PATENT SPECIFICATION

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COMPLETE SPECIFICATION.

Improvements in Means for the Fine Mechanical Adjustment of Electrodes such as are used in Spark Gaps, Detectors and the like.

Communication from BING WERKE, vorm. GEBRÜDER BING AKTIENGESELLSHAFT, a German company, of Nürnberg, Germany.

I, PERCY CHARLES RUSHEN, of the firm of Haseltine, Lake & Co., Chartered Patent Agents, 28, Southampton Buildings, London, W.C. 2, in the County of Middlesex, a subject of the King of Great Britain, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to the fine adjustment of electrodes such as are used in spark gaps, detectors and the like and the particular object of the invention is to provide a device for this purpose which can be manufactured at a low cost and with which the electrodes may be adjusted with great accuracy. My invention is particularly intended to be applied to toy apparatus for wireless telegraphy and telephony for the adjustment of the electrodes of spark gaps, detectors and the like.

With this object in view the present invention consists of a non-automatic adjusting device which comprises a curved elastic wire or band arranged to turn about a slightly eccentric pivot.

In the drawings affixed to this specification and forming part thereof I have illustrated in a purely diagrammatic manner and by way of example a number of devices embodying my invention. All the devices represented are designed for use in connection with wireless toy stations, but I wish it to be understood that my invention is capable of application to electrodes other than those of the kind illustrated.

In the drawings

Figure 1 shows a spark gap, and

Fig. 2 shows a detector embodying my invention.

Figure 3 illustrates another form of spark gap.

Referring first to Figure 1, 1 and 2 are a pair of slightly resilient metallic electrodes fixed to a base plate 3 so that their points are slightly distant from one another. 4 is an arm pivoted to a standard 5 so as to turn about the horizontal axis 6. To the end of said arm, which adjoins the electrodes 2, there is fixed a scythe-shaped resilient adjusting member comprising a straight portion 7 and a curved portion 8 of slight eccentricity, its free end being only little farther distant from the pivot 6 than its base. The curved part 8 applies itself with slight pressure from the rear against the right-hand electrode 2. When the adjusting member 8 is turned in the direction of the arrow, it will exert a slightly increasing pressure upon the rear face of the electrode 2 which owing to its inherent resiliency will give way to this pressure and will bend so as to slightly approach the electride 2. Obviously the width of the gap separating the points of the electrodes can by this means be varied and adjusted in the simplest manner and with very great accuracy.

In the toy detector shown in Fig. 2 one of the electrodes is replaced by a slightly resilient standard 20 supporting a capsule 21 enclosing the detector mineral 22 which projects therefrom and

faces the point of the other electrode 1. The eccentric adjusting member 8 applies itself with slight pressure from the rear against the standard 20 and on being turned in the direction of the arrow causes the standard to bend slightly and the mineral 22 to approach the point of the electrode 1.

The modified spark gap illustrated in Fig. 3 comprises a pair of eccentric electrodes adapted to be turned by hand about their pivots, the width of gap separating them being varied in accordance with the relative position of the electrodes.

The discs 30, 30 are arranged to be turned by hand about parallel axes 31, 31. The eccentric electrodes fixed thereto comprise each a straight portion 32 and a scythe-shaped slightly eccentric portion 33, the discs being distanced apart in such manner, that with the points least distant from the pivots facing each other the electrodes are separated by a gap of a certain width. Obviously by turning one of the electrodes in the direction of the arrow it will, owing to its eccentric form approach the other electrode, thus decreasing the width of the gap. The same result will be obtained, if both electrodes are turned about their pivots, and owing to the eccentricity of the part or parts to be turned the distance between the parts can thus be adjusted very finely.

Owing to the simplicity of means employed to effect this adjustment the eccentric adjusting device is particularly suited for toy apparatus requiring simplest handling and lowest cost of production.

I wish it to be understood that I do not desire to be limited to the exact details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed, as communicated to me by my foreign correspondents, I declare that what I claim is:—

1. A non-automatic adjusting device for electrodes such as are used in spark gaps, detectors and the like, comprising a curved elastic wire or band arranged to turn about a slightly excentric pivot.

2. A non-automatic adjusting device as claimed in Claim 1, comprising a pair of curved electrodes formed of elastic wire or band and arranged to turn about slightly excentric pivots with their convex portions in close proximity of each other.

3. A non-automatic adjusting device for electrodes such as are used in spark gaps, detectors and the like substantially as described with reference to the accompanying drawings.

Dated this 19th day of December, 1921.

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Agents for the Applicant.

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[This Drawing is a reproduction of the Original on a reduced scale]

Fig. 1.

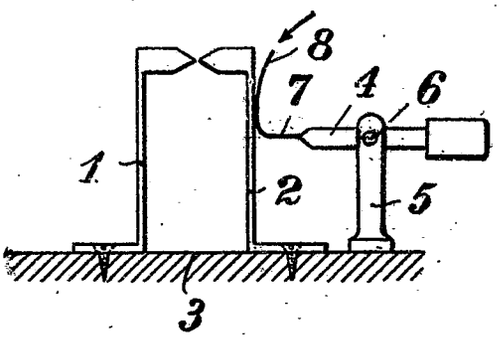


Fig. 2.

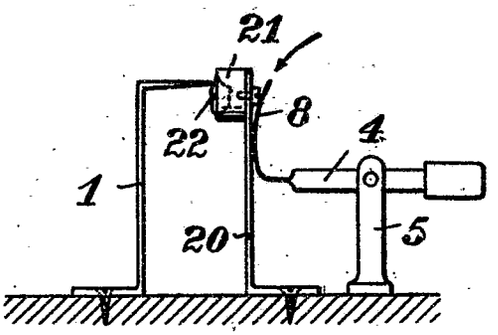
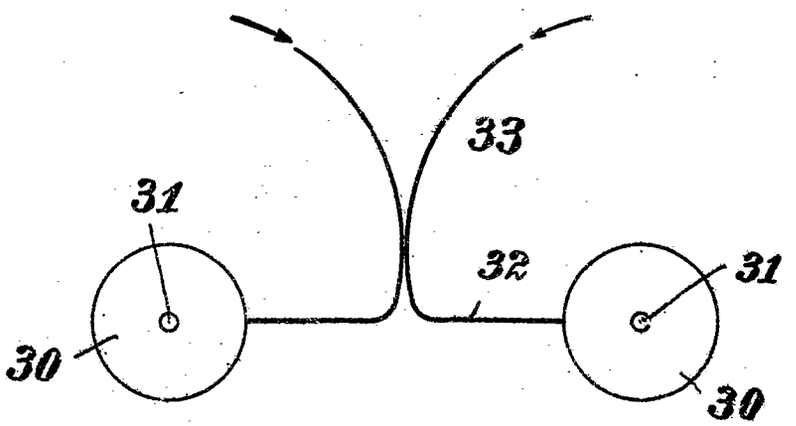


Fig. 3.



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