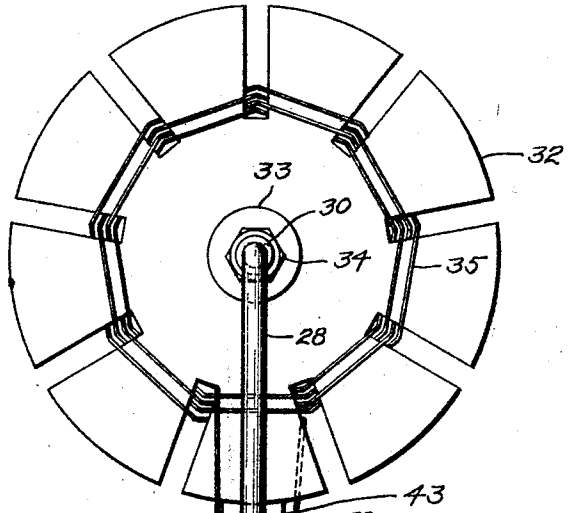
April 20, 1926. 1,581,162

E. J. BOUCHER

TUNING COIL MOUNTING

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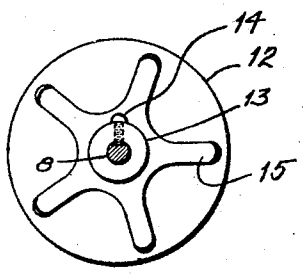


Fig. 3

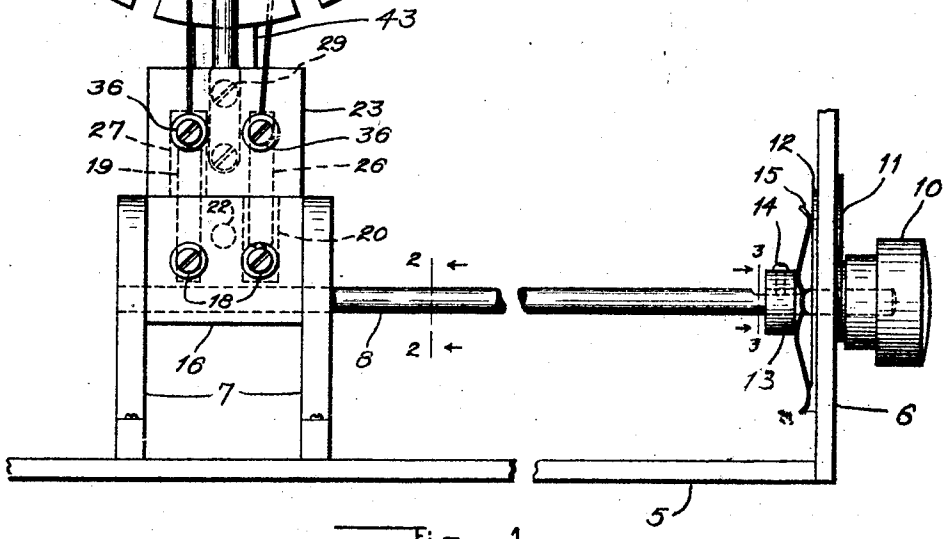


Fig. 1

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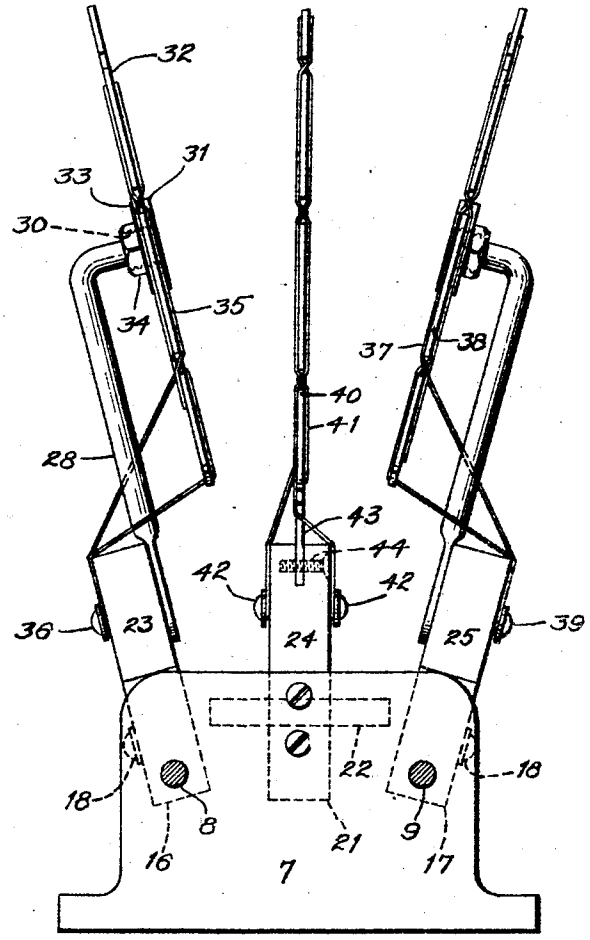


Fig. 2

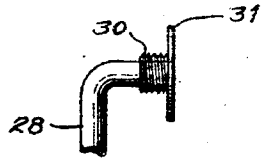


Fig. 4

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Patented Apr. 20, 1926. 1,581,162

UNITED STATES PATENT OFFICE.

EMILE J. BOUCHER, OF CATONSVILLE, MARYLAND.

TUNING-COIL MOUNTING.

Application filed April 18, 1923. Serial No. 632,880.

To all whom it may concern:

Be it known that I, EMILE J. BOUCHER, a citizen of the United States, residing at Catonsville, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Tuning-Coil Mountings; 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.

My invention relates to coil mountings.

Among the objects of my invention are:—

To produce a coil mounting capable of controlling the mutual inductance between the primary coil and the secondary and tickler coils of a tuning set by moving the secondary and tickler coils relatively to said primary coil, which is fixed.

To produce such a mounting which obviates the necessity for gears by mounting the secondary and tickler coils upon revoluble shafts which extend to the front of a panel forming part of the tuning set and combining with said shaft an efficient device for producing sufficient friction to hold said coils in whatever positions they may be placed.

Heretofore, difficulty has arisen by the use of inefficient frictional devices, or secondary and tickler coils have been mounted on vertical shafts, but this form of mounting required the use of gears when the operating knobs for said coils were placed on the front of the panel.

My invention also comprehends certain peculiarities in the attachment of the secondary and tickler coils to the plug comprising the terminals of said coils.

By the use of my improved mounting I am enabled to readily remove the coil from a plug to secure another coil to said plug. These and further objects of my invention will be set forth in the following specification, reference being had to the accompanying drawings, and the means by which said objects are effectuated will be definitely pointed out in the claim.

In the drawings:—

Figure 1 is a side view of a tuning set equipped with my improved device.

Fig. 2 is a section along the line 2—2 in Fig. 1 looking in the direction of the arrows, the base being omitted.

Fig. 3 is a section along the line 3—3 in Fig. 1 looking in the direction of the arrows.

Fig. 4 is a detail hereinafter referred to.

In the drawings:—

5 represents the base to which there is secured a vertical panel 6, both being made of any approved material.

To the base 5 housings 7—7 are secured and said housings comprise bearing holes for the shafts 8 and 9. The panel 6 also comprises bearing holes for said shafts and on the front of each of said shafts there is secured an operating knob similar to 10 which is secured to the shaft 8. To each of said knobs is secured a pointer 11 which cooperates with any usual form of dial, (not shown), for indicating the angular positions of said shafts.

A metallic plate similar to 12 having a hole through which passes the corresponding shaft is placed upon each of the shafts 8 and 9 and said plate is prevented from turning by friction against the panel 6.

A hub such as 13 is secured upon each of the shafts 8 and 9 by a screw such as 14 and to each of the hubs 13 there is secured a plurality of spring fingers such as 15 which bear against the plate 12 with sufficient force to hold the shafts 8 and 9 in any position to which they may be moved.

Between the housings 7—7 there is secured to the shaft 8 a plug 16 and a similar plug 17 is secured upon the shaft 9 between said housings. Each of these plugs has two screws such as 18 for the attachment of conductors thereto, and in addition, each plug has a projecting terminal 19 and a tubular terminal 20 mounted therein, the latter not extending beyond the surface of said plug.

A plug 21 similar to the plugs 16 and 17 is secured between the housing 7—7 midway between the shafts 8 and 9.

A stop 22 is secured in the plug 24 for a purpose hereinafter explained.

Plugs 23, 24 and 25, similar to the plugs 16, 21 and 17 are detachably secured, respectively, to the last-named plugs by the projecting terminals 26 in the plugs 23, 24 and 25 entering the terminals 20 on the plugs 16, 21 and 17, and by the tubes 27 in the plugs 23, 24 and 25 embracing the projecting terminals 19 upon the plugs 16, 21 and 17.

Coils are secured to the plugs 23 and 25

and since the mode of securing the two plugs is similar, it will be described only with reference to the plug 23.

The support 28 is secured to the plug 23 by screws such as 29 and said support is bent at right angles and to the bent end there is secured, as by soldering or in any approved manner, the threaded sleeve 30, having the flange 31 formed integrally therewith.

The coil disk 32 is provided with a hole through which passes the sleeve 30. A washer 33 is mounted on said sleeve and the nut 34 clamps the coil disk 32 between the flange 31 and washer 33.

The coil 35 is stagger-wound in the usual manner and its terminals connected to the screws 36. A similar coil 37 is mounted upon the coil disk 38 and its terminals are connected to the screws 39.

A coil disk 40 is provided with a coil 41 connected to the screws 42 and said disk is provided with an extension 43 which is mounted in the slot provided in the plug 24 and secured therein by the screw 44.

The operation of my improved coil mounting is as follows:—

If the support 28 is removed from the plug 23 and the nut 34 is removed from the sleeve 30, then the coil disk 32, (see Fig. 2), may be moved towards the left past the bend in the support which can then be withdrawn from said coil.

By this means I provide for attaching a plurality of coils differing in number of turns of wire to the plug 23. Similarly, coils differing in number of turns of wire may be attached to the plug 25.

The coils 35 and 37 are usually wound with a different number of turns, and it is evident that the plugs 23 and 25 with their attached coils may be reversed in position.

It is also evident that when the plugs 16 and 17 strike the ends of the stop 22, their movement toward the central plug 21 will be arrested.

The positions of the coils 35 and 37 with reference to the coil 41 can be varied by turning the knobs 10 and the spring fingers will hold said coils in whatever positions they may be placed

While I have shown one preferred form of my invention, it is to be understood that this is for purposes of illustration only and in nowise to limit the scope thereof, for changes may be made therein without departing from the spirit of my invention.

I claim:—

The combination with a plug comprising terminals, of a support secured to said plug, a threaded sleeve provided with a flange secured on said support, a coil disk mounted on said sleeve, a nut on said sleeve for clamping said disk against said flange, and a coil on said disk having its ends connected to said terminals.

In testimony whereof, I affix my signature.

EMILE J. BOUCHER.