

Mechanisms - Motion

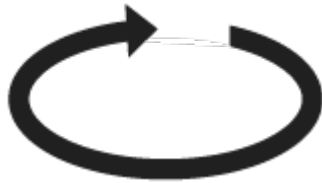
There are four types of motion:

Linear



Going in a straight line.

Rotary



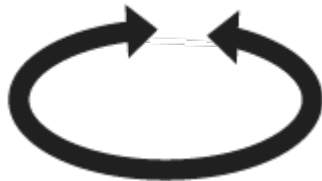
Going round and round.

Reciprocating



Going backwards and forwards in a straight line.

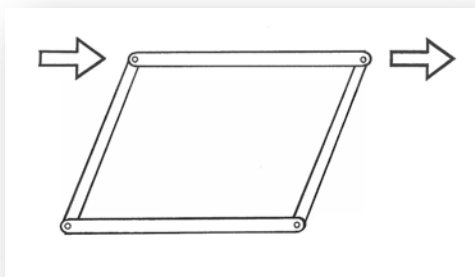
Oscillating



Swinging backwards and forwards.

Linear

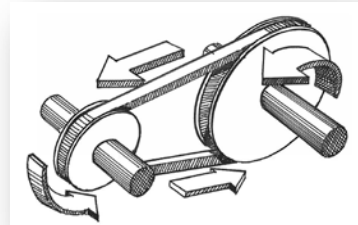
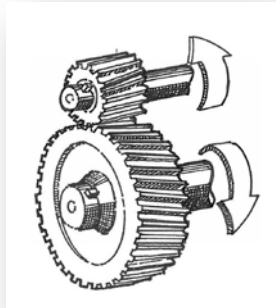
Linear movement is movement in a straight line in one direction.



A drill chuck also moves with a linear movement when the handle is rotated.

Rotary

The spinning top in the video converts linear motion into rotary motion.



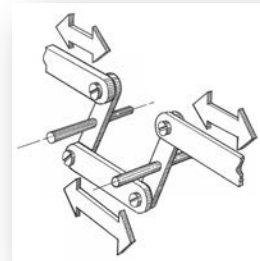
Rotary is the most common kind of movement. Think about wheels, cogs, Bicycles and CD/DVD Players. All these involve rotary movement.

Almost all machines involve some rotary motion. This is particularly true of mechanisms powered by electric motors.

Reciprocating

Reciprocate - a movement that is in a straight line, but moves forward and then backwards in a continuous movement, and then repeats again.

A sewing machine needle reciprocates (see the video), and moves up and down in a continuous movement.



The saw blade on this mechanical hack saw moves forward and backwards in a reciprocating motion.

Oscillation

Oscillation - a movement that rotates backwards and then forwards in a continuous movement.



A swing oscillates (see the video).

So does the pendulum of a clock (above).