



Hammers and Mallets

Hammers and dummy mallet heads are made from drop forged steel, which is in turn heat treated and then stress relieved, prior to having the handles fitted.

The term “drop forged” means that gobs of molten metal are dropped into a mould which is then pressed closed around the molten metal and forms a single piece moulding. This is to ensure that the hammer head is formed in such a way that fractures and occlusions can not occur (as might happen with a casting).

Drop forgings are much stronger and will sustain impacts better, especially when the forging has been stress relieved.

This is a process which ensures the grain of the metal all travels in the same pattern within the moulding, again to limit the risk of metal fractures.

Wedges are driven through the hammer head into the hammer handle and hold the handle firmly into the hammer head, it is important that the wedges don't crack the length of the handle so it is best to choose hickory or ash as the handle material.

Hammer handles are usually made from hickory or ash, because this type of wood has a close grain, is free of knots and unlikely to splinter.

It also takes the wedges easily and will last for at least 10 years in constant use.

Hammer and mallet handles can be replaced quite easily.

Lump Hammers:

These the simplest type of hammer head, quite literally a “lump” of metal attached to a hickory or ash handle using a pair of wedges.

Usually a rectangular block with machined and ground ends, Lump Hammers are most commonly used for roughing work and splitting tools such as bolsters, Feathers and drills.

Bush Hammers:

Bouchard (BUSH) Hammers are a machined steel headed hammer with a “bushing” at either end, this “bush” is designed to suit the mounting of a replaceable insert.

The inserts have a series of teeth machined into the face.

Smaller “Bush” Hammers hold the insert using a simple taper, for the larger hammers the end of the hammer is split and a taper pin opens the split inside the insert to locate it more securely.

Bush hammers are used to model large flat surfaces, removing material with less effort than using a hammer and chisel. Bush Hammers are not really suitable for the harder stone types.

Dummy Mallets:

These tools gained their soubriquet because they are neither a hammer nor a mallet.

The drop forged metal head is either shot peined or ground to stress relieve the surface.

Dummy mallets can be used with both the conventional and mallet headed chisels.



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Nylon Mallets:

A machined nylon head pressed onto a hickory handle and held with a wedge, these mallets are more typically used for stone carving, but should only be used with mallet headed chisels.

Beech Mallets:

Kiln dried beech wood machined and fitted with a beech handle, held in place using a wooden wedge, these mallets are mostly used for woodcarving but some stone masons use them too. Again these soft faced mallets are only suitable for use with mallet headed chisels.

Mallet Headed Chisels:

These chisels have a ball shaped striking end to them.

The larger striking area dissipates the energy from the hammer blow, this allows them to be struck with a soft face mallet without damage to either the soft mallet or the hard steel of the chisel.

Conventional Chisels:

Typically these have a smaller square striking face, more suited to steel hammers and dummy mallets, it is very important to strike the chisel squarely and with a light even tambre.

The striking head of the chisel should be dressed lightly after use, this removes burrs, hammer damage etc.. and prolongs chisel life. Do NOT use excessive force while dressing, this will over heat the tool and alter the tools strength and durability.

Tool Hardening:

Carbon steel chisels are typically "Case Hardened" – the tool is heated and then immersed in a high carbon product which is taken in by the hot metal as it cools. Repeated immersions will increase the carbon content of the tool and improve the tool hardness. The tool will then need to be dressed and sharpened before a process called "Tempering".

Tempering is a further heating process which is designed to hold a tools cutting edge for longer but at the same time improve the service life of the tool in general.

TCT tools are fitted with a Tungsten Carbide Tip – the tip is very durable but easily damaged (in the wrong hands) although TCT tools can be repaired, if the tip is chipped or cracked – the tool has reached the end of its life.

Hammers and Mallets – these self harden and should NEVER be heat treated.

If you need any more help our staff at both Thatcham (01635 587 430) and London (0207 380 0808) are always willing to offer help and advice.