

Duo-Lateral Type Inductances

A New Machine-wound Coil of Very Low Distributed Capacity and Resistance

FROM the point of view of the radio man, other lines of work must seem very dull, for there is no other industry in which so many new and clever ideas are brought out in such rapid succes-

practice, the distance between the wires of alternate layers is increased. Tests on these coils show that this new method of winding decreases the distributed capacity, and, because a small-

gears. Another improvement is the indicating dials. Connections from the movable plugs to the binding posts are made by flexible conductors.

The plugs are of the Pacent type,

DATA FOR DUO-LATERAL INDUCTANCES

L Mhs.	H. F. R. Ohms at	λ Meters	C Mfds.	Natural λ Meters	Turns	Wire S. C. C.	Diam. Ins.
0.045	1.9	150	17	70	25	24	2 3/16
0.075	2.6	200	17	86	35	24	2 1/4
0.156	4.2	300	18	102	50	24	2 5/16
0.36	6.3	400	19	150	75	24	2 3/8
0.66	27.2	500	19	220	100	24	2 1/2
1.40	38.0	700	20	290	150	24	2 5/8
2.50	48.0	1,000	20	350	200	25	2 1/2
4.20	63.0	1,400	20	420	250	25	2 15/16
6.25	68.0	1,500	21	540	300	25	3
10.62	73.0	2,000	22	700	400	25	3 1/4
17.6	75.0	3,000	23	860	500	25	3 1/2
25.0	90.0	4,000	23	1,120	600	28	3 3/8
38.0	97.0	5,000	23	1,260	750	28	3 5/16
72.8	104.0	8,000	24	1,750	1,000	28	3 3/4
116.6	125.0	10,000	24	2,200	1,250	28	4 1/16
171.5	140.0	15,000	25	2,600	1,500	28	4 7/16

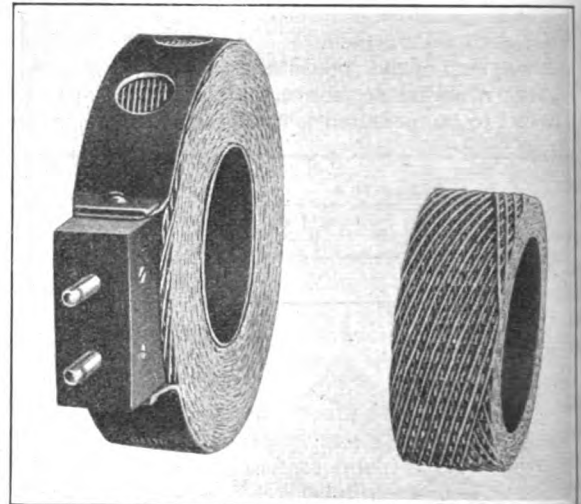


Fig. 1. Mounted and unmounted duo-lateral inductances

sion. It almost appears that there is nothing more to be added to the line of radio achievements save a substitute for electricity itself.

The duo-lateral coils, invented by Mr. Giblin of the Electrical Products Manufacturing Company, and dis-

er number of turns is required for a given inductance, the length of wire and, consequently, the resistance is lowered.

A table is given here showing the number of turns, the high frequency resistance at various wavelengths, and

made up of a grooved plug which snaps into a spring socket, similar, in principle, to the Pacent binding posts.

A three-coil mounting permits considerable flexibility of circuits. The most usual method is to use the center coil as the secondary, one outside coil

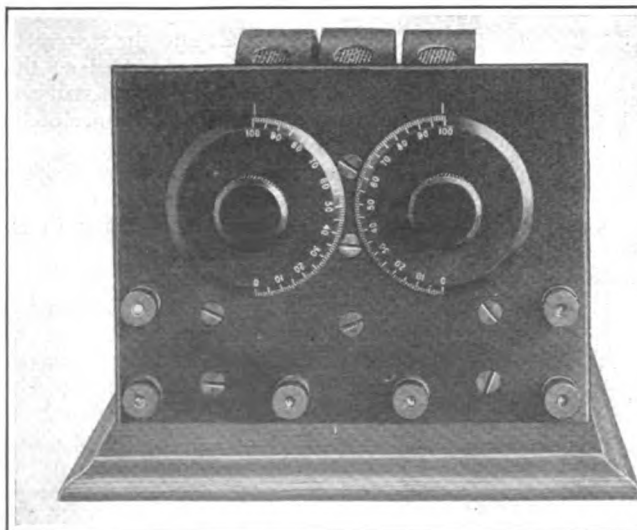


Fig. 2. Primary and tickler coupling are controlled from the front of the panel

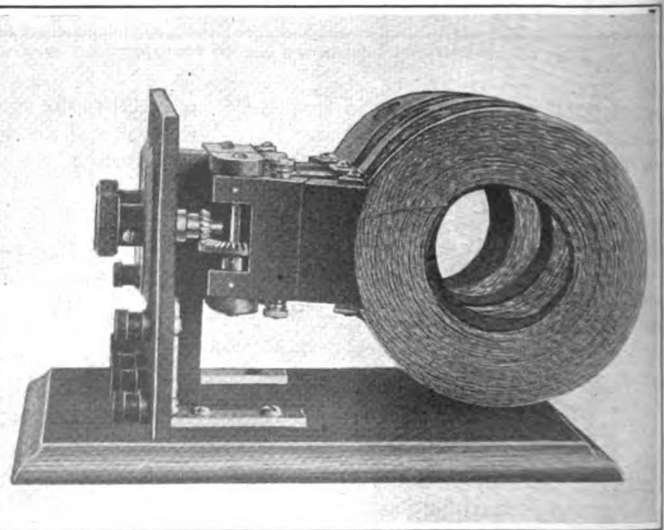


Fig. 3. Showing the bevelled gears by means of which the coils are turned

tributed by the Pacent Electric Company, are different from the familiar "Coto-coil" in that the wires of every other layer are between the wires above them, instead of being directly below them. This effect can be observed in the unmounted coils. As a result of this

the distributed capacity, as well as the natural periods of duo-lateral coils of various inductances. All sizes are 2 ins. inside diameter and 1 in. wide.

In Figs. 2 and 3, a new type of inductance mounting is illustrated. Here the panel effect is achieved by connecting the shafts of the handles to the shafts of the movable plugs by bevelled

as the primary, and the third as a tickler. Another way, for undamped wave reception, is to replace the tickler by a very small coil in series with a separate oscillator. This serves to heterodyne the incoming oscillations.

Again, the three coils can be connected in series, and used as a variometer.