

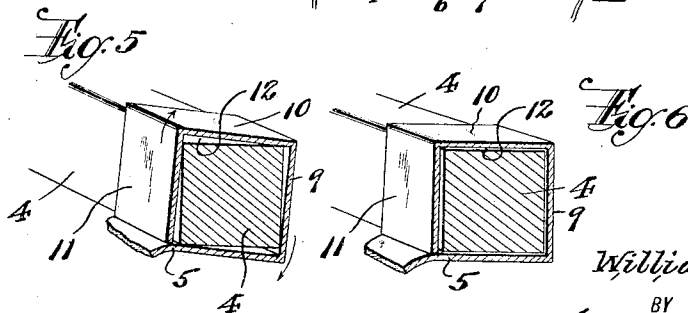
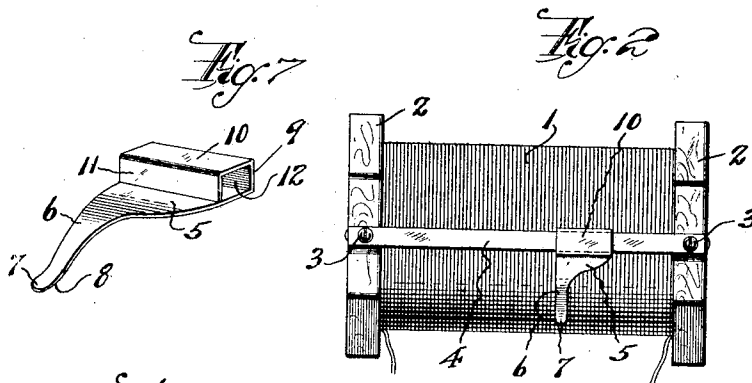
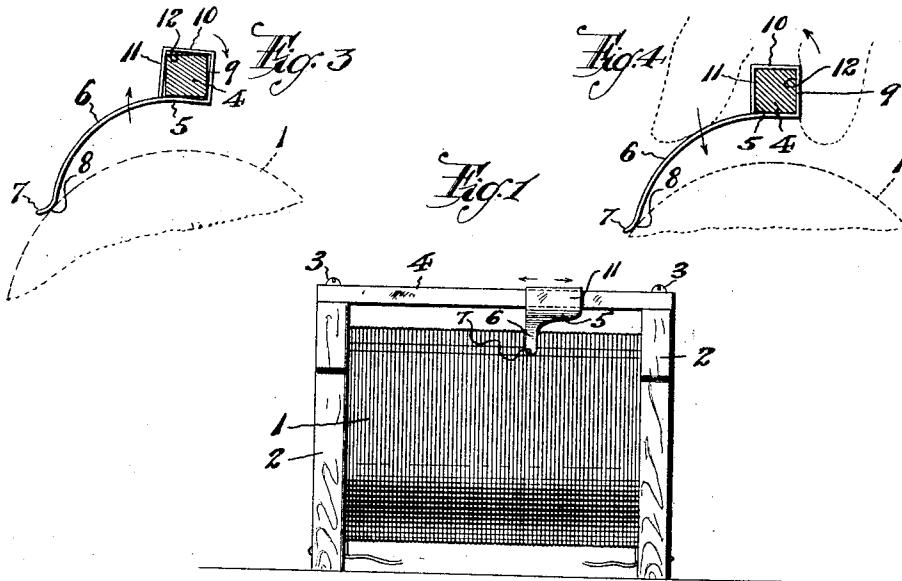
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W. F. GEHRIG

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SLIDER FOR TUNING COILS

Filed April 4, 1922



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UNITED STATES PATENT OFFICE.

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SLIDER FOR TUNING COILS.

Application filed April 4, 1922. Serial No. 549,454.

To all whom it may concern:

Be it known that I, WILLIAM F. GEHRIG, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Sliders for Tuning Coils; 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, reference being had to the accompanying drawings, and to characters of reference marked thereon, which form a part of this specification.

This invention relates, generally, to improvements in adjustable sliders for tuning coils used in connection with wireless telephone apparatus; and the invention has for its principal object to provide a very simple, cheap, durable and efficient slider, which is self-locking relative to the slider rod upon which it is mounted, and which may be easily and quickly manipulated to release the same for sliding adjustment on the slider rod and relative to the windings of the tuning coil.

Other objects of this invention, not at this time more particularly enumerated, will be clearly understood from the following detailed description of the same.

The invention is clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a side elevation of a tuning coil and its slider rod equipped with the novel self-locking adjustable slider made according to and embodying the principles of this invention; Figure 2 is a plan elevation of the same; Figure 3 is a detail transverse section of the slider rod, showing the self-locking adjustable slider thereon in its locked relation to said rod, the parts being drawn on a slightly enlarged scale; Figure 4 is a similar view to that shown in Figure 3, but illustrating the slider in released relation to the rod and adapted to be slid thereon; Figure 5 is a fragmentary view similar to that shown in Figure 3, but drawn on a greatly enlarged scale to more clearly illustrate the locked relation of the slider to the rod; Figure 6 is a similar fragmentary view similar to that shown in Figure 4, also drawn on an enlarged scale to more clearly illustrate the released relation of the slider to the rod; and Figure 7 is a perspective

view of the novel slider removed from the rod.

Similar characters of reference are employed in all of the hereinabove described views, to indicate corresponding parts.

Referring now to said drawings, the reference character 1 indicates the tuning coil, which is mounted between the head frame 2. Fixed upon said head frame 2, by screws 3 or any other suitable fastening means, is a longitudinally disposed slider rod 4 spaced outwardly away from the surface of the coil 1. Said slider rod is of square or rectangular cross section.

Mounted upon said slide rod, so as to be capable of a sliding adjustment thereon in either direction, is the novel slider made according to and embodying the principles of this invention. The said novel slider comprises a metallic main body or plate 5, terminating at one side in a downwardly curved or arched contact finger 6 having at its free end an upwardly curved tip 7, whereby the underside of the extremity of said finger 6 is formed to provide a convex contact point 8 adapted to engage and move over the windings of the coil 1 when the slider is slid back and forth upon the slider rod 4. The opposite side of said main body or plate 5 is folded upwardly, as at 9, then transversely, as at 10, and then downwardly, as at 11, to thereby form in connection with one side of said main body or plate 5 a longitudinal polygonally shaped bearing sleeve having an opening or way 12 therethrough corresponding in its cross-sectional shape substantially to the cross sectional shape of said slide rod 4, but being slightly larger in its inner dimensions than are the outer dimensions of said slide rod. When normally arranged on said slider rod 4 the bearing sleeve of the slider embraces said slider rod so that the latter extends through said opening or way 12 thereof. The metallic main body or plate 5 and its contact finger 6 are of a stiff springy nature, and the curvature of the contact finger 6 is such that when the slider is operatively assembled with the slider rod and coil, the said upwardly arched contact finger 6 is under a substantial tension. The tension of the contact finger serves two purposes, first, to assure a strong and firm engagement of the contact point 8 thereof with the windings of the coil 1, and,

second, to cant or tip the bearing sleeve relative to the slider rod so as to cause a strong frictional binding of the former upon the latter, whereby the slider is practically
5 locked, against accidental movement, in any position upon the slider rod and relative to the windings of the coil 1 to which it has been adjusted, in a manner clearly to be understood from an inspection, more particularly, of Figures 3 and 5 of the accompanying drawings.

When it is desired to adjust the slider on the slider rod to shift the contact point 8 upon the windings of the coil 1, the operator presses with his finger downwardly
15 upon the upwardly bowed arch of the contact finger 6 (as indicated in Figure 4 of the drawings), whereupon the bearing sleeve of the slider is turned axially relative to the slider rod to thereby release said bearing sleeve from its normally canted or tilted and frictionally bound relation to the rod, and so that the same is symmetrically aligned with the rod in the manner shown more particularly in Figures 4 and 6, whereupon the
25 said bearing sleeve may be easily slid back and forth upon the slider rod to thereby shift the contact finger 6 and its contact point 8 relative to the windings of the coil 1 until the same are disposed in a desired adjusted position. Immediately the desired adjusted position of the slider is thus attained, the operator releases the pressure upon the upwardly bowed or arched contact
30 finger so that its inherent tension may be free to again cant or tilt the bearing sleeve for return to its frictionally bound or self-locking relation to the slider rod, as already above explained.

40 It will be apparent from the above description, that the present invention provides a very simple, effective and easily manipulated self-locking slider for the tuning

coils of wireless telephone receiving sets, and one which is exceedingly cheap and easy to 45 manufacture.

I am aware that some changes may be made in the various arrangements and combinations of the several devices and parts, and in the details of the construction of my
50 present invention, without departing from the scope thereof as described in the foregoing specification and as defined in the appended claim. Hence, I do not limit my invention to the exact arrangements and
55 combinations of the parts of the device as set forth in the foregoing specification, nor do I confine myself to the exact details of the construction of said parts as shown in the accompanying drawings. 60

I claim:—

In a device of the kind described, the combination with a tuning coil of a longitudinal slide rod having a polygonal cross-sectional shape, a self-locking slider, said slider 65 comprising a bearing sleeve corresponding in cross sectional shape to the cross-sectional shape of said slide rod, said bearing sleeve embracing said slide rod so as to be movable back and forth thereon, and a downwardly 70 curved contact finger extending from the under side of said bearing sleeve with its free end engaging the windings of said coil, said contact finger being under a normal spring tension operating to cant or turn said 75 bearing sleeve on said slide rod whereby the former is frictionally bound on the latter in the desired position to which it has been adjusted thereon.

In testimony that I claim the invention set 80 forth above I have hereunto set my hand this 30th day of March, 1922.

WILLIAM F. GEHRIG.

Witnesses:

GEORGE D. RICHARDS,
FLORA MILLER.