum, substantially as set forth.

3. In a telegraph-sounder, the combination of the sounder-bar and the hollow sounder-drum having sounding-points projecting inwardly from its head, between which said sounder-bar passes, and with which it comes in contact as it operates, substantially as set forth.

4. The combination of the sounder-bar and the hollow sounder-drum, said drum being

provided with adjustable sounding-points *ee'*, extending inwardly toward the sounder-bar which enters said drum and passes between them, substantially as shown and specified.

5. The combination of the magnets, the armature, the sounder-bar, the sounder-drum, the armature-spring, and the means of adjusting said spring, consisting of the nut *d*, the screw *D'*, and the rod on which said screw slides, substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 13th day of June, A. D. 1884.

JAMES F. GILLILAND. [L. S.]

Witnesses:

C. BRADFORD,

E. W. BRADFORD.