

The wonderful world of

Therming

A Primer on Therming
by

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What is therming?

Therming is a woodturning technique in which multiple blanks are mounted on the lathe so that the same profiles can be imposed on multiple blanks simultaneously. After cutting the first profile in the blanks, the blanks are rotated (usually by the same amount) and the next profile is then cut into the blanks. Typically two to four profiles are cut to create oval, triangular or square turnings, but any number of profiles can be cut, rotating the work between each profile.

The goal of therming is usually to create identical parts. The parts are then either reassembled (glued) into a whole, or used as a set of symmetrical parts (e.g. table legs) or simply as multiple parts. Therming opens up a whole new realm of woodturning forms that one might never expect to be producible on a lathe, such as lens shaped, triangular, and square hollow forms, 'S' shaped candle sticks, and table legs and aprons that look like they were shaped by hand.

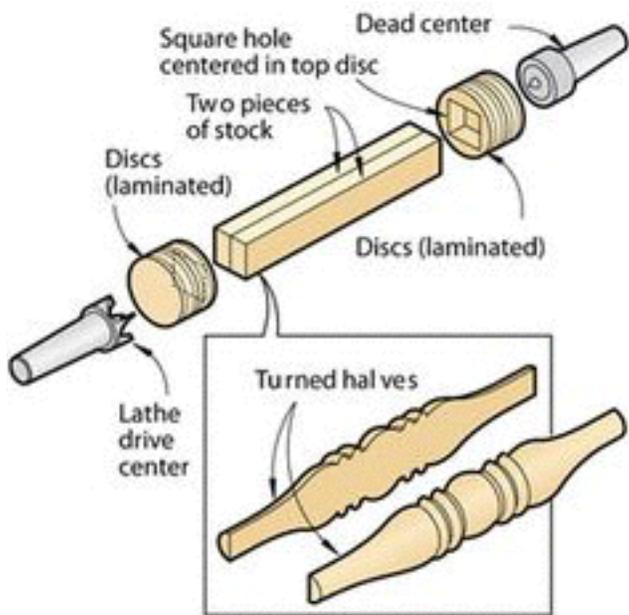
It is possible that you have already done some therming.

That is right. If you have ever made an inside-out turning, then you have already done some therming. In inside-out turning, several blanks—usually four—are bundled together and mounted on the lathe. The first profile, that is the inside of the turning is turned first, then the parts are unbundled, rotated 180 degrees, and glued. Then the second profile, that is the outside of the turning, is then turned.

Another type of therming, closely related to inside-out turning, are split turnings. In split turning, two blanks are bundled together and then a single profile is turned. The work is then split in half to create two identical parts that are usually used as symmetrical parts, for instance, on a mirror or dresser.



Inside-out turning is one type of therming



Split turning is another type of therming



Split turnings on a dresser

Inside-out and split turnings only scratch the surface of what is possible with therming.

Although there are many interesting projects that can be created using inside-out turning and split turnings, there are additional therming techniques that can have spectacular results, results that often look to be impossible to accomplish on a lathe. Expanding on the concept of the split turning, a sacrificial piece of wood can be added between the two blanks to create arc-based forms that can be later rejoined (glued) to create work with a lens shaped cross section. The results could be, for instance, a lens shaped hollow form.



sacrificial piece between blanks



Hollow form with a lens cross-section

Reuleaux forms

The approach to making work with a lens cross section can then be extended to create three and four sided forms with a Reuleaux polygon (a.k.a curvilinear polygon) cross section. Setting up the blanks for such work is more work, requiring more complex sacrificial components, but the results can be well worth the additional pain.



Four mahogany blanks mounted on poplar sacrificial blocks. Note the bundle of rubber bands for extra security.



After turning the outside, I wrap the work in plastic wrap, remove the tail stock, then hollow the inside the same way I would hollow any other hollow form.



Once the work is hollowed, the four mahogany parts are assembled with glue to form a shape with a Reuleaux rectangular cross section.

Getting Jiggy with it...

Although using sacrificial pieces of poplar to create Reuleaux polygon forms can have spectacular results, the process can be time consuming. The sacrificial approach is, however, necessary in order to create parts that are accurate enough to assemble into a whole. If instead the goal is to simply end up with several identical parts, then there is a simpler, more efficient approach, which is to create a therming jig.

A therming jig consists of two disk, one for the headstock and one for the tailstock, with some means of mounting multiple blanks symmetrically. I have been experimenting with ways to mount blanks on a therming jig, and so far I have not found a single "best" way of mounting. I originally started out with a therming jig that is based on round tenons, and this may still be the best option for turners without access to flat woodworking tools.



Four prototype stool legs mounted in a round tenon based therming jig.

This is because the ends of the blanks must be square to the center axis and this happens automatically when squaring off a round tenon on the lathe. However, turners that have access to a jointer and a miter or table saw may find a simple jig based on pins to be a more efficient option.



I even made a therming jig base on the Festool Domino (floating tenon joiner) for shaping table aprons. The mortises are cut into the apron stock whilst still square, and the same floating tenons that will be used later to assemble the table are used to mount the aprons in the therming jig



This pin based therming jig is efficient for general work. The holes are for set scores that keep the work from moving while turning each side.

Contemporary Furniture

I find that the most exciting, unexplored application of therming, in my not so humble opinion, is for making furniture parts. With a little practice, it is possible to produce parts that would take a couple of days with traditional methods in just a couple of hours. I have made many prototype furniture legs for stools and tables, and have even figured out how to therm table aprons. I hope to soon start applying this technique to actual furniture, not just prototypes.



All the parts of this stool prototype are made on the lathe, and all parts except for the seat are thermed.



Even table legs and aprons that look hand-shaped can be thermed on the lathe.

Resources

Art Leistman

Art Leistman makes uses therming to make artistic pieces such as teapots, Terpsichoreans, etc.

Art Leistman : <http://www.artliestman.com>

American Woodturner Article

Art Leistman also has an article on therming in the April 2010 issue of American Woodturner.

<http://www.opcaaw.com/InfoPages/ThermingArticle.pdf>

Woodworkers Institute Article

The Woodworker's Institute has an interesting online article on Therming, including a little bit on the history of Therming and a Thermed Lamp project.

<http://www.woodworkersinstitute.com/page.asp?p=1547>