

Bevel Cut 2018-03 March

Boxed In

What's your opinion?

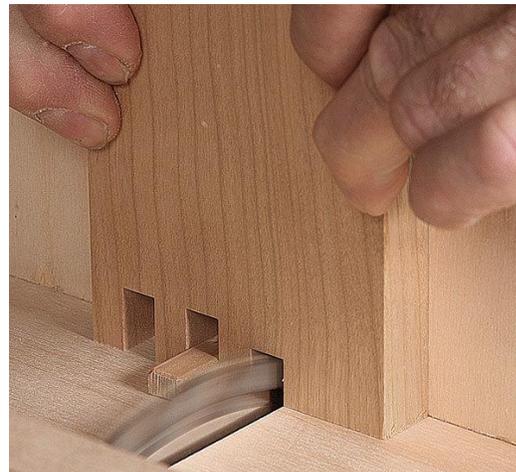
- Box joints are the savvy woodworker's alternative to dovetails.
- Box joints are the lazy woodworker's alternative to dovetails.

Like dovetails, covered in an earlier edition of *Bevel Cut*, box joints (sometimes called finger joints) have alternating pins and sockets. To fit together, one piece has pins where the mating piece has sockets. The challenge is to cut pins and sockets that are virtually the same size, with paper-thin tolerances for fitting the joint. Like the case with dovetails, there are home-made (see *FWW* April 2018) and commercially-available jigs (for both router tables and table saws) that can ease the box joint task. Almost all the techniques described online assume the use of a table saw, although hand-cut is also an option; a combination of the two can be used for unusually deep joints (like cabinets).



To size the pins and sockets, you simply adjust the width of the dado blade. The blade's height is supposed to match the thickness of the pieces being joined and determines the length of the pins and sockets. Flat-bottomed dadoes are a must for good-looking joints.

One tip is to start with pieces oversized and then to trim them to final width after you cut and fit the joint. Box joints usually turn out to be wider than the sum of the pin and socket widths because of the fit-tolerance between each pin and socket. Starting oversized allows you to compensate in the end. On the other hand, the width of the box sides should be an integral multiple of the finger width to achieve the most artistic appeal. Otherwise you end up with partial fingers at the top and/or bottom. So, how do you meet both constraints?



I've tried a box joint only once, using a home-made jig that turned out to be not good enough for my purposes. I expect to go back for a second try some time this winter. (I ended up using a drawer lock router bit for a set of drawers.) As is the case with many woodworking tasks, there are lots of hidden details or ways to not achieve near-perfection – is the joint too loose or too tight for gluing; do the ends protrude too much to prevent a good clamp-up?

Box joints are really dovetails with an angle of zero degrees rather than 6, 8, 10, or 12 degrees depending on hardwood vs. softwood. Given some knowledge of mechanics, trigonometry and the laws of physics, you would conclude that traditional dovetails must be stronger than box joints. But how strong do you need? Dovetails also have the allure of being traditional and a sign of the woodworker's skill, or his patience with dovetail jigs. Box joints don't seem to carry the mystique of dovetails, although any google search will find lots of articles on box joints in the woodworking bible – Fine Woodworking Magazine. And lastly, as seen in some of the online photographs, box joints do not necessarily have to sacrifice on aesthetic appeal or be limited to 90 degree joints.

