

Tip #11 Everything You Ever Wanted To Know About Clamping

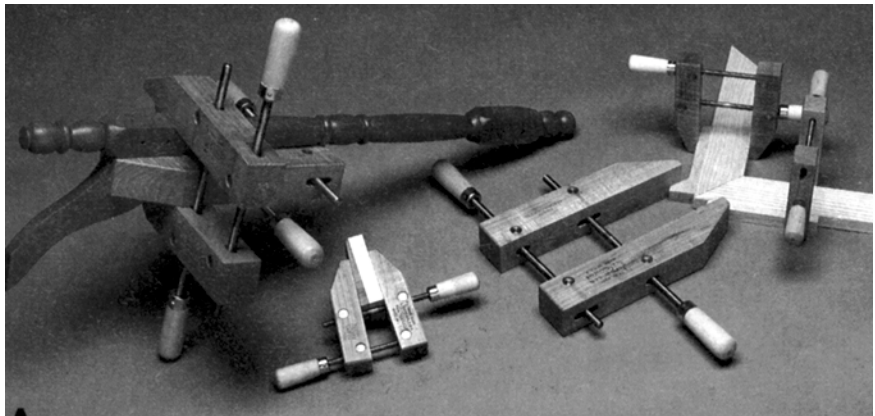
There is an unwritten woodworking law that says, “You never have enough clamps.” Just when you think you have all the clamps you could possibly need to tackle any project, along comes one requiring just two or three more than you have on hand. And when is this most likely to happen? More often than not, AFTER you’ve slathered glue all over your mating project components and have started to put everything together. PANIC TIME!

Experienced woodworkers know all about this. In fact, it’s one of the first lessons we learn as we move into more complex projects. That’s why clamping tools are one area of the shop where any investment you make is sure to be worth its weight in gold. No, you won’t have to buy thousands of dollars worth of specialized clamps to be sure you’ll have what you need...when you need it. But you should equip your shop with a good selection of multi-purpose clamps that can be used in different ways. If you choose your clamping tools carefully, you can get a lot of versatility out of relatively few clamps...and, since they have no motors and few moving parts, if you take care of them, they’ll never wear out. Let’s take a look at some of the most common types of clamps:



By far, the most useful clamps for today’s woodworker are **Hand Screws**.

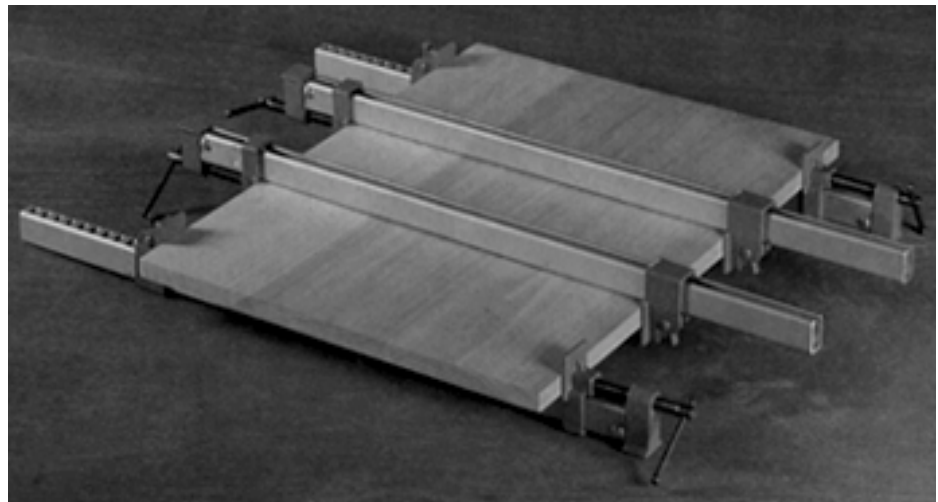
Their wooden jaws won’t mar workpiece surfaces and can be moved in either a parallel or non-parallel action by tightening both screws in unison or one screw more than the other. Offering double screws and deep throats, they give you the ability to grasp a variety of odd shapes and apply either a broad area of evenly distributed pressure or a high concentration of pressure at a single point.



To use a Hand Screw properly, grasp the handle on the center spindle with one hand and the outer handle with the other. Open or close the jaws by rotating your hands in a clockwise or counter-clockwise motion while you hold onto the handles. Apply the appropriate amount of pressure by turning the outer handle, using the center spindle as a fulcrum point.

For gluing-up large projects, we recommend lightweight **Aluminum Bar Clamps**. They provide superior strength, but without the drawbacks heavy, cumbersome, iron pipe clamps. Plus, unlike iron, aluminum won’t react with certain glues, which can leave unsightly stains on your workpieces.

Most models feature quick-release mechanisms to speed-up the adjustment process. They're great for gluing-up panels, large cabinet carcasses and other types of project components where a longer reach is required. Place one diagonally from corner-to-corner on cabinet glue-ups to "rack" your carcase into square.



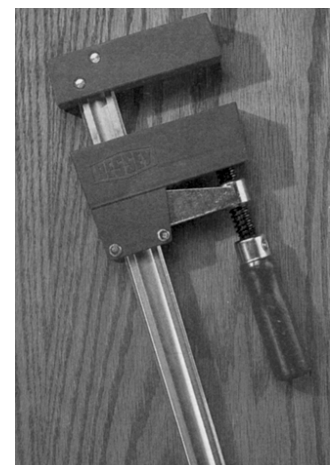
Here are some other tools that fall into this category of "bar-type" clamps. They typically offer smaller capacities than the aluminum models described above, but still feature quick-release mechanisms for rapid adjustments. Among these are the following:

- The classic pipe-type clamp fixtures that are readily available at most home centers and hardware stores. These are made to fit onto lengths of 1/2" or 3/4" diameter galvanized or steel pipe. They're inexpensive, plus give you the ability to have a number of different lengths of pipe available for a variety of different sized projects. However, they can be heavy and cumbersome to work with – plus – as mentioned above, iron pipe will react with certain glues, creating unsightly stains.

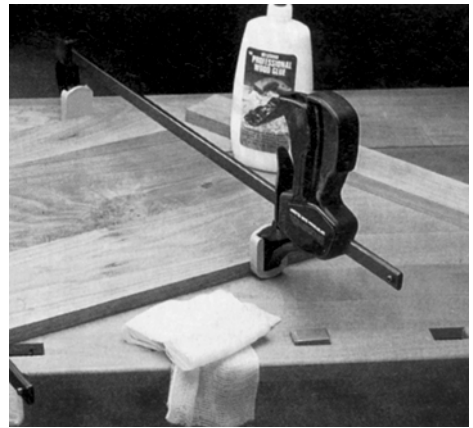
- Small, steel bar clamps are also readily available in lengths from 12" up to 36" or even 48". They usually slide on small, rectangular bars and offer twist-type wooden or plastic handles for tightening.



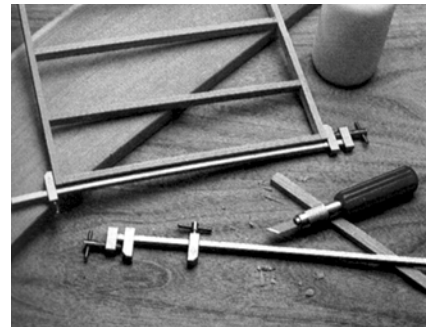
- K-Body-type bar clamps are similar in design to the small steel versions mentioned above. They, too slide on rectangular steel bars and tighten with a twist-type handle. However, they offer wider, square jaws to distribute pressure more evenly and are designed to open and close parallel to one another. They're available in larger sizes and can be quite costly.



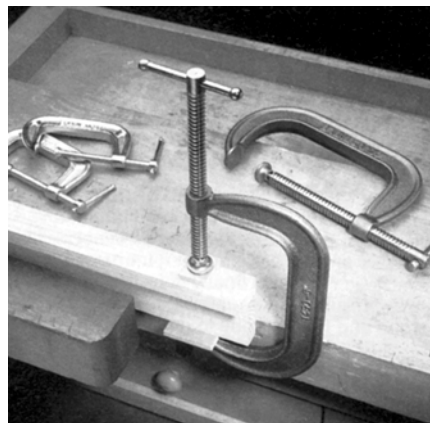
- Pistol-grip style, quick-release bar clamps are a good choice for rapid, one-hand gluing operations where speed of application is more important than the amount of clamping pressure to be exerted. These are normally available in capacities up to about 36”.



- Model-makers bar clamps are very small in size and are most often used by those who build very small projects such as doll houses, miniature furniture, small gift boxes and the like.



C-Clamps are an “old standard” of woodworkers everywhere. Since they’re so inexpensive, they’re great stand-bys for those once-in-a-while projects that need to be clamped in dozens of different places all at once.



There are a number of specialized C-Clamps available. For example, there are deep-throat models that will allow you to reach in further from the edges of your workpieces.

