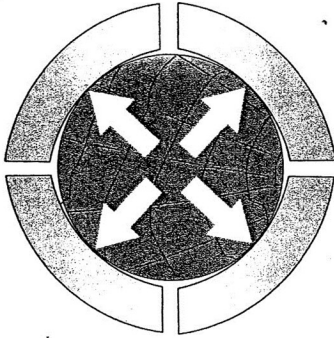


# holding wood

## GETTING A GRIP

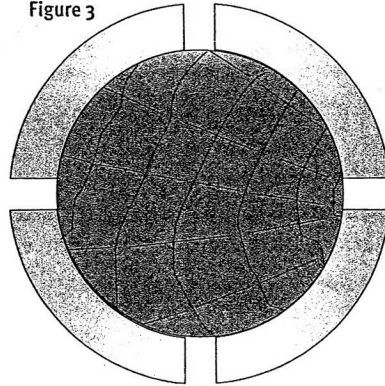
Figure 2



### 2. Undersize workpiece

An undersize workpiece has poor annular contact with the jaws, and is more likely to move off axis and spoil the work, or even possibly fly out of the chuck.

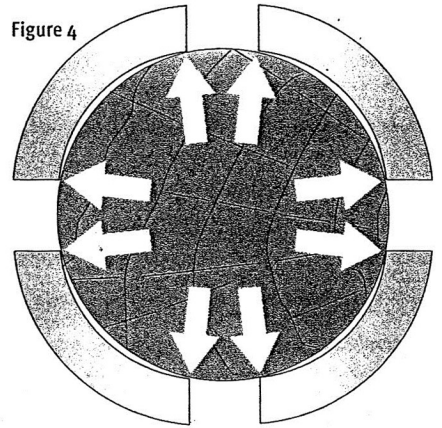
Figure 3



### 3. Good contact

Good annular contact where the jaws form a closely mated collar around the workpiece, ensures concentric, firm and effective workholding.

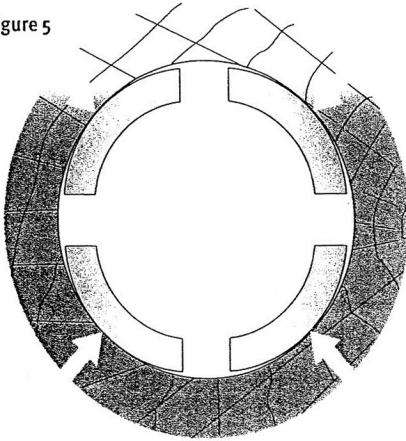
Figure 4



### 4. Oversize diameters

Holding oversized diameters causes the corners to dig in. This easily collapses the cellular structure of the wood which means surface damage, possible extrusion off axis because of the different densities, a much reduced grip, and again, a risk of work flying off the chuck.

Figure 5



### 5. Expansion holding

The same is also true of expansion holding, but with the added risk of the wood cracking by over tightening. An important point to consider is the effectiveness of holding power in the area of contact. It's good to have the radii of the jaws matching that of the workpiece in the vertical (or face) plane, but how they seat to the workpiece can be equally important.

Figure 6

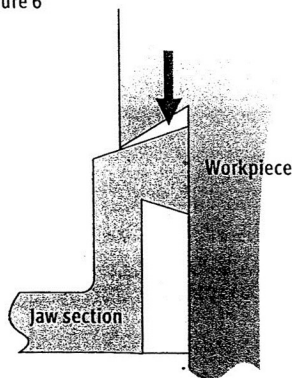
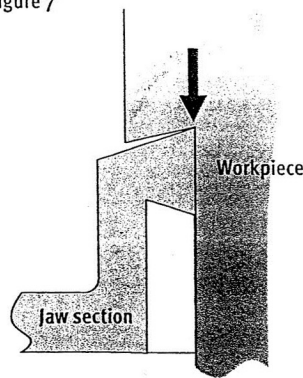


Figure 7



### 6. Over-deep dovetail

A typical over-deep dovetail form with poor jaw contact, which in turn means a weaker, and less positive hold.

### 7. Well-seated dovetail

The dovetail is less than the angle of the jaws, but it is well seated and allows the jaws to locate more positively and deeply in the recess. Perfect angular contact would be more effective, but as even tip contact would have probably still have greater than 80 per cent of the holding power, it is less important.