

Kokeshi Dolls

by Bill Lane



The inspiration for this project (Photo.1) came from a set of three Kokeshi Dolls (Photo.2) which my wife purchased during an Asian cruise. Upon our return the wooden dolls found a resting place on our lounge cabinet. While enjoying a pre-dinner drink one evening, I decided that duplicating the dolls would make an interesting project.

Having worked out the design, I moved to the workshop where I turned my first doll. I gave it to the local Village Arts club to paint and decorate. The members were impressed with the doll and soon I had orders for five more.

Design

Traditional Kokeshi dolls come from the northern part of Japan. They are characterised by an oversized head, simple trunk and no arms or legs. Creative Kokeshi Dolls, such as those in Photo.2, have been made since World War II, mostly in Gunma prefecture further south. On these dolls the body is more shapely, the hair is a feature and the trunk design is a brightly coloured kimono instead of a floral pattern.

On the original dolls, the two halves of each doll are held together with a piece of elastic anchored to the inside of both the head and the body. I settled for a dif-



Photo.1: The author's Creative Kokeshi Dolls

ferent system, using a wooden peg with an oversized upper flange. This still permits rotation at the neck joint, like the original.

My early dolls were all the same size. However, for the set described in this article I chose to vary the dimensions. Rather than produce three different plans, I cleaned up my original plan (Fig.1) and photocopied it at 90% and then copied the photocopy at 90%. The dolls were made from measurements taken directly from the full sized template so there was no need to work out three sets of figures.

The following sections describe how to make the largest doll. The procedures are the same for the smaller dolls; only the dimensions are changed.

Photo.2: The original set of Creative Kokeshi Dolls



Hair

Take a blank 65mm x 65mm x 100mm long, mount it in a scroll chuck and turn it down to a 60mm dia. cylinder.

Drill a 40mm dia. hole, 15mm deep, in the tailstock end of the blank to accept the head (Photo.3).

Hollow out the blank to a depth of about 45mm as shown in Fig.1, leaving a shallow rebate on the side of the recess to locate the head. The hollowing out reduces the weight of the hair, ensuring that the finished doll is not top heavy.

Reverse the blank and drill a 3mm dia. hole, 8mm deep, in the top of the hair to take the dowel that will secure the bow (Photo.4).

Reverse the blank again and shape the lower curve of the hair, reducing the edge of the hair down to a finished diameter of 50mm (Photo.5).

Remove the blank from the lathe and secure it upside down in a bench vice. Mark out the face area, ie. 35mm wide x 15mm high, and cut out the waste. I found this step quite fiddly, but achievable, with a small dovetail saw or similar.

Clean up the face opening, working from 120 to 180 grit abrasive (Photo.6).

Mount the blank back on the lathe and turn the top of the hair to shape. I used a 1/2" (12.7mm) skew before parting off (Photo.7).

Alternatively, you can make a jam chuck to suit the hollow in the hair. With the blank reversed and pressed over the jam chuck, it is much easier to form the desired curve of the hair.

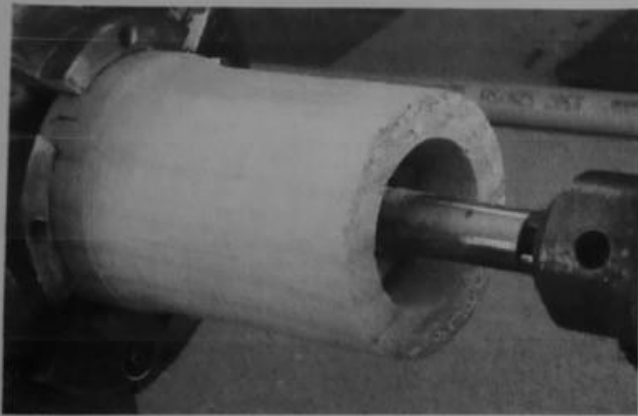


Photo.3: Drilling the hair blank to take the head



Photo.4: Drilling the hair blank to take the dowel for the bow

Head

Mount a blank, 45mm x 45mm x 70mm long, on the lathe and turn it down to a 40mm dia. cylinder.

Drill a 22mm diameter hole in one end, 8mm deep. Then drill a 15mm dia. hole through most of the the blank.

Measure 30mm from the tailstock end. This defines the length of the head.

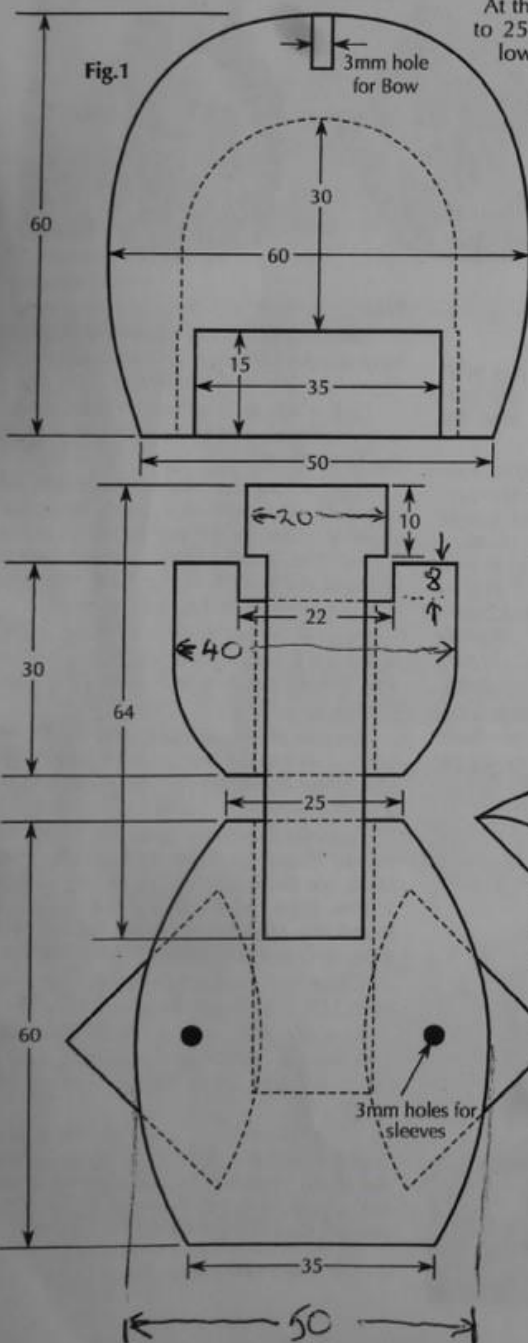
At the pencil line reduce the diameter to 25mm and turn the curve on the lower part of the face (Photo.8).

Lightly sand and part off the head.

at the headstock end and 25mm dia. at the tailstock end, with a 50mm dia. 'waist' and a smooth curve either side of the waist.

Drill a 14mm dia. hole, 40mm deep, in the end of the blank (Photo.10).

Using Photo.1 and Fig.1 as a guide, drill two 3mm dia. holes in the front of the body to take the dowels that will secure the kimono sleeves.



Body

Turn a blank, 55mm x 55mm x 100mm long, down to a cylinder 50mm in diameter.

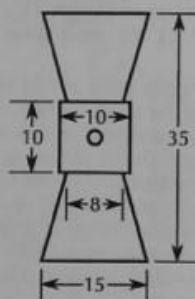
Mark off 60mm from the tailstock end and turn the shape of the body (Photo.9). Reduce the ends to 35mm dia.

Main Dowel

The head is secured to the body with a turned dowel which allows the head to rotate. Measure the combined depth of the hole (in the head and body) and turn a 14mm dia. dowel to suit. Turn a 20mm dia. x 10mm wide flange on the end of the dowel.

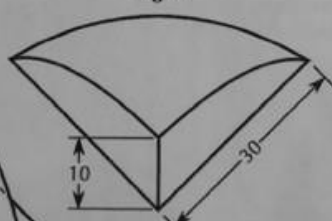
Finish the shaft end first so that you can check it for fit in the body (Photo.11).

Fit the dowel to the head and check that it does not bind, either in the hole or at the flange.



Bow

Fig.2



Sleeves

Sleeves

Start with a blank, 65mm x 65mm, and turn this down to 60mm diameter.

Measure 15mm back from the tailstock end and part down to 20mm diameter. Turn the 15mm wide section to the convex profile shown in Photos.12 & 13 and Fig.2. Sand if necessary to remove any tearout or other irregularity.

Remove the blank from the lathe and mount it in a bench vice. With a fine toothed saw, cut the shape into quarters (Photo.13), ensuring that the cuts penetrate into the narrow section below.

Reposition the blank in the vice so that you can cut off the sleeves. This method gives you four sleeves when you only need two, but you can save the extras for your next set of dolls!

Drill a 3mm dia. hole in the approximate centre of each sleeve for the dowel that will attach them to the body.

Bow

Being so small (Fig.2), the bow is the fiddliest component to turn. I don't have small jaws for my chuck so I improvised with a wooden set. If you do the same, use hardwood since softwood will tend to



Photo.5: Shaping the head

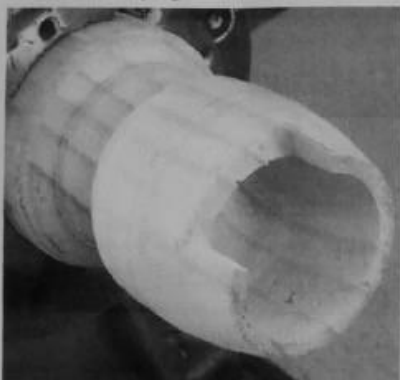


Photo.6: The head after the cut-out has been done

wear and allow the blank to wobble while spinning. Bring up the tailstock to support the blank.

Turn the blank down to 15mm diameter. Mark the length of the bow and the position of the centre knot. With a narrow (3mm) parting tool, turn either side of the knot down to 8mm dia. and form the conical shape out to the ends with a 1/2" (12.7mm) skew chisel.

Reduce the centre knot to 10mm dia.

Drill a 3mm hole in the centre of the knot for attaching the bow to the hair.

Rather than part the bow free of the waste, I chose to cut it free with a fine-toothed saw. Sand the ends flat and to a smooth finish.

Fine Dowels

I made the 3mm dia. dowels by turning a thicker piece of straight grained hardwood, 150mm long, down to the required diameter.

You may need to support the wood against the chisel to prevent the tool from snapping the dowel into two. This can be done by placing the side of your forefinger against the wood on the opposite side of the blank. Only light pressure is required. You can use a leather finger stall to prevent any abrasion on the finger, but

I found this to be unnecessary.

When the dowel is down to the required diameter, cut it into suitable lengths.

Glue an end of a dowel into each of the kimono sleeves and the bottom of the bow. Once the glue has dried, check that the dowels fit easily into the body and hair respectively. Don't worry about the length as some extra length will make them easier to mount for painting (Photo.14).

Painting

Once you have completed the largest doll, use the above instructions to produce the two smaller dolls.

My original idea was to use contrasting woods for the dolls, but in the end, they were made from the same material and fully painted.

The dolls were painted before assembly as painting them later would have been much more difficult (Photo.14). As shown in the photograph, some items such as the sleeves were temporarily supported on improvised stands to make handling them easier.

Only a small amount of paint is required to complete the dolls so I purchased small tubes of Arts & Crafts tints

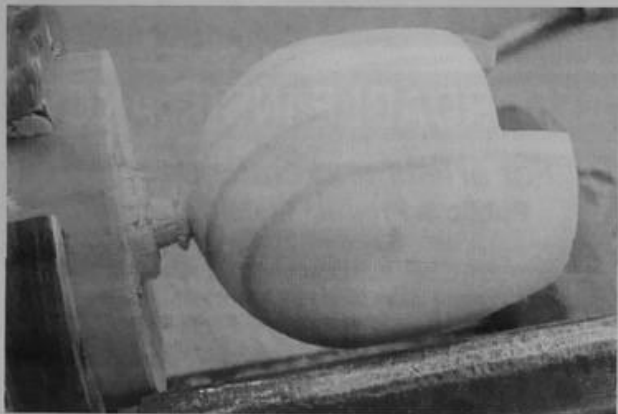


Photo.7: The hair ready for parting off

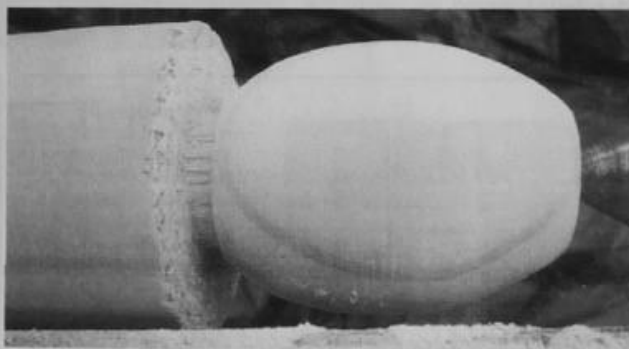


Photo.9: Turning the body



Photo.8: Drilling the head for the connecting dowel and shaping the lower curve of the face



Photo.10: Drilling the body for the connecting dowel



Photo.11: Turning the main connecting dowel



Photo.12: Turning the shape of the sleeves

for the different colours. Each doll was given three base coats, with a very light sand between the layers.

The final decoration was done by the local Village Arts instructor.

Assembly

When the paint has dried and hardened, assemble the dolls with glue.

Apply a little glue to the hole in the body, taking care to ensure that the top of the body is totally free of glue and there is no risk of excess glue being forced up out of the hole when the dowel is inserted.

Attach the head by inserting the connecting dowel through the head and into the body. Check that the head is free to rotate, but is not too loose on the body.

Apply glue to the inside mating surface on the hair and insert the head, ensuring the the painted face is correctly aligned with the cutout in the hair.

Cut the 3mm dia. dowels already fitted to the bow and sleeves to the required lengths. Add a small dab of glue to the dowel and attach these items, ensuring that they are correctly orientated for the desired finished appearance.


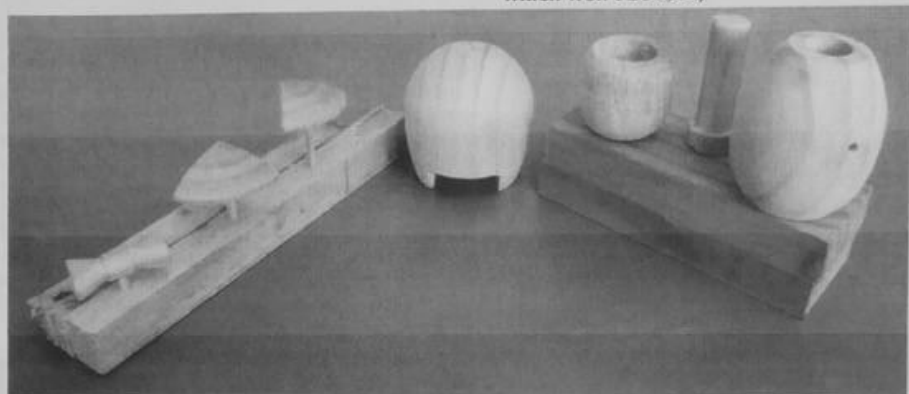
If everything has gone to plan, you should now have a lovely set of Kokeshi Dolls, to keep or give away. 

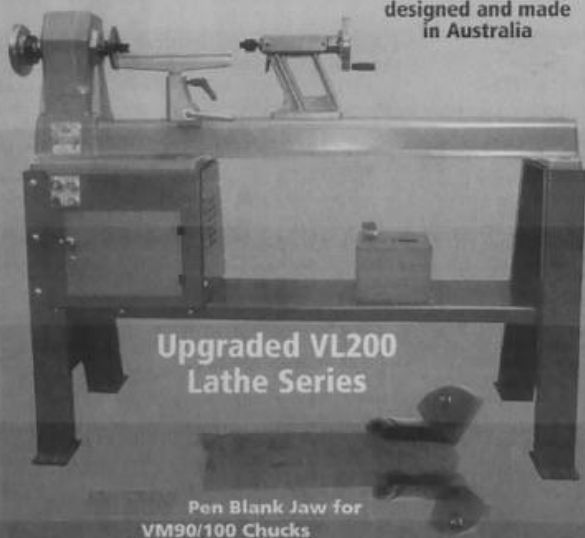


Photo.13: Cutting the shape into quarters to form the sleeves

Photo.14: The various components of one doll ready for painting (excluding the connecting dowel on the right which won't be seen)



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