



The Ball and Claw Foot

Mary May

The Ball and Claw foot has its origins in Chinese mythology, expressing the balance between the opposing forces of good and evil in a dragon's claw clutching a pearl (fig. 1). The pearl, representing wealth, good luck, and prosperity is caught by the dragon who grasps it in its desire for power and enlightenment.

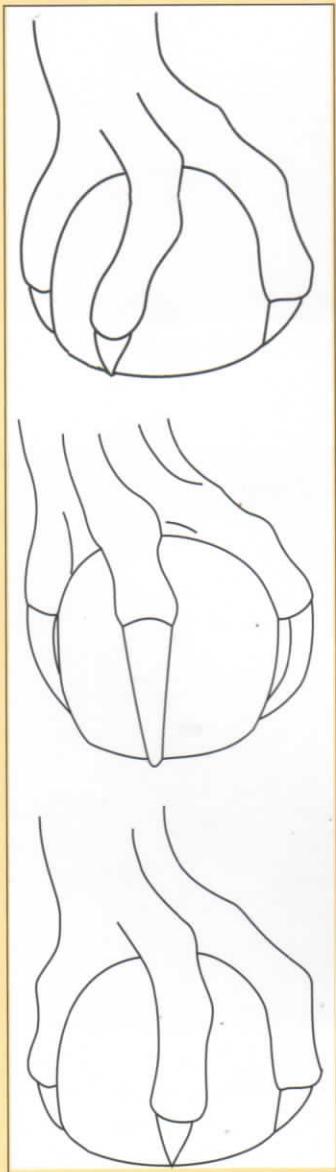


Figure 2 Regional differences in ball and claw feet are emphasized in the oblique views. From top, Boston, Newport, and Philadelphia.



Figure 1 Detail of the flag of the *Qing* Dynasty which ruled China from 1644 until 1912. *Wikimedia*

The Dutch and English began incorporating this historic design into their furniture in a period from about 1710 to the 1740s, as the symbolism of order, balance and symmetry were coming into favor in Baroque furniture designs.

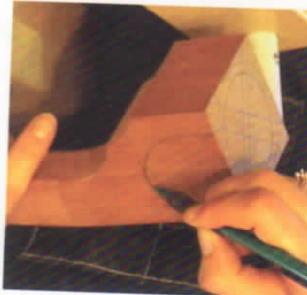
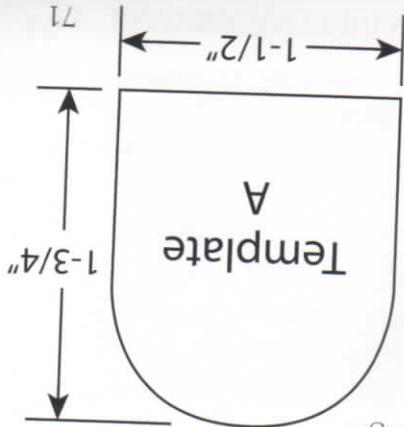
While ball and claw feet were being replaced with the French Rococo style feet, such as the scroll or whorl feet in England, they were gaining popularity in American furniture designs in the 1740s. The use of ball and claw feet became popular with the Chippendale and Queen Anne style of American furniture where it is incorporated with the cabriole-shaped leg. The claw image closely resembles the feet of birds of prey, such as eagles, hawks and falcons.

In the Colonies, the styles of ball and claw feet vary greatly from region to region (fig. 2). In Boston, the side talons bend backward slightly, forming a triangle from the side view (fig. 3). In Newport, a vertical egg-shaped ball with undercut talons or claws was favored (fig. 4). In New York, the ball appears squared with a softened definition of the talons. In Philadelphia, a more detailed, rounded ball is common.

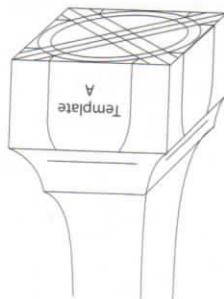
Carving the ball and claw foot can be a straight-forward process if you follow the steps and guidelines presented here. One thing that helps to guide you through this process is having the reference lines drawn on the bottom of the foot. Be sure to complete each carving step as cleanly as possible before going on to the next step, as this simplifies the process and sets you up to complete the subsequent steps. The following text with step by step images describes how I carve a Philadelphia ball and claw foot using the tools specified on page 74.



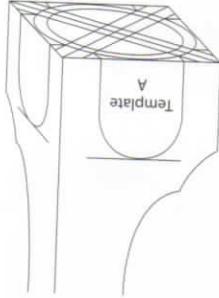
Figures 3 & 4 Pedigreed paws. Examples of a Boston ball & claw (L) by Phil Lowe, and a Newport variation by Al Breed.



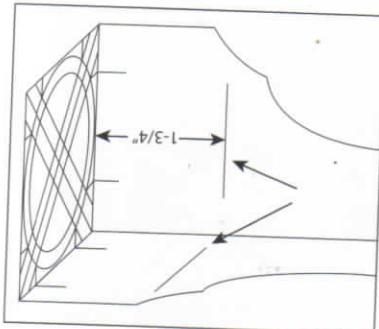
Front sides



Back sides



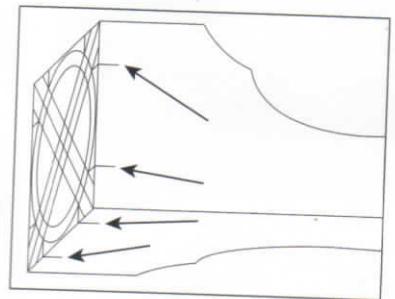
STEP 5: Cut out template "A".
STEP 3: Extend lines up all 4 sides of the foot $\frac{1}{4}$ ".
STEP 4: Draw a line $1\frac{3}{4}$ " up the side of the foot on all 4 sides. These lines are where your first V-cuts will be. This line also locates where the ball meets the edge of the ball. This is where the leg profile begins.
STEP 2: Draw extension lines made in STEP 3 and place each edge on the $\frac{1}{4}$ " extension lines made in STEP 3 to accurately position it in the center of each side of the foot. Trace around the template to locate where the ball will curve around to meet the edge of the foot. Trace around the ball to each side of the foot. On a half-circle at the top. On the front 2 sides, only draw the vertical lines up to the first saw cut. The reason for this is the template will become distorted as it folds over the sawed edge.



STEP 4: Draw a line $1\frac{3}{4}$ " up the side of the foot on all 4 sides. These lines mark the height of the foot. These lines will join with the ball and where the height of the template "A" will reach in the next step.

go in STEP 5.

These lines are where your first V-cuts will be. This line also locates where the ball meets the edge of the ball. This is where the leg profile begins. Note that based on a Chippendale chair. Sizes and profiles vary greatly depending on the particular piece of furniture.

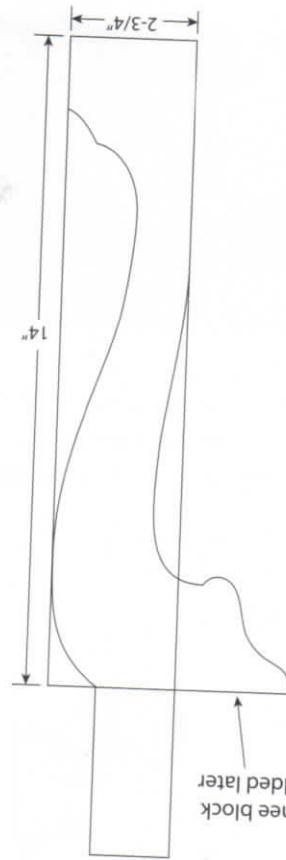
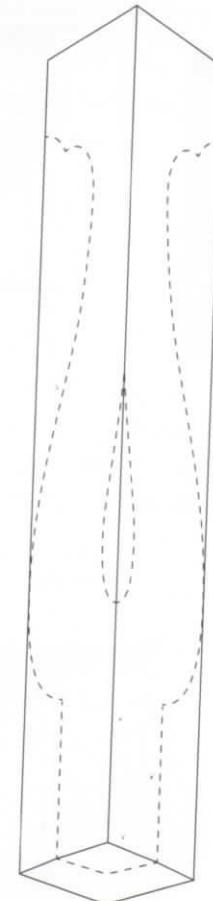
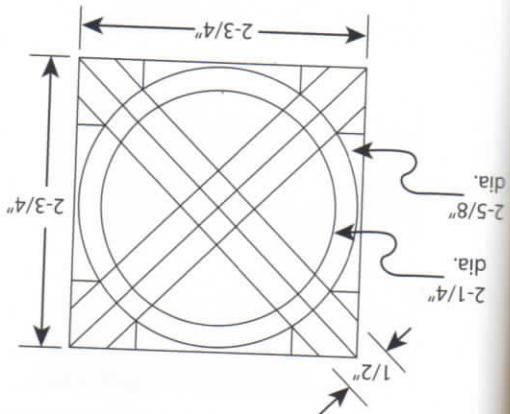


STEP 3: Extend lines up all 4 sides of the foot $\frac{1}{4}$ ".

How to Carve a Philadelphia Style Ball and Claw Foot

STEP 1: Saw out the main profile of the leg on the band saw. The knee block is added later. Note that the illustration shown is a basic cabriole leg shape based on a Chippendale chair. Sizes and profiles vary greatly depending on the particular piece of furniture.

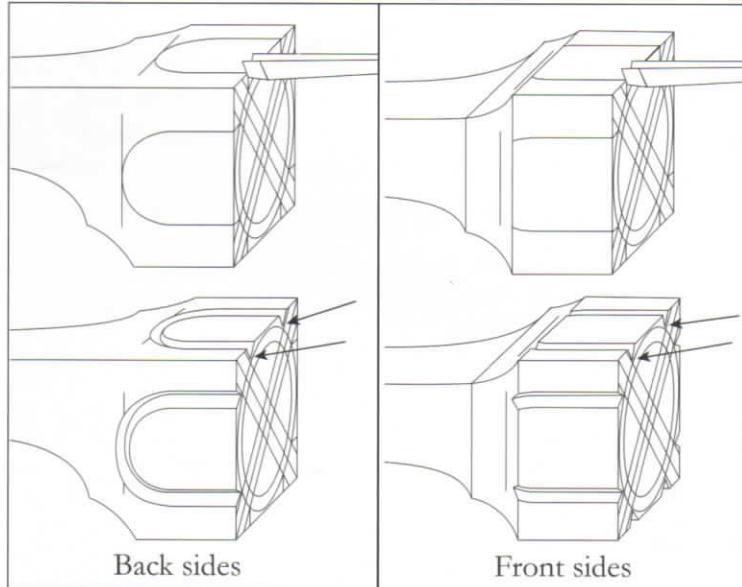
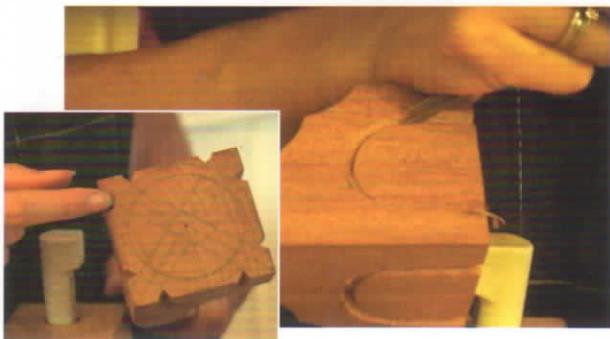
STEP 2: Draw all guidelines on the bottom of the foot. The bottom of the foot is where the widest part of the ball will be. The outer circle is on the underside of the ball. The inner circle (smaller) is where the ball will be rounded down to the foot. The bottom of the foot is where the widest part of the ball will be.



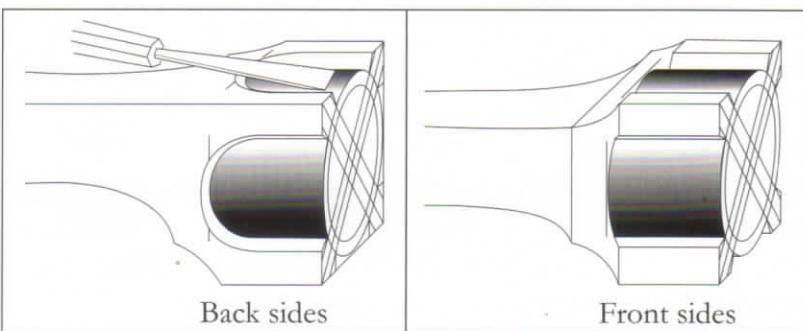
knee block
added later



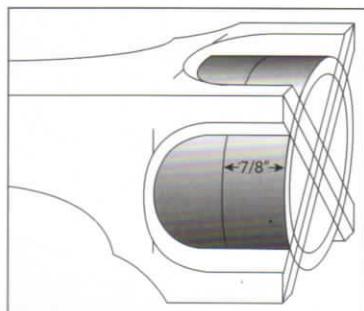
STEP 6: With a 6mm v-chisel, make a $\frac{1}{4}$ " deep cut so that the corner of the v-chisel cuts directly on the line that was drawn in STEP 5 (template "A"). This is the intersection of the larger circle and the line that locates the edge of the talon.



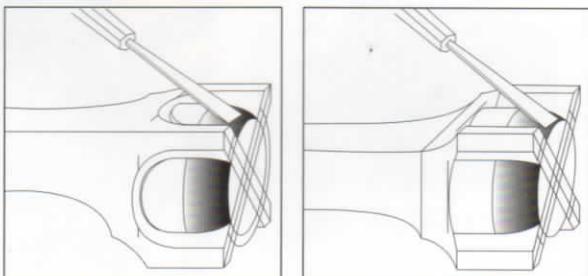
STEP 7: With a #1, 14mm flat chisel (or #3, 14mm if it does not dig in at the corners), round over edges of ball to create a cylinder shape. The size of the cylinder should match the larger circle drawn on the bottom of the foot. While you are carving this section, also carve and define the edge of the talons to make the width of the talons $\frac{1}{2}$." You can base this off the drawings on the bottom of the foot.

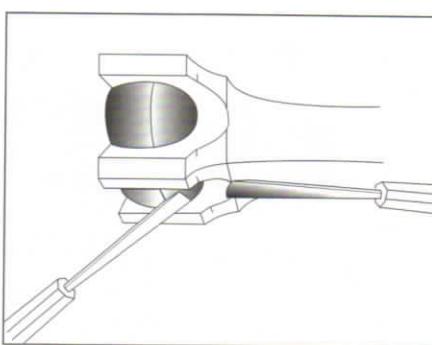
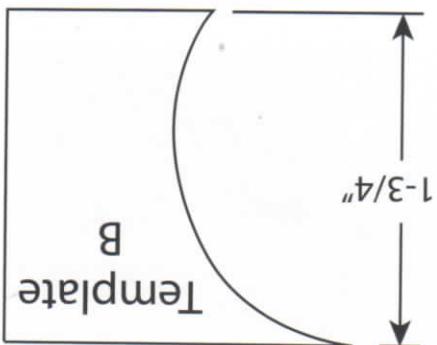


STEP 8: Draw a line $\frac{7}{8}$ " up from the bottom of the ball on all 4 sides of the newly carved cylinder. This will locate the midpoint of the ball. The rounding over of the ball will be based on this line. Everything below this line will round down toward the bottom of the foot and everything above this line will round over the top of the ball.

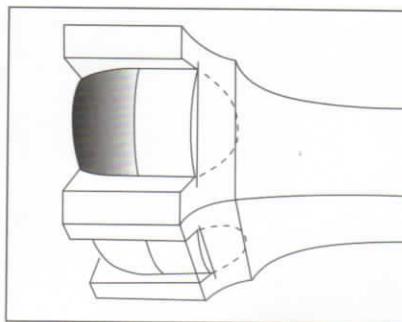


STEP 9: Continue using the #1, 14mm flat chisel to round over the bottom of the ball. Start $\frac{1}{16}$ " from the midpoint line drawn in STEP 8 and gently curve the ball over until it touches the smaller circle drawn on the bottom of the foot.

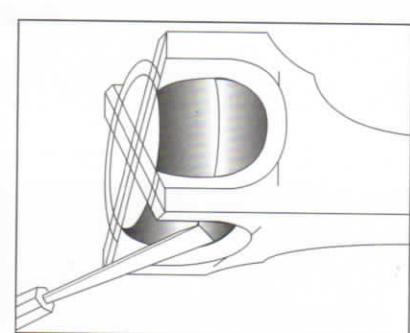
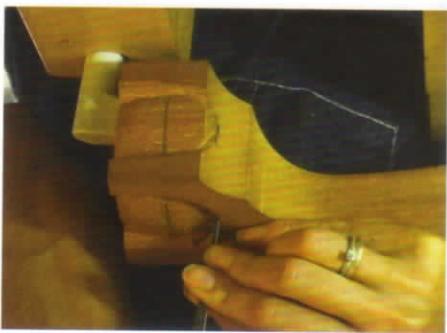




STEP 12: This next step is probably the most difficult. You will be using your #1, 14mm flat chisel, a #7, 14mm gouge, and a #3, 6mm gouge. Start rounding over the upper side of the ball with a #1, 14mm. Next, with the #7, 14mm and #3, 6mm gouge. Make a straight down cut (this is defining the edge of the web) until it meets with the flat chisel. You will need to take small amounts away each time until there is a nice clean corner where is a nice clean time to make a straight down cut. Make sure and meets the ball rounds over and meets the web. Make sure this corner is at the 1-3/4". Help make sure the curvature of the front sections of the templets meet at the top corner of the ball. Line the bottom corner of the ball. Position template "B" along the edge of the ball. Line the bottom corner of the ball. Position template "B" on a piece of thin cardboard. Cut out template "B". Cut out template "B" correctly, cut out template "B". The top corner should meet at the web.



STEP 11: On the front 2 sections, draw a line that extends from where the v-cuts ended in STEP 6 (at the first corner band saw cut) and curves around to the corner of the second band saw cut. This will be the location of the edge of the web for the front 2 sections.

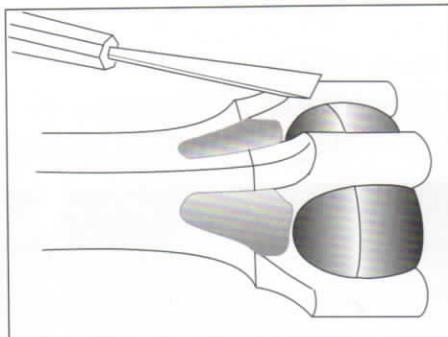


STEP 10: With your #1, 14mm flat chisel, round over the top of the ball in the back 2 sections only. Make sure that the corner where the top edge of the ball meets the edge of the web is at the 1-3/4". Line you drew in STEP 4. Use a #7, 14mm gouge to make a cut that defines the top edge of this curve. View the foot from all angles to make sure each section of the ball looks like it joins with the next section of the ball on the other side of the ball.

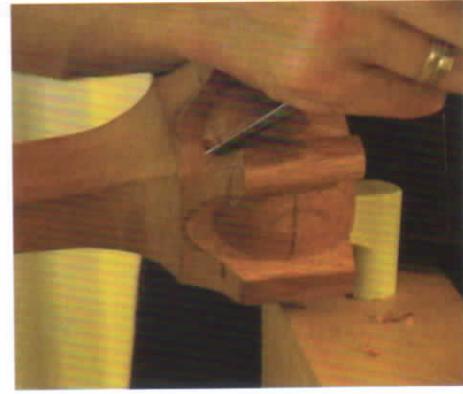
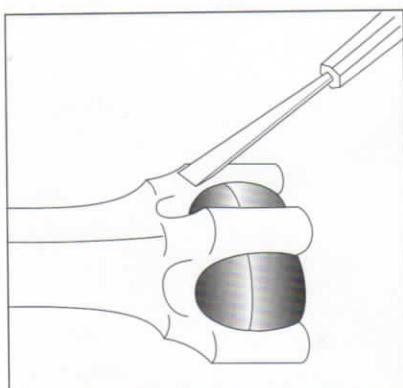




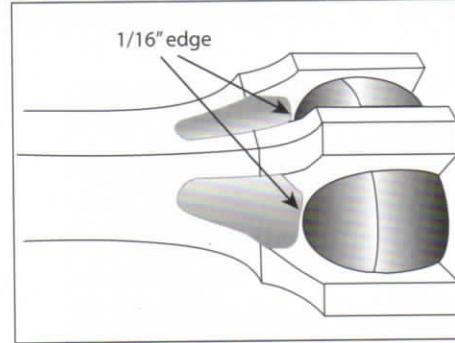
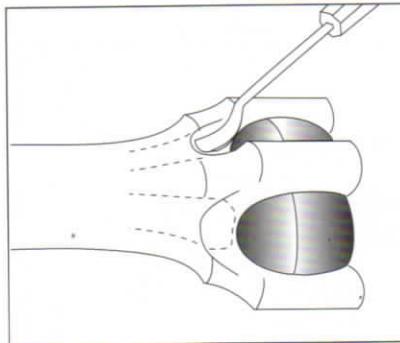
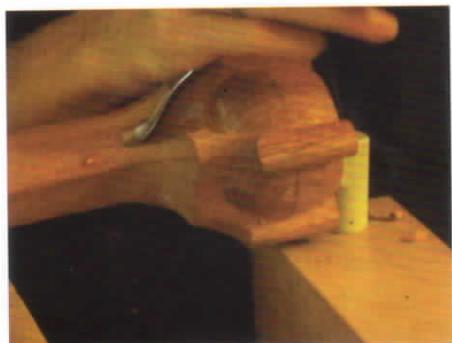
STEP 13: With the #1, 14mm flat chisel or #3, 14mm, round over each lower section of the talon into a tube shape. Make sure they are all the same size ($\frac{1}{2}$ " thick).



STEP 14: With the #1, 14mm flat chisel or #3, 14mm, round over the upper 2 sections of the talons. These will have a gentle curve that follows the saw cut curve.



STEP 15: With a #8, 10mm spoon bent gouge, hollow out the front web section between the dotted lines shown. Let this cut gently blend and flow into the ankle area. Be careful not to go too deep and create a hole. Leave a $\frac{1}{16}$ " edge where the web meets the ball.



CLAW & BALL TOOL LIST

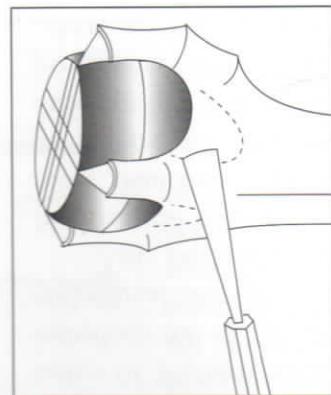
Mallet
6mm v-chisel (60°)
#1, 14mm flat chisel
#3, 6mm
#3, 14mm
#7, 14mm
#8, 10mm spoon bent
Fishtail-shaped gouges are preferable

STEP 16: With a #1, 14mm, round the upper sections of the talons in the web area. This should have the appearance of skin flowing tightly over tendons. The upper part of the center talon area should feel very much like your achilles tendon.

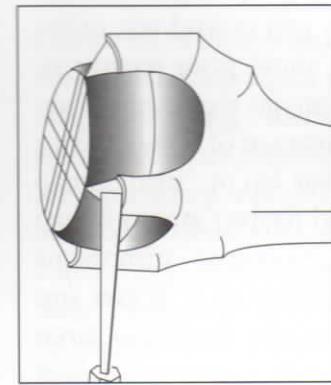
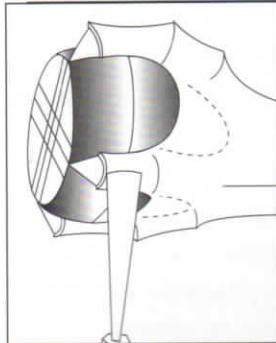


U.S., and at her workshop in Charleston. She teaches at a variety of schools and locations throughout the U.S. and has recently started an online video woodcarving school casts and has released many instructional woodcarving DVDs, study and designs. May sells commissioned pieces for arborists, furniture makers, making on commission pieces for arborists, SC. She works and has a professional workshop in Charleston, SC. She works woodcarving with several master carvers from around the world, May has studied the fine art of traditional woodcarving with several master carvers from around the world.

ABOUT THE AUTHOR

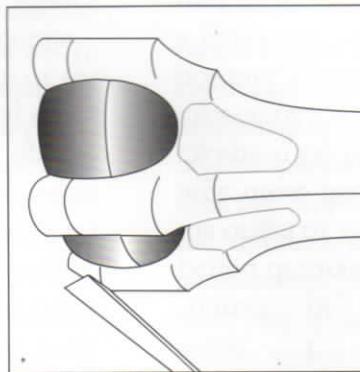
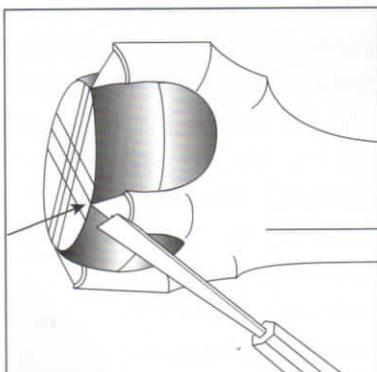


remove chisel marks, etc. and sand lightly to lower edges of talons, points such as knuckles, Finally, soften any sharp into the back of the leg. This should gently flow on the back 2 sections, underside of the web 14mm, round the STEP 21: With a #7,

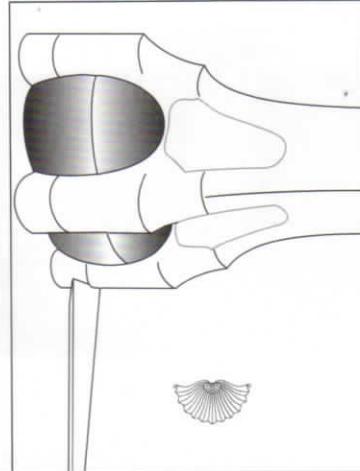


the gouge needs to be very sharp. This is cutting directly across the grain, so knuckles. Of the talons so there is a gentle curve between the and the claw, carve sideways across the grain.

STEP 19: To define the step that separates the talon and the claw, curve sideways across the grain.



with the smaller circle drawn on the bottom of the foot. STEP 18: With the #1, 14mm, carve the claws down to a point. Make sure these are carved so the point joins



claw (see STEP # 19). Step here that divides the talon and the whole talon. There will be a $\frac{1}{16}$ " deep around the talon and the beginning of the claw. Make this cut about $\frac{1}{16}$ " deep around the talon and the end of the talon and the beginning of the claw. This is the end of the tube-shaped talon. This is the bottom of the cut $\frac{1}{2}$ " up from the bottom of the talon and the beginning of the claw.

STEP 17: With the #1, 14mm, make