Peppermills Revisited

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a.k.a. The Ins and Outs of Peppermills

- Why Turn Peppermills?
- A few examples of different kinds of mills
- Making peppermills with mini/midi lathe
- Let’s turn something easy, no special tools needed
- Mistakes, details, and maybe a couple of gotcha’s
- Let’s make a basic mill (available for Salt or Pepper)
- A complicated “combo” Saltshaker and Pepper Grinder
- Another easy mill, can be done without a chuck (if we have time)
- Other possibilities for Kits and Mills
- Specialized tools – for the tool junkies among us ;-)
- Crush Grind Mechanism
- Resources
- What comes next?

Why Turn Peppermills

- They make great presents, and are relatively easy and quick to make
- Range of kits available from “super easy” to “somewhat complicated”
- Great opportunity to develop/improve spindle turning techniques
- Lots of examples available for learning about design
- Opportunity to learn how to duplicate a particular shape
- Most kits can be made without any special tools (or with special tools, if you are a tool junkie !!!)
- Three examples will be turned, if there’s time, and two could be made without a chuck, if necessary

First a Few Examples of Different Kinds of Mills

- A few examples of ‘commercial’ mills and shakers
- The basic mill mechanism can be made in a variety of sizes, and with the right version, can be used for grinding pepper or salt (and other spices)
- Crush Grind mechanism will be discussed in detail later
- What re some issues and options for drilling the body?

Making peppermills with mini/midi lathe

- Limited bed length is a key issue
  - Jet JWL-1015 max (without live/drive centers) is 16-1/2” (14” with live/drive centers)
  - Delta LA200 “midi” is 17-1/2”
- Need room for a chuck (13-1/4” with Super Nova 2), and at times, a drill chuck (11-1/2 – 11-3/4 depending on the chuck), and drill bit (~9-1/4 with Forstner bit), which makes it difficult to make a 10” pepper mill.
- Homemade drill bit holder using a “Blank MT Adapter” saves space (back to 12 ¾” plus Forstner bit (or ~10-1/2”, so a 10” mill is “easy”
- Often the tailstock clamp does not secure the tailstock when drilling into hard woods
- Spade Drills are an inexpensive alternative for Forstner bits
- Easy to customize the size of spade drills by grinding of the edges, also can easily shorten the shaft of space drills to help with the bed length limitation
- Woodcraft (possibly others) sells pre-drilled peppermill blanks

Let’s Start with Something Easy

- Antique Peppermill from Woodcraft (and other vendors)
- The grinding mechanism is “pre-assembled”
- Can be turned without a chuck if necessary. A drill press is optional
- Just add a turned/shaped body piece of wood, and attach the mechanism

Photo from WaltsWoodCreations on Etsy

Mistakes, details, and a couple of gotcha’s

- Many (most?) of the instructions contain mistakes or misleading statements
- Take time to carefully read the instructions, before putting wood on the lathe, and think through the details of each of the steps
- Think about your desired design shape in the context of the drilling dimensions, and the stated “stated” size of your kit.
- How many tenons are needed to make a particular mill?
- Which end is up (or down)?

Let’s make a basic mill available for Salt or Pepper

- Chef Specialties (PA Company) – Made in USA
- Stainless Steel mechanism for pepper mills
- Ceramic mechanism for salt grinder (and other spices)
- Available with shaft lengths up to 24” standard
- Chef Specialties will supply 50% discount off web site prices for club group buy purchases

A Complicated “combo” Saltshaker and Pepper Mill

- Backgate industries - manufacturer
- Fast Karma WoodCrafts – authorized dealer
- www.fastkarmawoodcrafts.com

A Fairly Easy Mill

- The instructions indicate drilling on a drill press, which is ok but tricky
- Instructions also show the use of a pen mandrel with a set of bushings that can easily be turned
- Bottom line, this one is easier to turn if a chuck is available
- This is the way I will turn one, assuming time is available

Other Possibilities for Kits and Mechanisms

- Artisian Pepper (and Salt) Grinding Mechanism Craft Supplies – very similar to the Chef Specialties, but manufactured by Dayacom in Taiwan
- Artisan Crank Top Pepper (and Salt) Mill from Craft Supplies – very similar to the Penn State basic grinder I will show later
- Penn State Combo Salt Shaker & pepper Grinder kit
  - Similar to Backgate Combo, but rather easier to make
- Crush Grind, which is made in Germany, and I will discuss this shortly
- Many more possibilities – let me know if you find any different and interesting kits and mechanisms

Specialized tools – for the tool junkies;-)

- Specific sizes of drills (sometimes needed)
  - 1-1/16” – pretty much required for the standard mechanism and similar kits, but a modified spade drill is a reasonable alternative
  - Maxi-Colt Forstner bits – essentially eliminate the “lost bed length” due to drill chuck. Not available in carbide afaik
  - Carbide Forstner bits for longer life when drilling a lot of mills, especially for 1-1/16” which is most often used for most, if not all of the long body hole
  - Blank MT Adapter with modifications – essentially eliminates the “lost bed length” due to drill chuck
  - Pre-drilled blanks from Woodcraft (possibly other suppliers)

Crush Grind Mechanism

- Crush Grind mechanisms are based on metric dimensions – watch out for inaccurate conversions to imperial dimensions.
- Crown Tools PMT/1 – Pepper Mill tool for notch with CrushGrind mechanism
- Woodcut Mill Drill for CrushGrind mechanism
- Metric Forstner drills have 8 or 10 mm shafts, so a “normal” drill extender which is 3/8” dia will have to be drilled out for 10mm.
- Metric are available with hex shafts from Roman Carbide brand (available via Amazon), but the Hex fits into a 10mm hole
- Blank MT Adapter – essentially eliminates the “lost bed length” due to drill chuck, can also be used for metric drills

Resources –

- Available in FLWT Library
  - Chris West book – Turning Salt & Pepper Shakers and Mills
    - Many great design examples
  - Ted Sokolowski DVD – Making a Peppermill – Focus on Design
  - Alan Lacer DVD – Projects along the Woodturning Trail
  - Nick Cook DVD – Turning for Food Kitchen Related Projects
  - Rex & Kip DVD – Woodturning Projects vol. 2

- Available in CAT Library
  - Projects along the Woodturning Trail DVD with Alan Lacer
  - Turning for Food Kitchen related Projects DVD with Nick Cook.
  - Not sure about possible books, but I recommend the Chris West book if its not currently available

What Comes Next?

- Open Shop assistance for FLWT members
- Workshop possibility based on member interest
- Any questions, comments, suggestions, additions?
- I am happy to take email and/or phone call questions and discussions any time. Don’t hesitate to contact me

Notes/Tips – in pseudo random order here

- When removing a piece from the chuck, ‘always’ mark the location of #1 jaws, even if you don’t expect to remount the piece going forward.
- Clear the chips often when drilling hole deeper than the drill diameter
- Laguna 1836 does not include the “cone removal” pin, but it’s easy to make one.
- Mark the pitch of the tailstock thread, to aid in drilling to a specific depth. If the pitch is imperial (i.e. #threads per inch), also mark a metric equivalent (e.g. 16 tpi on PM 3520B is equiv to 4T ~ 6.4mm)