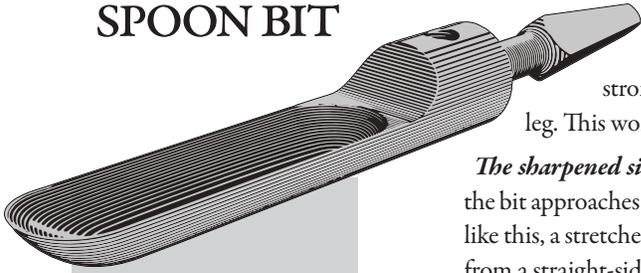




SPOON BIT



Thank you for purchasing a Gramercy Tools Spoon Bit!

Like all Gramercy Tools, the Spoon Bits hail from a long line of historical ancestors, but have been manufactured with modern methods and an original design we built up from first principles.

Whether you're working in greenwood, chairmaking, or if you're simply fond of woodworking with fine hand tools, we hope these new/old bits will add an exciting capability to your craft.

We offer a range of sizes from an inch down to three eighths of an inch in diameter.

Gramercy Tools are designed & manufactured by the good people at:



112 26th St. Brooklyn, NY 11232
800.426.4613 & 718.499.5877

toolsforworkingwood.com

We hope you enjoy your new spoon bit. Please contact us if you have any questions.

Spoon bits have an ancient lineage. Effective versions can be made simply by a blacksmith, so examples of sharp, concave cutters appear throughout the history of woodworking. By the third century AD, Roman spoon bits could be found in sites across the Western Empire.

Drilling with a spoon bit affords many advantages. *You can drill at any angle* because of the bit's round nose, which is immensely useful for drilling chair seats for legs, or drilling the legs for stretchers.

Spoon bits don't have spurs or a lead screw so *you can drill through nearly all of your material* without worry of poking through the other side. Deeper holes mean stronger joints. For example, you can have a longer stretcher tenon going into a thinner leg. This works at any drilling angle.

The sharpened sides let you correct the drilling angle as you cut. Also, with a little deft wiggling as the bit approaches final depth, you can cut a hole that's wider at the bottom than the opening. In a hole like this, a stretcher tenon can expand to wedge itself in place, rendering a stronger joint than you'd get from a straight-sided hole.

Spoon bits are excellent roughing tools. The smooth surface left by a spoon bit requires little cleanup and is well-suited for spoon carvers and sculptors looking for an efficient way to waste out material from concave features and bowls.

Modern spoon bits began to disappear from tools catalogs after WWI, when the traditional trades of the chairmaker were mechanized. At the same time, Welsh and Windsor chairs went out of fashion. Without a steady source of users, the quality of the remaining bits on the market declined.

Gramercy Tools Spoon Bits have been engineered for chairmaking and furniture building, but application is only limited by imagination. Sculptors, pipemakers, pen-turners, and even electricians can all benefit from a keenly sharpened, single-flute rotary cutter.

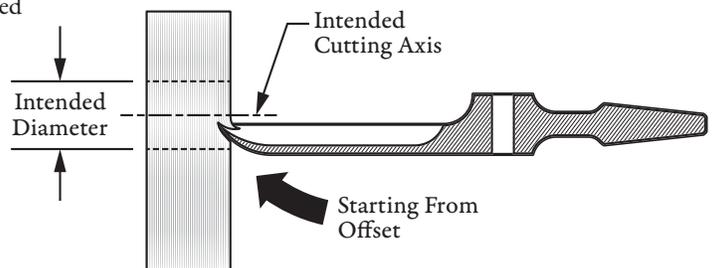
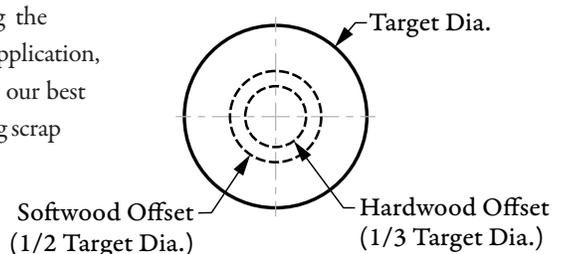
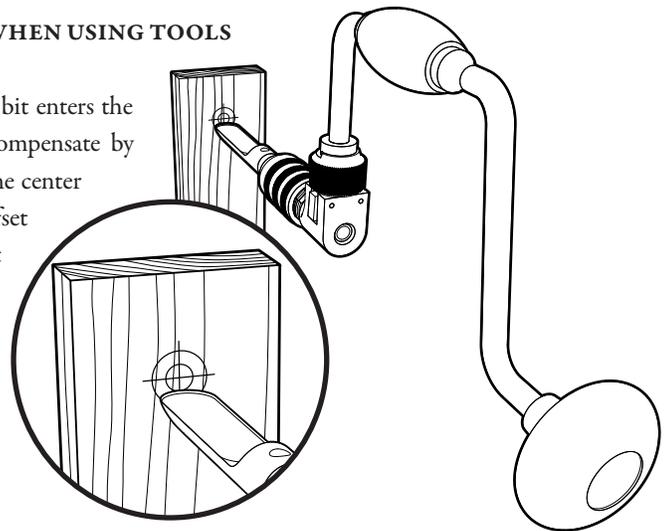
ALWAYS WEAR EYE PROTECTION WHEN USING TOOLS

STARTING A HOLE: Since the spoon bit enters the wood like a carving tool, you have to compensate by starting the bit at a position offset from the center of your intended hole. Naturally this offset distance changes depending on your bit diameter and the type of wood you're drilling.

Roughly, the starting point for your hole will be somewhere on a circle $1/3$ of the target diameter for hardwoods and $1/2$ for softwoods, adjusting as you become more familiar with the cutting action.

Grain orientation should dictate where along the offset circle to start your cut, but since wood, application, and intended drilling angle will all vary widely, our best advice here is to start a few test holes in matching scrap wood before any new drilling job.

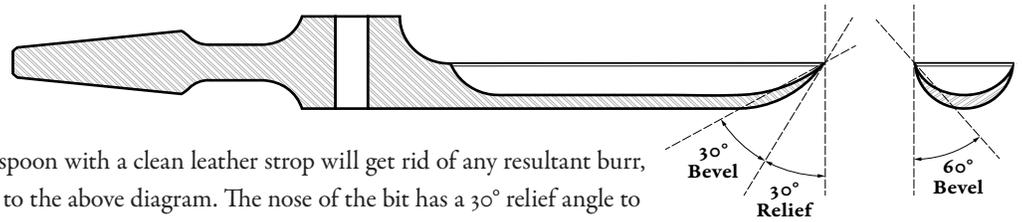
Crank the bit back and forth with gentle pressure, increasing your arc each time until you feel the bit has established a central dimple coincident with the desired hole location. At this point you can increase pressure and begin to cut in full clockwise or counterclockwise circles, whichever the grain seems to prefer.



WHEN SHARPENING, hone *only* the inside of the spoon with a small slipstone or a dowel covered with abrasive film.

Lightly stropping the outside edge of the spoon with a clean leather strop will get rid of any resultant burr, but refrain from using abrasives and refer to the above diagram. The nose of the bit has a 30° relief angle to aid in penetration, but this fades to 0° at the sides. Whatever you do, don't create a secondary bevel around the outside. This will spoil the cutting action and you'll need to grind the whole edge past the offending secondary bevel to rehabilitate the bit.

Gramercy Tools Spoon Bits are made of hardened O1 (oil-hardening) tool steel. With normal use, they will last ages. To prevent corrosion, oil bits lightly before putting them away. Store them in a dry environment.

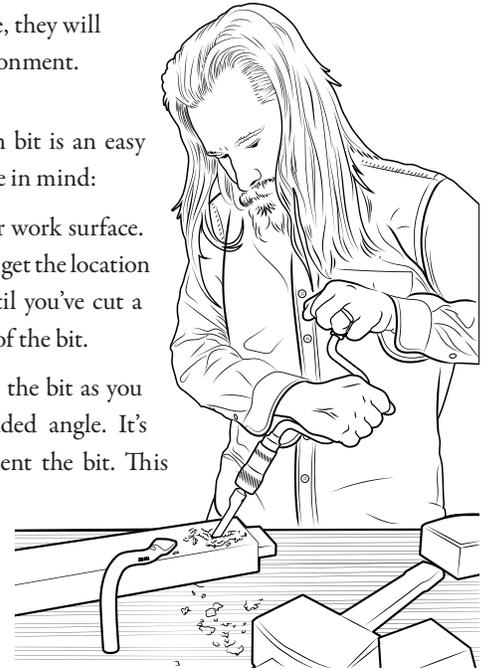


DRILLING ANGLED HOLES with a spoon bit is an easy skill to master. Just keep the following procedure in mind:

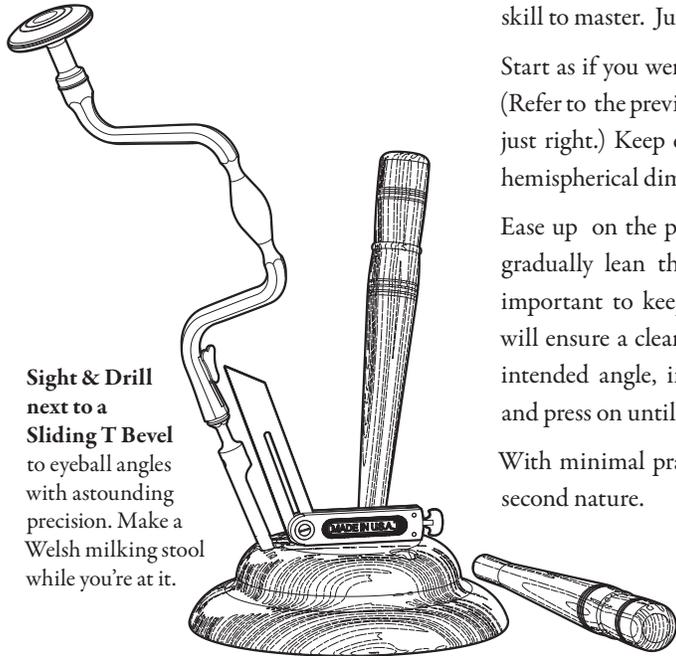
Start as if you were cutting a hole square to your work surface. (Refer to the previous section on starting holes to get the location just right.) Keep drilling at this orientation until you've cut a hemispherical dimple equal to the full diameter of the bit.

Ease up on the pressure, but continue to rotate the bit as you gradually lean the cutting over to your intended angle. It's important to keep up rotation while you reorient the bit. This will ensure a clean hole. When you reach your intended angle, increase the drilling pressure and press on until you reach your desired depth.

With minimal practice, this technique will be second nature.



"Drilling at an angle is similar to drilling square. You start the hole square, just to get the center mark dished out and then tilt your brace to the correct angle. Sighting with a sliding bevel gauge is really handy." — Joel Moskowitz



Sight & Drill next to a Sliding T Bevel to eyeball angles with astounding precision. Make a Welsh milking stool while you're at it.

A WORD FROM OUR FOUNDER ON BRACES & BITSTOCKS:

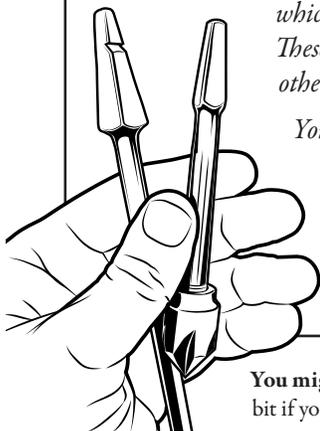
"The usual way to drive a spoon bit is with a brace. The earliest braces were made out of wood with a bit wedged into the bottom of the brace. Wooden braces might not be strong enough for larger bits, but they work great for smaller sizes.

Early wooden braces evolved into the Ultimatum brace that enhanced the wooden brace with brass reinforcements. Stronger, all-iron braces were made starting in the middle of the 19th century in Great Britain (Scotch braces) and in the USA (Spofford braces).

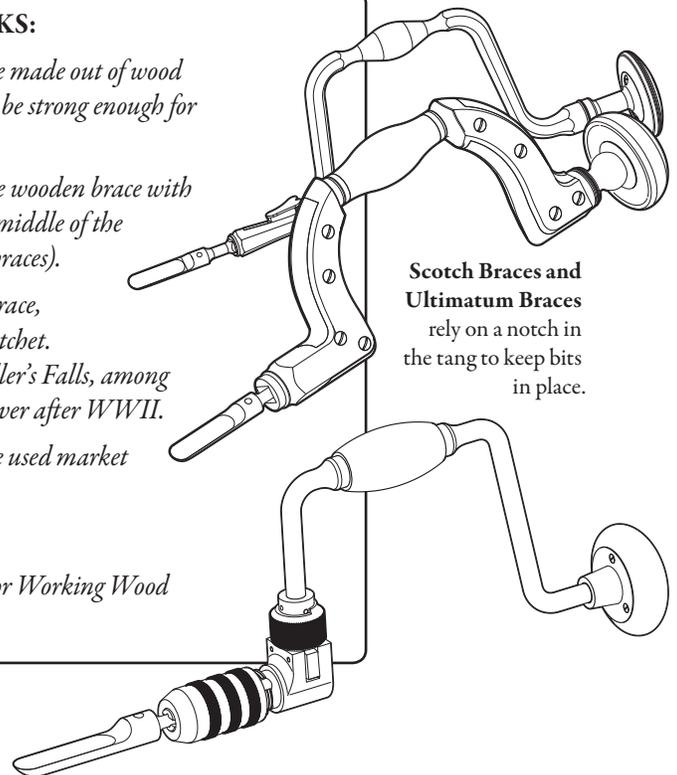
The latter part of the 19th century brought the ratcheting brace, which has an adjustable two jaw chuck and a built-in ratchet. These braces, made by North Brothers, Stanley, and Miller's Falls, among other makers, were ubiquitous until electric drills took over after WWII.

You can easily find an old one in great condition on the used market for \$70 or less."

—Joel Moskowitz, Founder & Owner, Tools For Working Wood



You might need to grind a notch in the tang of your spoon bit if your particular brace requires one.



Scotch Braces and Ultimatum Braces rely on a notch in the tang to keep bits in place.