

My Modern Tool Set

by **Carl Ford**, 02/01/2015

I like many turners, started out by purchasing a set of tools from a well known manufacturer. Then while attending classes, demos and symposiums, I learned that I did not need most of the tools in the set. Modern turners have moved on beyond the scrapers and spindle turing tools featured in the old fashion sets still sold by many well known manufactures.

Here are **MY** suggestions for a modern set of tools for new turners. Please, keep in mind that I do mostly medium size faceplate (bowl) turning with a little spindle turning here and there.

Note: Most turners agree that the sets of tools currently sold are "old fashion" and not what new turners need. However, there is no general consensus on what set of tools should be recommended as replacements. Was there ever any consensus? Or did the manufactures just start selling the old sets to make more money?



[Tools from Packard Woodworks](#)

All # part numbers and prices show below are for tools from Packard Woodworks Inc (www.packardwoodworks.com).

Prices on 1/12/2015.

I live in New York state on the east coast. So I purchase things from Packard on the east coast in North Carolina.

[M2 High Speed Steel - Forget about anything else!](#)

I recommend purchasing all tools in M2 High Speed Steel (HSS). M2 is the most common type of steel.

Save the expensive fancy harder and powered steels (A11, 2030, 2060, Pro-PM, Kryo, etc.) for the professionals who turn 24/7. They may wear out M2 tools fast enough to justify the more expensive steels.

Learning how to sharpen your tools is the big hurdle for most turners. **Hard steels just take longer to grind and thus just lengthen the sharpening learning curve.**

The theory that hard steels save money because you sharpen less is marketing BS. Most turners hate to sand. Thus they always sharpen their bowl gouge, before taking the finial cut on the outside of a bowl and then sharpen again before taking the finial cut on the inside. Thus most turners only take 15 to 20 cuts between sharpening. i.e. Sharpen on the outside, 1 or 2 finial cuts, go to the inside, take 8 to 10 cuts to rough out the inside, then sharpen before finial cuts on inside. Go to the next bowl and take 10-15 cuts to rough out then sharpen before final cuts on outside. Wash, rinse, spin and repeat!

M2 steel is easily good for at least 20 cuts, probably 30 or 40 before it needs to be resharpened. Thus while bowl turing you are under the cut limit between sharpening and don't need expensive fancy harder steels! **You will sharpen the harder steel tools the same amount!** Way before they really need to be sharpened. Because, you hate to sand! Therefore, anything beyond M2 is a waste of money!

[Spindle Turning Set](#)

- **M2 1-1/4" Spindle Roughing Gouge (1-1/4" diameter)**

M2 1-1/4" (32mm) P&N Spindle Roughing Gouge, #1004514, \$103, and 14" Handle #103391, \$9 = \$112

Use the factory grind. Note: P&N is the name of the manufacturer.

For safety reasons, I like the P&N roughing gouge. It has a heavy duty machined tang that can **not** easily be broken off. The name says it all. A "Spindle" Roughing Gouge should **ONLY** be used for spindle work. **DO NOT** use on bowls.

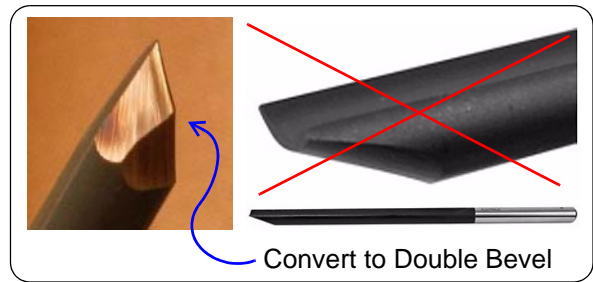


Chalk

- **M2 1/2" Detail Gouge with Michael Hosaluk Double Bevel Grind** (1/2" diameter, 3/8" across flutes)

M2 1/2" (12mm) P&N Detail Gouge, #104508, \$45, and 14" Handle #103391, \$9 = \$54

Replace the factory grind with a Michael Hosaluk double bevel style grind. Michael's grind is more versatile. Take a class with Michael or see "Tool Sharpening Templates" on page 8

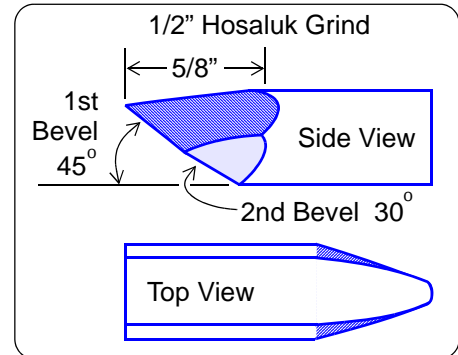


This is my go to tool for spindle turning. I use it for all of my spindle turning. The double bevel and narrow round point allow me to easily get into tight spaces like a skew. But, it does not easily catch like a skew. With a little practice you can easily obtain a finish almost as good as a skew.

With a detail gouge you can cut coves and beads like a spindle gouge. You can use it as a safe and easy skew. You can use it to rough out. One tool can do it all! So you only need to learn and master one tool!

I also use my detail gouge on bowls. I use it to part off the nib on the bottom of bowls when finishing a bowl on a vacuum or jam chuck. I also use it when making fancy rims on bowls.

Detail gouges should have a shallow flute that leaves plenty of meat under the flute for strength. Unfortunately, they vary a lot from manufacture to manufacture. I only like the detail gouges made by P&N and Thompson Tools.



- **M2 1/8" x 1/2" Parting Tool** (1/8" wide, 1/2" tall)

M2 1/8" P&N Parting Tool, #104530, \$31 and 14" Handle #103391, \$9 = \$40

Go with the factory grind.

This parting tool is cheap and the one I use most of the time. It easily slices thru wood because it is only 1/8" wide. Two passes with this tool are faster than a 1/4" tool. The 1/2" height is enough to support the cut and allows mounting the tool in a long handle for safety.



- **Total \$112 + \$54 + \$40 = \$206**

Bowl Turning Set

- **M2 5/8" Bowl Gouge with Ellsworth Grind** (5/8" diameter rod, 1/2" across flutes)

M2 1/2" Ellsworth Signature Bowl Gouge, #103328, \$96

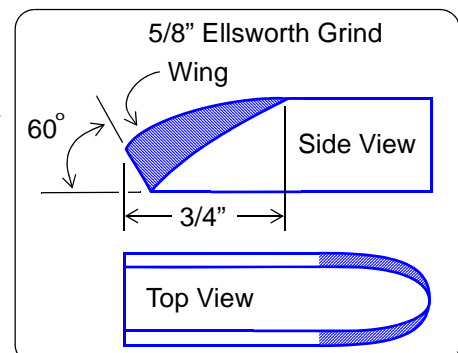
Beware! Get the "Ellsworth Signature Gouge" made by Crown. NOT the one made by Henry Taylor!

I prefer the shape and hardness of a real "Ellsworth Signature Bowl Gouge". This is my go to gouge for green wood. For dry wood I use my Al Stirt style bowl gouge.

A wing sticks up on a properly sharpened Ellsworth gouge. The wing makes the gouge work great in green wood but is too aggressive in dry wood.

Note: "Green" wood is wood that is coming from a fresh cut log. The wood has NOT been kiln dried or air dried and it is NOT the second turning of a "twice turned" bowl.

Purchase the Ellsworth gouge to get the Ellsworth Grind. When you sharpen this gouge follow David Ellsworth's philosophy of going to the grinder to just dress the bevel. Not to GRIND the gouge! Follow David's sharpening directions that come with gouge and/or get his book!



Eraser

Chalk

Trying to save money by going with something other than an Ellsworth gouge does not make sense! An Ellsworth gouge is a "superflute" gouge. These days, when you compare the cost of other superflute (aka masterflute, etc.) gouges to an Ellsworth, the Ellsworth is about the same.

Note: "Side grind, English grind, Irish grind, Ellsworth grind, O'Neill grind, whatever the term, what we're talking about is the deep fluted (bowl) gouge with the sides ground back so the corners are well back of the cutting edge." as per John Jordan, in American Woodturner, March 1994.

• **M2 1/2" Bowl Gouge with AI Stirt Grind (3/8" across flutes)**

M2 3/8" Packard Masterflute "Side Grind" Bowl Gouge, #100181, \$80

Modify the factory grind. Grind to AI Stirt's shape. See drawing on right.

I use this gouge in dry wood and any place I need a gouge with out an aggressive wing that sticks up. Like, when finishing the bottom of a green bowl on a vacuum or jam chuck.

The short, steeper side grind on this gouge is good for getting in close to the tailstock.

Note: This is a "Standard" AI Stirt bowl gouge. Not his "Finishing" bowl gouge advertised in Tool Catalogs.

• **Total \$96 + \$80 = \$176**

Additional Bowl Turning Tools

• **M2 1/2" x 1/4" Left Hand Shear Scrapper with AI Stirt Grind (1/2" wide, 1/4" thick)**

M2 1/2" Packard Square End Scrapper, #100154, \$35

Note: 10% discount if you purchase 2 or more Packard brand tools!

Ground to AI's shape. See drawing on right.

The scrapper cuts due to the burr. Thus this tool **must be M2. NOT** some other "harder" steel. If the steel is too hard you will not be able to create a good burr!

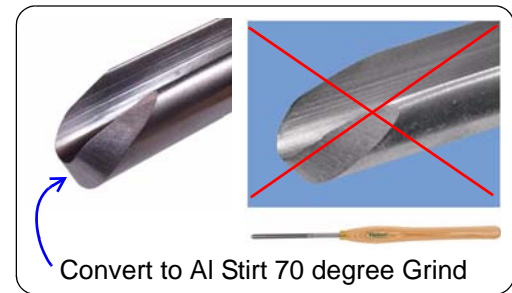
Use a diamond hone to remove any burr created by grinder. Then use a burnishing rod or Veritias "Scrapper Burnisher for Turners" to turn up a burr on end of scrapper.

Use the scrapper tipped up on edge at a 75 degree angle off the tool rest and at a 85 degree angle to the work.

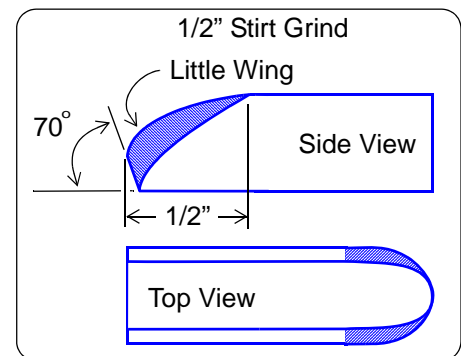
DO NOT use on INSIDE of Bowls. Only on the OUTSIDE. Use a "AI Stirt Finishing Bowl Gouge" on the inside!

I **ONLY** use this scrapper for AI Stirt style **shear scraping!** I DO NOT use old fashioned scrapers flat on the tool rest!

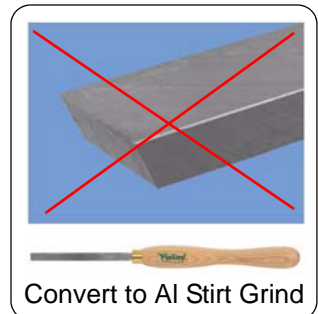
Note: People often use the bottom edge of a bowl gouge to shear scarp. When you do this the upper edge of the bowl gouge obstructs your view. Using this dedicated shear scrapper does not obstruct your view. Thus you can easily adjust the cut to get a baby bottom smooth finish. Using this cheap scrapper, also saves money because you often have to re sharpen the bowl gouge before you can use it to shear scarp.



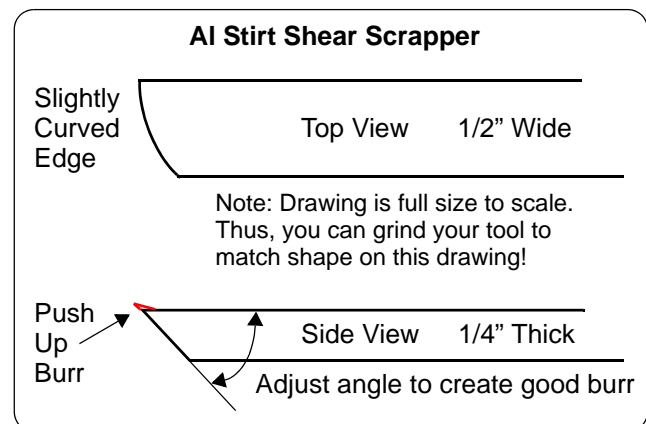
Convert to AI Stirt 70 degree Grind



Veritias Burnisher



Convert to AI Stirt Grind



- **M2 1/2" x 1/4" Right Hand Shear Scraper with AI Stirt Grind** (1/2" wide, 1/4" thick)

M2 1/2" Square End Scraper, #100154, \$35 (Same # as the above. This is not a typo.)

Right handed version of the above. Grind to the same shape shown above. Just flip it over.

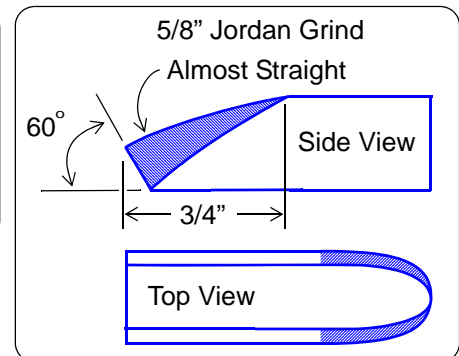
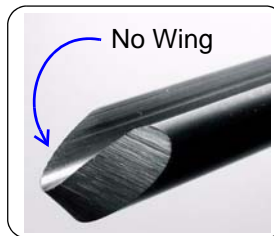
- **M2 5/8" Bowl Gouge with John Jordan Grind** (5/8" diameter, 1/2" across the flutes)

Any old bowl gouge will do. It just needs to be M2 HSS and 5/8" diameter (1/2" across the flutes).

If you purchase, go with 5/8" Bowl Gouge, \$80, directly from <http://www.johnjordan-woodturning.com>

An older, cheaper gouge for rough work. I use this gouge to rough out bowls in green wood. The grind is the one demoed by John Jordan on the AAW Fundamentals of Sharpening video.

John's side grind with no wing is less aggressive than a Ellsworth grind with a wing. A gouge with a wing is too aggressive when roughing a green log to round. It just forces you to slow down and endure the rough ride. A flat flat grind with no wing works better!



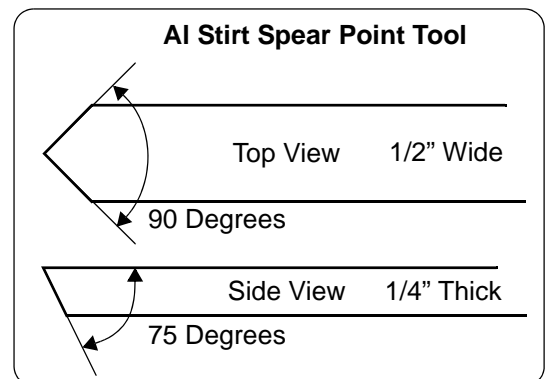
- **M2 90 Degree Spear Point with AI Stirt Grind** (1/2" wide, 1/4" thick)

M2 1/2" Square End Scraper, #100154, \$35 (Same # as the shear scrapers above. This is not a typo.)

Discard the factory grind. Grind to 90 degree spear point. See diagram at right.

Use to cut decorative grooves, small pseudo beads, and rims on bowls and hollow forms.

Like a Richard Raffan Spear Point tool, but the point is less pointed. Only 90 degrees, thus it cuts a wider groove without going to deep.



Hollowing Tools

I believe that people should learn to hollow small vases (6" tall or less) using a set of small Ellsworth style tools. After you have mastered the small tools then switch to a more modern Munro Hollower2. Learn to crawl before you try to run a marathon! You have to learn to feel your way around inside of a hollow form and how to visualize where you are. This is best done on a small scale using Ellsworth style tools.

- **3/8" Straight Hollowing Tool** (3/16" HSS cutter)

3/8" x 12" Jordan Straight Tool, #102718, \$35

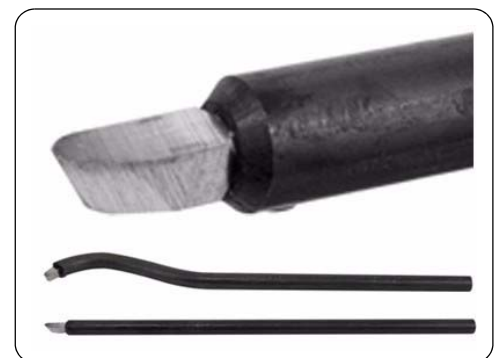
I use this tool to do all of my small hollowing. Vases up to 6" tall. Hollow forms up to 6" in diameter. Christmas ornaments, etc. 6" is really pushing it. Don't go over 4" to 5" when you start out.

I also use this tool for big face plate parting tool jobs. When held in a long handle it is a lot safer than hanging a conventional parting tool a long distance over the tool rest.

I DO NOT recommend the big 5/8" bar Ellsworth/Jordan tools. They will beat your body up and kill you long before you learn to hollow anything.

The small tools put a lot less physical demands on your body. A lot less torque, etc.

Note: I use to recommend the Ellsworth Small Hollowing Tools (3/16" HSS cutter, 3/8" diameter rod, 6" long), #106209, \$50 for a pair. I still, really like those tools. But the 6" long shaft is just to short. The Jordan tools are virtually the same with a 12" shaft.



Chalk

- **3/8" Hook Hollowing Tool** (3/16" HSS cutter)

- **3/8" x 12" Jordan Hook Tool, #102719, \$35**

I recommend that novices design all of these hollow forms so they can be done 100% with the straight tool. But, sooner or later you need a hook tool to get into tight spots.

Note: Jordan sells a hook shape tool that puts less torque stress on the user by keeping the cutting tip in line with the tool shaft. Ellsworth sells a bent tool, that is really not bent. The cutter sticks out at a 45 degree angle. The cutter is not in line with the tool shaft, thus it puts more torque stress on user.

- **Munro Hollower2**

- **5/8" Munro Hollower2, #101210, \$243**

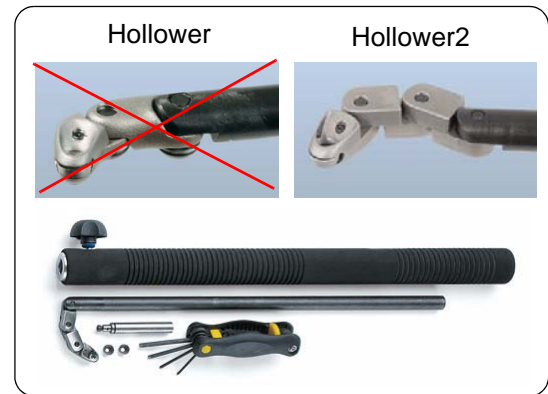
- **or 3/4" Munro Hollower2, #101240, \$306**

Should I recommend the Munro Hollower2 on the 5/8" bar or 3/4" bar? \$306 - \$243 = \$63. Is a lot of cash. If you are interested in big work or you might be interested in mounting the hollower in a 3/4" Trent Bosh Hollowing Tool Stabilizer (that I highly recommend) then get the 3/4" Munro.

Get the "Hollower2"! Rolly Munro had/has a couple of versions of his tools.

I like the Munro "Hollower2". Also known as the "Hollower II". All of the links in the Hollower2 head are straight (rather than curved). This allows you to use the Hollower2 with the lathe in forward or reverse.

The older "Hollower", that is some times now called the "Mini Hollower" had a curve in the cutter link. This made it difficult to use in the bottom of hollow forms and made it completely useless if you wanted to turn with the lathe in reverse.

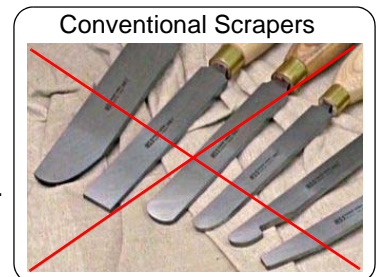


Tools I DO NOT Need!

- **Conventional Scrapers**

I do not use any old fashioned scrapers flat on the tool rest. They leave a poor finish that often requires lots of sanding. I hate to sand!

I only shear scrap with a bowl gouge or my 1/2" shear scraper with Al Stirt grind.



- **Spindle Gouges**

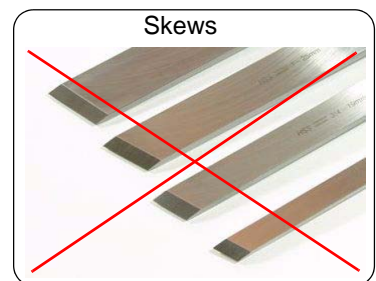
I use my detail gouge. The detail gouge can do it all. Coves, beads, concave, convex, etc.

You just need to spend your time mastering one tool. The detail gouge.

- **Skews**

I have a large Alan Lacer skew that I use for big jobs. I use my detail gouge for everything else.

It often takes years to master the skew. You can NOT use the skew on bowls. Mastering the detail gouge that you can use to finish the bottom of bowls and on spindles is a better investment of time.

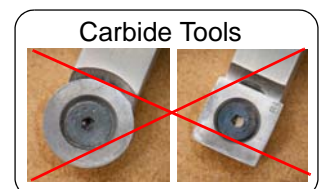


- **Carbide Tools** (flat top carbide tools)

All of the carbide tools other than the Munro and Hunter tools (i.e. Easy Wood Tools) are really just fancy old fashioned scrapers. Like, I said above. "They leave a poor finish that often requires lots of sanding. I hate to sand!" Thus I don't like carbide tools.

If a carbide cutter is flat across the top like the Easy Wood cutters, then it is a scraper.

The Munro and Hunter tools are in a different class because they use a carbide cutter that is recessed in the middle on top and they have a bevel you can ride. They are thus more like a gouge.



I understand that carbide tools appeal to new people because they don't have to sharpen them! The problem is you spend a lot more time sanding. Sooner or latter you going to have to learn to use a gouge to avoid sanding. Why spend \$100's on carbide tools and then \$100's more on real turning tools (gouges, etc.)?

The \$120+ prices on carbide tools is absolutely outrageous! A metal working carbide inserts sell for \$2 to \$5 each. The woodworking ones sell for \$10-\$20. A nice 5/8" x 18" 4140 steel shaft is \$10. A nice 17" ash handle is \$15. \$20 + \$10 + \$15 is \$45 retail! Manufactures buy things at wholesale prices. Typically 1/2 of retail or less. So \$23 plus labor to produce. Lets say \$30 to produce with labor. Retail would be \$60. Plus shipping and overhead for retailers takes us to \$80 tops. Right in line with the price of a nice gouge. But, wait! These carbide tools are scrapers and scrapers are typically \$30 to \$45. So why \$120+ for an Easy Wood Tool?

If you are willing to spend \$120+ for a scrapper masquerading as a carbide tool then I have some really prime swamp land in Florida I want to sell you!

Tool Manufactures / Brands

• **Crown**

Crown is my go to brand. The M2 HSS Crown tools. Good steel and I generally like the handle shape. Crown handles are on the long side and not too small in diameter.

Note: The "Ellsworth Signature Gouge" I recommend in this article is made by Crown or Henry Taylor. Go with Crown!



• **P&N**

When I was young and poor, I went with cheaper P&N tools for spindle tools that were not critical. Rather than more expensive Crown tools.

My P&N tools have served me well. P&N tools are ok, but not great. Some people complain they can't seem to get them sharp. I have not run into this problem. But, I have shied away from recommend their bowl gouges.

I recommend P&N tools in this article because "the price is right" and I like the tool shapes. You can get the same shapes from Thompson Tools if you want better.



• **Thompson**

Thompson Tools are now all the rage. I like them. But, they are not available in any catalog. You have to order directly from Thompson and some times they are out of stock.

I decided to stick with tools available in most catalogs for this article.



• **Packard**

Packard is the Packard Woodworks Inc house brand. I use and like the Packard brand. They are very good tools for the money. I like the quality of their tool steel and I like the ash handles.

I go with Packard, when I can not get a Crown tool or the Crown price is too much.

The Packard catalog clearly states "Packard Tools are made to our specs in Shuffled England by the experienced craftsmen at Hamlet Craft Tools." I agree. Hamlet is an old and well respected company.



• **Hamlet, Henry Taylor, Oneway**

Other good quality brands.

• **Robert Sorby**

I do not like Robert Sorby tools because I don't like the handle shape. The thin (small diameter) handles are hard to hold onto. They are just not comfortable in my hands. Otherwise, Sorby is a good quality brand.



Eraser

• Easy Wood

Carbide tools. They are scrapers. I don't like them. See "Tools I DO NOT Need!" on page 5

• Others

Benjamins Best, PSI, etc. I listed all the good, well known brands above. If not one of the above then probably a low end brand. May be good. May be crap. Made in China?

Beware! Cheaper tools may be carbon steel, rather than more modern M2 HSS (High Speed Steel). Carbon steel tools go dull fast and need more sharpening. Some people feel old carbon steel tools were better because you could get them sharper than HSS tools. But, they are talking about old high quality, made in the USA carbon tools! Modern carbon steel tools made in China probably suck?

Tool Handles

Tool handle "likes" and "dislikes" are a personal thing. I highly recommend that novices purchase tools that come with wooden handles and use the wooden handles while they learn what they like and don't like.

I like wooden handles on my turning tools and my own custom adjustable handles on my hollowing tools.

• Wooden Handles

I prefer the weight and feel of wood handles. I like my handles long. This is a personal thing. Some people prefer short handles, etc.

The 17" long handle that is standard on a "Ellsworth Signature Gouge" is my favorit. The shape fits my hand perfectly. I like the diameter of the handle. I can get a good grip with out requiring a "death grip".



The Woodturners Catalog / Craft Supplies USA sells a 17" Ash Tool handle that is the same shape (www.woodturnerscatalog.com #100-734 \$15). I have converted all of my turning tools to use this handle.

Note: Packard Woodworks does not sell the 17" handle I like. So I had to go with the Packard 14" Beech Handle, #103391 from Packard for the P&N Tools that I recommend in this article. The Packard 14" Beech Handle, looks like the 14" handle that comes on Crown tools. I like the Crown handle. Packard also has a 8-1/2" Beech Handle, #103390 that I like. Because, it is like a Crown handle.



• Custom Adjustable Handles

I make my own Custom Adjustable Handles for my hollowing tools. I make them out of PVC pipe, hard maple and shrink tubing fabric. See my "Custom Handles Article" article in up coming April 2015 issue of AAW American Woodturner Journal.

I don't like the commercially available handles from Oneway, Hosaluk, Jordan, Bosh, McNaughton, Thompson, Sorby, Carter, etc because they are all to expensive, to small in diameter, and often to short for hollowing tools.



• Adjustable Handles

Before I started making my own Custom Adjustable Handles, the **18" Aluminum Hosaluk Handles** were my favorit. They are lighter weight than steel handles and thus don't wear me out.

Beware of using heavy steel handles on turning gouges. Like the handles made by Oneway and McNaughton. It is really hard to properly sharpen tools on the grinder with a heavy steel handle hanging down. Proper sharpening often requires swinging the tool handle a great deal thru a long SMOOTH arc. Swinging a heavy handle is just way to much for most people. Removing the heavy handle each time you go to the grinder to sharpen a tool, gets real old, real fast!



I don't believe in adding weight to my handles to reduce vibration! If you are using a tool properly (riding the bevel, etc) then you should not be getting lots of vibration. If vibration is a problem then you need to improve your technique!

Eraser

Chalk

Sharpening/Grinding Jigs

The "Wolverine Grinding Jig" with a "Vari-Grind" attachment is really the only good choice. Made by Oneway. It has become the defacto standard. It is used by all of the big woodturning schools, in demos, and by most woodturners.

When you ask someone how do you sharpen XYZ? Their answer will be to use the Wolverine, with this and that setting. If you don't have a Wolverine then you will be up a creek with out a paddle.

Get the original "Vari-Grind". **DO NOT** get the "Vari-Grind-2". It does not work! It restricts your movement to much. You can NOT properly sharpen an Ellsworth shape on a Vari-Grind-2.



Grinder

You absolutely must have an 8" grinder!

A 6" grinder DOES NOT work! It is hard to explain, but the geometry just does not come out right on a 6" grinder. If experienced users can not grind a gouge properly on a 6" grinder then what are the chances you will be able to do it?

Everyone uses an 8" grinder. Go with the flow.

I recommend the Dayton Bench Grinder model # 2LKR9. 8" x 1" wheels, 3450 RPM, 3/4 hp, 120 volts, 7 amps, www.zoro.tools, \$227 on 2/4/15.



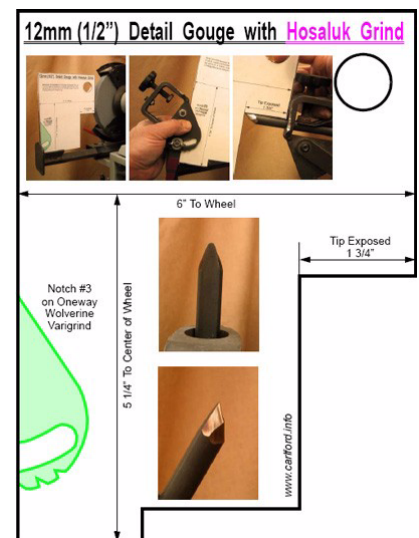
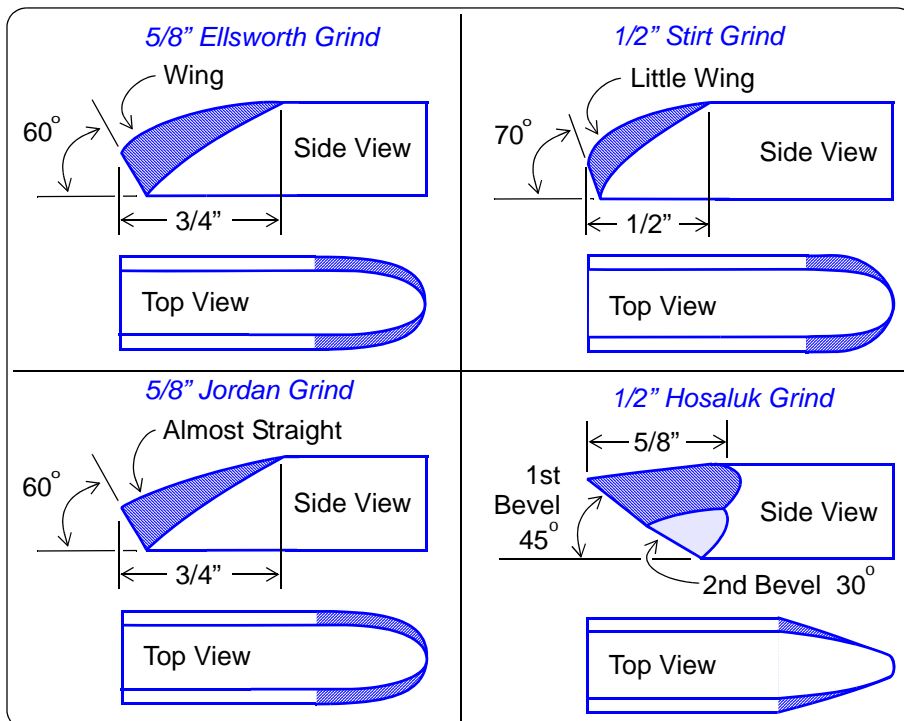
See my "Low Cost Industrial Bench Grinder" blog entry for wheels, bushings and Zoro Tools part numbers. See <http://carlford.info/blog/2013/01/low-cost-industrial-bench-grinder/>

Tool Sharpening Templates

See my "Tool Sharpening Templates" handout for full size templates that allow you to easily set up your grinder to sharpen turning tools.

www.carlford.us -> Jigs & Tools -> Tool Sharpening Template

Or http://www.carlford.info/pages/jigs_tools/Sharpening_Templates/Sharpening_Templates.pdf



Chalk