

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

Fig. 1.

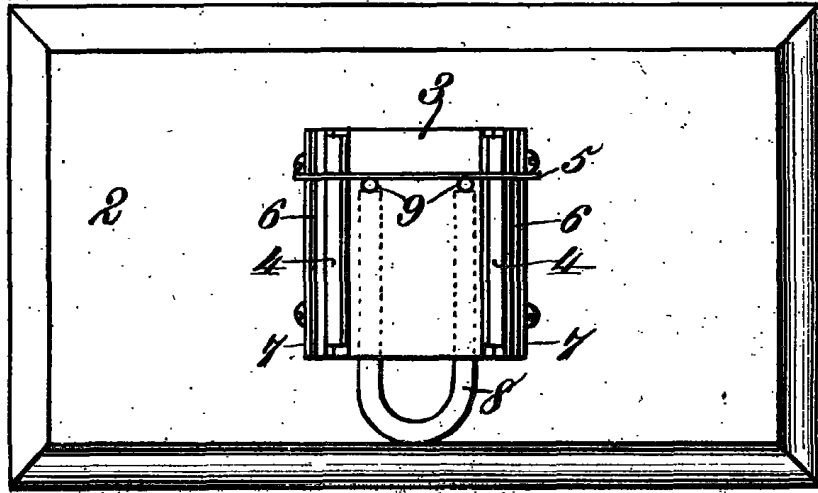


Fig. 2.

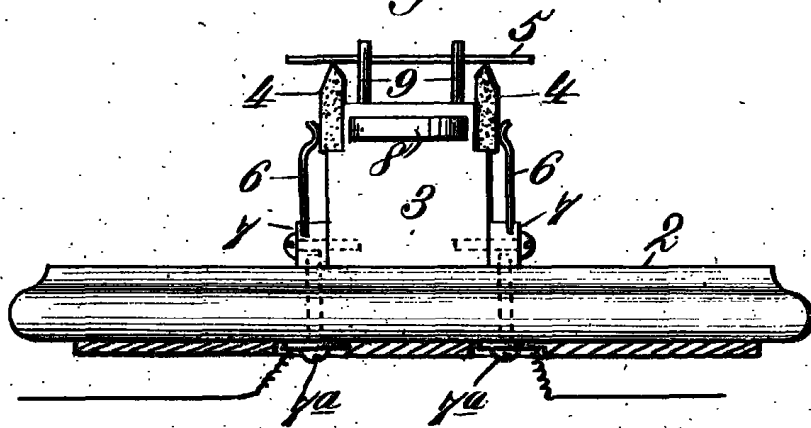
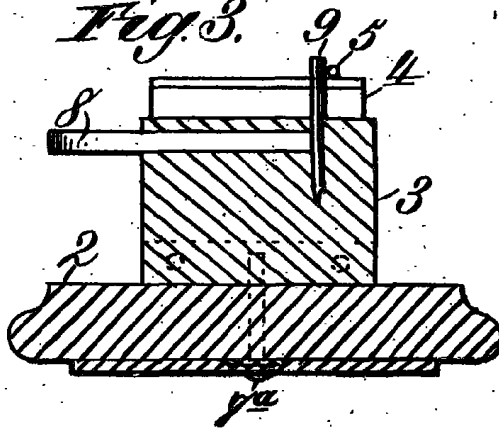


Fig. 3.



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A.D. 1906

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COMPLETE SPECIFICATION.

Improvements in Oscillaphones or Hertzian Wave Responsive Devices.

I WALTER WENTWORTH MASSIE, Mechanical and Electrical Engineer, of No 4 Market Square, Providence, County of Providence, State of Rhode Island, United States of America, 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 oscillaphones, or, as they are sometimes known, wave responsive devices. The invention possesses all the advantages of the oscillaphone set forth in the Specification of Letters Patent of the United States, No 769,005, granted to me August 30, 1904, and to which reference may be had, and a certain additional advantage, such as the maintenance of a conducting or bridging element in proper contact with terminals. The said advantage, together with others that the invention possesses, will be set forth at length in the following description of that form of embodiment of the invention which I have selected for illustration in the accompanying drawings forming part of this specification.

In the drawing:—

Figure 1 is a top plan view of an oscillaphone involving my invention, that part of the magnet which is enclosed by the non-conducting element being shown in dotted lines.

Figure 2 is a front elevation, and

Figure 3 is a cross sectional elevation of the same.

Like characters refer to like parts throughout the several figures.

An oscillaphone embodying the invention includes a base, as 2, and an insulating block, as 3, upon said base, the two parts being rigidly fastened in any desirable way.

Like in the Specification of Letters Patent mentioned hereinbefore, the base may be of wood and the insulating block of vulcanized rubber. The block is rabbeted along its opposite sides to receive terminals, as 4, which may be of carbon, the tops of which are bevelled to produce knife edges to be bridged by a conducting element, as 5, freely supported by the terminals or carbon pieces 4.

To hold the carbon pieces in their seats at opposite sides of the insulating block, I show vertically disposed springs or terminal clips 6 soldered or otherwise fastened rigidly to conducting members or strips 7 secured to the insulating block 3. The complete apparatus is firmly held on the base 2 by screws or analogous devices 7^a engaging the members or strips 7 and which form the terminals as shown. The free terminals of the springs or clips bear against the outer faces of the carbon terminals 4 to secure the result desired. This arrangement gives the apparatus a more compact and better appearance, minimizes the area required in mounting, produces a more reliable contact, and permits greater range of adjustment of block in changing its position under the conducting element or needle when using the latter against the stops.

Located in a plane below the upper surface of the insulating element of the device, whether it be the block 3 or its equivalent, is magnetized means, which magnetized means may consist of and preferably is a permanent magnet, for I find that I can secure the advantages of the invention with a magnet of such

[Price 8d.]



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type, although it is believed it will be understood from what has been stated that I do not wish to limit myself in this respect. A permanent magnet however, serves as a simple and satisfactory medium for holding the bridging element down in solid contact with the upper edges of the terminals.

The magnet shown is denoted 8, and it is of the horseshoe form, its legs or 5 branches being seated in bores in parallelism or substantially so, in the block 3. The legs or branches of the magnet are introduced into the bores from one end thereof, for example, the front end, with a portion, or the head end or bow of the magnet projecting from the block, so that the said projecting end can be easily reached to adjust the magnet to vary the force acting on the con- 10 ducting element or needle.

The free ends of the legs of the magnet 8 are shown as abutting against pins, as 9, which may be driven down into the block 3 at right angles to the longi- 15 tudinal axis thereof and across the bores through which said legs extend. The upper portions of the pins which constitute convenient stop means in the present case for the conducting bridging element 5, extend above the upper sur- 15 face of the insulating element and above the upper knife edges of the two terminals or carbon elements 4. The pins 9 serve as stops for the bridging element and also for the magnet. As the magnet is located below the upper surface of the insulating block, its pull is in a perpendicular and downward direction, 20 so that I can maintain the conducting element in desirable contact with the terminals. As the magnet abuts against the stops, the conducting element or needle will be held against the said stops.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that 25 what I claim is:—

1. In a device of the kind referred to, the combination of an insulating element, stop means upon the upper side of the insulating element, terminals between which the stop means is located, a bridging element to rest on the ter- 30 minals, and a permanent magnet, the insulating element being bored to receive the magnet.

2. In a device of the kind referred to, the combination of an insulating element, stop pins extended into the insulating element and above the upper surface thereof, terminals between which the stop pins are located, a bridging 35 element to rest on the terminals, and a permanent magnet, the insulating element being bored to receive the legs of the permanent magnet, and said legs bearing against said pins.

3. In an oscillaphone or wave responsive device, the combination with a base support, an insulating element, and terminals engaging the element and having a conducting element thereon, of conducting members secured to the element, 40 and fastenings applied to the base and engaging the said terminals and constituting the sole connecting means for the apparatus with respect to the base support.

Dated the 20th day of February 1906.

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