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Chapter **1**

Discovering the Basics of Woodworking

If you're like me (and all the other woodworkers I know), you became interested in woodworking because you wanted to use your hands to build something of lasting value. Maybe your motivation was partly economic — why pay a fortune for poorly made, ugly furniture, right? — and partly a need to create something of your own.

Regardless of why you got interested in woodworking, you want to know how this whole craft works. Well, this chapter leads you through the basics of the woodworking process and shows you where to go in this book for answers to your questions.

Getting the Lowdown on Wood

One of the most important aspects of woodworking is understanding the properties of wood. I know this seems obvious, but you'd be surprised at the number of woodworkers I talk to who don't know why wood acts the way it does. Wood changes with the weather and the pressure placed on it (such as when it's stacked in a pile under a bunch of other wood). It expands and contracts and can twist, warp, or cup depending on the stresses existing within it (from the direction of

the board's grain). Looking at a board and determining where those stresses are and how they may impact the board as it experiences changes in humidity requires some basic understanding of wood and how it's made.

Many species of wood fall into two general categories: hardwoods and softwoods. Knowing which type of wood is which and being able to choose the right wood for your goals can help reduce the negative impact of the inherent instability of solid wood. As you discover the variability of wood, you'll undoubtedly come to appreciate that some wood products allow you the same level of beauty without having to worry about the wood changing shape on you. These include veneers and manufactured wood products such as plywood and medium-density fiberboard (MDF). The particulars of wood are covered in more detail in Chapter 2.

Setting Up Shop

You need tools to work with wood. And most woodworkers think tools are great. I know I love buying and using tools. Heck, I'm the first to admit I have a problem. (Does anyone know of a 12-step program for tool addicts?) I buy tools like candy (actually, more than I buy candy). I have special tools for almost every imaginable task, and I can't ever seem to get enough. Such is the life of a woodworker.

You don't need to get addicted to buying tools, but you will become dependent on using them. That's okay because by knowing how to use your tools, you can build just about anything you can imagine.

Tooling up

I dedicate several chapters in this book to exploring the exciting world of tools. From age-old hand tools to the most modern machine for milling wood, Chapters 5, 6, and 7 cover them all (well, not *all* of them — that would be insane, not to mention take up the entire book). Not only do you get a look at what tools are what, but you also get a glimpse into how to use each of them safely and effectively.

Working safely



REMEMBER

Speaking of safety, woodworking is one of the most dangerous hobbies you can get into. Wood is harder than skin and bone, and the tools you use to cut and shape wood can do real damage really fast if you happen to slip or make a mistake. Not to worry, though. Chapter 3 gives you the heads-up on creating a safe shop in

which to work and staying safe while you're working. As a bonus, Chapter 20 offers ten habits to get into that can make your woodworking time accident-free.

Getting organized

With all this tool talk, you'll probably be tempted to buy every tool I describe in this book. To keep you from going broke, I offer some advice on which tools to buy and when so you can slowly and sanely build your workshop as you improve your woodworking skills. See Chapter 4 for more on this topic. Chapter 8 helps you set up your shop so you can get to all your tools without a hassle. You can also explore shop essentials, such as lighting and electrical requirements, to ensure that you can see what you're doing and run all the tools you want to use.

Working with Wood

Woodworking isn't just about tools and wood. Okay, it largely is (especially if you're a gear junkie like me). But even more important are the skills required to use the tools to craft the wood into the projects you want to create.

Putting the wood together

The first step in developing woodworking skills is to discern the best glues, *joints* (ways of connecting two pieces of wood), and fasteners to use. Whether you need a dovetail joint for a drawer front or a mortise-and-tenon joint for a table leg, Chapters 10 and 11 introduce you to the wonderful world of wood joints. With an understanding of the joints in Chapters 10 and 11, you can build any furniture project and make it strong and durable.

Of course, wood joints would be almost useless without some sort of adhesive to go with them. Chapter 9 walks you through the most common types of adhesives available for woodworkers and explains the best one for each job. In Chapter 12, I go over the ins and outs of screws and nails and show you when and where to use them to improve the strength of your joints.

Following plans

The key to making furniture is having a plan. (Or is that the key to life? I always forget.) The good news for beginning woodworkers is you don't need to develop a plan; you just need to follow it. Project plans are abundant and easily found. After you get familiar with how plans are written, you can build just about anything (depending on your skills, of course).

Once you review your chosen plans, you can pick out the wood and other materials and get to work. (Check out the Cheat Sheet and Chapter 2 for information on buying wood.)



REMEMBER

But before you start cutting, spend some time figuring out which board to cut the part from. For example, tabletops look best if you choose boards with similar grain patterns and overall color. Likewise, drawers and doors look great if you can use one board for pieces next to each other. Chapter 13 helps you figure all this out.

Building projects (and skills)

As far as I'm concerned, you can never have too many project plans to choose from. For example, I may like a Craftsman-style table, but you may think that style is too clunky looking and prefer the elegant lines of a Shaker design. With this in mind, I include three chapters of project plans, each with several variations on basic projects that give you some great furniture and help you progressively build your woodworking skills.

Chapter 14 details how to make bookcases — the basic part of a carcass. Chapter 15 digs into tables and gives you a chance to practice your edge-to-edge joints for building tabletops and use the most common and durable joint that exists: the mortise and tenon. Chapter 16 goes a little further by providing plans to make a dresser and an armoire. By the time you finish these chapters, you'll be well on your way to feeling comfortable making furniture and ready to tackle more ambitious projects.

Finishing up

When the project is together, you're only halfway done. The next step involves getting a smooth, blemish-free surface and preparing the wood for a stain or topcoat. Chapter 17 guides you through the varied world of sandpapers and wood fillers.

After you've smoothed the wood, you can decide whether to add any color and, if so, what type. You can choose from stain or paint as well as water-based, oil-based, or lacquer-based products. Because you have so many options, I'm sure you can find one that works for you. Chapter 18 helps you make sense of all the choices and shows you how to apply these products.

The final step in any woodworking project is protecting the wood from moisture and damage. Chapter 19 includes lots of information about the most common types of topcoats. Because they don't all provide the same degree of beauty and protection, you get a chance to compare the pros and cons of each topcoat so you can choose the best option for you and your project.