



MAXWELL'S WHEEL

MAXW01

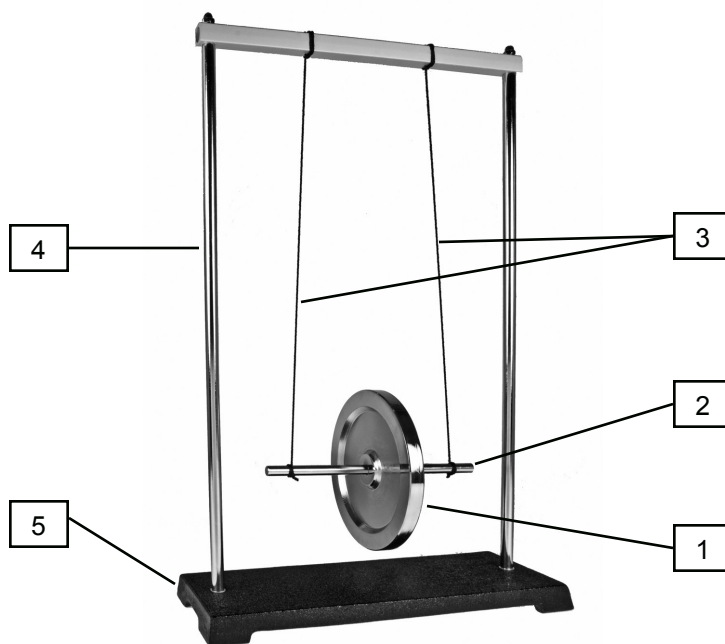


Figure 1

DESCRIPTION

Maxwell's Wheel is a demonstration device to show the conversion of energy between potential energy of position and kinetic energy. Some quantitative work may also be done with the device.

The apparatus consists of a heavy wheel (1, *Figure 1*) mounted rigidly on an axle (2) and supported by a pair of cords (3) from a rectangular frame (4) with a heavy base (5).

The wheel is first rotated by hand so that the support cords are rolled onto the axle, raising the wheel to the top of the frame. When the wheel is now released, it accelerates in both rotation and translation until the bottom of the cord pair is reached, converting its potential energy into kinetic energy. At the bottom, the translational motion is stopped, but the rotation continues, winding the cord around the axle and raising the wheel again until all the wheel's energy is in the potential form once more. This process continues until all the motion is brought to rest by dissipative forces.