



Above: Tools and materials: gourd riffer rasps, straight rasp stick (*beriba* wood), piano wire, leather scraps, 1.25-inch nails, hammer, saw, old tire (an optional source of wire)

Right: Test *beriba* wood and find the flexibility to see if it will hold the pitch. If it's too weak, it won't hold the pitch and will continue to bend. If it's too strong, it can't be bent.



Berimbau

Materials

stick—6 feet long
(*beriba* wood or ash
preferable)
piano wire—7 feet
nails
small leather pieces
gourd—6-inch diameter
palm oil or leather dye
cotton string

Tools

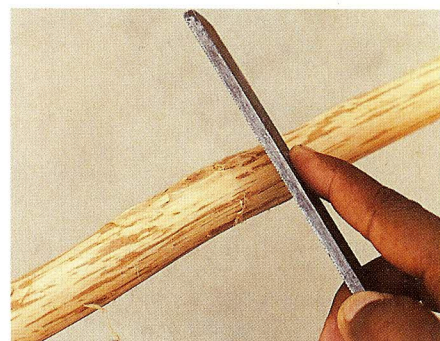
saw
hammer
files
sandpaper
scissors



Make the initial cut for the foot (*pe*) of the *berimbau* and mark the notched end with a saw cut.



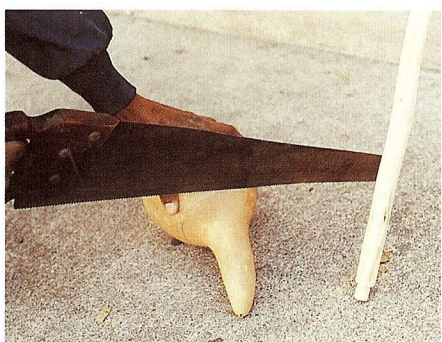
Use a rasp to cut and shape the foot. Make a distinct wall for it.



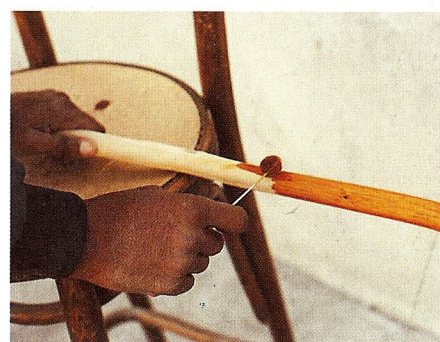
Smooth the edges of the head of the *berimbau* so it's rounded and protects the sides from splintering. Scrape away the hairy bark fibers that would otherwise clog the sandpaper. Use a rasp to shave down any knots and finish removing bark.



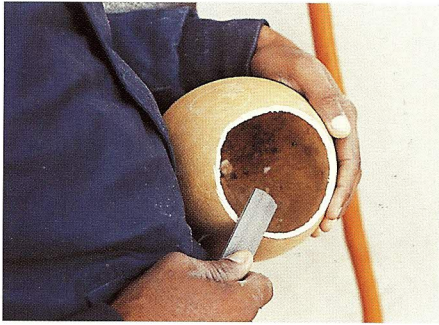
Sand the wood with coarse sandpaper (80-grit), followed by 120-grit. Do a final sanding with 220-grit (extra-fine) sandpaper.



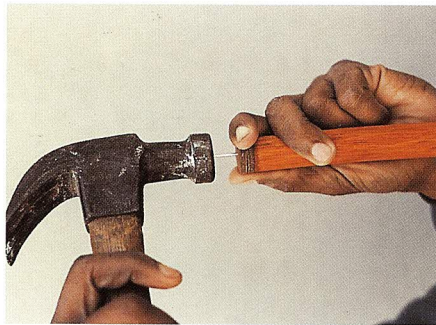
Cut the gourd to fit the *berimbau*. Sometimes the top of the gourd can be used for a smaller *berimbau* of higher pitch (*viola*).



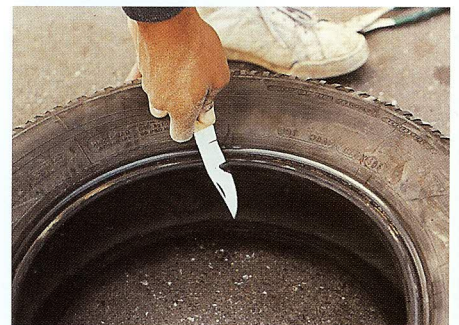
Stain the wood.



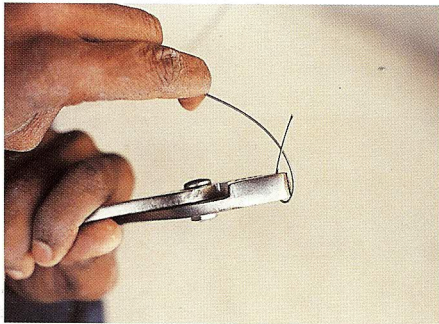
Use a file to smooth the edges of the gourd



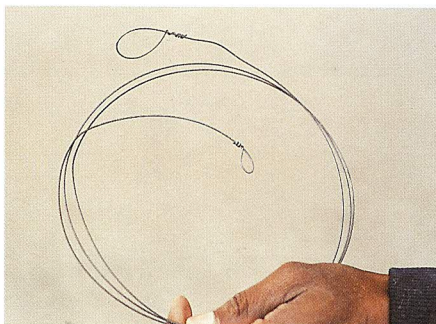
A leather circle is used to protect the wood from the wire string cutting into it. (Also, without the leather the instrument will have a more metallic sound.) Glue the leather to the wood. Nail two 1.5-inch brads through the leather into the wood to keep the leather from spinning.



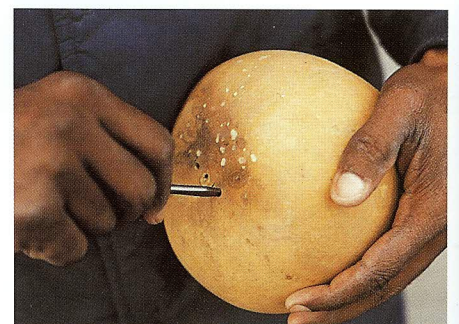
The traditional Brazilian way of obtaining wire for a *berimbau*, using a sharp hunting knife to remove several rounds of wire from an old tire, a very difficult and dangerous process. Hours of scraping rubber off the wire will still be necessary even after the wire is freed.



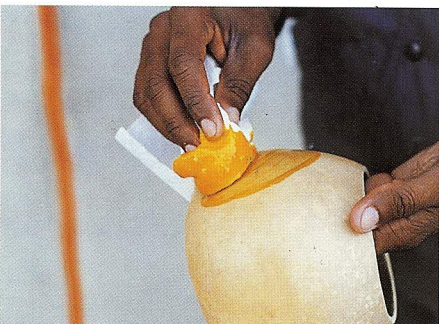
Bend a loop in one end of the piano wire just large enough to go over the tenon of the foot of the *berimbau*. Twist the end of the wire around the base of the loop to hold it in place.



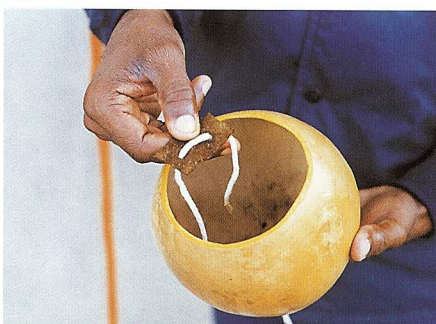
Make a smaller loop at the other end of the wire.



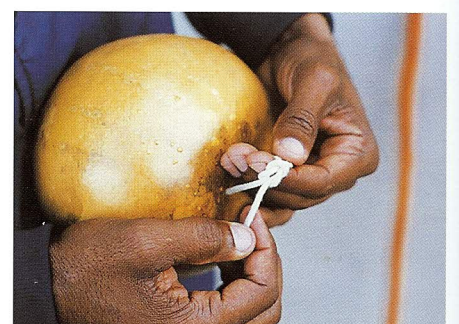
Place the stick on the bottom of the gourd and make two holes in the gourd on either side of the stick. Sand slightly to flatten the stick about six inches where the gourd will be attached, so as much surface area as possible of the stick is touching the gourd.



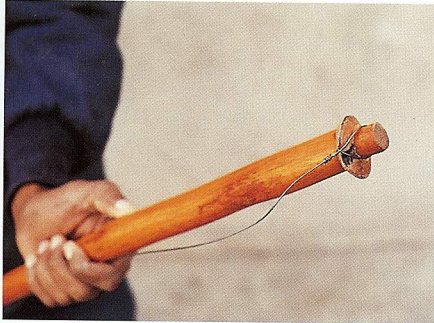
Oil the gourd with red palm oil (*ten ten tai*) or decorate it.



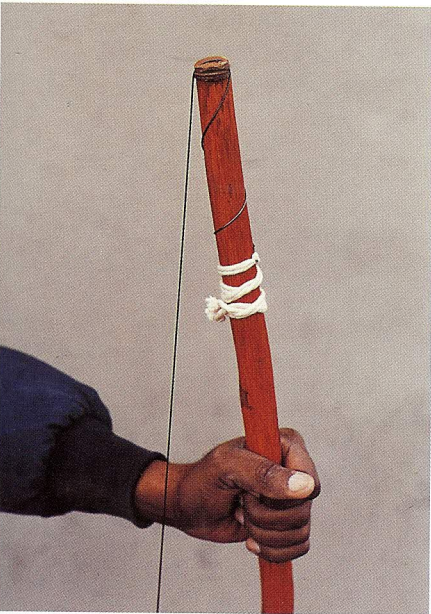
Pass the string through two holes in a piece of leather on the inside of the gourd. The leather protects the gourd from splitting from the pressure of the string.



Pass the string through the two holes in the gourd and make a loop on the back of the gourd that will allow just three fingers to pass through. The loop should be big enough for the gourd to fit over the stick, and there should be a little space so you can manipulate the stone against the wire. Tie the ends of the string with a square knot.



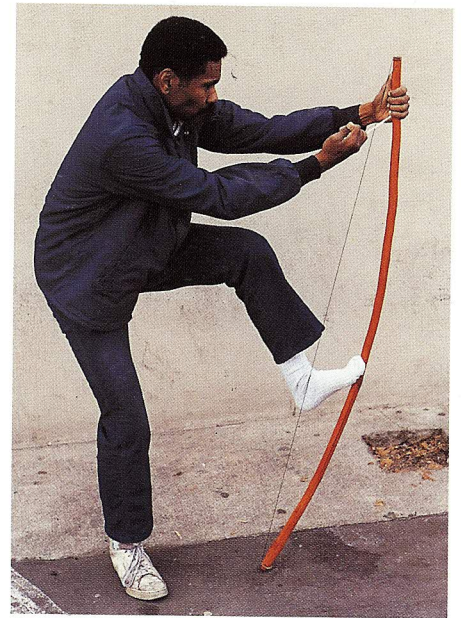
Attach a 24-inch length of string to the small loop in the wire. To attach the wire to the stick, slip the leather washer over the tenon to protect the wood, then the large wire loop over the tenon on the foot.



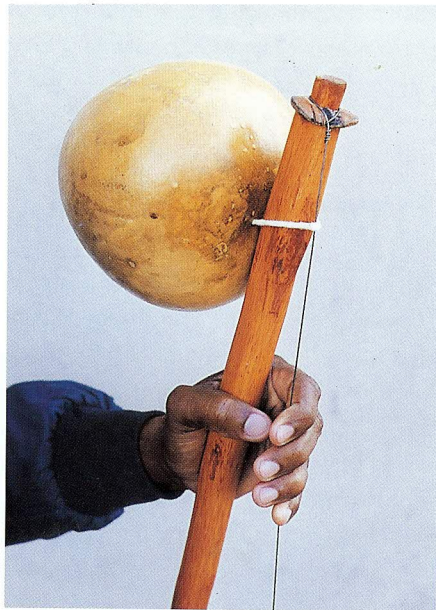
Bring the wire down and wrap it around the stick and then continue to wrap the string around the stick with a half hitch to set the wire in place. To secure it, continue to wrap the string around the stick and then finish it off with another half hitch.



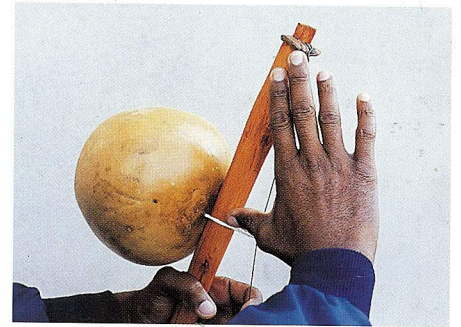
Bring the wire over the leather nailed to the head of the *berimbau* and down the back of the *berimbau*. Use your thigh to help bend the wood. Don't overbend or you'll break the stick.



Another way to bring the wire over the leather and down the back of the *berimbau*. Use your foot to get the stick to bend sufficiently. Be careful not to overbend and break your stick.



About one hand length from the end is the preferred position for the gourd in *Capoeira*. In West Africa the gourd might be found at the middle of the bow. Some performers like to put the gourd in such a position on the wire that the tone of the string is an even octave above the tone on the other side of the gourd.



Slip the string loop at the bottom of the gourd around the foot of the *berimbau*. Squeeze the wire and *berimbau* together so you can slide the gourd on. Always squeeze the wire to adjust the position of the gourd for the pitch.

Tip: When you first make the *berimbau*, don't bend the wood too much, or the tone will be in the lower register. Leave the *berimbau* strung at this tension for a week. Afterward, loosen the string and restring it a little more tightly. In this way your wood will adjust gradually to the tension and not crack as a result of being overbent initially.