Making it Move

Different mechanical systems can be used to make an object move. The parts of a machine that create movement are called mechanisms. Mechanisms include sliders, levers, linkages, wheels, axles and cams.

Sliders



Sliders move from side to side or up and down.

Bolts use a slider mechanism.

Levers



Levers consist of a rigid bar that rotates around a fixed point called a fulcrum or pivot.

A seesaw is an example of a lever mechanism.

Linkages



Linkages combine the slider and lever mechanisms. They are made from bars joined with pivots.

A scissor lift uses a linkage mechanism.

Wheels and axles

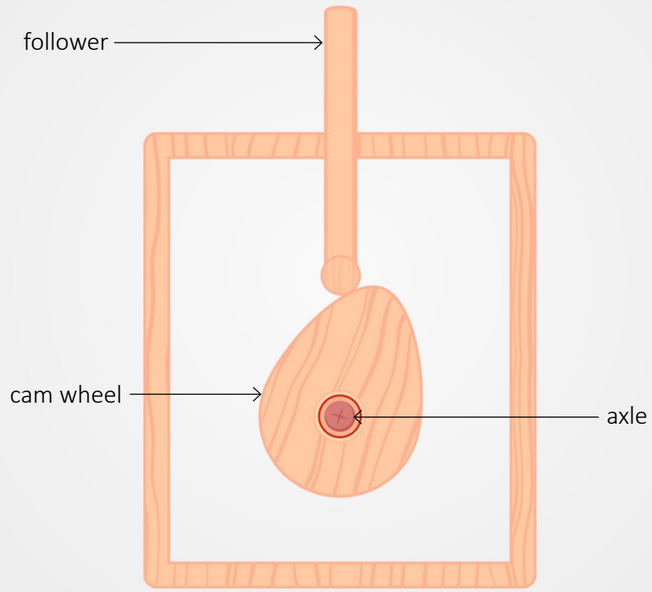


Axles are rods which allow wheels to rotate to help a vehicle move easily.

Wheels and axles are used on cars and pull-along carts.

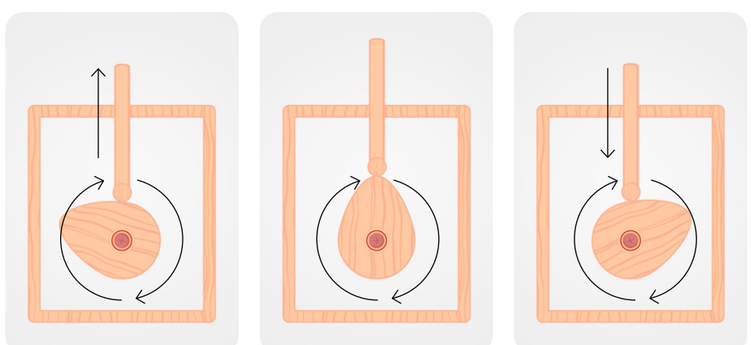
Cam mechanism

A cam mechanism is used to change rotational movement into up and down movement. It consists of three parts: a cam wheel, an axle and a follower.



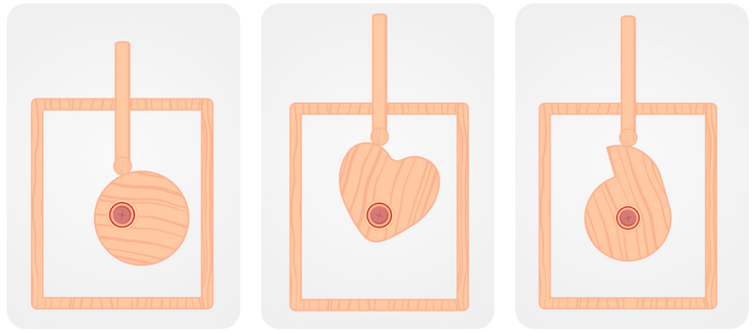
Movement created by a cam

When the axle turns, the cam wheel rotates. This makes the follower that rests on the cam wheel move up and down, following the shape of the wheel's edge.



Different-shaped cams

Cam wheels come in different shapes to do particular jobs. Each shape makes the follower move up and down in a different pattern. Some are used to open and close valves in engines, and others allow carousel horses to move up and down.



circular cam | heart cam | snail cam

Automata

Automata are mechanical objects or models that can be relatively self-operating. They often contain a range of cam mechanisms that create movement.



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The Silver Swan automaton, Bowes Museum, Barnard Castle

Glossary

follower	Part of a mechanism that follows the movement of another part.
mechanism	A system of parts that work together in a machine.

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