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RADIO TUNING UNITS
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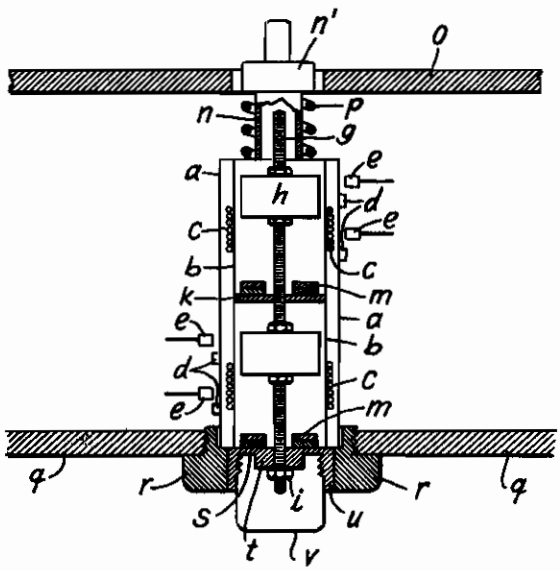

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RADIO TUNING UNITS

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The invention relates to radio receivers such as push-button receivers having a series of tuning units consisting of a fixedly set condenser and a coil. In such receivers the units are so arranged as to be moved longitudinally to bring one of the units into its active position in which the receiver is tuned on the predetermined wavelength assigned to said unit. Heretofore it has been necessary to adjust the units mounted in the radio receiver after the latter has been connected to an antenna and being placed on the plot where it shall be used. For the purpose of fine adjustment the known receivers of said kind had partly to be demounted. To avoid this disadvantage the invention provides a tuning unit being composed of a coil and a fixedly set condenser which is constructed in such a way as to allow a fine adjustment without demountage. The new unit, therefore, is so constructed as to be allowed to be placed in every receiver and to be finely adjusted after being attached to the receiver. To this purpose the coil of the unit can be adjusted by moving its iron core into or out of same after having released the front part of the new unit to allow a screw spindle to be rotated to which the core is attached. The unit, therefore, is provided with a removable cap serving as push-button and sealing the adjusting means co-operating with the screw spindle. In assembling the receiver casing is provided with corresponding bearings into which the units are set in. The units can easily be removed from the receiver and other ones acting on other predetermined wavelengths can be inserted. Thus it is possible to have a series of units which at will may be inserted into the receiver.

In the accompanying drawing one form of execution of the invention is represented by way of example.

In the receiver only shown by its frontwall *q* and an intermediate wall o a cylindrical sleeve *a* is arranged having an extension *n* on the rear end which is smaller in diameter than the diameter of the sleeve *a*. The extension *n* is provided with a flange *n'* protruding through wall o of the receiver casing and being in connection with a known locking device, not shown. The latter serves for the purpose to lock the sleeve in its positions. A spring *p* coiled around the prolongation *n* is disposed to hold the sleeve *a* in its inactive position in which no electrical connections exist between contacts *d* of the sleeve and contacts *e* arranged in the receiver and adapted to co-operate with said contacts *d* arranged on the sleeve *a* manufactured of insulating material. The front end of the sleeve *a* is carried in a ring *r* having a reduced part screwed into a corresponding hole of the frontwall *q*. To the inner surface of the ring *r* is fastened a flange *u* provided with a screw-thread and connected with the bottom *s* of the sleeve *a*. In the centre of said bottom an enlargement *t* is provided having a screw-threaded hole for the insertion of a spindle. A cap *v* can be screwed into the flange *u*.

In the sleeve *a* is mounted a cylinder *b* adapted to carry coils *c* arranged on the outer surface of the cylinder *b*. The coils are in connection with said contacts *d* disposed on the outer surface of the sleeve *a*. The cylinder *b* is divided by the intermediary of a partition wall *k* into two parts in each of which an iron core *h* as well as a fixedly set condenser *m* are situated. The cores are carried on a screw-threaded spindle *g* which is arranged in the center of the cylinder *b* and can be moved longitudinally by being rotated in the nut or enlargement *t* of the bottom *s*. The condensers *m* are carried by the partition wall *k* and by the bottom *s*, respectively. The said condensers *m* are in electrically connections with the coils c. The spindle *g* guided in the enlargement *t* of the bottom *s* can be fixed in any position desired by means of a nut *i*. The contacts *e* and *d* are arranged in such a way as to be held out of contact by the action of the spring *p*. To make contact the sleeve *a* must be pushed in by pressing the cap *v* screwed into the flange *u* in order to allow an adjustment of the high-frequency iron cores *h* after having been inserted into the receiver. As aforesaid the sleeve is locked in its active position in which the contacts *d* and *e* are connected and the coils *c* are switched in. As is known the locked position of the sleeve is released when a second sleeve mounted to the receiver is depressed.

The sleeve *a* together with its inner parts serves as a tuning unit and will be tuned on a predetermined wavelength before being inserted into the receiver. The receiver casing is provided with a series of corresponding units each tuned on an individual length desired. The sleeves are fastened in the casing by screwing the ring *r* into the frontwall *g*. After having pushed in the sleeve whereby the contacts *d* and *e* are connected and the coils and condensers are switched in the cap *v* will be removed as to give free admittance to the nut *i* and spindle *g*. By rotating same a fine tuning of the device may be obtained by adjusting the iron cores *h* in the coils *c*. After the fine adjustment the spindle *g* is locked by means of the nut *i* and the cap *v* is replaced.

FRITZ BERGTOLD.