C_2 = variable standard capacitor
C_4 = fixed standard capacitor

At balance

$$(R_1 + j\omega L_1)\left(\frac{1}{j\omega C_4}\right) = \left(R_2 + \frac{1}{j\omega C_2}\right) R_3$$

separating real and imaginary terms,

$$L_1 = R_2 R_3 C_4 \quad \text{and} \quad R_1 = R_3 \frac{C_4}{C_2}$$

Advantages

i) we get 2 independent equations as C_2 and R_2 are variable since R_2 and C_2 are in same arm, convergence to balance conditions is much easier
ii) balance equations are simple and don't contain frequency component.
iii) bridge can be used over a wide range of inductances.

Disadvantages

i) bridge requires a variable capacitor which is expensive and its accuracy is about 1 percent (1%).
ii) value of C_2 becomes large when measuring high Q coils.