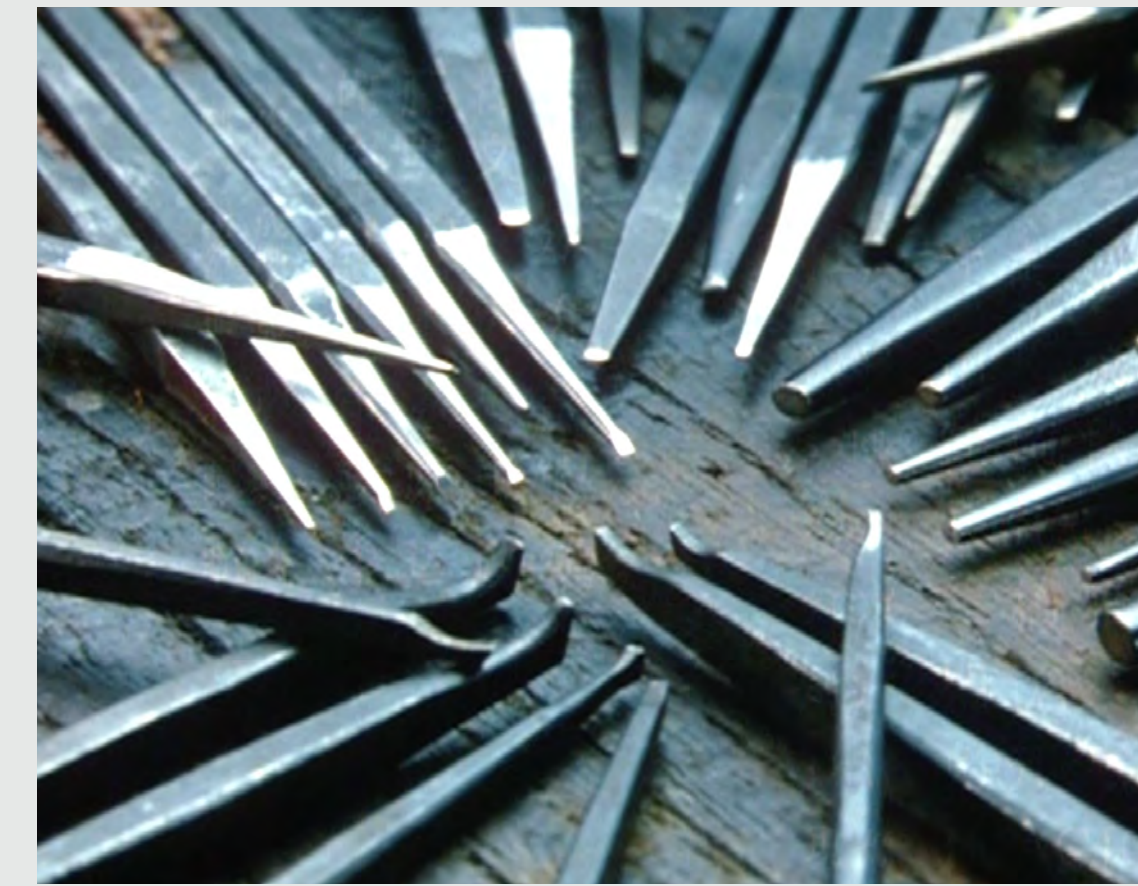


# UCHIDASHI 打ち出し

## About

The uchidashi technique is used to make a three-dimensional relief from a flat sheet of metal. It involves a hammer and punch forming the metal from the front side, defining a form in a way that retains the thickness. The definition of form, before the details are added, leaves the piece appearing as though a thin cloth or piece of clay were draped over it. The details are then chased in. This technique is similar to chasing and repoussé.



Tagane are small chisels and punches used to move the metal. Professionals generally shape their own tagane to suit their purposes. They have several hundred of these tools in different shapes and sizes, and in extreme cases, thousands.



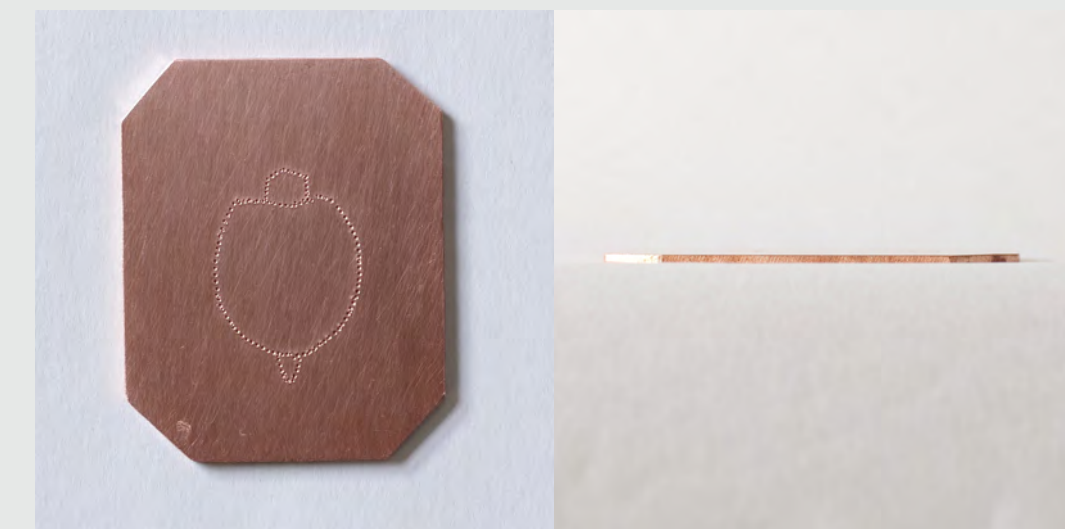
Pitch is used to stabilize the metal. Japanese pitch is made up of earth products (crushed powder of calcinated clay, soil, and volcanic ash), pine resin, natane oil, and carbon black. It is usually placed in a thick and heavy iron bowl and can be made soft or hard depending on temperature. To deform the metal significantly, the pitch should be softer and used with a large tagane. To deform it just a bit, the hardness and tagane size should both be middling. At the final stage, the pitch should be harder to use a small chisel.



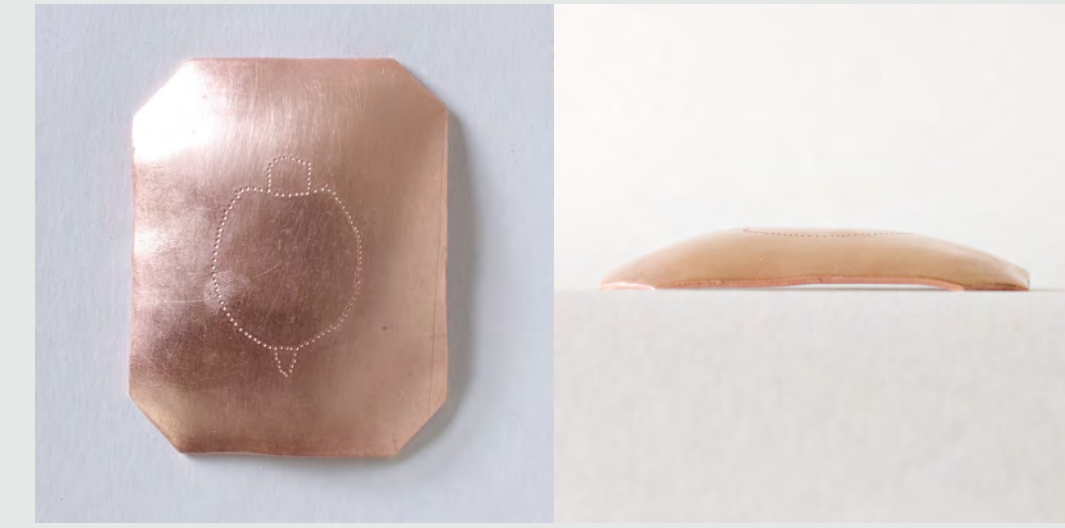
The metal gets harder as it is worked, so it occasionally needs to be annealed, or softened by heating and slow cooling. Each time, the metal must be lifted off the pitch and any lingering pitch must be cleaned off. Before the metal is put back on the pitch, any fire scale from annealing should be removed.

In this example, uchidashi is combined with other techniques like inlay, gilding, and patination.

## Process



1 Drawing is transferred to metal using a center punch.



2 Hit the metal from the backside with shumoku-zuchi to swell.



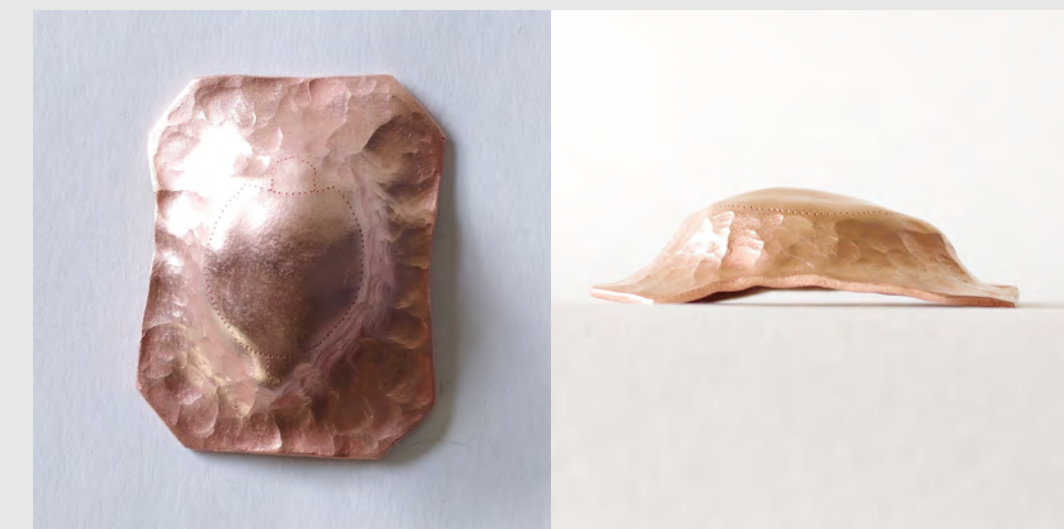
3 Punch 10mm outside the outline with the bozu-tagane.



4 Punch from the backside with the wooden ki-tagane.



5 Begin making the waist by hitting the metal with the yose-tagane.



6 Continue making the waist high little by little by repeating the last two steps.



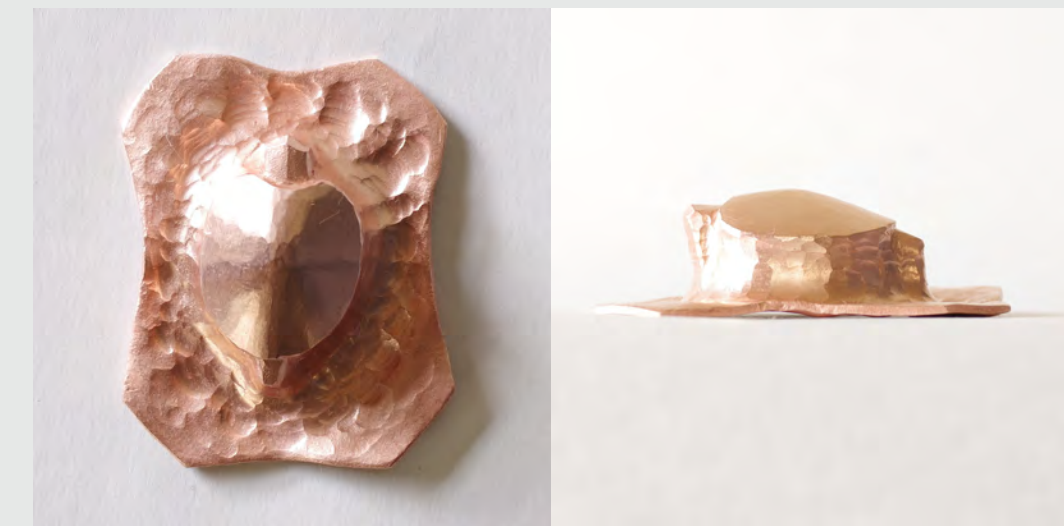
7 Start shaping the head and tail with the narasi-tagane.



8 Smooth out the bumps in the shell with the big narasi-tagane.



9 In the second round, continue making the waist higher and refining the form.



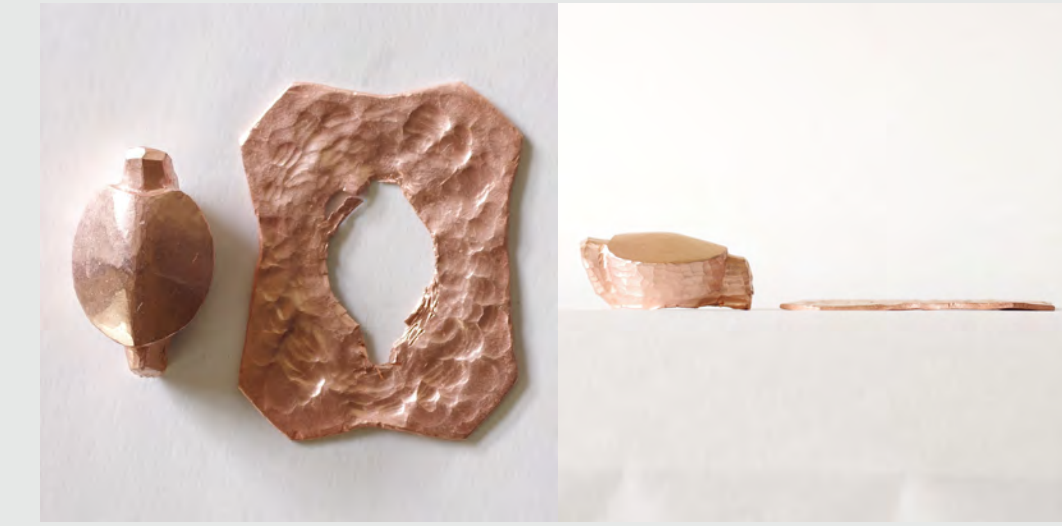
10 Make the sides vertical with the yose-tagane and namekuri-tagane.



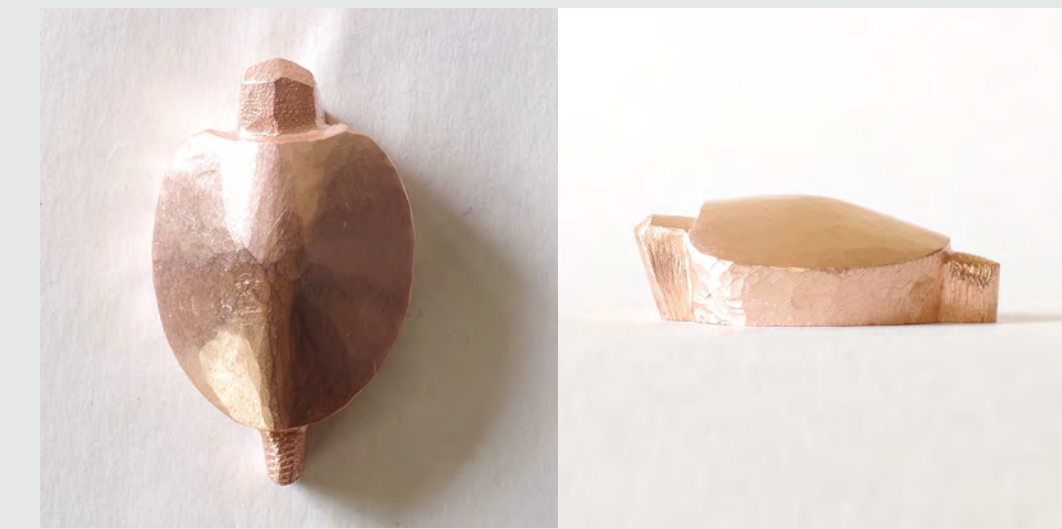
11 Smooth the surface with the narasi-tagane gently while the pitch is hard.



12 It takes a lot of skill to keep the metal of even thickness except at the bottom of the waist.



13 Cut off the base.



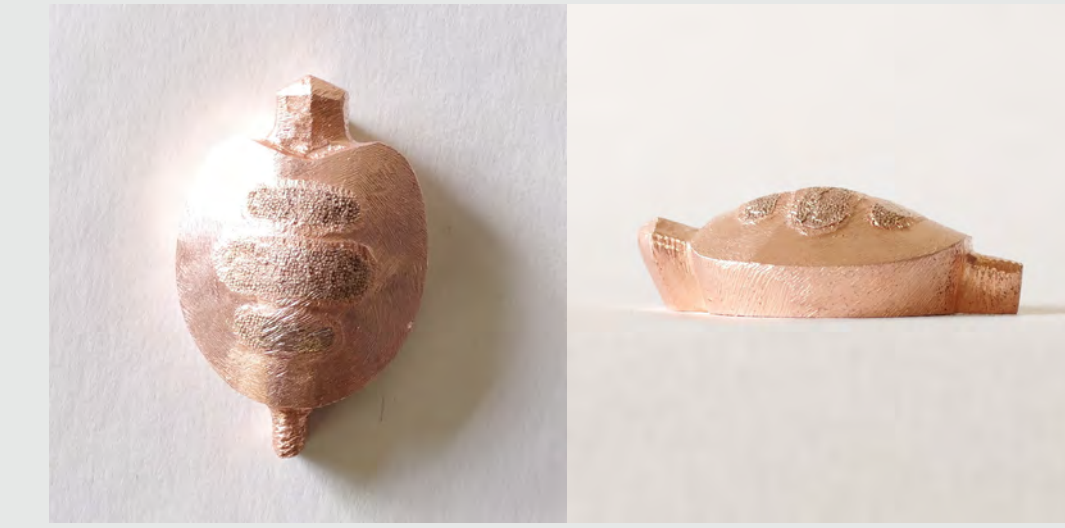
14 File, scrape with kisage to remove file marks, and polish to finish the relief.



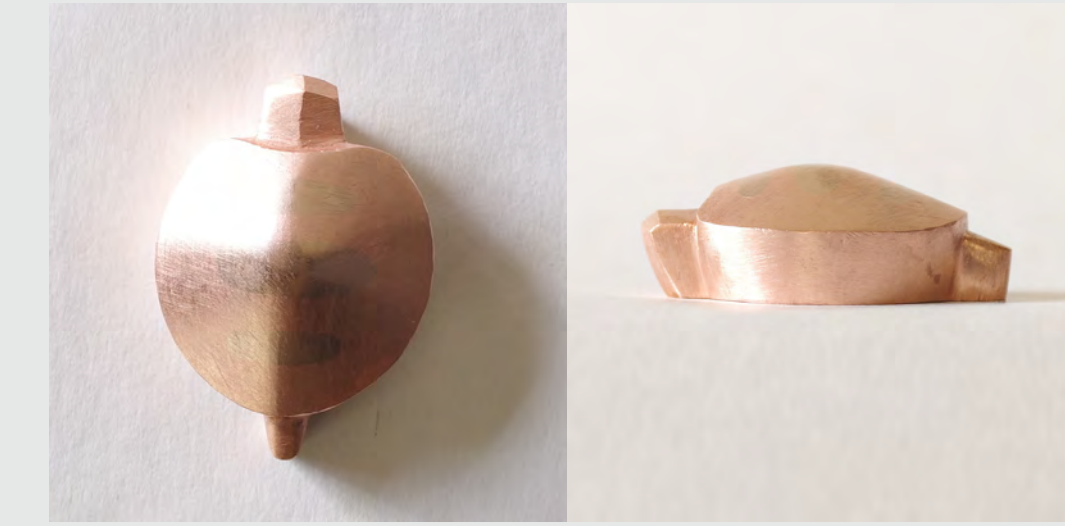
15 Raise a burr around the inlay areas with the keage-tagane.



16 Carve with ha-tagane and burnish with ashi-tagane.



17 Hammer in the soft metal inlays.



18 File, sand, and polish.



19 Engrave with hammer and chisels.



20 Gold amalgamation



21 Silver amalgamation



22 File



23 Polish and patination.



24 View from each side



25 A back sheet with fittings is riveted to the relief.