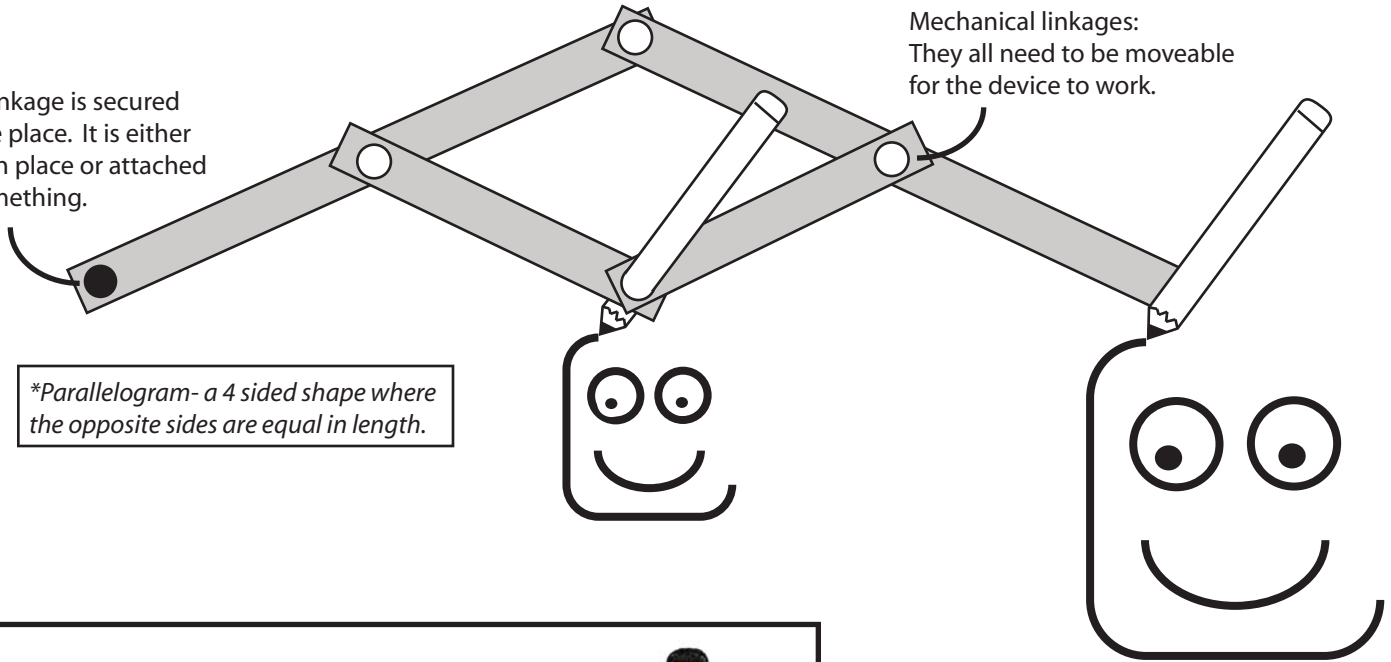


PANTOGRAPH

What is it? The pantograph was invented in 1603 and it was a device used to copy images or enlarge drawings. The device is based on mechanical linkages that form parallelograms*.

This linkage is secured in one place. It is either held in place or attached to something.

Mechanical linkages:
 They all need to be moveable for the device to work.

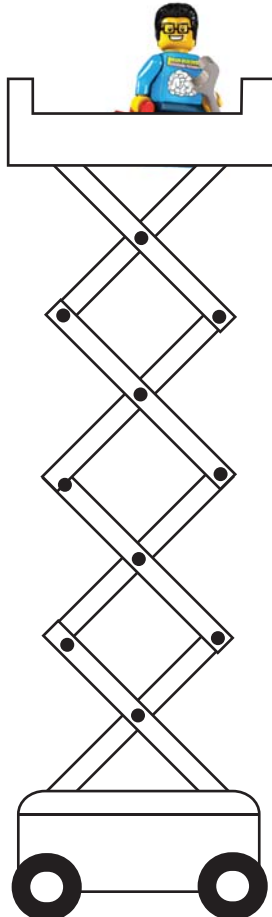
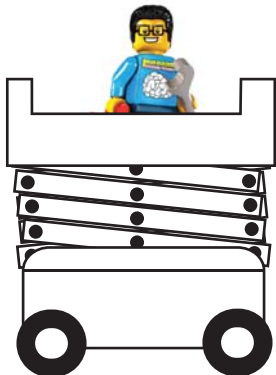


*Parallelogram- a 4 sided shape where the opposite sides are equal in length.

Scissor Mechanism:

This is also known as a pantograph due to its unique design which opens and closes like an accordion. It is made with many linkages and it forms a criss-cross "X" shaped pattern. They are a great contraption as they can become very small and compact and can also extend out very far.

Scissor lifts are used everyday and it helps people reach high places. It is especially helpfull when a ladder is not tall enough to reach an area.



Can you engineer a pantograph like the one above and can you engineer a scissor lift or "scissor claw"?

