

Definition of Engine Turning: Like Engraving with a Ruler

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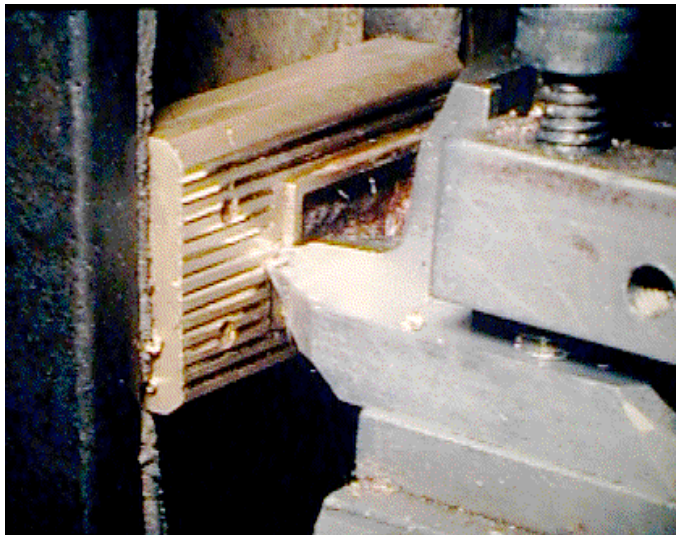
Technical Drawing on Metal

Imagine being able to do on metal what you can do on paper with a ruler, compass, french curves, or any other drawing instrument. Then consider hand engraving on metal as freehand drawing.

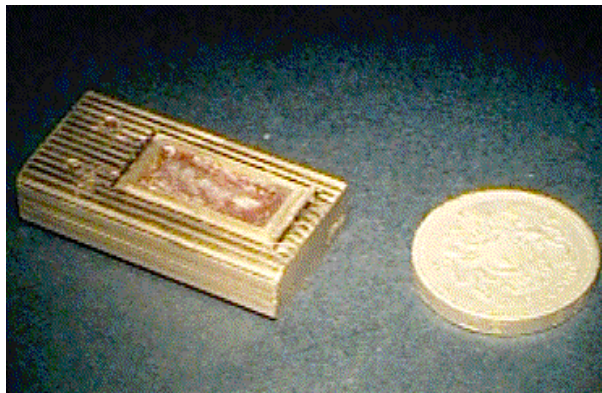
The Engine Turning process is basically a set of drawing instruments for engraving lines on metal. It works slightly differently, for example the cutting tool remains stationary and the workpiece is moved against it, but the principle is really very similar.

The straight line machine is a sophisticated ruler that can cut parallel lines, straight or wavy and can also cut straight or wavy lines which radiate from a point. In addition it is able to do this on surfaces which are curved.

The circular machine provides the complementary compass actions, with the addition of wavy circles or arcs, and again can deal with three dimensional objects, in particular cylinders, cones and spheres, none of which have to be regular in particular.



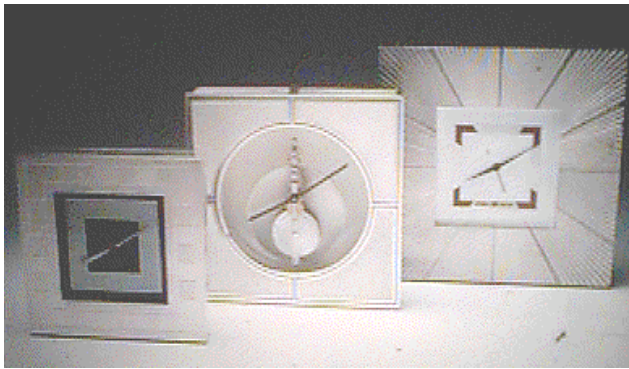
In this illustration of a Miniature Digital Clock in 18ct gold, straight lines have been cut along the case and a trim line or border is being added around the LCD dial window.



As removed from the machine after cutting, the case is still filled with wax to prevent the chuck jaws from crushing it.



The finished clock, showing that even the simplest use of engine turning can transform a product.



Three Clocks with precisely designed Engine Turning. While each single cut may not have been specified here, there was a precise drawing indicating what was required and samples of the various pattern areas may well have been seen before the job was commenced.

Right: Cufflink with 4 sets of radiating lines. How the cuts are laid out is decided primarily by the designer, usually with a little guidance from the engine turner to avoid unnecessary expense.

In this example, the pattern has been carried over the edges of the cufflink by careful filing, for a more three dimensional effect which shows off the heavy weight of the design.

