

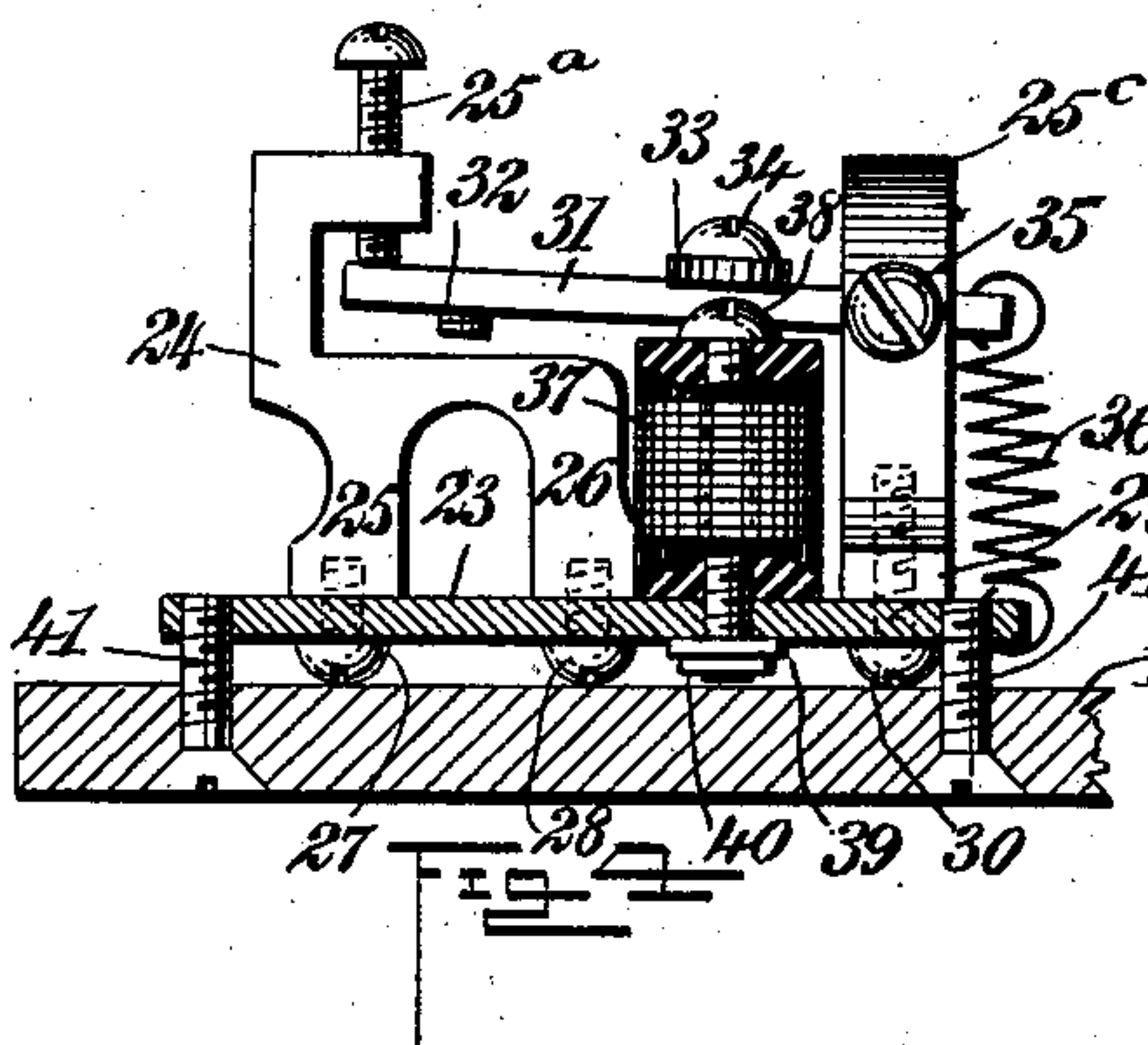
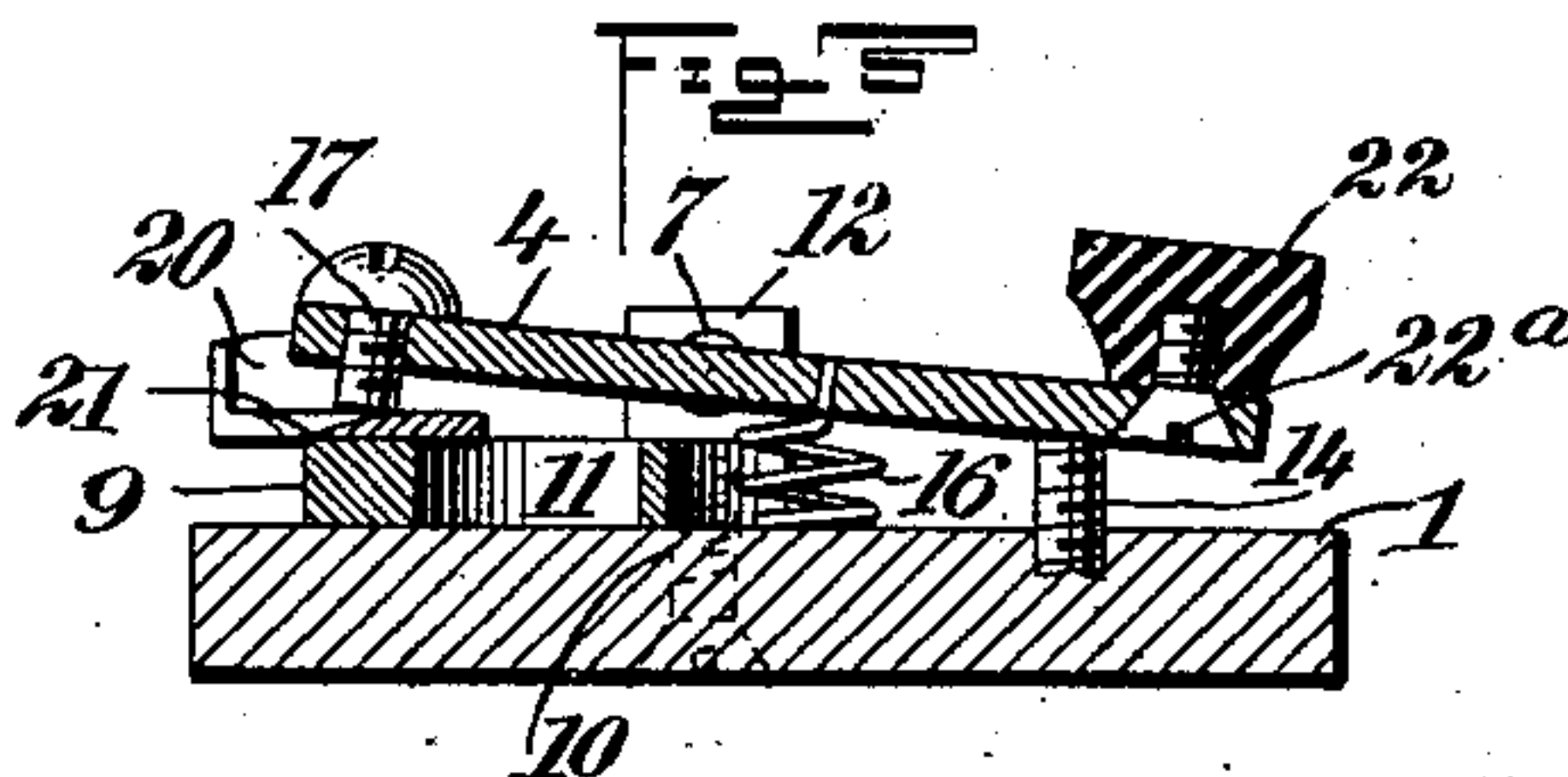
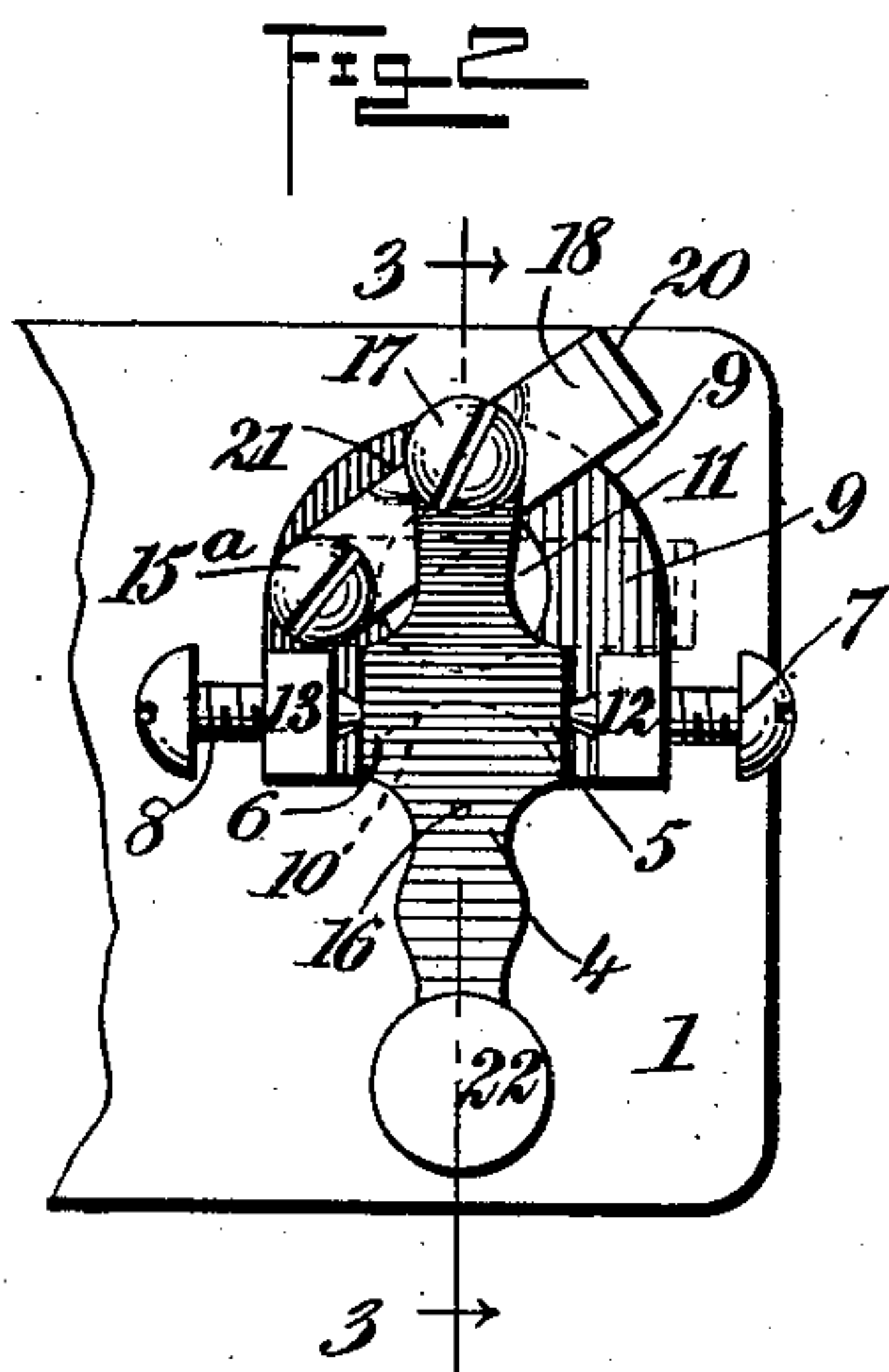
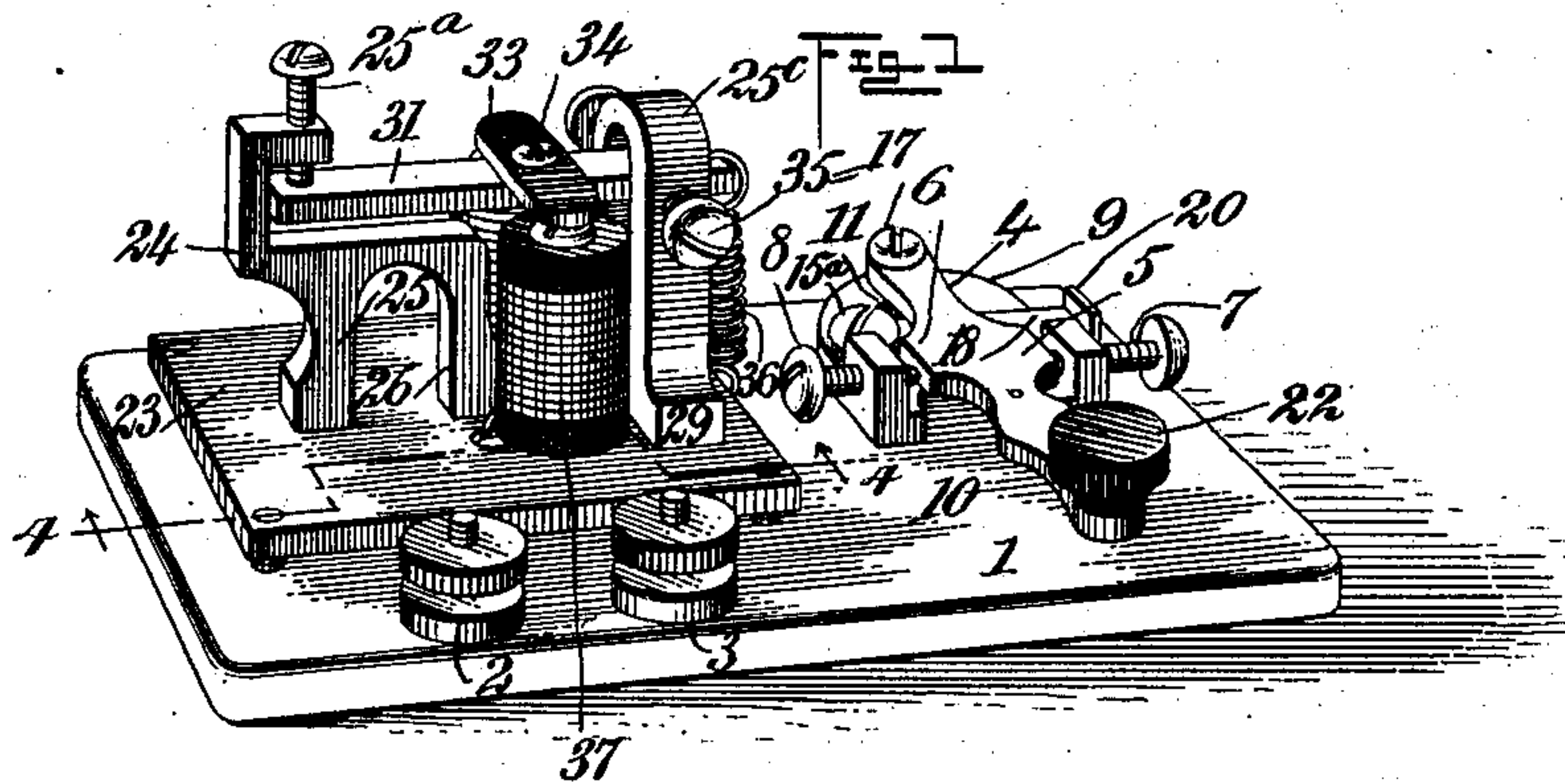
No. 744,575.

PATENTED NOV. 17, 1903.

B. I. LEVI.  
MINIATURE TELEGRAPHIC INSTRUMENT.

APPLICATION FILED DEC. 26, 1902.

NO MODEL.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

BENJAMIN I. LEVI, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO  
MOSES LOWENSTEIN, OF NEW YORK, N. Y.

## MINIATURE TELEGRAPHIC INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 744,575, dated November 17, 1903.

Application filed December 26, 1902. Serial No. 136,645. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN I. LEVI, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Miniature Telegraphic Instrument, of which the following is a full, clear, and exact description.

My invention relates to telegraphic instruments, my more particular object being to produce a type of instrument for service as a novelty and made of small size.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of my instrument complete and made upon a scale somewhat enlarged. Fig. 2 is a fragmentary plan view of the transmitting-key. Fig. 3 is a section through the key upon the line 3 3 of Fig. 2 looking in the direction of the arrows, and Fig. 4 is a fragmentary section upon the line 4 4 of Fig. 1 looking in the direction of the arrows.

A board 1 is provided with binding-screws 2 3 in the usual manner. The key-lever is shown at 4 and is provided with side lugs 5 6, integral therewith, these lugs being engaged by screws 7 8, which may, if desired, be ordinary machine-screws. The key-frame is shown at 9 and is provided with mutilations 10 11 and also with lugs 12 13, through which pass the screws 7 8. Screwed into the substance of the board is a boss 14, forming the electrical contact of the key. (See Fig. 3.) If desired, this boss may be coated with tin or with any non-corrosive material. A spiral spring 16 rests upon the board 1 and normally presses the key-lever 4 upward. A screw 17 is adjustably mounted in the back end of the key-lever 4 and forms the so-called "mechanical" contact or limiting stop for preventing too great a retrograde movement of the key and also for adjusting the play of the key.

A circuit-closer 18, having, preferably, the form of a blade provided with a beveled edge, as indicated more particularly in Fig. 3, is journaled upon a screw 15<sup>a</sup> and is free to move in the arc of the circle, as indicated

in Fig. 2. It is also provided with an upwardly-projecting ear 20, which may be grasped by the operator and used as a handle for manipulating the circuit-closer. When the operator desires "to close the key," he pushes the handle or ear 20 into the position indicated in Figs. 2 and 3, the beveled edge of the circuit-closer being so disposed as to raise the contact-screw 17 into the position indicated in said figures, thereby causing the key-lever 4 to engage the contact 14 and close the circuit.

The middle portion 21 of the circuit-closer 18 is provided with a thin edge, as indicated in Fig. 3, in order to insure a safe closure of the key. A finger-button 22 is secured upon the key by means of an ordinary screw 22<sup>a</sup>, as indicated in Fig. 3.

A base-plate 23, made, preferably, of brass, is used for the purpose of supporting divers of the parts and also for the purpose of increasing the loudness and clearness of the sound. A bracket 24, provided with legs 25 26, is mounted upon the base-plate 23 and is secured thereto by means of screws 27 28, provided with hemispherical heads, as shown. A screw 25<sup>a</sup> is revolvably mounted within the bracket 24 for the purpose of limiting the play of the armature-beam 31.

The arch 25<sup>c</sup> (see Figs. 1 and 4) is of the usual construction and is provided with lugs 29, which are engaged by screws 30, these screws having hemispherical heads, as shown in Fig. 4.

The armature-beam 31 is provided with a threaded boss 32, forming a stop limiting the downstroke of the beam. The armature 33 is of iron and is secured upon the beam 31 by means of a screw 34 in the usual manner. This armature-beam 31 is mounted upon screws 35 and is retracted by a spring 36, as shown in Fig. 4. Magnets 37 are provided with screws 38, which serve as cores and also as clamps for holding the magnets in position. The screws 38 are provided with hemispherical heads, these heads serving as poles of the magnet. The back plate 39 is of iron and is engaged by the screws 38, which pass loosely through the same, being held rigidly in position by means of the nuts 40—that is, the screws 38 are screwed firmly into the base-



plate 23, the back plate 39 is loosely slipped over the lower ends of the screws, and the nuts 40 are used to tighten the back plate rigidly in position. The hemispherical heads 5 of the screws 27 28 30 serve as spacing members for holding the plate 23 out of contact with the board 1, and screws 41 are passed upward through the board 1 and screwed firmly into the plate 23, thereby drawing this plate 10 firmly down, so that the hemispherical heads of the screws 27 28 30 are drawn tightly against the board, thus setting up an initial strain sufficient to hold the base-plate 23 firmly in position.

15 Having thus described my invention, I claim as new and desire to secure by Letters Patent—

20 In a sounder for miniature telegraphic instruments, the combination of a board provided with screw-holes and countersinks for

the same, sounder mechanism provided with a base-plate and with supports for a movable armature, screws engaging said base-plate and said supports for the purpose of holding the same together, said screws being provided 25 with heads normally engaging both said board and said base-plate so as to space the same apart, and screws engaging said board and said base-plate, said screws being provided with heads engaging said countersinks upon 30 the under side of said boards and connecting said board and said base-plate together so as to exert pressure upon said screw-heads.

In testimony whereof I have signed my name to this specification in the presence of 35 two subscribing witnesses.

BENJAMIN I. LEVI.

Witnesses:

WALTON HARRISON,  
EVERARD BOLTON MARSHALL.