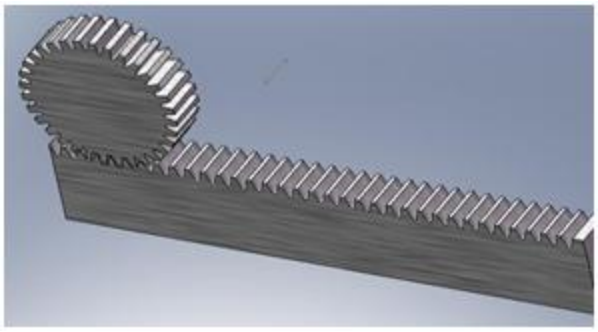
BASIC MECHANISMS FOR ROBOTICS

Types of gears Helical gears: they have lower efficiency than spur gear but produce low noise due to less collision of teeth. They are advance spur gears with helical teeth.

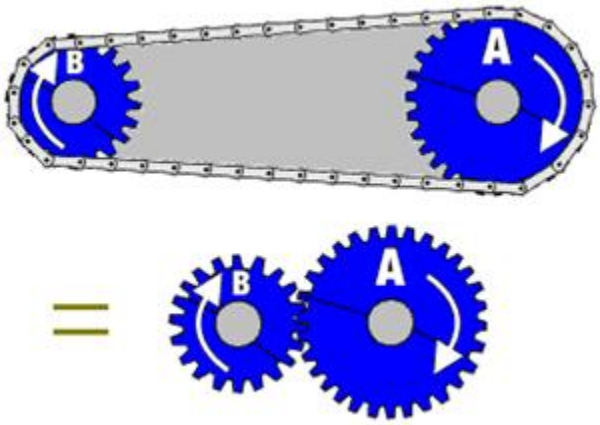
Bevel gears: they are used to turn the direction of rotation by 90degree. They find application in car differential gear box and have lower efficiency.

Rack & pinion: they are used for converting linear motion to circular & vice versa.



This gear is commonly used in the car steering system to convert to the rotary into linear motion. **Worm gear:** it is pair of worm & worm wheel and is used where a large gear reduction is required. It also changes direction of rotation. It is self locking gear, only the worm can drive the worm wheel but not vice versa.

Sprocket & chain: increased surface area lead to wastage of energy, but the direction of rotation remain the same



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