

Tools for Woodwork

What hand and power tools does the serious beginner need? Here's our best list.

When setting up shop, probably the last place you should search for the tools you need is in a tool catalog. The catalogs and supply stores are clogged with an array of tools, jigs and other equipment that all look absolutely essential.

Truth is, most of those tools are essential, but just not for every shop and every woodworker. The core list of tools you need to build furniture is actually pretty small.

We set out to develop our own list of "must-have" tools for a shop that blends hand and power tools, but we quickly discovered that someone had already done the job for us – and done it well.

The late Charles H. Hayward was a 20th-century woodworking writer who had been traditionally trained in professional English shops when both hand and power tools were common. Hayward wrote many classics, including "Woodwork Joints," "Cabinetmaking for Beginners" and "English Period Furniture." He also was the editor of England's *Woodworker Magazine*.

All of his books are out of print, though they are easy to find used on the Internet.

One of Hayward's best books, "Tools for Woodwork," explains how to use most basic hand tools and hand-held power tools. At the back of



What's inside your tool cabinet? And what should be? Here's our list of what belongs in a beginning woodworker's tool kit.

that book is a "suggested kit for the man taking up woodwork seriously." We've decided to print his basic list and illustration (at right) with our commentary following each entry. Plus, we've included a list of what we consider to be the essential and recommended power tools.

The Preliminary Tool Kit

These are the hand tools Hayward says you should purchase before you cut your first stick of wood. The numbers before each entry correspond with the numbers in the illustration.

1. Crosscut handsaw, 22": This is technically a panel saw. It is useful for breaking down large planks you before flatten them.
2. Backsaw, 10": Presumably a carcass saw and filed crosscut, this tool will make your finishing cuts and is typically used with the bench hook.
3. Dovetail saw, 8": We prefer a 15-point saw that is filed for ripping cuts.
7. Jack plane: Hayward seems to prefer this plane for processing rough lumber. A 14"-long plane is typical.
8. Fore plane: Hayward seems to prefer this size plane (about 18") for shooting the edges of boards instead of a jointer plane.
9. Smoothing plane: The smoothing plane is

the last plane to touch the work before scrapers or sandpaper. A 10"-long plane is a typical size.

15. Firmer chisels, 1/4" and 3/4": These were once common tools without the beveled edges that are common in catalogs today.

18. Warrington hammer: These small hammers have a cross-pane on one end for starting brad nails. Very handy and still available.

21. Mallet, 5" head. For driving chisels. Beech is the preferred wood.

20. Nail punch, fine: A small tool for setting nail heads below the wood's surface with a few short blows.

22. Pincers: A handy tool for pulling errant nails.

23. and 24. Screwdrivers, 8" and 3": Traditionally, these would be straight drivers. You'll also need Phillips, square-drive and others.

25. Cutting gauge: A marking tool with a knife for making its mark (instead of a pin).

28. Ratcheting brace, 8": Still useful, even in a power-tool shop.

29. Auger bit, 3/8".

30. Twist or brad-point bit, 3/16".

31. Countersink bit.

32. Center bit, 3/4": A bit for making flat-bottomed holes. Now Forstners are the standard.

33. Bradawl: Designed to start holes for nails and small screws.

34. Try square, 6".

41. Card scraper: This tool cleans up tear-out left by the smoothing plane.

42. Oilstone: Buy one with coarse and fine grits. Waterstones are now common.

43. Folding rule: Or a tape measure.

Useful Additional Tools

The following tools should be added to your kit as you encounter a need for them when building individual projects.

4. Bow saw, 12": This saw is useful for deep and curved cuts.

53. Keyhole saw: Used for fine work, particularly keyholes. These days one with a Japanese tooth pattern are more common and useful.

The Necessary Power Equipment

In addition to that list of hand tools, we think the well-equipped shop should start with these pieces of power equipment.

- 10" table saw
- 8" jointer
- 12" benchtop planer
- 1/2" drill
- Random-orbit sander
- Drill press or hollow-chisel mortiser
- Jigsaw or band saw
- Two-base router kit (2hp)
- 10" miter saw

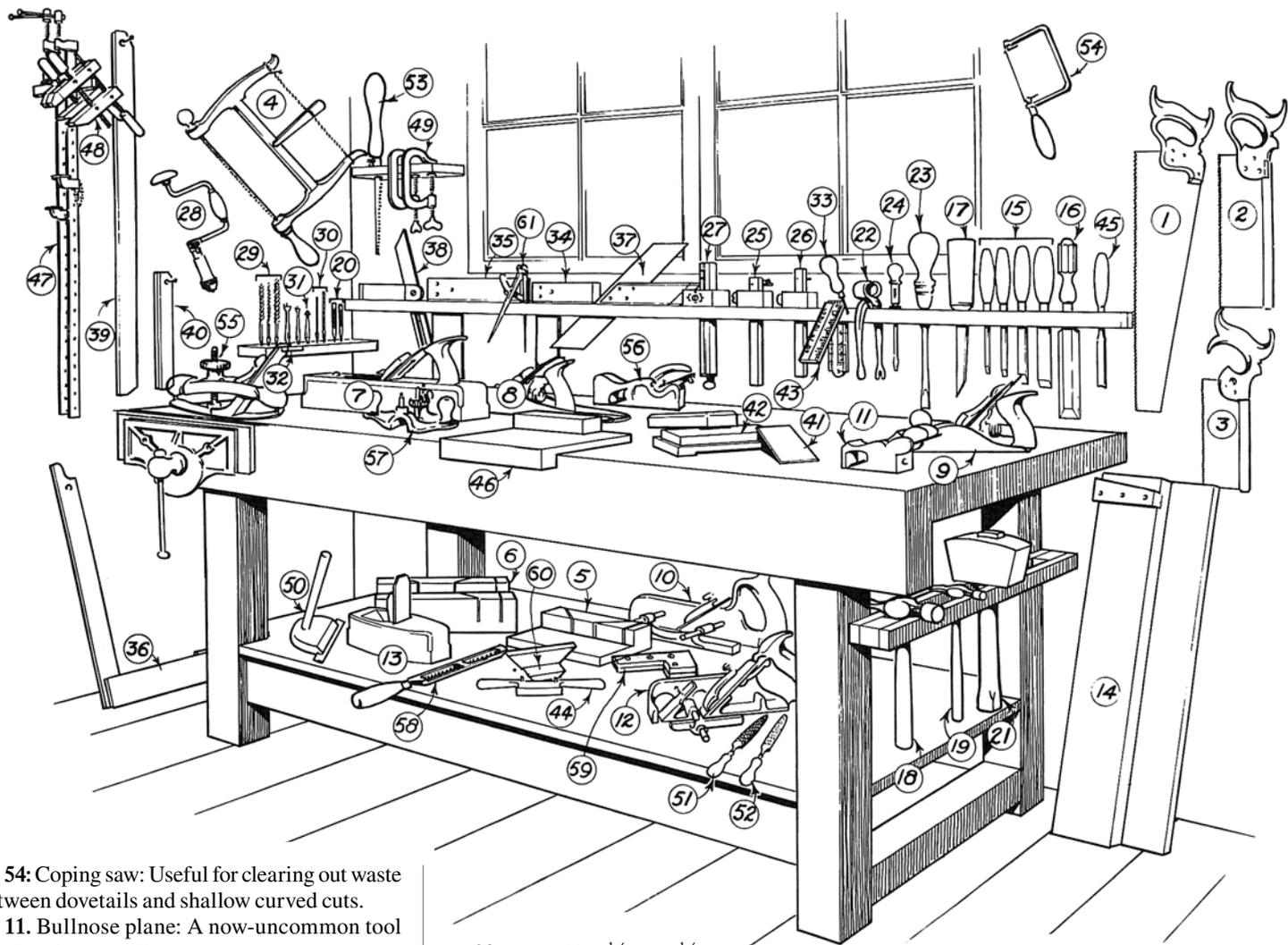


ILLUSTRATION FROM "TOOLS FOR WOODWORK" BY CHARLES H. HAYWARD

54. Coping saw: Useful for clearing out waste between dovetails and shallow curved cuts.

11. Bullnose plane: A now-uncommon tool for cleaning up rabbets.

56. Shoulder plane: A useful tool for trimming the cheeks and shoulders of tenons.

55. Compass plane: If you do circular work, this plane is helpful. Others never need it.

12. Rabbet plane: For the woodworker who prefers to cut rabbets by hand.

13. Tooothing plane: A useful plane for roughing up surfaces prior to veneering.

10. Plow plane: A useful hand tool for making grooves and small rabbets. Not found in a typical power-tool shop.

15. Firmer chisels, $\frac{1}{8}$ " and $\frac{1}{2}$ ".

16. Paring chisel, $1\frac{1}{2}$ " : Useful for a wide variety of fine cuts. Beveled edges are typical.

17. Mortise chisels, $\frac{5}{16}$ " : If you work with machine-processed stock, you'll probably want a $\frac{1}{4}$ " tool instead.

19. Patternmaker's hammer: Like the Warrington next to it, but smaller.

26. Marking gauge: A gauge with a pin used for marking across and with the grain.

27. Mortise gauge: A marking gauge with two cutters to mark the two walls of a mortise simultaneously.

44. Spokeshave, wood body: Useful for curved shapes in easy-to-cut woods.

29. Auger bits, $\frac{1}{4}$ " and $\frac{1}{2}$ ".

32. Center bits, 1" or as required: Again, substitute Forstners. Buy them as you need them.

47. Sash clamps, 36" : Begin with one pair and purchase as needed.

49. C-clamps: A modern equivalent would also be F-style clamps.

48. Handscrews: Useful for all sorts of tapered and odd workholding needs.

35. Try square or combination square, 12" .

37. Miter square: Useful for laying out and checking mitered work.

38. Sliding bevel, 8" : For marking and measuring angles other than 90° .

45. Gouge: A large tool for removing large amounts of wood quickly – not a carving tool.

58. Surform tool: It looks like a cheese grater and is used for shaping curved and compound work, such as cabriole legs.

57. Router plane: Used to trim tenon cheeks, deepen grooves and to cut hinge mortises.

61. Dividers: Basic tools that step off dovetails or other joinery.

Homemade Tools and Jigs

Hayward also showed several homemade devices that make your hand tools work more accurately.

He called them "appliances"; we call them "very useful."

5. Miter block: A sawing device used to help cut small miters.

6. Miter box: A more complex and accurate device for cutting miters in mouldings.

14. Shooting board, 36" long: An appliance used to plane the long edges of boards true.

39. Straightedge: Make as many as you need; they're wood.

36. Square, 24" : Useful for laying out joinery full-scale on cabinet sides.

40. Winding sticks: Two identically sized, straight sticks used to check boards for twisting and cupping.

42. Oilstone case.

50. Veneering hammer: This tool presses veneer against its substrate.

46. Bench hook: An essential appliance for accurate crosscuts with a handsaw.

59. Scratch stock: A small tool with homemade cutters filed to cut small shapes, such as beads.

60. Miter template: An appliance clamped to your work that allows you to chisel accurate miters. **W**

— Christopher Schwarz