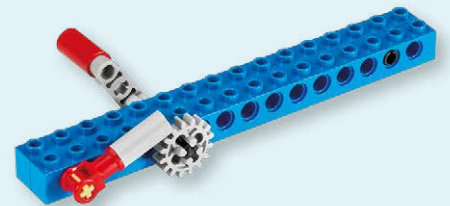


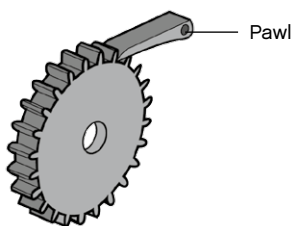
# Pawl and Ratchet

Student Worksheet



## Mechanisms: Pawl and Ratchet

A ratchet mechanism is based on a gear wheel and a pawl that follows as the wheel turns.



When the gear is moving in one direction, the pawl slides up and over the gear teeth, sending the pawl into the notch before the next tooth. The pawl is then jammed against the depression between the gear teeth, preventing any backwards motion.

Ratchet mechanisms are very useful devices for allowing linear or rotary motion in only one direction.

Common examples of ratchets are clocks, jacks and hoists.

### Did you know?

There are ratchets in some screw drivers that allow the user to turn with an effort in one direction and then turn back without turning the screw.

**I1**

**Build I1 book III, pages 28 to 29**

Turn the handle in both directions and describe what happens.

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