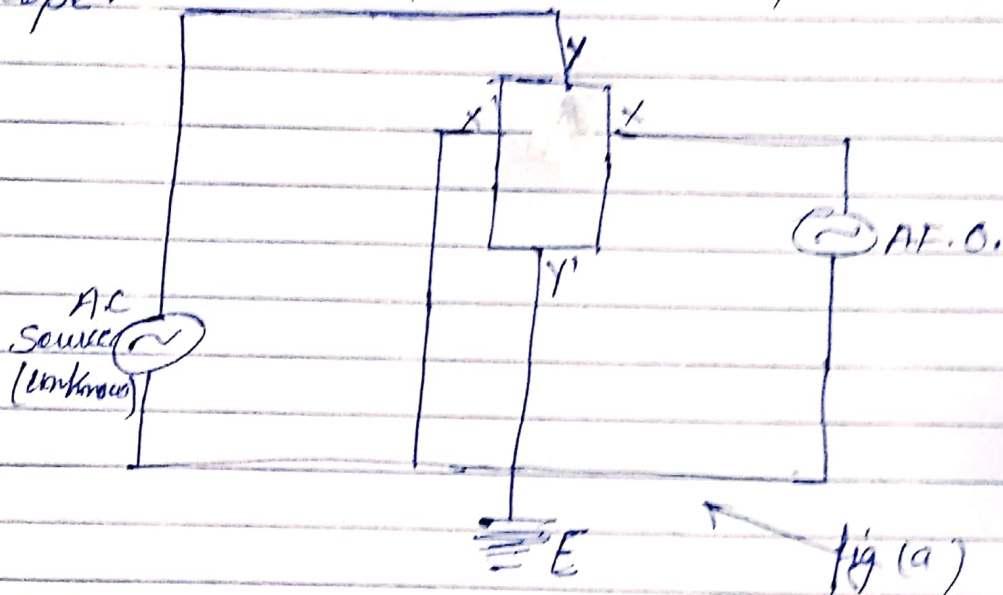


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Formation of Lissajous figure by using 'CRO'

A very convenient method for obtaining Lissajous fig. is by using a cathode ray oscilloscope.



An electrical experiment is in fig. (a) obtain Lissajous fig. A source of a.c. voltage of unknown frequency is connected to the vertical input terminals Y-Y' of the CRO. Audio frequency oscillations of known frequency is connected to the horizontal input terminals X-X'. By adjusting the phase and frequency of the unknown source, a study Lissajous fig. ~~is~~ a straight line, an ellipse, a circle, a fig. etc. is obtained on the screen of CRO. This electrical arrangement is used to determine unknown frequency of the A.C. source.

The unknown frequency f of any a.c. source can be determined by using the formula.

$$f = \frac{N_h}{N_v} \cdot f_0$$