

Nov. 18, 1924.

1,515,900

C. J. EVERETT

DETECTOR FOR USE IN RADIOCIRCUITS

Filed May 5, 1922

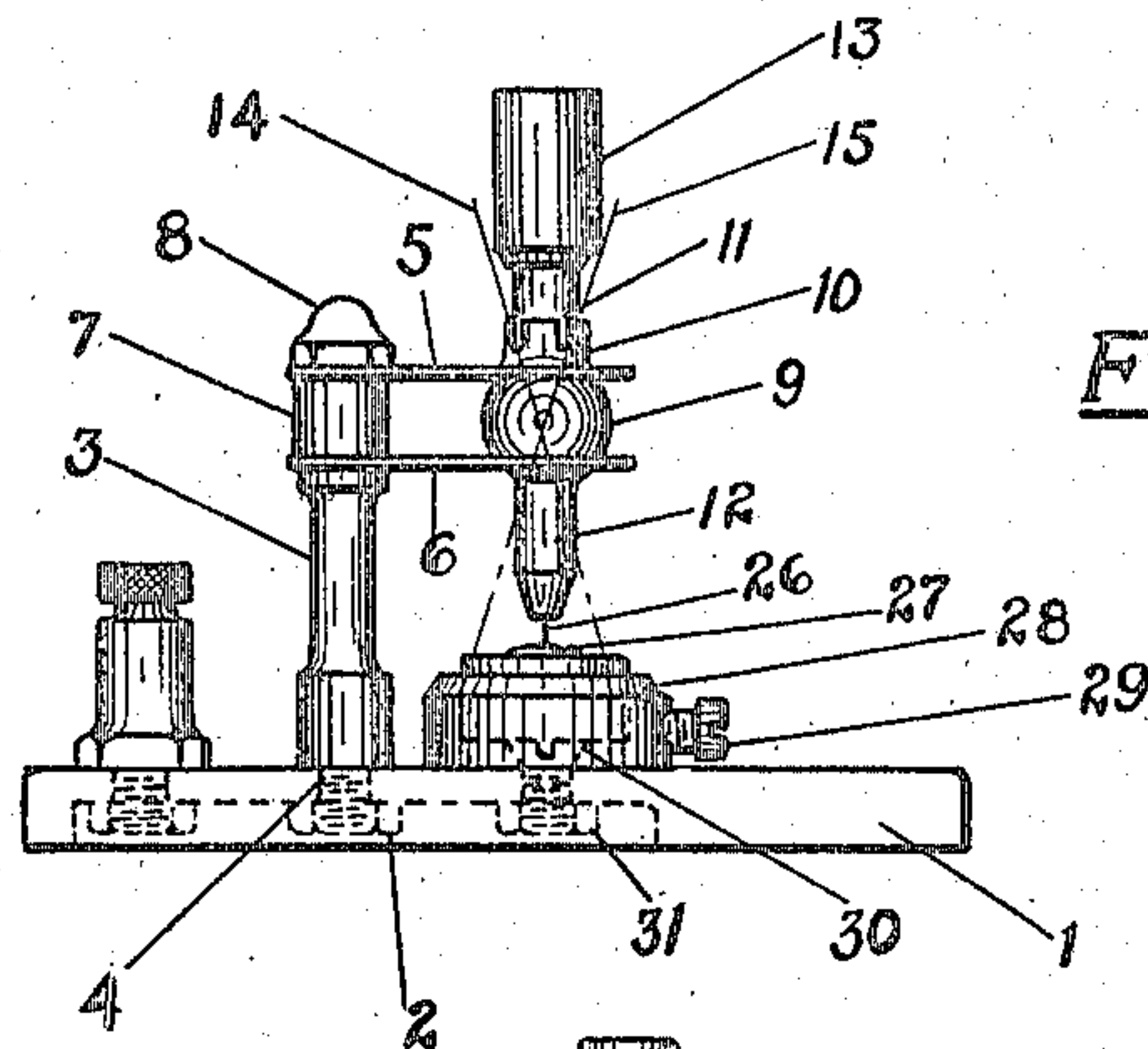


Fig. 1

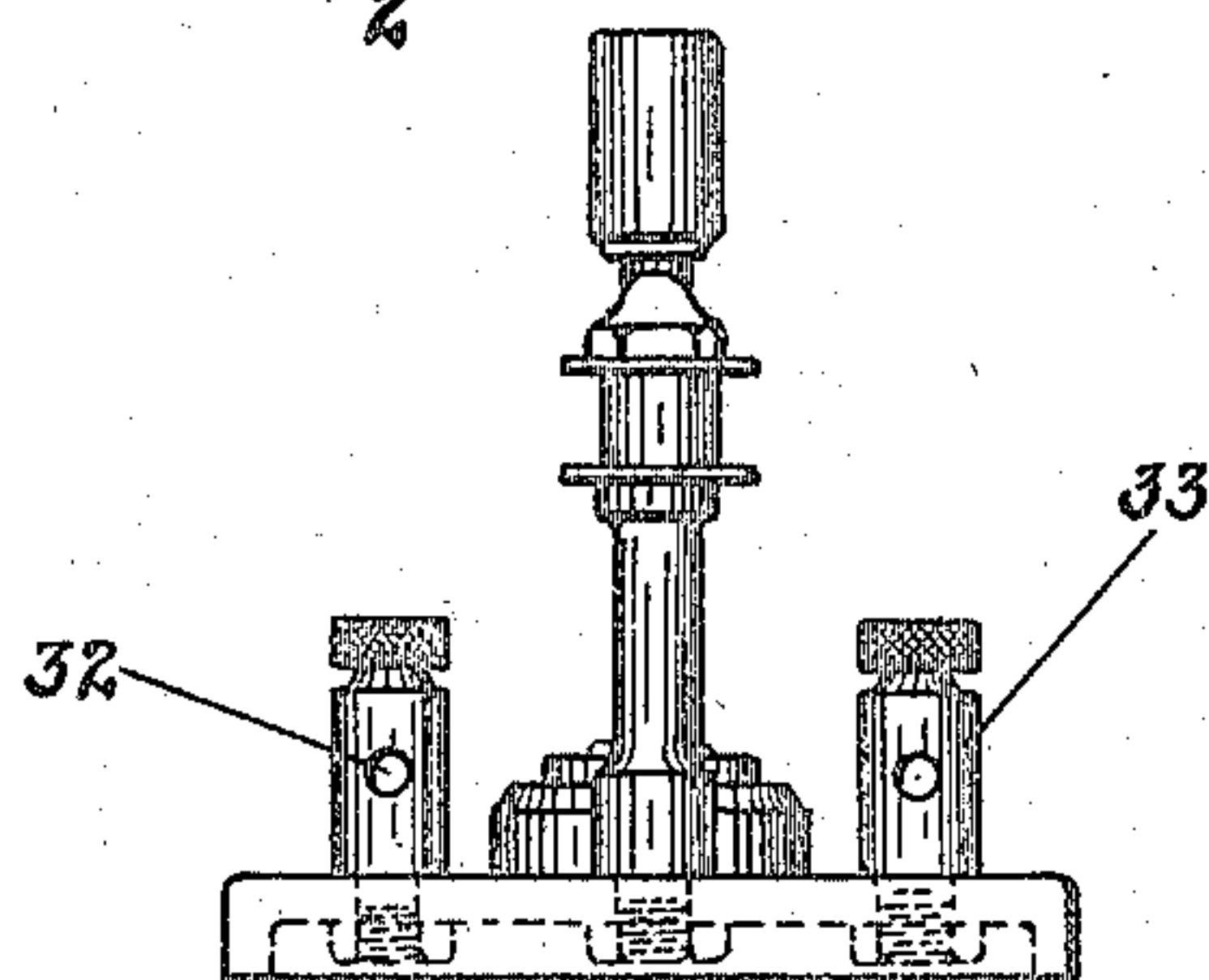


Fig. 2

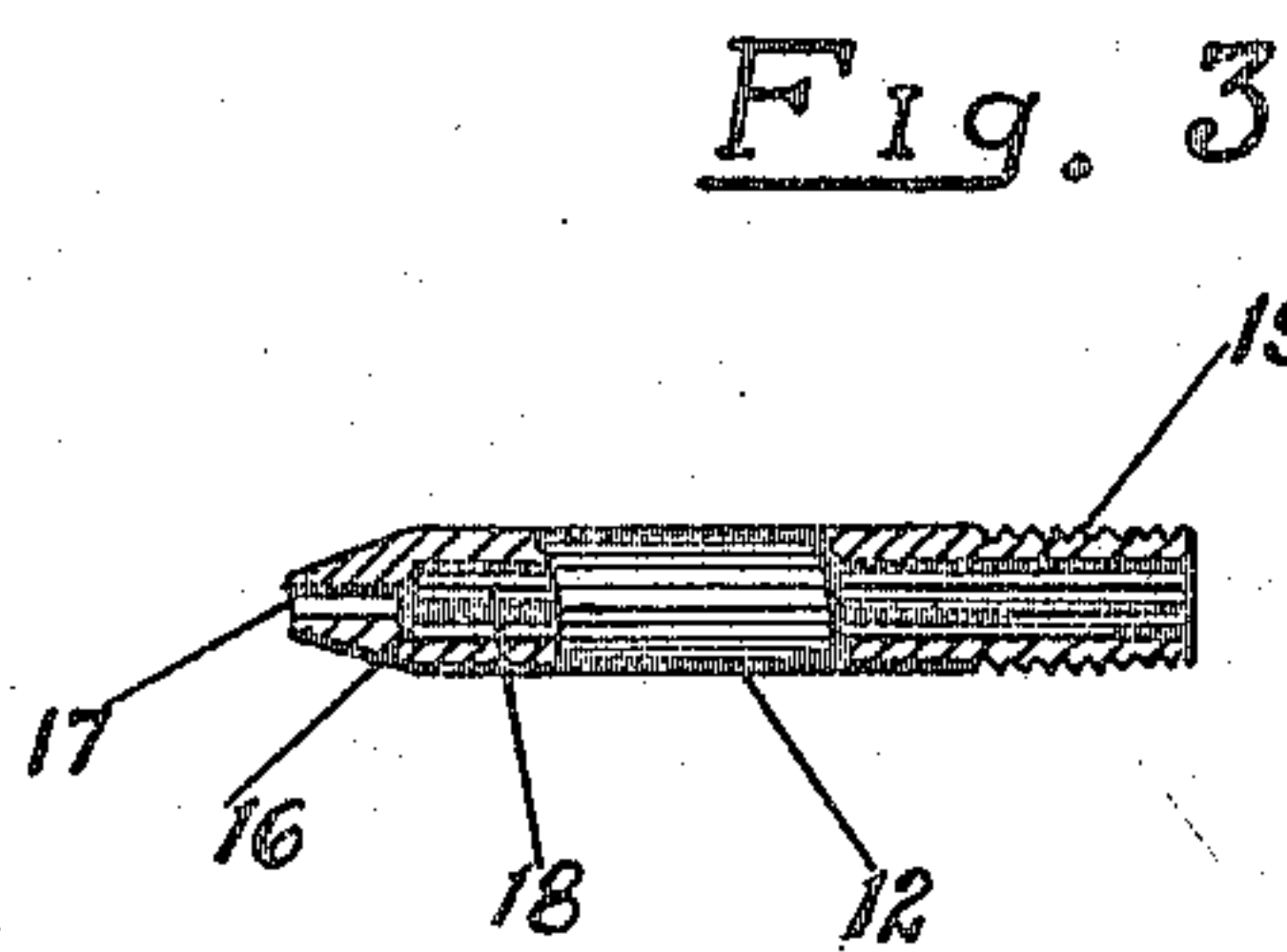


Fig. 3

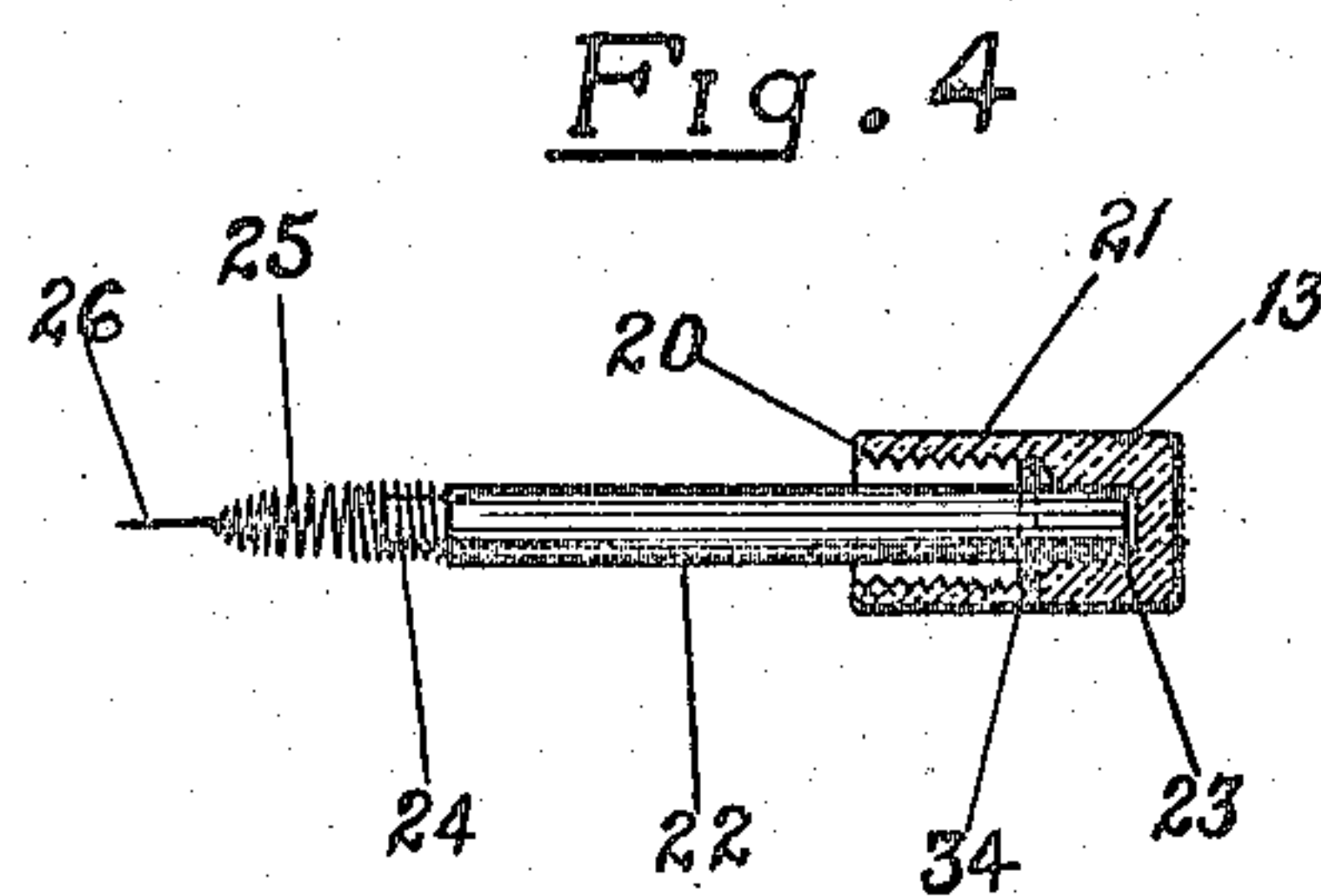


Fig. 4

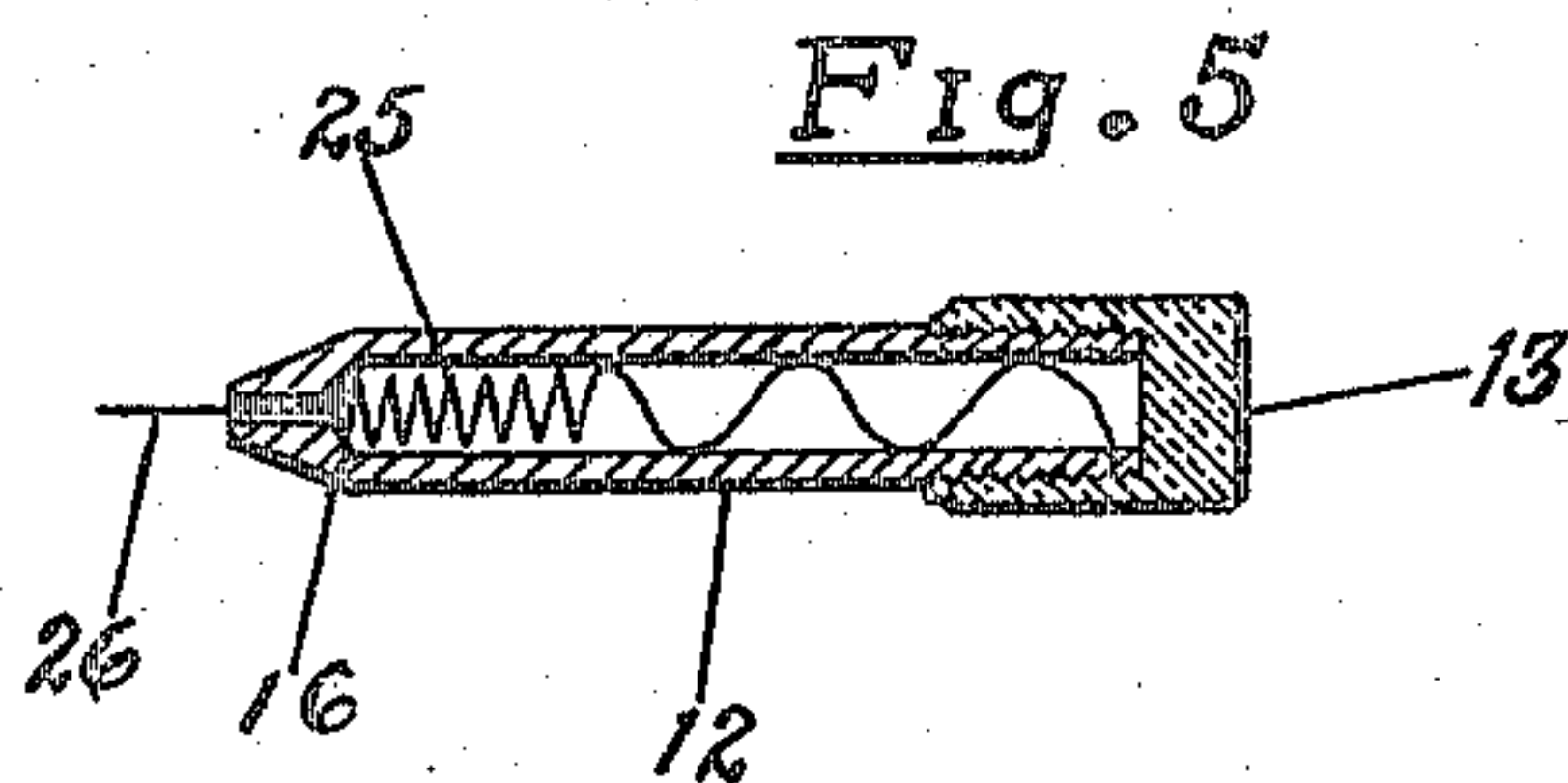


Fig. 5

INVENTOR  
CHARLES J. EVERETT  
BY  
*A. D. P. Libby*  
ATTORNEY



## UNITED STATES PATENT OFFICE.

CHARLES J. EVERETT, OF NEW YORK, N. Y.

DETECTOR FOR USE IN RADIOCIRCUITS.

Application filed May 5, 1922. Serial No. 558,649.

*To all whom it may concern:*

Be it known that I, CHARLES J. EVERETT, a citizen of the United States, residing at New York, in the county of New York, State of New York, have invented certain new and useful Improvements in Detectors for Use in Radiocircuits, of which the following is a description, reference being had to the accompanying drawing and to the figures of reference marked thereon.

This invention relates to detecting means for receiving communication by wireless transmission.

The principal object of my invention is to provide a part for an improved form of holder constituting a detector wherein the parts are simple and inexpensive to manufacture.

My invention will be best understood by reference to the drawing, in which:

Figure 1 is a side elevation of a complete detector.

Figure 2 is an end view of Fig. 1.

Figure 3 is a part sectional view of one of the parts constituting my improvement.

Figure 4 is a part cooperating with the parts shown in Fig. 3, and

Figure 5 is a modified form of contact holder.

In the drawings the like numbers refer to corresponding parts in the various views, 1 being a base preferably of insulating material. Fastened to the base 1 as by screw threads 4 and nut 2 is a metal standard 3. Supported at the upper end of the standard 3 are plates 5 and 6, which extend laterally therefrom in substantially parallel relationship, the plates 5 and 6 being spaced apart by a spacer 7 and held in position by a nut 8 which engages threads on the upper end of the standard 3. The outer ends of the plates or support arms 5 and 6 have holes therein to receive a cylindrical guide and support member 9. Extending from the cylindrical surface of the guide 9 is a projection 10 having slots 11 therein so that the parts between the slots can be formed inwardly so that the inside diameter of the projecting part 10 is somewhat smaller than the slidable member or barrel 12, the upper end of which carries a knob or handle 13, which is used to raise the barrel 12 up and down in the guide 9 or to swivel the guide about in any direction through a given angle as indicated by the lines 14 and 15. As will be seen from Fig. 3, the barrel 12 has one end tapered to

form a nose 16. A restricted passage 17 extends through the nose 16; that is to say, the passage 17 has a considerably greater length than diameter and opens into the enlarged hollow portion 18 of the barrel 12. The end of the barrel opposite the nose 16 is threaded as at 19 to receive threads 20 which are on the internal part of the skirt 21 of the knob or handle 13. It will be understood of course that the position of the threads may be reversed on the two parts, or the knob 13 may be held to the barrel 12 in any other manner. A stem 22 is seated in a passage 23 in the upper end of the knob or handle 13, being held therein in any suitable manner. Usually a press fit is sufficient to produce the necessary result. A collar 34 pressed or otherwise fastened to the stem 22 is used to complete the contact between the stem and the barrel 12. The lower end of the stem 22 is reduced in diameter as at 24 and a spring 25 is attached thereto in any suitable manner as by reduced end convolutions which grip the portion 24. The spring has one end 26 extending outwardly so that when the parts shown in Fig. 4 are assembled in the barrel (Fig. 3), the end 26 will extend through the passage 17, being guided by the passageway so that the end 26 can engage a relatively stationary contact 27 which I term as "working" to indicate that it is a piece of detector crystal or an equivalent thereto of the kind which will produce the required result when used in cooperation with the spring contact 25 and end 26. The "working" contact 27 is held in a holder 28 as by screw 29. The holder 28 being mounted to the base 1 by screw 30 and nut 31. Binding posts 32 and 33 are connected one to the standard 3 and the other to the holder 29.

The materials used for the contacts 25 and 27 are such as to give the necessary rectification of the radio currents travelling in the circuit in which the detector is wired. There are many such combinations of materials, but since these form no part of my invention they will not be specifically mentioned. Furthermore, since the holder, outside of the barrel and cooperating parts as shown in Figs. 3, 4 and 5, constitutes no part of my invention, the details may be materially different from that shown, but in order to illustrate my improvement I have chosen to show the same in connection with the holder described and claimed in the ap-



plication of Edward B. Nowosielski, Serial No. 558,181, filed May 3, 1922.

In Fig. 5 I have shown a modified form in which the spring 25 is operatively held within the barrel 12 without the use of the stem 22. However in both forms shown, the spring 25 is constructed as to size and convolutions in such a manner as to give a delicate yet firm touch when the knob or handle 13 is operated to control the movement of the barrel 12 whereby contact is made between the end 26 and the various parts of the crystal 27.

It will be apparent that by my improved manner of mounting the spring contact, it is protected from injury due to careless manipulation, accidents or other causes, which troubles are apt to befall a spring contact that is exposed. My construction is such that the barrel 12 may be readily withdrawn from the guide member which supports it, and carried in one's pocket without distorting or otherwise injuring the contact spring.

It will be further apparent that various changes may be made in the details of my invention without departing from the spirit of the same and the scope of the appended claims.

Having thus described my invention, what I claim is:

1. In a detector having a contact surface, a cooperating member comprising a barrel having a restricted opening at one end, a stem, a knob or handle on the stem, said knob or handle having means for fastening to the end of the barrel opposite the restricted opening, and a spring contact member carried by the stem having an end projecting through the restricted opening to engage said contact surface.

2. In a detector having a contact surface,

a co-operating member comprising a barrel having a restricted opening at one end, said opening being greater in length than in diameter for guiding the end of a contact, a stem supported on the opposite end of the barrel and carrying a spring having an extended part projecting through and guided by said restricted opening to engage said contact surface.

3. In a detector having a contact surface, a cooperating member comprising a barrel having a restricted opening at one end, and threads on the other end, a stem, a knob or handle fixed to the end of the stem and having a skirt threaded to engage the threads on the barrel to hold the stem in place within the barrel, a spring having one end operatively secured to the stem and the other end extending through said opening in the barrel to engage said contact surface.

4. In a detector having a contact surface, a cooperating member comprising a barrel having one end tapered to form a nose and a passage through the nose, a stem positioned in and attached to the barrel, a spring having an end extending through said passage to engage said contact surface, said spring being held in working position in the barrel by said stem.

5. In a detector having a contact surface, a cooperating member comprising a barrel having a reduced passage in one end, a knob or handle on the other end for moving the barrel, a stem operatively connected to the knob or handle, a spring held by the stem in operative position within the barrel and having an end projecting through said passage to engage said contact surface.

In testimony whereof, I affix my signature.  
CHARLES J. EVERETT.