

A Short History of Woodturning

By Stuart King

Ways of revolving a workpiece have challenged Man's ingenuity for tens of thousands of years. One of the earliest devices was the drop spindle, which used the momentum created by the spindle's weight to spin wool.

The potter's wheel was almost certainly the first machine used by our ancestors, and the reciprocating bow drill and pump drill may have been the first mechanical hand tools. Such machines could be used to create fire and to make bore holes. By fitting a profiled cutter, they could be used to produce buttons, counters and beads.

Small lathes driven by hand-held bows probably provided the earliest form of turning, particularly of small items made of wood, ivory, bone, amber and precious metals. Even fine, gold, Celtic jewelry was worked on the bow lathe, which also figures in early engineering, especially watch and clock-making.

The earliest lathes were powered by the workman, sometimes helped by a colleague. Two men can be seen in the earliest drawing of a lathe, on an Egyptian wall relief in the tomb of Petosiris, around 300 BC. Each lathe part is shown as clearly as possible for the viewer, which makes it misleading, as it appears to show a vertical lathe. One man provides the power by pulling to and fro on a cord or leather strap wrapped around the workpiece, while the turner sits opposite, with his chisel on the toolrest.

Iron Age:

In the Iron Age, inhabitants of the Glastonbury Lake Village were competent woodturners. Excavations show that these West Country Celts turned sizeable artifacts, such as wheel spokes and hubs.



Mallets, bowls, tool handles, and smaller items such as stoppers for jars were among items recovered by amateur archaeologist more than a century ago. but no actual lathe evidence was found, so one can only make assumptions. Strap or bowl lathes could have been used for smaller

items, but wheel hubs would probably need more power that a strap lathe could apply. Pole lathes were almost certainly used to turn larger items.

The Romans were familiar with the woodturning lathe and were particularly adept at making lidded boxes and containers from boxwood; also sophisticated furniture

parts for couches and the like. In Dorset, shale, a soft stone, was turned into body adornments such as amulets.

Vikings:

Excavations at York have produced overwhelming evidence that woodturning played a significant role in daily life during the Viking occupation.

The Vikings were great artisans and natural woodworkers; domestic items were made from wood, probably daily. It seems everyone used wooden bowls in latter-day York. They were turned in small timber buildings behind the houses fronting the streets.

Apart from complete bowls, many "cores" - the waste center pieces left after bowls had been turned on a pole lathe- were found. These cores, and the discovery of part of an adjustable toolrest, give clues as to what these ancient lathes must have looked like and how they functioned.

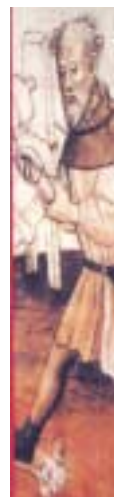
Interesting parallels can be found in modern times. George William Lailey in Berkshire was using a virtually identical bowl-turning lathe until 1958. Even today, Romanian turner Ion Constantin (WoodTurning Issue 170) works in similar way.



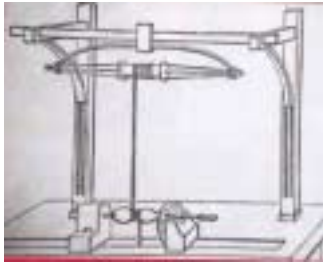
The earliest depictions of a pole lathe occur in the 13th century, in a very stylized stained-glass window in Chartes Cathedral. It shows what appears to be a woman seated at the lathe, complete with cord and foot treadle. A more accurate picture is to be found in a French illuminated manuscript.

Again the turner seems to be female. The lathe parts appear to be turned and decorated with beads.

Another portrait of a pole-lathe turner can be seen in the 1425 "house book" of a German family called Mendel, who founded a home for aged craftsmen in 1388. Every artisan in the home who died was given a full-length picture in the book. The Book Of Trades, published in Nuremberg, in 1568, includes a woodcut of what we might call a production turner. His workshop faces the street and also serves as a shop front. He seems to be using mainly hook tools, judging from those hung on the rack behind him and the position of the tool he is using.



He is shown making a bowling pin. The German text translates as: "the turner makes little jewel boxes of boxwood, cases, pulpits, bedposts, hammer handles, bowling pins and mallets." Also in his shop are dishes, furniture legs, a flute and drinking flasks turned on double axes. All this illustrates the versatility and importance of the pole lathe in a thriving medieval city.



If space for a pole was limited, perhaps by a low ceiling, an occasional substitute from the late 17th century onward was a bow and "shreave" - an archery-type bow with several catgut strings passing thru a bobbin (the shreave) on to which the lathe line was attached.

As the foot treadle was depressed, the shreave revolved, wound up the bow cord and in doing so applied enough tension to the bow to provide for the upward return of the treadle. This was a temperamental alternative to the sprint pole, with the extra disadvantage of restricting the cord's movement to any part of the work. The only plus point was its compactness. The simple pole was much more versatile.

China:



In his book, Hand or Simple Turning, John Jacob Holtzapffel shows a Chinese pipe-stem turner using another form of reciprocal motion- a drive cord is wound round the driving mandrill, and the two ends terminate at separate foot pedals. The operator would work seated and pump the foot pedals alternately; such a lathe was suitable only for

light work. In the sar itinerant strap-lathe turner who set up his crude lathe wherever a job was found. If a customer needed to replace a broken furniture pare, for example, the turner would start by ramming two low posts into the ground at the required distance apart, and tie a horizontal toolrest to them.



The long, continuous history of using reciprocating lathes is perhaps surprising: you may wonder why early use of the wheel did not have a more significant impact. But it's unrealistic to write a chronological history of the lathe, expecting each new advance to supersede the last and completely replace it; life is not that simple

An etching of 1635 shows a Dutch spindle turner at a pole lathe identical to those used commercially in the beech woods of England less than 50 years ago- and still used by some craftsmen today!



Indeed the pole lathe is currently enjoying something of a renaissance, and the UK's Association of Pole-Lathe Turners boasts more than 350 members