

MECHANISMS - WIND POWER

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On behalf of The World Association of Technology Teachers

W.A.T.T.



World Association of Technology Teachers

The 'Mechanisms Exercise' can be printed and used by teachers and students. It is recommended that you view the website section 'Graphics' (www.technologystudent.com) before attempting the design sheet .

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As part of the wind power project you will investigate a range of mechanisms, learn how they work and how they are used. Draw four mechanisms that you feel are the most interesting. Name the mechanism and add notes.

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MECHANISM NAME: _____

NOTES

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NAME:

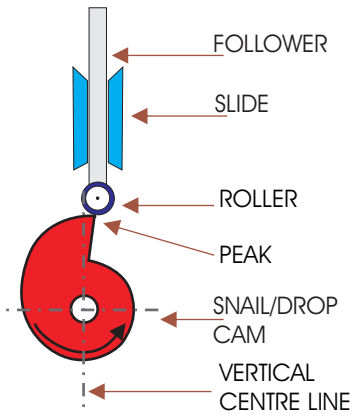
MECHANISMS

DATE:

As part of the wind power project you will investigate a range of mechanisms, learn how they work and how they are used. Draw four mechanisms that you feel are the most interesting. Name the mechanism and add notes.

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MECHANISM NAME: DROP CAM.



NOTES

As the drop cam rotates the follower stays level for a short time. It then rises slowly and suddenly drops

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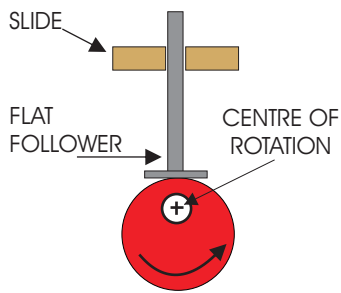
NAME:

MECHANISMS

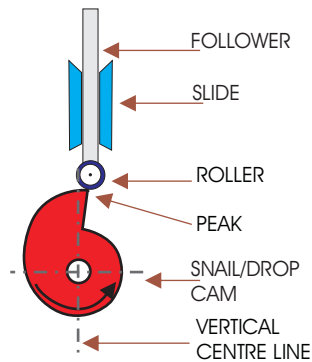
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MECHANISMS - CAMS

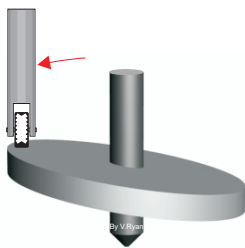
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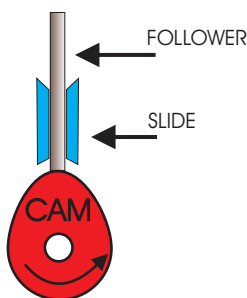
ECCENTRIC CAM. The follower moves up and down in a vertical direction. Its movement is very smooth.



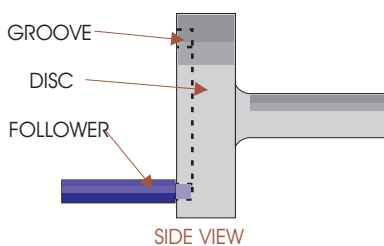
DROP CAM. As the drop cam rotates the follower stays level for a short time. It then rises slowly and suddenly drops



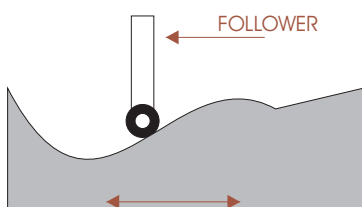
SWASH CAM. This cam is like a 'spinning top'. As the angled disc rotates the follower rises and falls, following the movement of the disc.



PEAR SHAPED CAM. As the cam rotates, the follower stays level for $\frac{1}{2}$ a revolution, then it rises and falls following the cam profile.



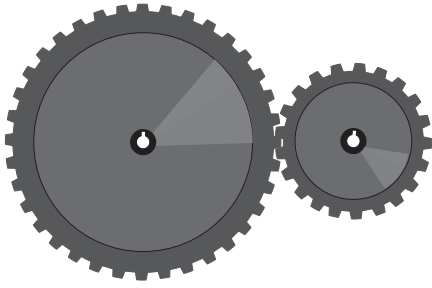
BOX CAM. As the disc (cam) rotates, the follower - follows a groove cut into the disc.



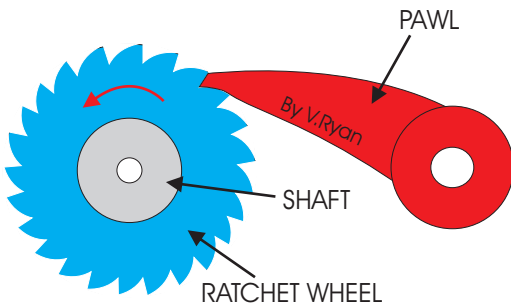
FLAT PLATE CAM. The follower rises and falls according the movement of the cam profile , as it travels from left to right.

MECHANISMS - GENERAL EXAMPLES

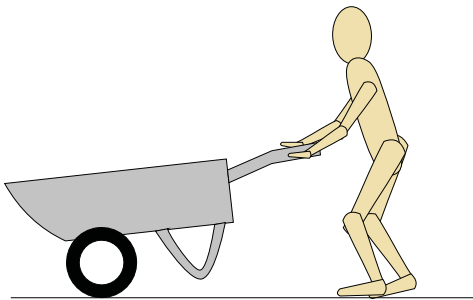
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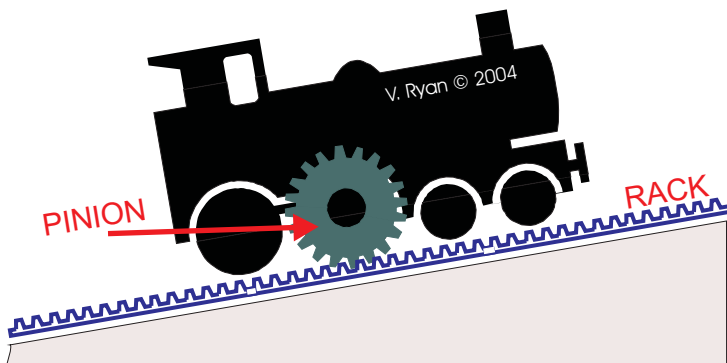
GEAR TRAIN - Used in a range of machines and engines. They are used to speed up or slow down motors.



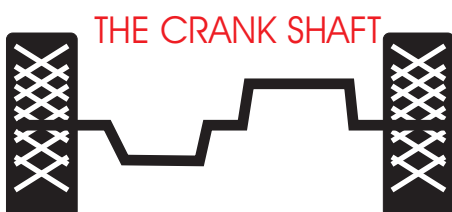
RACHET - Used in mechanical devices and lifting mechanisms.



LEVERS - Allow people to lift and move heavy weights without strain.



RACK AND PINION - Used on trains that climb steep slopes.



CRANK - acts a little like a lever. Converts reciprocating motion into rotary motion.