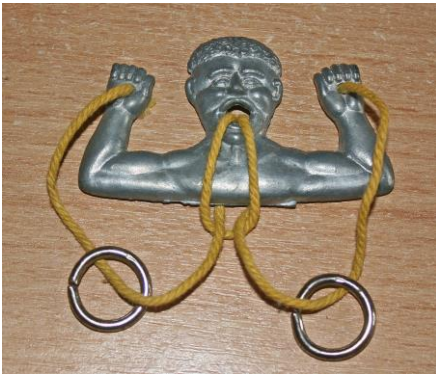


## January 2016 Demonstration – John French

John opened by emphasizing that the demo was all about using small pieces of wood and producing items that can be used to entertain and have a bit of fun as well as providing the challenge of a puzzle. To set the tone, John used a little audience participation by asking that everyone pointed both index fingers horizontally at the tip of their nose. Focusing their eyes just above the fingers, move them slowly forward and away from the nose and a floating sausage would be revealed!! Next he showed various puzzles to get the audience thinking.



Then to the lathe with a couple of pieces of differing wood both approx 20mm square and 120mm long. Mounted on the small jaws of a chuck, roughed to a cylinder and then spindle turned to a matching pair of small bone shaped items. The audience was then challenged to hold each piece in the crook of the forefinger and thumb of each hand and then using the thumb and middle finger tips of the opposing hand to remove the pieces without getting them locked together. A period of mirth and laughter followed with no successful resolutions so John showed the solution which involved approaching with palm to palm turning the hands inwards grasping the pieces and bingo!!



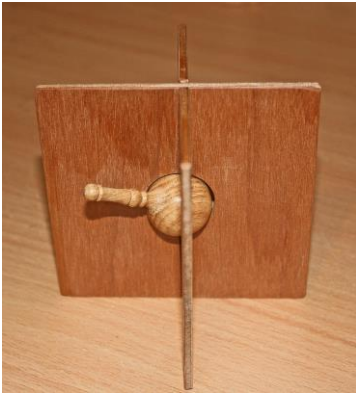
John now moved on to a succession of puzzles all based on the same string and two ring principle based on an old 'politically incorrect' puzzle from the 19<sup>th</sup> century. Mounting a pre drilled piece, 25mm square by 150mm long, in the chuck jaws;



John produced a thick bar-bell shape with parallel small holes to take the string through the spheres and the ends and at right angles an 8mm hole in the centre. Decorating and finishing the piece John then tied the string and rings to the piece as shown in the puzzle in the centre of the photo. The other two puzzles in the photo are different presentations of the same puzzle. A solution to the puzzle can be found here <https://www.youtube.com/watch?v=RkGI9rHIGZk>

For the next puzzle John roughed out a 50mm dia cylinder and bored a 30mm dia hole to a depth of approx 50mm. Shaping the outside of the cylinder to a barrel shape 10 mm longer than the hole depth. The outside was decorated to look like a barrel and finished including parting off, reverse chucking and sanding. A second blank was mounted and turned to a finished cylinder just smaller than the barrel internal dia. Importantly, one end of this cylinder has to have a dome and the length of the cylinder from top of dome to base should be the same as the depth of the barrel. The finished puzzle was handed around with the challenge to remove the plug without touching the barrel or touching the plug! After a few comments from the audience John demonstrated that a healthy blow across the top of the barrel will activate "Bernoulli's principle" and pressure drop will extract the plug





The next piece was a spinning top with a difference! A simple piece of spindle turning produced a top with a 24mm spherical body, a pivoting bead at the bottom and a long “40mm” finger grip. The next step was a surprise, in that John produced 2 pieces of 4-5mm plywood 100mm square with a 25mm hole in the centre and a 5mm central slot joining the edge to the central hole. Unseen, the two ply wood pieces were slotted together with the top spherical centre contained within the hole. The challenge was to remove the top, which did spin within the holes. The solution demonstrated after a number of failed attempts was simply to squeeze the plywood sheets together and remove the top!!

After refreshments John displayed a selection of self explanatory puzzles that he had turned: A turned maze with a capped centre “home” with 3 ball bearings. A simple looking puzzle but the thin walls will require some careful turning to avoid detonation. Also the removal of the joining gaps requires significant finishing effort to provide smooth transition of the balls between channels.

Secondly, a simple dome (above) with a single ball which produced a degree of frustration as there is no trick to the solution just a very steady hand. This one was taken from John Berkeley’s book “All Screwed Up!”.

Next up a family story about a gypsy and a Y shaped piece of stick with the now inevitable piece of string and a ring on which John based the design of the “gavel” puzzle. A piece of wood 25mm square and 100mm long had been centrally predrilled on one face with a 10mm hole 2/3 of the way through the block. Additionally a couple of 2-3mm holes drilled at 45° along the long axis and into the 10mm hole, drilled approx 12mm from the edge of the central hole. These holes were to hold the ends of the string. The piece was turned to a finished gavel head. A piece of 18mm x 18mm x 200mm long was finish turned to produce a gavel handle.



The final puzzle was an exercise in turning beads, John demonstrated making three beeads joined together and then explained that you now need to turn three more of these pieces plus two with four beads. The object is to make a tetrahedron from the six pieces. This particular puzzle is available commercially but it is more fun to make your own and practice your tool skills



To complete a very entertaining evening John showed a couple of other puzzle items that he had made plus some that had been made by John Berkeley.

Finally John recommended some books which he had found useful.

Woodturning Trickery by Dave Springett and Fun at the lathe By R C Bell, and All Screwed Up! By John Berkeley