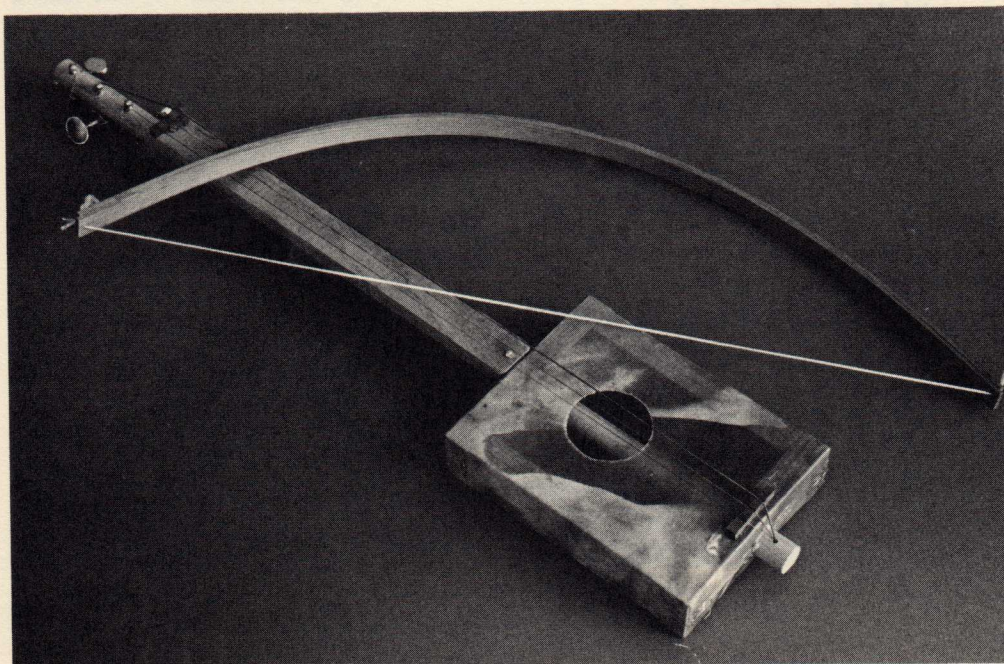


Rawhide Violin

Bowed instruments need not resemble a Stradivarius violin. Invent your own and you won't play second fiddle to anyone!



MATERIALS

Wood, 1" x 1 $\frac{3}{4}$ " x 38", for sound box and fingerboard
 Rawhide to cover sound box
 8 nails for making frame
 Tacks or staples for attaching rawhide
 Hammer
 Saw
 Drill
 26" of $\frac{5}{8}$ " dowel
 3 machined heads (purchase at a music store)
 Guitar strings or nylon fishing line (at least 25-lb. test)
 Knife
 Hardwood for bridges: one $\frac{3}{4}$ " x $\frac{1}{4}$ " x 1 $\frac{1}{4}$ "; one $\frac{1}{6}$ " x $\frac{1}{4}$ " x 1 $\frac{1}{4}$ ".
 1 piece of wood, 28" x $\frac{1}{4}$ " x $\frac{1}{2}$ ", for bow
 1 spool 100% cotton thread for bow strings
 Pencil
 Rosin
 2 screws

TO MAKE VIOLIN

1. Make a box out of the 1" x 1 $\frac{3}{4}$ " wood. (Our box is 7 $\frac{1}{2}$ " x 5 $\frac{1}{2}$ ".) With the saw cut 2 pieces of wood 7 $\frac{1}{2}$ " long and 2 pieces 4" long. Nail the frame together (A).
2. Soak rawhide for at least 1 hour in cool water, until soft.
3. Cut rawhide with scissors to a size large enough to wrap completely around wood frame.
4. With tacks, hammer rawhide to one edge of frame (B).
5. Pull rawhide completely around frame and overlapping first row of tacks and pulling tightly, tack in place (C).
6. Cut a corner out of the rawhide so that the edge will lie flat (D). Fold over frame and tack in place.
7. With a drill and $\frac{5}{8}$ " bit, drill a hole centered through each of the narrow ends of the box. With a knife, cut a sound hole in the raw-

- hide about 3" in diameter, 3" from one end and centered between the sides (E).
8. Cut the $\frac{5}{8}$ " dowel to a 26" length and insert it through the holes in the box, leaving 1" at one end for attaching the strings (F).
 9. Cut a piece of wood 1" x $1\frac{3}{4}$ " x 14" for the fingerboard. Drill hole on each end of fingerboard. Center board on dowel, with one end against sound box. With pencil, mark position of fingerboard holes on dowel. Remove board; drill holes in dowel to match those in fingerboard. Drill holes the size of the machined heads in dowel, at end above fingerboard. Screw fingerboard in place. Insert machined heads (G).
 10. Drill a hole in the dowel at the opposite end of the fingerboard and insert all three strings. If necessary, knot ends (H).
 11. From the hardwood make two bridges, one $\frac{1}{6}$ " x $\frac{1}{4}$ " x $1\frac{1}{4}$ ", the second $\frac{1}{4}$ " x $1\frac{1}{4}$ " wide x $\frac{3}{4}$ " in the center slanting to $\frac{1}{2}$ " on the sides. With a knife (or file), make 3 evenly spaced notches on the top of each bridge (I). Glue arched bridge on the rawhide box near the string end and the other bridge at the end of the fingerboard near the machined heads (see diagram). Dry thoroughly.

12. Place strings over bridges and attach to machined heads, making sure that the strings go over the sound hole.

TO MAKE BOW

13. Take the 28" x $\frac{1}{4}$ " x $\frac{1}{2}$ " piece of wood and cut a notch in the center of each end.
14. Measure 50 bow lengths of cotton thread. Tie together in a knot in one end and slip through notch in bow. Bend the bow (to measure length), make a knot in the other end of the cotton thread and slip through notch (J). The string should be taut. Use rosin on the bow.

TO PLAY

Hold the violin against your left upper arm, tuck it under your chin, or hold it between your knees. The left hand fingers the strings and the right hand holds the bow.

