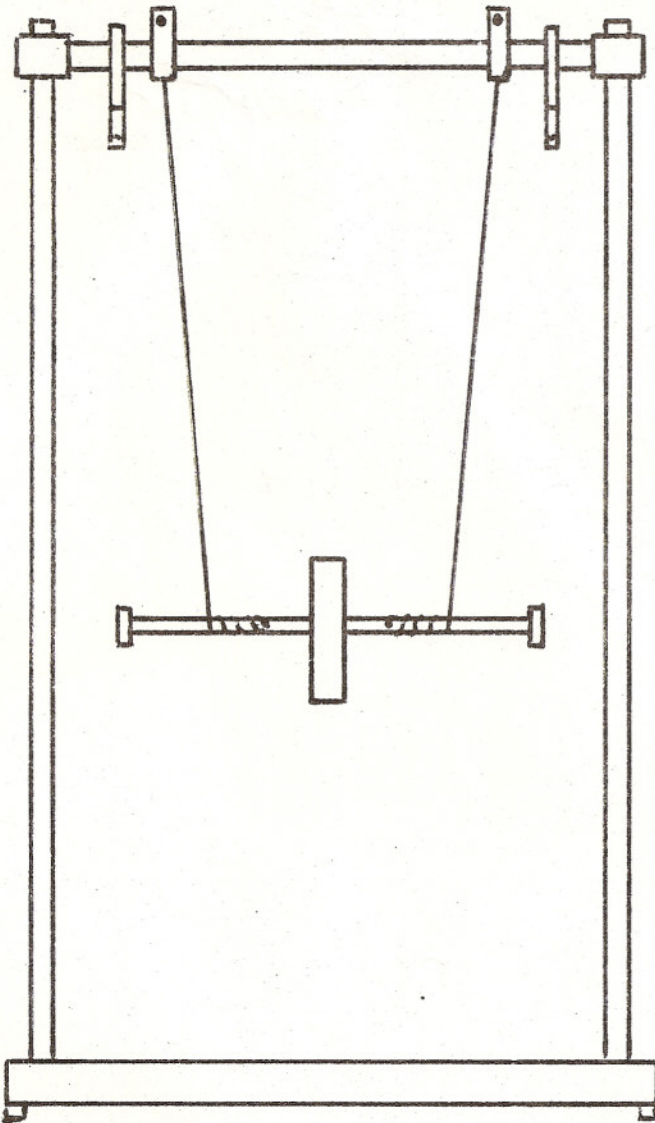


Interchange of Energy,
Potential and Kinetic,
Mainly of Rotation

M-Wall



Remove the wheel from its supporting slots, allow the cords to support its weight, and wind the cord on the axle, as illustrated, by turning the wheel. Release the wheel from its highest practicable position, and observe it as it falls and then rises.

Approximately 4.5 seconds are required for the rotating wheel to fall the $2 \frac{3}{4}$ feet that it does fall, whereas only about 0.4 second would be required for it to fall this distance freely without rotation. Most of the loss of potential energy goes into kinetic energy of rotation. The wheel rises to roughly 90 % of its original height as the kinetic energy (less frictional loss) is reconverted into potential energy.

Note: Always place the wheel in its supporting slots when not in actual use, particularly when the apparatus is being transported or stored.