

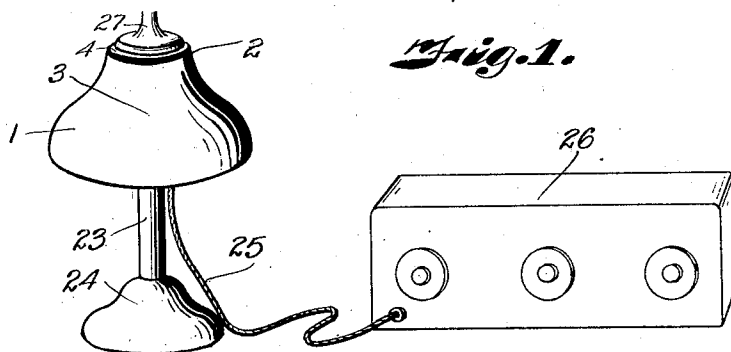
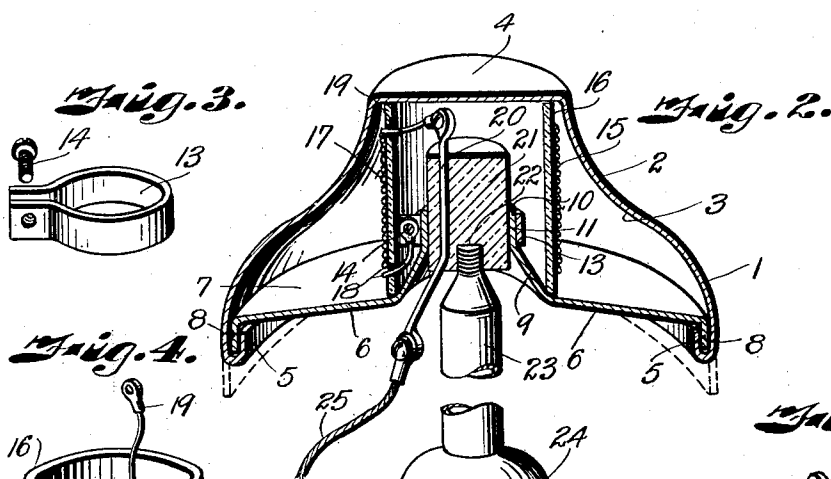
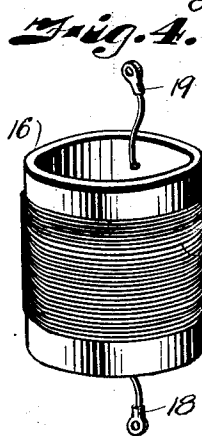
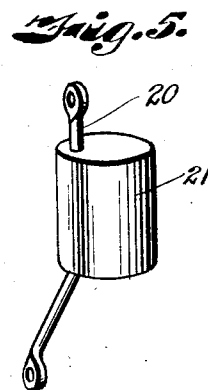
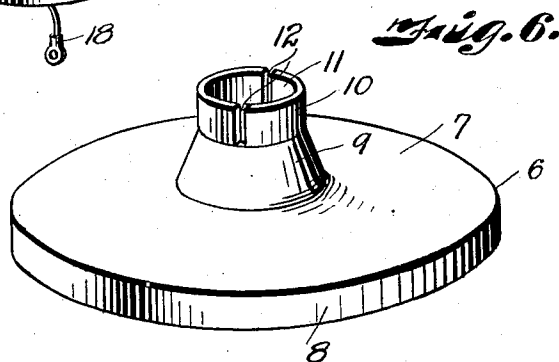
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B. R. JONES

ANTENNA FOR RADIOS

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UNITED STATES PATENT OFFICE.

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ANTENNA FOR RADIOS.

Application filed November 22, 1926. Serial No. 149,925.

My invention relates to radio receiving antennæ, and especially to an antenna of the loop type of construction.

The principal object of my invention is to provide a simple and compact arrangement of antenna inductance means in a device that is slightly in appearance and affords a maximum of inductance with the use of a minimum amount of wire. I accomplish this object by mounting an inductance coil within a bell-shaped housing and in predetermined relation therewith, the device being positively sensitive to faint ether waves.

A further advantage of my invention resides in its adaptability to co-operation with means for increasing the capacity of the device for inductance. This result arrives, as the description will disclose, by providing an antenna unit equipped with a shelf or platform on which a telephone instrument or other aerial agent may be positioned as supplement to the inductance capacity of the antenna. Such a device may appropriately be displayed in a room with the radio receiving instrument, constitutes an easily portable antenna, may quickly be associated with an available aerial agent; and with these advantages has a high degree of efficiency as an antenna. Obvious variations of the method of positioning the aerial agent in inductive adjacency to the antenna may be provided as desired, such as hooks on the antenna unit.

In the drawings:

Fig. 1 is a perspective view of the antenna showing same connected to a radio receiver.

Fig. 2 is a sectional perspective view of the antenna.

Fig. 3 is a detail perspective view of the insulator clamp.

Fig. 4 is a detail perspective view of the inductance coil.

Fig. 5 is a detail perspective view of the insulator plug and connectors.

Fig. 6 is a detail perspective view of the support plate.

Referring in detail to the drawings:

1 designates an antenna comprising a housing 2 and the parts enclosed, the housing consisting of a bell-shaped member 3 having

a flat top 4 and a back-turned lip 5 on its lower edge, and a plate 6 which serves as a closure for the mouth of the bell-shaped member 3, the plate having a disk-like portion 7 which is slightly convex for the purpose of affording greater rigidity.

The plate 6 has a downwardly turned flange 8 on its outer edge adapted for engagement in the groove formed between the back-turned lip 5 of the bell-shaped member 3 and the wall of this member. The plate 6 has an upwardly and inwardly extending conical portion 9 and a further upwardly extending vertical portion forming a collar 10, the opening in which collar is designated as 11. The collar 10 has oppositely disposed slots 12 whereby the collar is permitted to be contracted upon the application of clamp ring 13 provided with clamping screw 14.

An induction coil 15 is provided comprising a tubular member 16 of such dimensions that it will fit snugly on the base of the conical portion 9 of the plate 6 and contact the flat top 4 of the bell-shaped member 3; a conductor 17 preferably of wire wound on the tubular member 16 and having the terminals 18, below, and 19, above, these being respectively connected with the lower and the upper ends of the coil. The lower terminal 18 is connected with the housing by means of the screw 14 which attaches the terminal to the clamp that embraces the collar 10 of the plate 6. The upper terminal 19 is attached to a connector bar 20 which is horizontally spaced from the walls of the coil 15 inwardly thereof and which is molded in an insulator plug 21 adapted to be embraced by the collar 10 of plate 6 and extending downwardly between the inward faces of the conical portion 9 of the said plate. The plug 21 and the connector bar embedded therein with its attached terminal 19, as may be seen in Fig. 2, are spaced from the flat top 4 of the housing 2. The plug is provided with a threaded opening 22 in its lower end adapted to engage the upper end of leg 23 of the base 24.

The arrangement described and illustrated provides an antenna unit which may be of any desired design for ornamental purposes.

In the assembly of the parts the clamp ring 13 is placed on the collar 10 and the

terminal 18 of the inductance coil 15 is attached to the clamp by means of the screw 14. The insulator plug 21 is then inserted in the opening 11 of the collar 10 and the
5 clamp is tightened to hold the plug in fixed position and to assure its stability as the supporting element for the unit. The terminal 19 is then attached to the upper end of the connector bar 20, thus completing the
10 assembly of parts on the plate 6. The plate 6 carrying the elements referred to is then placed within the bell-shaped member 3, the pre-assembly condition of which is indicated by the dotted lines in Fig. 2. The plate 6
15 is adjusted within the bell-shaped member so that the upper end of the coil 15 contacts the inner face of the flat top 4 of the bell-shaped member 3. The lip 5 of the bell-shaped member 3 is then crimped inwardly,
20 enclosing the depending flange 8 of plate 6 and so completing the assembly of the antenna unit. The unit is then attached to the base by means of the co-operation of the threaded portion of the plug 21 with the
25 leg 23. A cord 25 is provided and attached to the depending end of connector bar 20, this bar being as described, connected with the upper terminal 19 of the inductance coil. The cord 25 is led to connection with radio
30 26 and the device is in condition for operation.

The device will operate with improved efficiency over ordinary simple types of antennæ. Its inductance may be increased by
35 the placing of a telephone instrument 27 on the flat top 4 or by the bringing of other

available aerial agents into contiguity with the antenna unit.

What I claim and desire to secure by Letters Patent is:

40 1. In an antenna for radio, a structure comprising a metal housing having a dome and a lower closure member, an inductance coil positioned within the housing and having a tubular body engaged with the housing, the tubular body providing the aerial
45 terminal of the coil, an insulator plug carrying a bar, the radio receiver terminal connected with said bar, the insulator plug supporting the housing, and a standard engaged
50 with the plug and supporting the antenna.

2. An antenna for radio comprising a base, a leg carried by the base, an insulator carried by the leg, a housing, means for
55 clamping the housing to the insulator, an inductance coil within the housing, and means carried by the insulator for connecting the inductance coil to the aerial terminal of a radio receiver.

3. An antenna for radio comprising a
60 base, an insulator carried by the base, a bell-shaped housing, a closure for the mouth of the housing having a central opening and a flange surrounding the opening for engaging the insulator, a clamp ring encircling the
65 flange to secure the housing to the insulator, a coil within the housing, and means for connecting the coil with the housing and a radio receiver.

In testimony whereof I affix my signature.

BURLE R. JONES.