

Although bulky, a wooden mallet is well suited for driving a chisel or joint assembly. Inspired by a vintage mallet in the Lee Valley collection, this tool combines the best features of a metal hammer and a wooden mallet. The cast brass head has the mass and small size typical of a metal hammer, while the wooden striking faces make it possible to drive a chisel without splintering the handle. Since this mallet has two striking faces, you can keep one smooth and clean for assembly tasks. The size and mass of the mallet can persuade reluctant parts into alignment, even in confined areas.

Carcass Assembly

Like most cabinetmaker's mallets, this tool has angled striking faces. While some woodworkers like the slightly different striking position this offers for jobs like driving a chisel, there is another more specific reason for tilting each face. As shown in **Figure 1**, when the tool is grasped at the end of the handle, the user's knuckles should be in line with the face to be struck. This is useful during carcass assembly when it is imperative that the face strike the workpiece as flat as possible to avoid dents.

To make use of this feature, simply hold the mallet as shown and bring the head upwards, maintaining contact and pivoting on the knuckles. Use a sharp wrist action to bring the striking face down onto the workpiece.

Since finger size and grip will vary from one user to another, it may be necessary to adjust the angle of the striking face. Grip the mallet as you normally would and hold the mallet on your workbench. Sight along the surface of the bench to see if there is a gap between the face of the wooden insert and the bench top. Use a coarse file or belt sander to re-shape the face of the insert as required to bring it and the bench top into a parallel alignment, as shown in **Figure 1**.

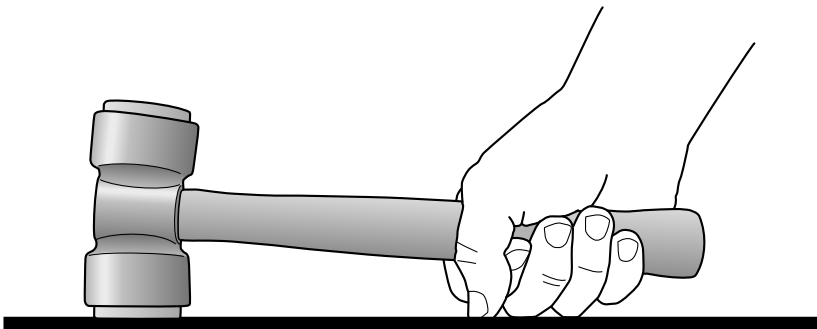


Figure 1: Grasping the mallet.

Care and Maintenance

When wood that is exposed to moisture has limited space to swell, such as in this tool, excessive swelling will permanently compress the wood. In such a case, the wood will actually be smaller after it returns to the moisture content it had when it was tight. Consequently, do not expose the mallet to water or rain and, if possible, avoid humidity extremes. Both conditions will cause the handle and inserts to loosen.

The handle is made of carefully selected and seasoned white ash or hickory (depending on supply). With care, it should require little or no maintenance; however, it may become loose after much use or severe fluctuation in moisture content. To tighten it up, position the end of the handle firmly on your bench top. Use a steel hammer and a nail set or steel punch to drive the steel wedge deeper into the handle.

The inserts provided with the mallet are made of dense, close-grained hardwood. They should provide years of service; however, if the mallet is used to drive a cold chisel or any other kind of steel tool, this will dramatically shorten the life of the inserts. You can remove a damaged insert by boring a series of holes in a line across the face, through to the bottom of the cavity (which is about $\frac{13}{16}$ " deep) with a $\frac{1}{4}$ " twist drill bit. Avoid drilling into the brass casting. Pry the two halves of the insert out with a slot screwdriver. Make the new insert 1.6" diameter by 1" long and such that the end grain is on the striking face. Make sure to use well-seasoned wood so that the moisture content in your workpiece is as low as or lower than you would expect it to be during the driest part of the year. If you live in a climate that causes large fluctuations in moisture content, you may find the inserts become loose during the driest part of the season. To eliminate the potential for loose inserts, you may want to apply a $\frac{1}{4}$ " bead of silicone caulking around the bottom perimeter of each cavity just prior to installation.

The interior cavities of the mallet head are ribbed to help retain the inserts in spite of moisture content fluctuation. During dry periods, the inserts may seem loose, but should not fall out.



Caution: *Always wear eye protection when using any kind of striking tool.*