

## **Q: How are brass lathe parts protected so they don't tarnish and how is the 'Holtzapffel-like' finish obtained?**

**A:** It is always preferable to retain original finish but any brass or bronze parts that have lost most or all original finish can be cleaned down to bare metal, made smooth with fine abrasives, then 'curled' on selected surfaces\*. Then they should be well-washed in detergent, rinsed thoroughly in hot water, dried with a soft lint-free cloth, then dried completely on a warm dust-free surface (the top of the central heating boiler is a good place so long as it is dust-free); then rest the pieces on a cooler surface until they are just warm to the touch, say, a bit higher than blood heat. Then lacquer them with the finest brush obtainable so that the lacquer spreads evenly over the surface without leaving brush streaks. The original lacquer was made from flake shellac mixed with industrial methylated spirit (don't use the purple stuff, it has water in it and makes the lacquer cloudy). If you can't get these ingredients you could use French polish which is almost as good but it does usually have a little oil in it which can leave pin-holes in the finish.

Here is an old Holtzapffel faceplate that was battered and tarnished; it is just shown here as an example but not much care was taken over it as it is not an important piece.

\* 'curling' is a form of scraping that gives a frosted and whirly surface to flat expanses of brass which are likely to receive knocks. This finish tends to hide small blemishes which, on a plain piece of lacquered brass, would otherwise be very obvious. The process is well-described in Holtzapffel Volume III (page 1039 in first edition or page 25 in the enlarged edition). In case you do not have access to Volume III the process is started by smoothing the surface by rubbing all over with a wood block charged with a paste made from oil and powdered Water-of-Ayr stone. Then the parts of the surface to be curled are 'clouded' by rubbing all over with charcoal (or other mildly abrasive substance) and water, then a slate (or snakestone) pencil is used to make a curly, looped pattern over the surface.

