

The Journey from *Penturning to Penmaking*

by Kurt Hertzog

Common Mistakes and Potential Fixes

On the journey from penturning to penmaking, the expectations of "perfection" continue to rise. Early in the journey, the satisfaction and concept of perfection may be as simple as getting both halves of the kit barrels to still be clad with wood. Later on, the lack of clarity or change of coloration of the over-molding might be a show stopper for you. This issue's column is dedicated to illustrating some of the mistakes that I've seen (and made), and providing some of the potential causes and fixes for these problems. I've included items that represent different skill levels, so that there are potential improvements for everyone.

I think most problems can be lumped into one of three categories; let's use poor fits, poor design, and poor execution as our three categories. In actuality, there probably are really only two categories: the problems associated with "poor fits" really belong in the "poor execution" bucket; however, breaking out things into a "poor fits" category allows me to better illustrate some key things—please, humor me, it is my column! Most of the teaching will be done with photos.

POOR FITS

Offentimes, at one of my woodturning demos or classes, I'll get a penturner who wants to show me his or her pen(s) and ask my opinion. I don't usually look at the pen too closely until I can get it in my hand and feel it. I'll use my thumb and then my thumbnail to feel the fit at the nib. In my opinion, this is one absolutely key fit on any pen and it will be felt by the user every time they use the pen. If there is any step, up or down, eccentricity, or out of squareness there, it will forever put your pen in a newbie class.

If any imperfection can be felt there, I generally assume that the project probably has other issues that need attention as well, and the efforts put into the rest of the pen are probably for naught. More time and energy should have been spent on this fit, and if the maker couldn't make it perfect for whatever reason, the pen should be relegated to the learning pile. If you need one point to work on in your penmaking efforts, work on making this interface perfect. Absolutely perfect! After you have the ability to make this fit perfectly every time, then direct your efforts to the other fits, followed by materials, finishes, blanks made from "unobtainium," or whatever.

POOR DESIGN

The traditional kits do have a nasty habit of constricting

the choice of shape and size, and many makers try to express their creativity by turning all kinds of convoluted shapes or endless beads and coves. Perhaps this is their method of overcoming the erroneous concept that penturners aren't really woodturners, and that by turning these beads and coves, they can show their woodturning prowess. I would suggest showing off your woodturning skills on other styles of woodturning, because pens really don't usually lend themselves to a lot of imaginative turning—precision turning yes; but imaginative turning no. Most often, I've discovered that the bizarre features incorporated into a shape are used to hide the maker's inability to execute a precision fit at the interfaces. They wind up putting these bulbs or "unique" holding grips to make their pen one of a kind (or rather "cover up my poor fit here").

You now can use the mechanics of the 7 mm kit to do your own bidding. Size, shape, length, and special ornamentation are all in your control (refer to the column on "Ditching the Centerband" in *Woodturning Design* #21). Most of the other kit packages really only allow for minor modification; instead, your real freedom comes by manipulating materials and finishes (refer to *Woodturning Design* #23 for an article on casting polyester resin for one alternative to wood blanks). In a future issue, we'll explore many of the options available for material selection.

POOR EXECUTION

This category can cover just about everything that can go wrong in the penmaking process, such as poor alignment, too much material loss at the kerf, inattention to grain direction, poor prep for finishing, etc. I'm throwing in a handful for "thought starters," because this category could go on into infinity.

I would categorize most errors from here forward as "inattention to detail." If you have truly achieved perfection in your fits, particularly where they are felt at the nib, and the design is pleasing regardless of simplicity, now all eyes are on the rest. Did you ensure that the blanks were kept in the original orientation throughout the process? Were the blanks drilled from the interface out and on the same axis? Did you favor the interface ends when gluing in the tubes? Was the pen assembled so the grain will match at full open or full close? Is the transmission pressed to a depth to achieve a pleasing inkfill extension at full open? Did you change out the bargain-basement inkfill for one that is a better writer? Did you work through all the

grits prior to the application of finish, cleaning between grits and sanding axially as well as radially? Was a durable finish applied or was it just a quickie friction finish? Rather than beat a dead horse, I'll stop here, but I think you get the idea. After fit, the rest of the process comes into play and now perfection applies.

A PICTURE'S WORTH A THOUSAND WORDS

So let's look at some examples of the imperfections we've been discussing:



The fit at the nib is the most important fit you can have (see **Fig. 1**). Each and every time the pen is held, this fit will be noticeable. Anything oversized or undersized here is a sign of inattention to detail. Too big is easy to fix; too little is a bit more difficult. If you are only a few thousandths off, you can build it back with some finish, particularly a cyanoacrylate finish. If you are off any farther, give it up and remake the barrel; it will be worth it in the long run. In an upcoming tips-and-tricks column, I'll teach you a trick to making interface fits imperceptible.



If you are still doing centerbands, the same applies (see **Fig. 2**). While this interface isn't felt often and is nowhere near as important as the nib fit, it does, nevertheless, show your skill level by demonstrating attention to detail. And the same applies: too big, turn or sand some more; too little, build it back with finish or start again.



Beads and nib-fit cover-ups won't get it done. Though they do disguise the inability to accomplish a good nib fit to the nonturner, it lights up the "newbie sign" to other penturners. Besides, these grips are most uncomfortable to use (see **Fig. 3**), because the proper grip on a pen requires the user to have his or her control fingers right at the nib interface point.



Though there are many kit changes and adaptations that can be made, this isn't one of them. Here the turner didn't follow the instructions and has a terrible fit at the shoulder interface (see **Fig. 4**). There is no real recovery from this other than scrapping it. If you look closely, you can also see the radial scratches left in the barrels. These are fixable by going back and resanding properly, which includes cleaning between grits, as well as radial and axial sanding.



Though the maker took the time and effort to create a unique blank, not enough attention was paid to the alignments (see **Fig. 5**). The eye will catch the smallest

imperfection in any kind of a pattern, so parallel and perpendicular lines must be parallel and perpendicular. The smallest inaccuracy really lights up. The suggestion here is if you choose geometric patterns, make them perfect or don't make them; after all, why do you think paisley was invented?

Finishing a pen is critical. If you are making a "one-of-a-kind," there can't be flaws that are blatantly obvious. In this example, the maker chose to use a hidden clip, but the design of the curve and the fit of the clip didn't quite get it done (see **Fig. 6**). In addition, when the pen was buffed, the plating was buffed off the side of the clip and this flaw jumps right out to the viewer.



Fig. 6



Fig. 7

Eccentricity is a problem that many woodturners, and in particular, penturners face. There are many causes for this, but the most common one is a bent (or flexing) mandrel, which is usually caused by too much tail center pressure. With an eccentric fit, there will be portions of the interface that are properly aligned and other parts of the rotation where it doesn't match (see **Fig. 7**). Chances are if there is a good fit in some areas and a poor fit in other areas of an interface, bet on the wood being out-of-round and not the brass.

Here is a different look at the hidden clip fastening that was just a bit off. The clip cut was just a bit off and the clip registration shows it (see **Fig. 8**). As the level of pen moves up the scale, the expectations of perfection move as well.



Fig. 8



Fig. 9

Screw threads have multiple start points, and if you are making a kit or pen that uses screw threads, make sure it is assembled so that everything aligns when the threads are closed. This requires aligning the different components before you commit to pressing them. Press in one side, thread the mate up to close, rotate the other piece to the proper alignment, and then finish the other press with that alignment. Remember, geometric patterns are very unforgiving, so "close" doesn't count (see **Fig. 9**).



Fig. 10

As mentioned before, as you move up the scale, expectations move much higher. The maker went to great extremes creating a one-of-a-kind pen blank, but didn't quite get the alignment and corner fits perfect (see **Fig. 10**). When you get to this level, perfection is expected. Line widths, parallelism, corner fits, coloration, and veneer thickness uniformity all come into play.



Fig. 11

Let's look at the same pen blank, but focus on drilling the blank. Both ends were drilled, but are slightly off axis to each other. With the lines on the upper and lower barrel lines tilting away rather than being in a straight line, this high-end pen shows that minor inattention (see **Fig. 11**). Proper top and bottom alignment is key when there are grain matches or pattern alignments that will be apparent to the end user. Though you might think this is a minor

point, it is the sign of a maker who is aware of and cares about the details.

Fig. 12



Finishing is just as important as any other facet of the penmaking process. This blank shows two different levels of finish (see **Fig. 12**). The left side was carefully sanded through 2000-grit abrasive paper; but the right side, on the other hand, was carefully sanded through 400-grit abrasive paper and then through different grits of *Micro-Mesh* (through 12,000—different scales). The difference is obvious, I'm sure. While many makers brag about how high they sanded, it is much more important to use the abrasive properly by cleaning between grits and using proper techniques. Just because you sanded to 12,000 *Micro-Mesh* doesn't mean that you achieved that level of finish.

FINAL THOUGHTS

I hope I've given you some information you can use to make continuing improvements on your journey. As in past columns, there may be things covered here that you won't be able to use right at the moment, but I think they will be of value to you later on, so please tuck that information away for future reference. When I'm asked what turners can do to make their work more desirable, my response is to be able to achieve perfection consistently, and then think about the more bizarre materials. Use this column as a guide to the things you'll want to be paying attention to as you progress down the penmaking path.



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Reader's Gallery

Embellished Segmented Platter



The photo shows an "embellished" platter by **Arthur Duell**. He notes that it is 8" in diameter. The center of the platter is approximately 7/8" thick and narrows to 1/4" at the rim. But what is truly amazing is the work that went into the "field" of the platter! Arthur relates the following information regarding the particulars of the field design:

- White *Corian* center with a red dot.
- Sycamore wedge segments.
- Circle of 58 rings: hard maple inside aluminum rings.
- Circle of 18 rings: maple inside brass rings.
- Circle of 18 large rings: maple inside copper rings.
- Circle of 18 "flowers" with red center: milk glass.
- The outer ring is composed of four sections: two sections consist of rectangles of laminated mahogany with poplar and two sections consist of wood from an unknown shrub.
- All the parts are embedded in *EnviroTex* colored with red dye.
- Substrate consists of laminated pine/fir.