PATENT SPECIFICATION

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PROVISIONAL SPECIFICATION

Improvements in or relating to Variable Mutual Inductance's

An alternating current bridge is provided with external inductance coupled through a magnetic core to inductances in at least two of its arms, the resistance of the bridge being kept constant while the mutual inductance is varied by external current fed to the external inductance. A variable inductance comprises a number of relatively fixed inductances conductively connected and fed from a common source of alternating current, the ratio of current to potential on different members being varied by means of a shunted network across the inductance through which the current is varied. In one arrangement, Fig.1, the coils 1, 4, and 5-8 form the primary and secondary windings of a toroidal inductance, current being fed from the source S through a variable resistance R to the secondary winding 5-8. The variable resistance R may be calibrated in inductance values. The measuring etc., instruments Z is connected to the diagonal A, C and when an inductance is being measured it is located at X in the arm A, D. In another arrangement, the coupled coils of the variable mutual inductance are both external to the bridge, and such an arrangement is employed in shielded bridges without affecting the shielding. The coil carrying the varying currents can be connected across a network such as that described in Specification 202,284.

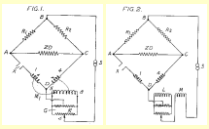

Figure 1 **Figure 2**