

Engine Turning (Rose Engine Lathe) Ornamental Turning

by Bill McInnis

Rose Engine Lathes date back to the mid 1800s and were produced until around 1940. When first developed, these were very expensive and cost about the same as a standard house. Because of the expense, these were the toys of the elite who most likely hired someone to operate the lathe.

There were a number of manufacturers of Engine Turning Lathes; the most famous was Holtzapffel and Co. These early machines were all hand driven by foot pedals or hand cranks.

The basic difference between an Engine Turning lathe and a modern Wood lathe is as follows:

- Wood Lathe - the head stock is fixed and the wood is driven around the spindle of the lathe. The wood is shaped by hand tools cutting away the wood as the wood is driven by an electric motor.
- Engine Turning Lathes (Rose Engine) - the head stock rocks and sometimes pumps (linear motion). The material to be decorated is brought into a fixed cutter by the rocking motion of the head stock.

The following are some basic terms associated with ornamental turning:

1. Rosette — A cam cut into a pattern. The cam defines the decoration that is cut into the surface of the object.
2. Rubber (Cam Follower) - This fixed device follows the outline of the Rosette and causes the head stock of the lathe to rock.
3. Hand Wheel - The hand wheel drives the Rosette. Through a series of pulleys, twelve revolutions of the hand wheel produce approximately one revolution of the object to be decorated.
4. Leveling Chuck - a device used to make fine adjustments in the X, Y and Z axis of the object to be decorated.
5. Fixed Cutter — a motor operated cutting frame.
6. Eccentric Cutter — an off-center cutting frame.
7. Dome Chuck - An object holding frame that allows an object to be held vertical while being decorated.



Resources:

1. [Lindow White - New Rose Engine Lathe \(David Lindow and Steve White\)](#)
2. [Ornamental Turners - A society of Ornamental Turners located in the US.](#)
3. [A Catalog and History of Holtzapffel Lathes](#)