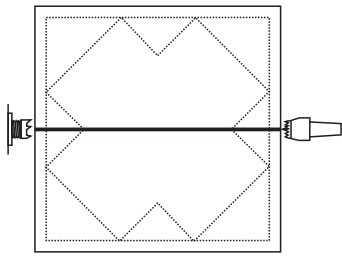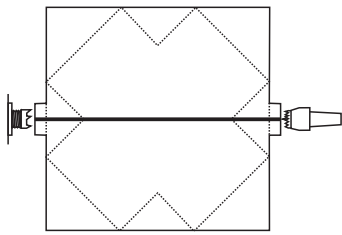# 4 Branch Streptohedron

As first shown to us by David Springett in his book Woodturning Wizardry.

Start with a block that is two halves of a 65 mm cube cut and rejoined with a paper joint at the centre. Mount this accurately between centres with the paper joint perfectly on centre and in line with the lathe drive.

Turn the wood to be round and 60 mm diameter. Measure and mark a line at the exact centre of the length of the wood. Then mark lines at 10 and 30 mm each side of the centre line. Cut the wood that is outside the 30 mm marks at right angles to the previously cut surface and almost down to the drive and tail centres. Draw a circle on each end of the work that is 20 mm in from the cut outer 60 mm diameter surface.
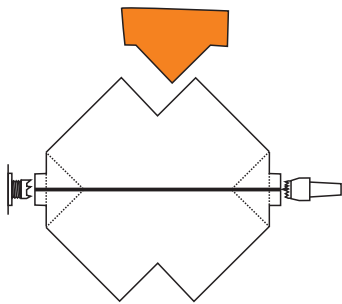
Cut away the wood between the 10 mm marks on the top and 20 mm marks on each end of the wood. Keep all cuts straight and clean. Cut away the centre of the top surface between the two 10 mm marks into a "V" shape which is 10 mm deep and thus an exact 90 degree angle at the bottom. Make a template to fit this cut. Sand all surfaces.
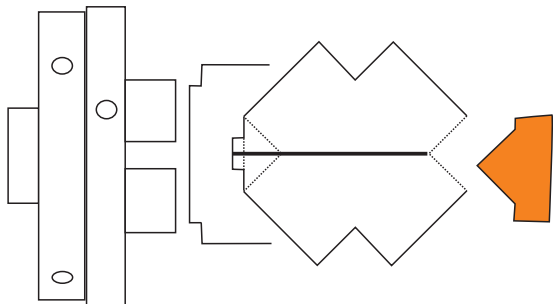
Remount the wood in a jam chuck. Bring up the tailstock for accuracy and keep it there as long as possible for security of the work. Inside the 20 mm circle cut a "V" shape into the end which is 10 mm deep and thus an exact 90 degree angle at the bottom and fits the template perfectly. Sand this end.
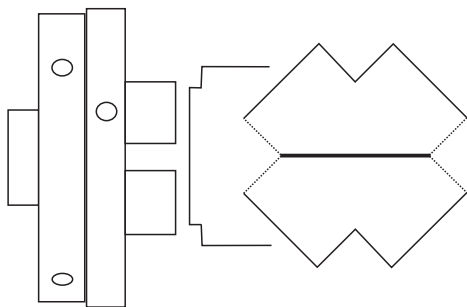
Turn the wood around and remount it in the jam chuck. Bring up the tailstock for accuracy and keep it there as long as possible for security of the work. Inside the 20 mm circle cut a "V" shape into the end which is 10 mm deep and thus an exact 90 degree angle at the bottom and fits the template perfectly. Sand this end.

Remove the wood from the lathe. Split the paper joint and sand the remaining paper away. Rotate one of the two parts through 90 degrees and glue the wood together. Sand and finish.