$$\frac{e_0}{a} = \frac{e_0}{R_0\theta_0} = a \text{ constant}$$

or $e_0 \propto R_0\theta_0$

B. Amplitude constant, time period variable

Sr. no.	amplitude	Time for20 oscillations	Mean time period T	e_0	e_0T	Linear velocity $v = \frac{2\pi}{T} R_0\theta_0$
1						

Conclusion. When the amplitude is kept constant

Precautions

1. The semi-circular frame should oscillations freely as a whole on the knife edge.
2. The magnet should pass freely through the coils C_1 and C_2.
3. The *emf* developed in the coil should be measured with the help of an electronic circuit.
4. The magnet should be small and should be mounted at the middle of the semi-circular arc.