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A. N. PIERMAN

MOUNTING FOR STEMS OF CRYSTAL DETECTORS

Filed Feb. 4, 1922

Fig. 1

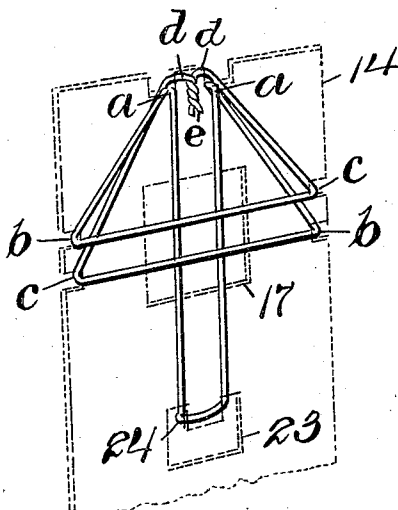
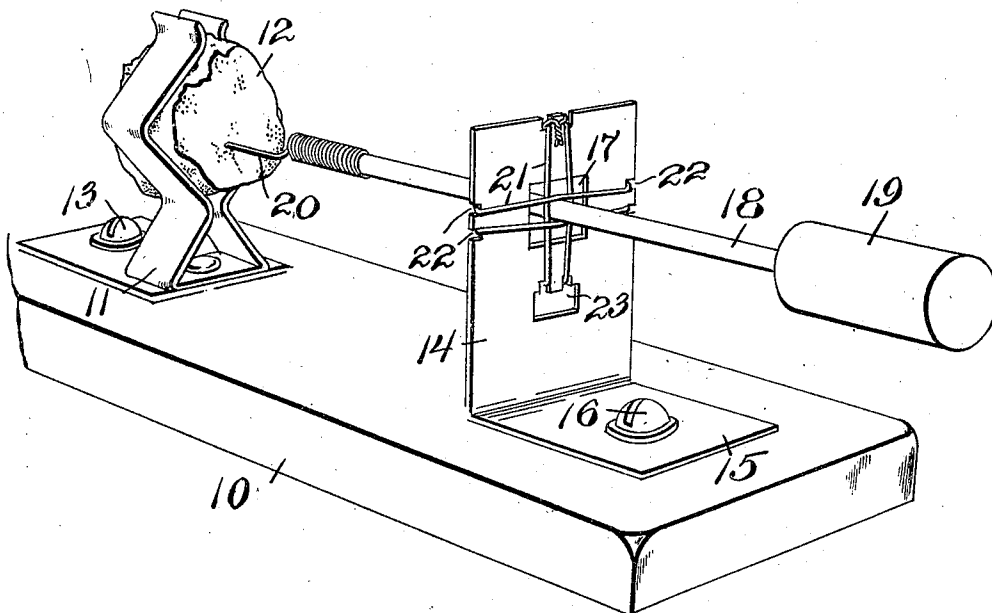


Fig. 2

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MOUNTING FOR STEMS OF CRYSTAL DETECTORS.

Application filed February 4, 1922. Serial No. 534,180.

To all whom it may concern:

Be it known that I, ALEXANDER N. PIERMAN, a citizen of the United States, and a resident of Newark, county of Essex, and State of New Jersey, have invented certain new and useful Improvements in Mountings for Stems of Crystal Detectors, of which the following is a specification.

This invention relates to a mounting for the stems of crystal detectors, which stems require a limited degree of adjustment, but which adjustment should be freely possible both in tilting the stem to various angular positions, and also to permit free rotation of the stem.

It has been customary to use ball and socket joints with a sliding stem in them, and the object of this invention is to provide a more easily operated stem having less friction, but as good electrical contact, and one that can be much more cheaply constructed.

The invention is illustrated in the accompanying drawing, in which Figure 1 is a perspective view of a crystal detector made according to my invention, and Figure 2 is a perspective view, on an enlarged scale, of the upper end of the support to more clearly show one manner of arranging the supporting wire.

The device can be fastened directly to the casing or any other part of a radio receiving set, but I illustrate it as being mounted on a base 10, on one end of which is any suitable form of crystal support 11, into which the crystal 12 is held, these crystals being made of galena, silicon and other attachable material.

The crystal support 11 forms also means for attaching a wire thereto, and I show the screw 13 which holds the crystal support to the base and also can act as a binding post or terminal for a wire.

The support for the crystal detector is made of substantially flat metal, the support 14 being preferably made with a foot 15 by means of which it is secured, the screw 16 acting to secure the foot 15 to the base, and also acting as a terminal or binding post.

The support has an opening 17, through which the stem 18 of the detector passes, the stem having a suitable handle 19 and having what is known as a whisker 20 at the end, which whisker is used for securing spring contact on the crystal 12.

The stem, in passing through the opening,

is engaged by means for holding it so that it can freely tilt, provide electrical contact and also be rotatable. Such means is provided by strands 21 of wire which is stretched across said opening 17 and is preferably arranged so that normally the strands are separated, so that the opening for the stem 18 is smaller in size than the diameter of the stem, and the wires are thus slightly spread when the stem is inserted so as to put the wires under slightly more tension and thus tightly hold the stem substantially central of the opening 17.

The wire can be arranged in different forms, but I prefer to arrange it in substantially parallel strands, the pairs of parallel strands being crossed at the opening 17 and being held in position in notches 22 in the edges of the plate 14, and the top notches being opposite the hole 23, which is suitably notched to receive the wire strand.

A single wire can be threaded on the device, one form of doing this being shown in Figure 2, the wire being looped at the bottom, as at 24, and then passed upward through the top notches, as at *a*, and then to opposite sides through the side notches, as at *b*, across the plate 14 to the notches where it is turned, as at *c*, and then again through the top notches, as at *d*, and then twisted together, as at *e*.

While the general formation of the supporting plate can be varied, the strands or other equivalent elements which form the direct supporting means for the stem 18 should be of a substantially flat formation and so disposed as to leave an unobstructed face on each side to prevent interference with the free tilting of the stem.

I claim:

1. A mounting for stems of crystal detectors comprising a support with an opening therein, and a stem passing through the opening, the support having the opening through which the stem passes provided with substantially flat means for frictionally engaging the stem to hold it in various angular positions and also allow the rotation thereof.

2. A mounting for crystal detector stems, which mounting comprises a support, and a stem, said support including a series of taut wire strands arranged to form an opening in which the stem is held in adjusted positions by friction.

3. A mounting for crystal detector stems,

which mounting comprises a support, and a stem, said support including a series of taut wire strands arranged to form an opening slightly less in size than the diameter of the stem, and in which the stem is adjustably held by friction.

4. A mounting for crystal detector stems, comprising a flat support having an opening therein and notches in its edges, a wire stretched across the opening and held in the notches, and a stem held between the strands of said taut wire.

5. A mounting for crystal detector stems comprising a flat support having an opening therein and notches in its edges, a wire stretched across the opening and held in the notches, the notches being disposed so that the wire forms crossed pairs of parallel strands, and a stem fitting frictionally in the crossing of said strands.

In testimony that I claim the foregoing, I have hereto set my hand, this 1st day of February, 1922.

A. N. PIERMAN.