

# Beginner's Corner

## Some Light Along the Path!

by Robert Gulley

## Lathe Basics and Purchasing Considerations

In the last issue, we discussed the different parts of the lathe and how each part works in conjunction with the whole. In this issue, we will discuss some of the various types of lathes and offer some ideas and considerations when purchasing a lathe.

### WHAT LATHES DO REALLY WELL

The most notable differences between lathes are variations in size, weight, power, and convenience features. Virtually all lathes do one thing really well—they spin chunks of wood at varying speeds with great consistency. Everything else about a lathe is designed (or marketed as such!) to make your turning experience a more pleasant and productive one.

I mention this because prices for lathes vary greatly among manufacturers, and it is easy to get caught up in the advertising hype concerning their particular product. Some features are more useful than others, so if a lathe has features you are not likely to use, you are probably paying for more lathe than you need.

I should also mention that there is no one lathe that can do everything equally well. Manufacturers have goals in mind when they design a particular lathe, and so there are varying designs for lathes even among the same company. If this is your first lathe purchase, don't worry about making a mistake—almost every lathe on the market can easily do all the projects you are likely to attempt as a beginner. Many people find their first lathe is the only lathe they will ever need, but don't be surprised if, down the road, you decide you want a bigger, more powerful lathe, or a lathe geared more to your specific turning needs. I am on my third lathe (having traded in the first two), and I bought a mini-lathe to use as a traveling lathe. (Okay, I'm a bit of a turning fanatic, I know!)

### SO MANY LATHES, SO LITTLE TIME

Lathes come in three main sizes, with subgroups in each category. For my purposes here, I will stick to the main divisions of mini- (or midi-) lathe, mid-sized lathes, and large lathes.

Mini-lathes are usually tabletop lathes; meaning they need to be supported by either a table or a special stand (see Fig. 1). These lathes are lighter in weight than the other two types, and they are more easily moved around the shop or taken on vacation ("Yes, honey, I'm bringing

the lathe—no, it won't take up that much room..."). A mini/midi-lathe can usually turn up to a 10" to 12" diameter bowl or a spindle 12" in length or longer, if a bed extension is attached. These lathes are generally powered by a 1/2 hp motor, and they do a surprisingly good job at many tasks. Don't underestimate their usefulness just because they are called mini; there's nothing little about the caliber of work they can produce!

Many people use mini-lathes for penturning, spindle work (chair legs, candlesticks, goblets, etc.), and smaller (10" or less) bowls. If you think about it, a 10" bowl is not exactly small! With the extension attached, you can even turn a baseball bat, walking stick, or a set of bedposts. With the extension attached, you can end up with the same length capacity as many of the larger lathes, but you pay a lot less. Sometimes less really is more!

I often encourage newcomers to start at this level, because I don't believe you can go wrong. Even if you do eventually decide you want a larger lathe, a mini-lathe will always be useful. Though I can turn pens on my large, 600+ lb. lathe, it really is easier to turn them on my mini-lathe.

### MID-SIZED LATHES

Mid-sized lathes (see Fig. 2) are larger—as you might have guessed—with more power, bed length, and sometimes



Fig. 1

Mini-lathes are good first-time lathes for size, price, and convenience.





Fig. 2

**A mid-sized lathe may be preferred over a larger lathe at not much additional cost. (Photo by Bill Blasic)**

more spindle capacity. Spindle capacity is usually measured in terms of the maximum diameter of a turning allowed by the design of the lathe (sometimes referred to as the swing or throw). It can also refer to the size of the spindle itself.

The larger size of these lathes also adds greatly to their weight, and this is a good thing in woodturning. One of the main drawbacks of the mini-lathe is its light weight. Vibrations are more pronounced, and it often has to be weighted down to keep it from moving around. A mini-lathe usually weighs about 75 lb., whereas a mid-sized lathe can weigh anywhere from 150 lb. to 350 lb. or more. Although this makes the mid-sized lathe less portable, it more than makes up for this shortcoming in stability and greater horsepower. Mid-sized lathes often come with either a 3/4 hp motor or larger, and the added power not only allows for heavier pieces to be turned, but torque is increased for smaller pieces, adding to the quality of the cuts.

## LARGE LATHES

Large lathes (see Fig. 3) often weigh in at 600 lb. or more, have a much greater spindle capacity, plus features that aren't available on smaller lathes. All this weight comes at a price, of course, but the capabilities of the larger lathe often more than justify the initial cost. Large lathes are rock solid and rarely need to be weighted down, they can handle pieces of wood that would literally break a smaller lathe, and they usually offer a range of power that allows for the greatest amount of torque at relatively slow speeds. Most large lathes also come with electronic speed controls that greatly enhance the range of cutting speeds you may use, and add-ons, such as coring attachments and hollowing tools, allow for a greater range of turning.

## WHAT TO BUY, WHAT TO BUY?

Budget constraints will probably be the biggest determining factor in your lathe purchase. The larger the lathe, the more it will cost—especially considering the price of steel these days! You need to decide what your budget will allow in terms of size, and then determine the features you want. For many people, a mini-lathe is all they will ever need, and because the cost of these lathes is relatively low, they can spend more on tools and accessories for their shop. Keep in mind that the cost of the lathe is probably the cheapest part of woodturning. Over the years, you will spend much more on tools and accessories than you will have spent on the lathe!

If you know from the start that you want to turn larger, heavier pieces of wood, then a mid-size or larger lathe is probably appropriate. You can always do smaller work on a large lathe, but not vice versa. Unlike the smaller lathes, there is a wide range of feature differences between the mid-size and larger lathes. Some of these features include variable-speed capability (both manual and electronic) (see Fig. 4); sliding/rotating headstocks designed to make bowl turning and hollowing easier; angle-iron vs. cast-iron legs; additional weight within each class of lathe; a number of belt/pulley combinations, thus affecting speed ranges; accessories that can be added to the lathe, and other useful features depending on the manufacturer.

To give you an idea of current prices for lathes, a mini-lathe will run you anywhere from \$250 to \$350 for the basic unit, more if you add a bed extension. A mid-sized lathe will cost anywhere from \$600 to \$2500 depending on features, and a large lathe can top out at \$6000 or more!



Fig. 3

**This large lathe weighs in at a hefty 850 lbs! All that weight means turning is rock steady, and the 3 hp motor will indeed turn very large chunks of wood! In addition to the 24" throw and the 26" length bed, an extension can be added to the lathe to turn it into a short-bed bowl lathe. The 17" extension accepts the tool rest/banjo from the lathe and other accessories—a really nice addition.**





Fig. 4  
Here is a close-up of the headstock and lathe controls. Note how the headstock is able to be moved along the bed of the lathe. By positioning it along the bed as needed, you can make a short-bed lathe, spindle lathe, and anything in between!

### TURNING ON A BUDGET

Now, before you put your head in your hands and go running for the hills, you can turn wood on a budget, and can do so quite nicely. Lathes can be purchased used through numerous outlets, including yard sales, estate sales, and auction services. Try to have someone who is knowledgeable about lathes give you a hand, because you don't want to end up with someone else's trash. Good deals are out there if you know what to look for, so if money is tight, try this route first.

Another advantage of buying a used machine is that the less you spend on the lathe, the more money you will have available for tools and various cool accessories! Additionally, when buying used, you can often get more lathe for less money than you could have buying new. Just remember, *caveat emptor* (let the buyer beware)! This also holds true for all your turning needs. You can turn on a budget and not only be productive, but also have a really good time. Take advantage of those opportunities when someone decides to get out of a hobby or scale down their shop.

### WHERE TO BUY LATHES

Whenever possible, I try to encourage people to see vari-

ous lathes in person to get a feel for how they work. There are numerous woodworking stores where lathes are on display, and you may be lucky enough to find a store that holds turning classes where you can get some hands-on experience on the particular brand of lathe you are considering.

There are also many online stores that sell lathes if there is not a woodworking store in your area. Just keep in mind, shipping costs can add significantly to the final price! If you are buying a mid-sized or larger lathe, you may have to choose between a limited number of delivery options—for example, some carriers will only deliver to the curb, and then it is up to you to get the lathe unloaded and into your shop.

Don't become overwhelmed by all the choices available. You can't really go too far wrong regardless of the lathe you purchase. If in doubt, start small—a mini-lathe can always be sold to another beginner, or better yet, you can keep it and add more lathes to your shop as your interests grow!

### Robert Gulley



Robert Gulley is a minister and adjunct college professor, writer, and woodturning enthusiast. He lives just outside Cincinnati, Ohio, and teaches woodturning classes at the local Woodcraft store.

Robert started turning back in 2001, and while he is interested in other

types of woodworking (box making and carving), woodturning is his passion. Robert notes that his wife loves his interest in woodturning, not only for the bowls and boxes she gets out of it but also for the mental health it brings her husband! Why, she even forced Robert to buy a new Oneway 1640 lathe—what a woman!

Robert says that little else fascinates him as much as taking a chunk of wood, turning it down, and discovering the beauty hidden below the surface. "Each cut reveals a part of the mystery awaiting you as the wood spins and the shavings fly—what a life! And I cannot think of a better way to spend an afternoon!"

Robert welcomes your questions and comments and can be reached by e-mail at [rgulley@wood-elegance.com](mailto:rgulley@wood-elegance.com). To see more of his designs, visit his website at [www.wood-elegance.com](http://www.wood-elegance.com).

### Editor's Notes on WOODTURNING SAFETY

There are as many different ways to turn as there are turners. Techniques presented by individual authors represent those methods that work best for them. *Woodturning Design* magazine does not certify any particular method as the "best and only way" to complete any specific turning task and will strive to offer different alternatives. You should always choose the method that you feel comfortable with, the one that works for you, and the one that is safe.

Woodturning can be a dangerous activity. Always wear the proper eye and ear protection, and take the necessary precautions to eliminate nuisance dust. Read and understand the manuals that come with your tools, and never use a tool in a way that endangers you or anyone around you. If you are not comfortable performing any operation or technique presented in *Woodturning Design*, **DON'T!**