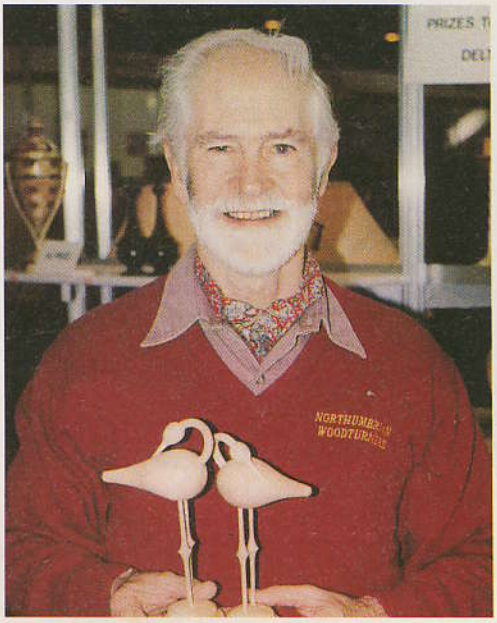
PROJECT

Wading birds



Keen on natural history all his life, Les Jamieson thought that a pair of wading birds would score highly on originality when he entered the turning competition at the Wembley exhibition earlier this year. He was proved right, and was rewarded with second prize.

Having had my appetite for competitions whetted last year when I received a runners up prize in Craft Supplies' autumn show, I felt encouraged to enter Wembley. The subject called for a matching pair of items, and as a naturalist I felt that a pair of birds would be quite different and would represent a challenge for lathe work.

The timber

Sycamore was chosen as the timber because of its close grain structure essential for strength in the delicate parts of the design, and also the grain pattern was very good for the feather effect on the body.

The amount of timber involved is not very great, and each bird was cut from a 2in. square by 12in. blank of sycamore as shown in the illustration.

Base and neck

With the base blank mounted between centres I initially turned a 2in. spigot to fit into the 2in. collet on my Craft Supplies combination chuck. Once mounted, I then made a cut with an 1/8in. parting tool 3/8in. deep and 3/8in. from the end of the block. I then turned a 3/8in. bead with a 3/8in. beading and parting tool before almost completing the ring with a 3/8in. captive ring tool. However, I wa careful not to cut right through.

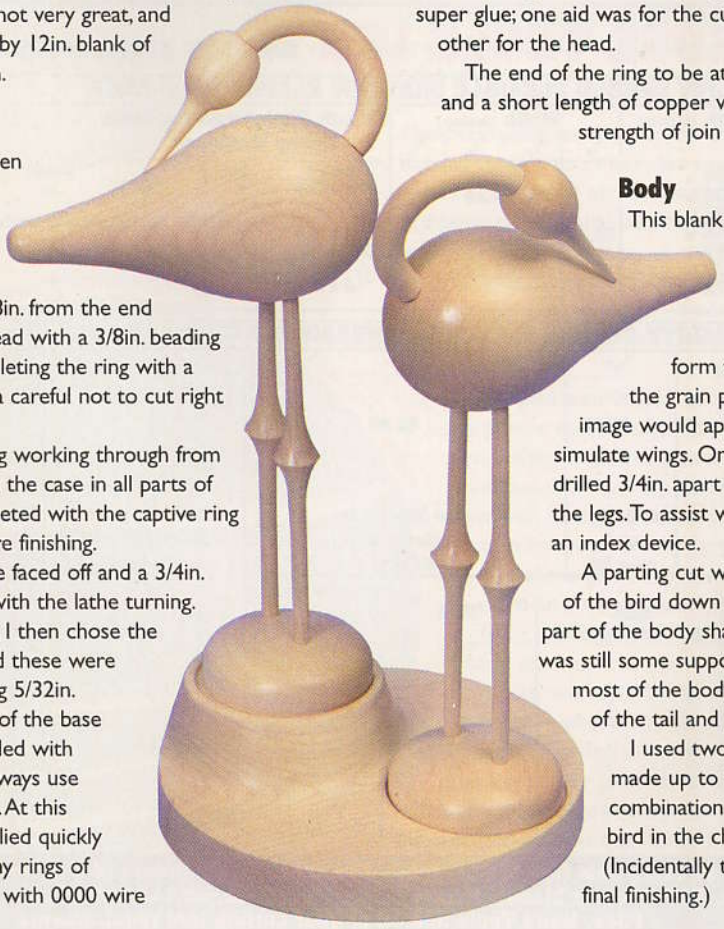
I sanded the outer edge of the ring working through from 120 to 400 in a range of grits, as was the case in all parts of the project. The ring was then completed with the captive ring tool, and placed to one side for future finishing.

The remaining block could now be faced off and a 3/4in. diameter circle marked on the end with the lathe turning. Paying attention to the grain pattern, I then chose the position of the holes for the legs, and these were marked with a bradawl before drilling 5/32in. diameter by 3/8in. deep. The turning of the base was then completed, sanded and sealed with Craftlac melamine, a finish which I always use diluted 50/50 with cellulose thinners. At this consistency several coats can be applied quickly with the lathe running, and should any rings of polish appear these can be removed with 0000 wire wool. The base was then parted off with a 1/16in. thin parting tool taking care to slightly undercut so that the birds would stand firm. The underside of the base can be sanded with a sanding disc held in a Jacobs chuck, but take care when using one of these in the headstock as it can easily come out if pressure is not maintained on it.

To finish the neck ring I made a jam chuck like the inside of a box lid approximately 1/4in. deep. The inner edge of the ring, which is always rough from the captive ring tool, could then be sanded. I reversed the ring and completed the sanding and sealing.

At this stage the ring was cut with a fine saw to form the two necks. In order to give a good close fit to the body and head, the cut ends of the rings have to be hollowed to form a concave surface. I started this concavity with a 1/4in. drill held in the Jacobs chuck then refined this with two sanding aids to which 120 grit paper had been attached with super glue; one aid was for the curvature of the body and the other for the head.

The end of the ring to be attached to the body was drilled and a short length of copper wire super glued to assist the strength of join at this part.

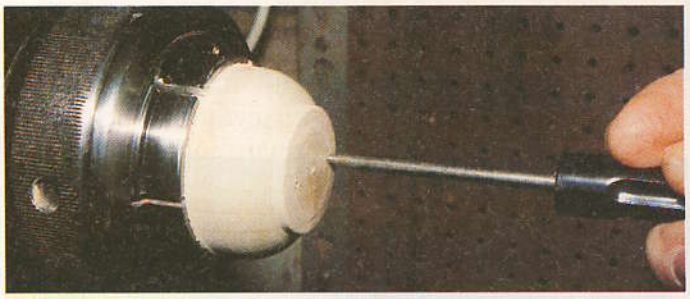


Body

This blank was again mounted in the 2in. collet chuck and roughed down to a cylinder. I marked a circle 1in. from the end and turned one side of a bead to form the bird's breast. I then observed the grain pattern so that a pear shaped image would appear on the bird's sided to simulate wings. On the underside two holes were drilled 3/4in. apart again with a 5/32in. drill to take the legs. To assist with this the chuck was held using an index device.

A parting cut was now made 4in. from the front of the bird down to a 3/4in. diameter and the best part of the body shaping was carried out while there was still some support. This allowed to sand and seal most of the body before carrying out final shaping of the tail and parting through.

I used two special wooden components made up to fit into the body of my combination chuck to hold the body of the bird in the chuck for finishing the tail. (Incidentally this device is ideal to hold eggs for final finishing.)

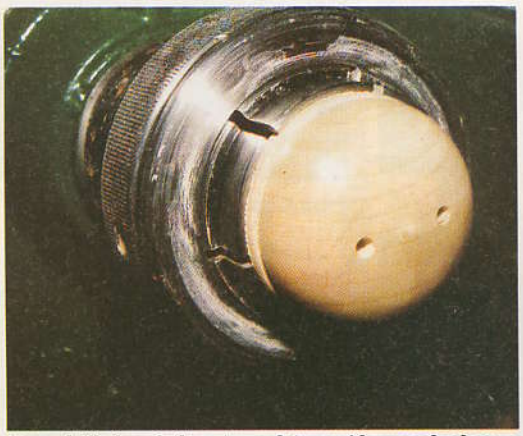


Base marked and pierced with bradawl ready for drilling.

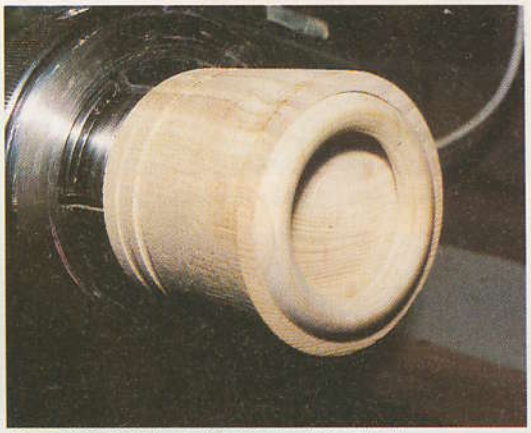
Legs

The leg blanks after initial cutting from the block were mounted in a Nova chuck fitted with the 25mm jaws. Using the tailstock for support I roughed down to 1/2in. diameter then shaped up the legs as shown to be 5/32in. diameter bulging out slightly at the 'knees' to be1/2in. diameter.

Due to the delicacy of these spindles, some form of support behind the leg is essential when turning. As you can see in the photograph I use the first finger of my hand supporting the tool blade on the rest behind the leg. This is a useful technique and essential when turning thin components such as lace bobbins.



Base drilled and then turned to avoid ragged edges.



Neck ring held in box lid type jam chuck.

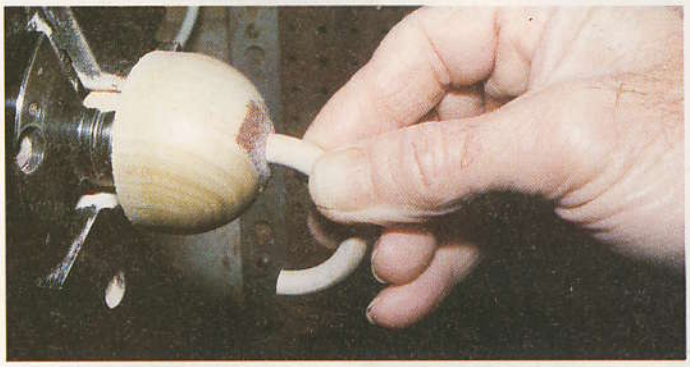
Head

I again mounted the block for this in the 25mm jaws and roughed down to 3/4in. diameter. Shaping was followed by sanding, sealing and parting off. I next drilled a suitable hole in the remaining block to jam chuck the beak into, using toilet tissue to prevent marking, and refined the back of the head.

Initial concavity formed with 1/4in. drill.

Assembly

The legs were first assembled with the base making sure that the knees were level and the grain matching. Next I fitted the body to the top of legs. The positioning of the neck was the most difficult part and had to be done by trial and error. As it turned out the hole for the copper wire turned out to be approximately 3/8in. above the centre point of the breast. The neck was then stuck at an angle of approximately 30 degrees using gap filling super glue with a setting time of 30 seconds. Finally the head was attached to the neck so that the beak touched the body, again using the same glue as before. The effect was to give the appearance of wading birds when roosting.



Sanding concave end of neck with sanding jig.

Plinth

A separate piece of timber is required for the base, and I cut mine to give a blank 5in. diameter by 2 1/2in. thick. Three holes as shown at A, B and C as in Figure 2 are required for mounting on a screw chuck. These were drilled 1/2in. deep. To assist in this, the drill can be marked with masking tape to indicate depth.

The blank was initially turned on centre A and the outer edge completely finished. Next I mounted on centre B and, with the lathe speed set at its lowest setting, the raised portion of the plinth was

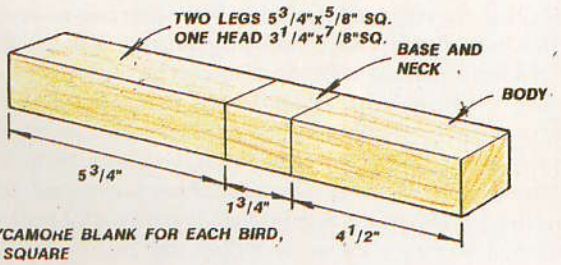
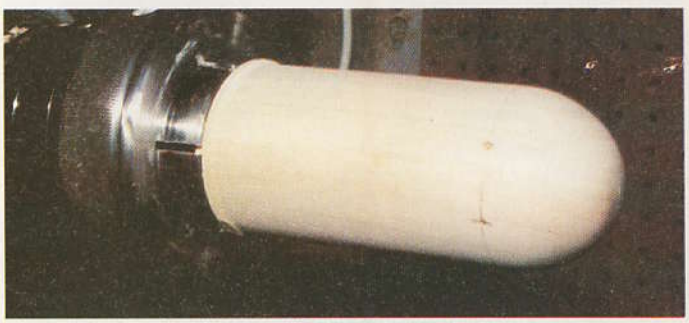
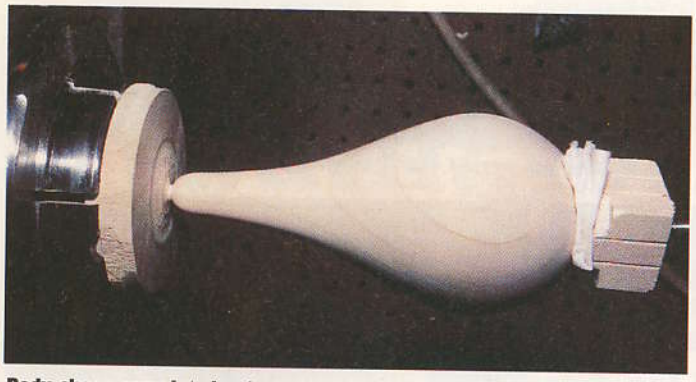


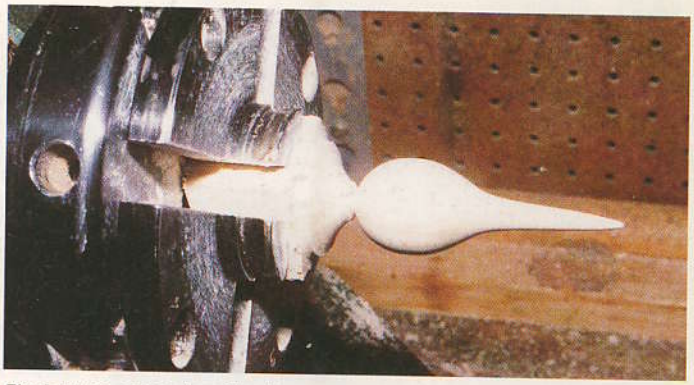
FIG.1. SYCAMORE BLANK FOR EACH BIRD, 12" x 2" SQUARE



Body shaped for bird breast and leg holes marked.



Body shape completed prior to parting off.



Final shape of head and beak.

Jig for holding egg shaped objects inside combination chuck.

Body reversed in turning jig for finishing the tail.

Shaping leg with finger support from behind.

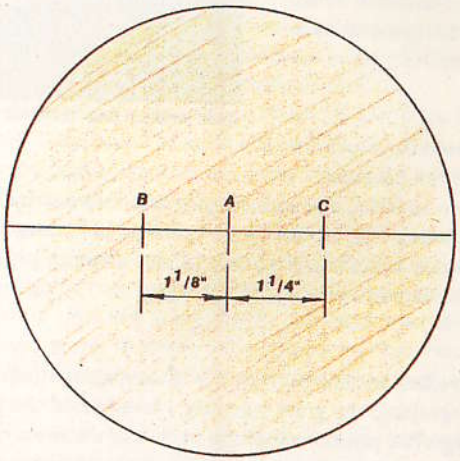


FIG.2. SYCAMORE BLANK WITH OFFSET CENTRES FOR PLINTH BLANK 5"Ø x 2 1/2" THICK

shaped. Great care has to be taken with this turning using a 3/8in. bowl gouge very sharp and taking thin cuts before sanding and sealing. Some hand sanding was also necessary. Finally the blank was mounted on centre C to make a small 2in. diameter recess for the other bird.

I completed the turning by re-centering on A and parting off 3/4in. from the base down to 3/4in. diameter, before stopping the lathe and cutting the last 3/4in. with a saw. The base was then finished with power sanding discs. To give a final presentation the birds and plinth were given a very thin coat of Renaissance wax and hand polished.

Conclusion

My competion entry was in fact the second pair of birds that I made, and the experience gained from the first pair enabled me to perfect small details such as hollowing the neck ends, drilling holes for the legs and then making finishing cuts to give no ragged edges around the holes. The shape of the legs, head and beak were also refined. Now if I was to attempt a third version I can only think of improving with pyrography or carving to give more detail.

I can heartily recommend competition work to anyone. It is a great incentive to produce the very best work you can. If you are successful the thrill is tremendous, if not then perhaps the next time.