

# MECHANISMS INFORMATION / WORKSHEETS

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On behalf of The World Association of Technology Teachers

# W.A.T.T.



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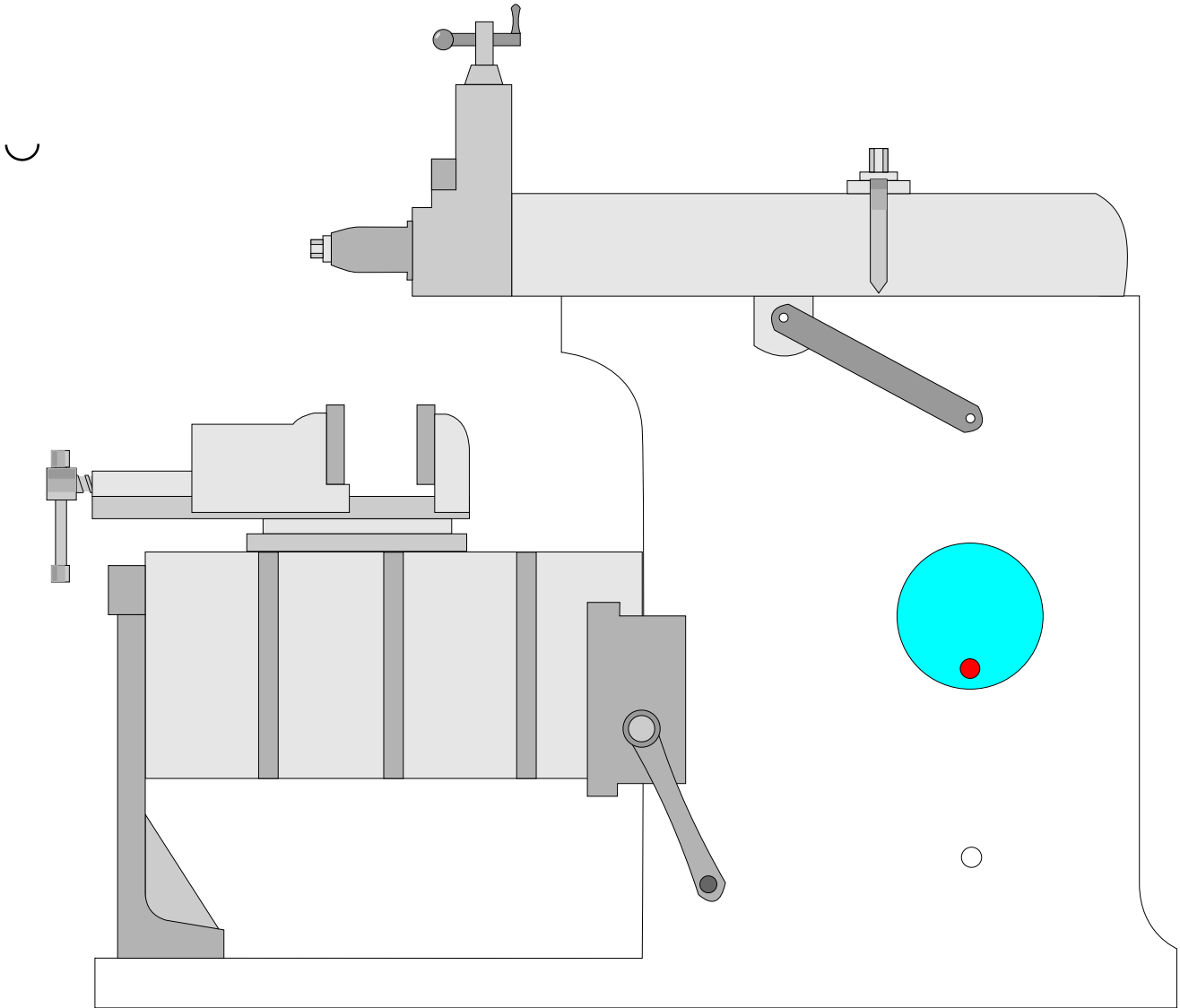
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# THE SHAPING MACHINE

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The shaping machine is a simple and yet extremely effective machine. It is used to remove material, usually metals such as steel or aluminium, to produce a flat surface. However, it can also be used to manufacture gears such as rack and pinion systems and other complex shapes. Inside its shell/casing is a crank and slider mechanism that pushes the cutting tool forward and returns it to its original position. This motion is continuous.

1. Complete the diagram below by adding the missing parts that make up the crank and slider mechanism.



2. Why is the crank slider mechanism suitable for this type of machine especially the motion of the cutting tool?

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3. Draw an alternative mechanism or combination of mechanisms that will produce the same forwards and backwards motion. Is your new mechanism an improvement on the crank and slider mechanism?