

H. GERNSBACK.
POTENTIOMETER.
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988,456.

Patented Apr. 4, 1911.

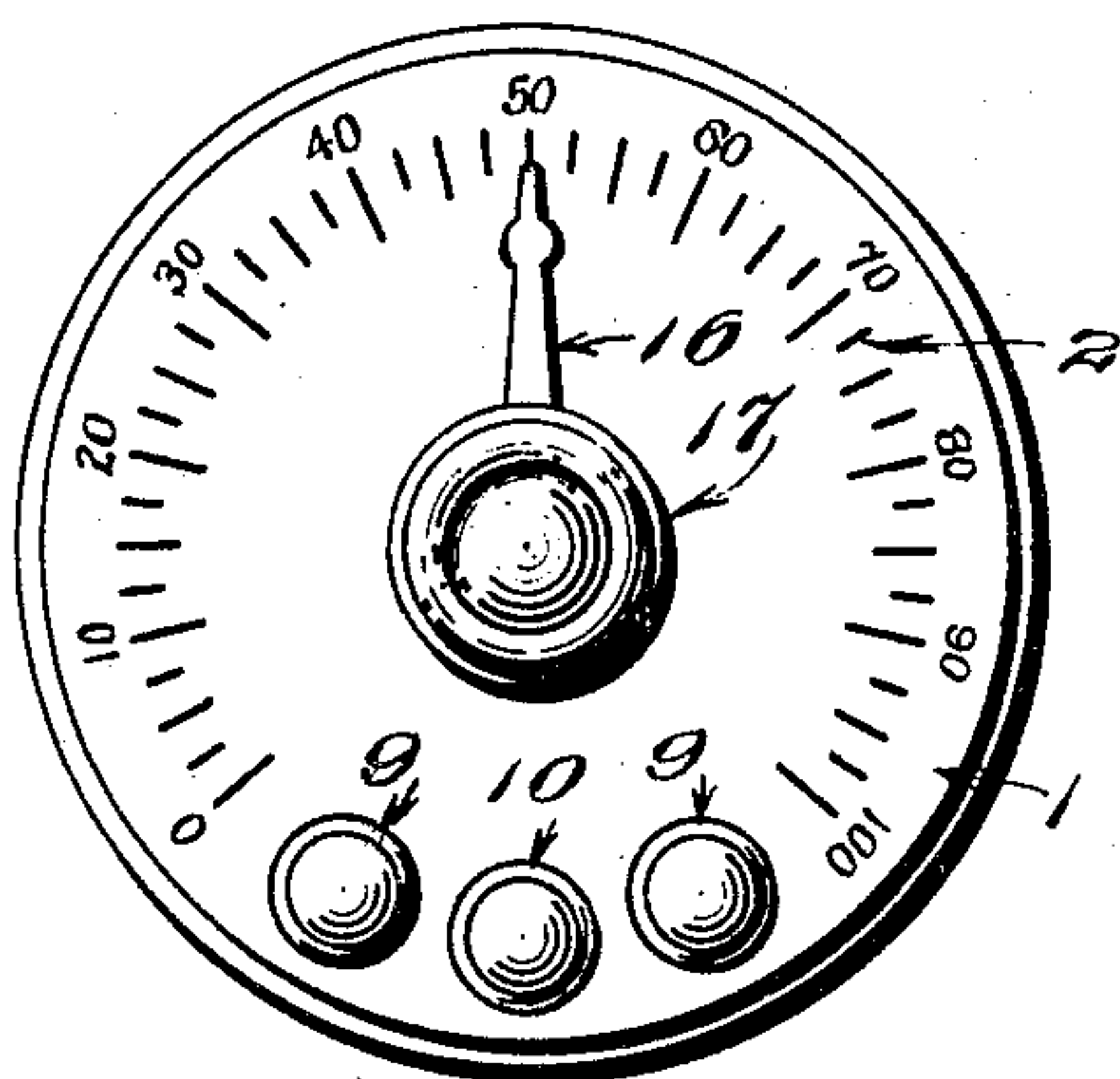


Fig. 1.

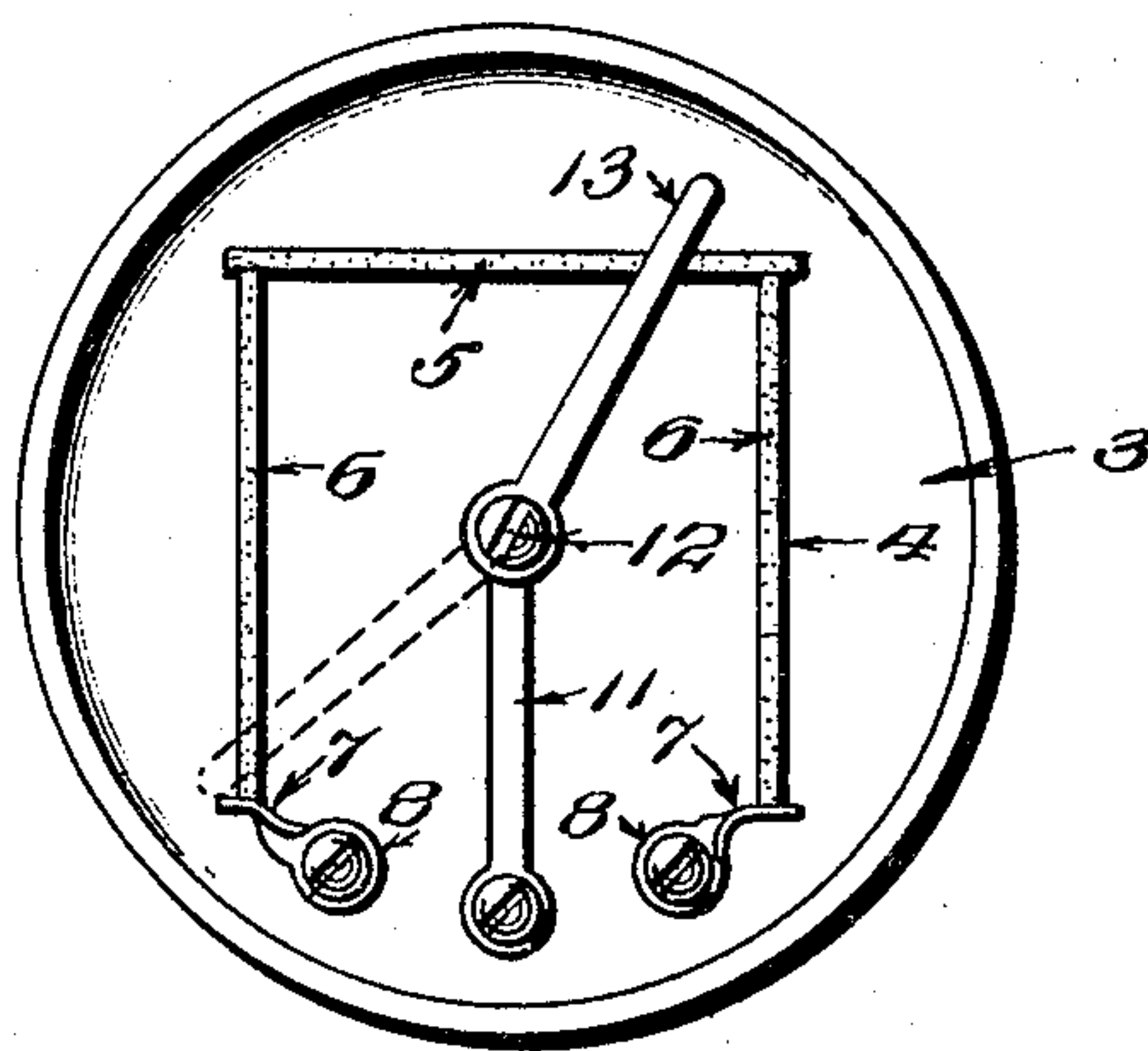


Fig. 2.

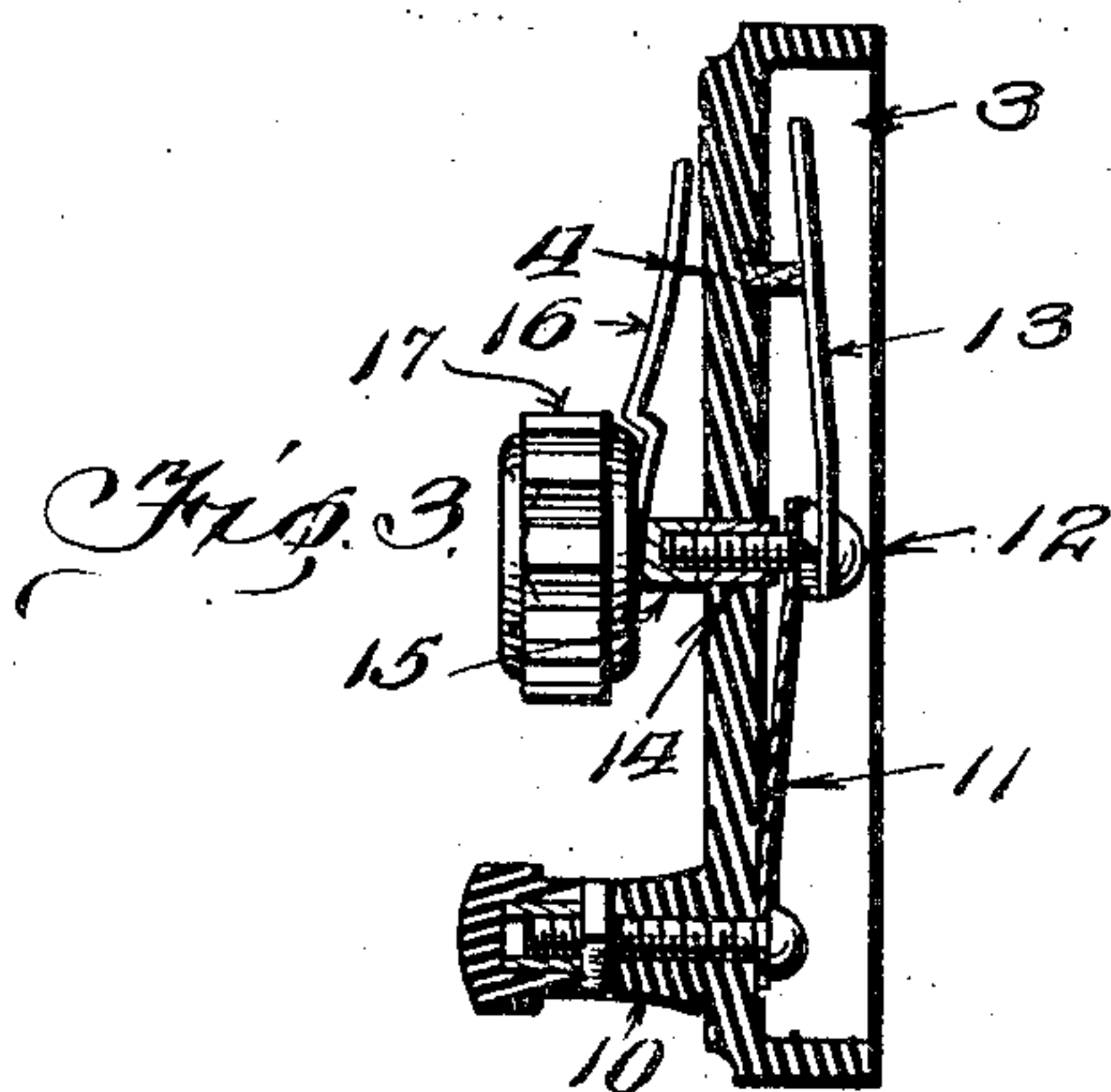


Fig. 3.

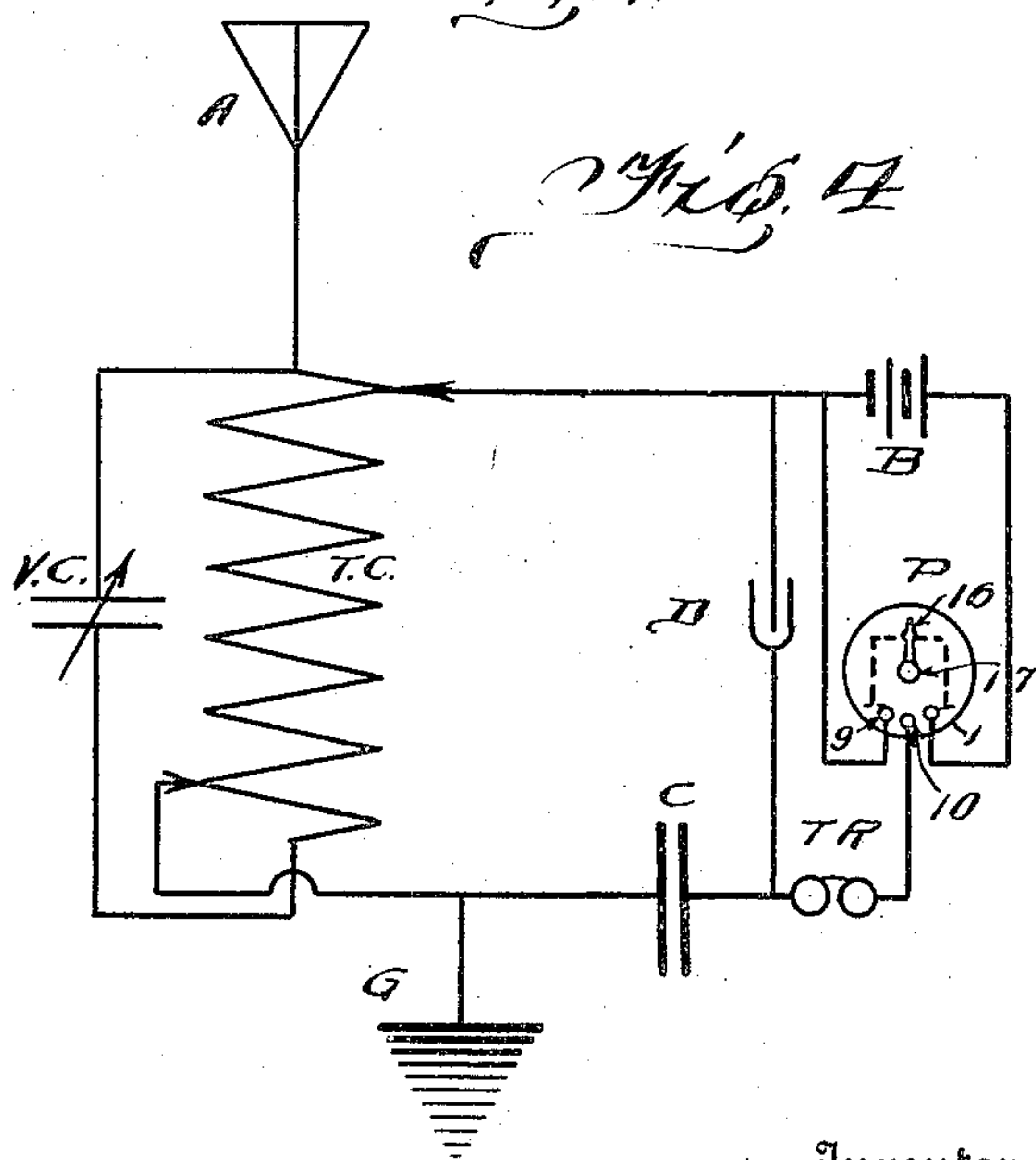


Fig. 4.

Witnesses
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POTENTIOMETER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HUGO GERNSBACK, a citizen of the United States, residing at New York city, in the State of New York, have invented certain new and useful Improvements in Potentiometers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to potentiometers and to that class used in wireless telegraphy, having for its object to provide a simple and compact device to control and regulate the resistance in electrical circuits.

Other objects will be apparent from the following specification, appended claim and drawings thereof, in which:—

Figure 1 is a plan view of the device. Fig. 2 is a bottom view thereof. Fig. 3 is a vertical central sectional view through Fig. 1. Fig. 4 is a diagrammatic view showing the application of the device.

Referring more particularly to the drawings, there is shown a base 1 made of gutta-percha or the like and having a circular shape, and on this base is the graduated scale 2. The under face of the base is dished as at 3 and in said face is cut a groove 4 which may be described as forming three sides of a square, in which groove is placed the high electrical resisting material, such as bars of graphite 5 and 6. Said bars are embedded in the under face and are so arranged that the ends of the top bar 5 extend into the path of the side bars 6 and receive the pressure exerted on bars 6 by resilient tongues 7 of the washers 8 forming part of the binding posts 9 of which there are two, one at the lower end of each side bar 6, and said binding posts terminate above the base to receive the wires from the battery and instrument as shown in Fig. 4. Mounted between the binding posts 9 is a third one 10 which is electrically connected with a bar 11 which in turn contacts with the central screw 12. This screw 12 carries a movable contact 13 which bears

on the bars 5 and 6 and after passing through the sleeve 14 terminates in the enlarged shank 15 which carries a pointer 16 and thumb piece 17, said pointer indicating on the scale 2 the resistance obtained.

In Fig. 4 of the drawings, I have shown a diagrammatic view illustrating the application of the invention to a wireless system in which A indicates the aerial, VC, the variable condenser, TC the tuning coil, D the detector, G ground, C condenser, TR the telegraph receiver, B the battery and P the potentiometer, the wiring in which figure is of the usual construction in wireless telegraph.

The operation of the device is obvious from the diagram of Fig. 4, that by proper connection with the circuits of the wireless system and battery, any potential may be caused to pass through the receiver by simply turning the thumb piece.

It is evident that the device is applicable in an electrical circuit as a rheostat by using the middle binding post and either of the side ones and, by the rotation of the pointer, the circuit may embody the entire length of the high electrical resisting bars or it may be varied until the current passes through the pointer, resilient arm and through the binding post.

What I claim to be new is:—

A potentiometer, comprising a base having a dished under face, binding posts on said base, a scale indicated on said base, a sleeve embedded in the center of said base, a screw passing through said sleeve, a thumb piece and indicator on one end, a contact on the other end of said screw, electrical connections between said screw and one of said binding posts, a groove in the bottom face of the base, bars of high electrical resisting qualities embedded in said grooves, said bars adapted to contact with the contact point on said screw, and electrical connections between the ends of said bars of high resisting materials and the other binding posts.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

HUGO GERNSBACK.

Witnesses:

E. D. JUNIOR,
E. R. WEADON.