

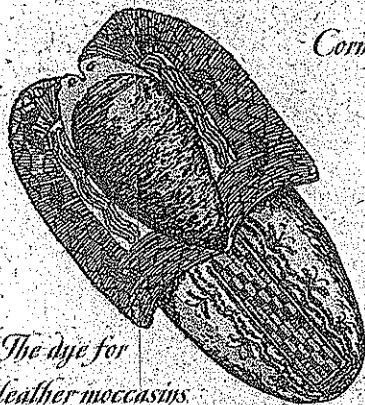
8

INDIAN



HANDCRAFTS

HOW TO CRAFT DOZENS OF PRACTICAL OBJECTS
USING TRADITIONAL INDIAN TECHNIQUES



The dye for leather moccasins was made from bark, leaves, or woodland flowers. The shoes were then decorated for ceremonial purposes, with quillwork, beads, or paint.

Corn-husk Doll



Triangular



Tapered Arrowhead



Leaf

Flint—hard and glasslike—was the stone most favored to carve arrow points from.



The Iroquois wooden false-face mask was said to have curative powers over illness or injury.



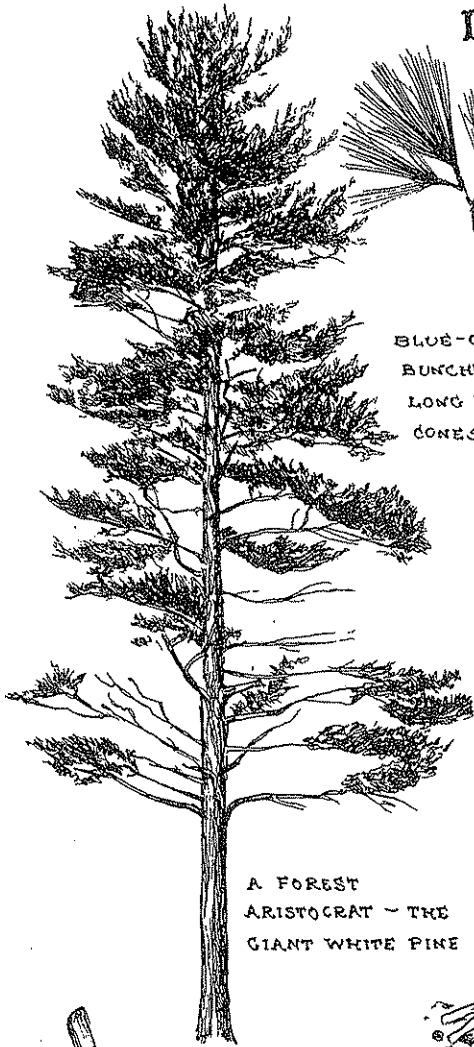
C. KEITH WILBUR, M.D.
REVISED EDITION

DUGOUT CANOES

The native Americans were astounded at the size of the early European sailing ships. Where, indeed, did trees grow to such a gargantuan size—large enough to hollow a vessel of such proportions?

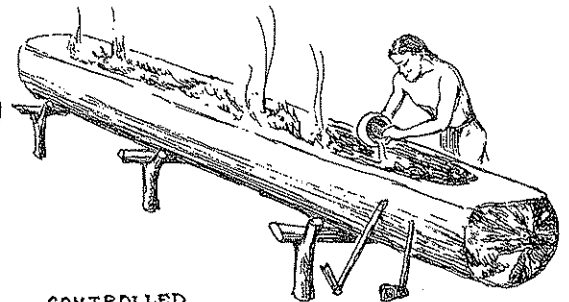
William Wood, in his 1634 New England's Prospect, described the dugout as made of pine "burned hollow, [then] scraping them smooth with clam shells and oyster shells, cutting their outsides with stone hatchets. These boats be not above a foot and a half or two feet wide and twenty foot long."

It is difficult to imagine these white-pine giants being felled, trimmed, and hollowed by burning—and the char being chipped away with primitive tools. Yet experienced craftsmen could trim the sides to within $\frac{3}{4}$ inch and could completely shape and finish an average canoe in just three weeks.



A FOREST ARISTOCRAT - THE GIANT WHITE PINE

BLUE-GREEN NEEDLES IN BUNCHES OF FIVE, WITH LONG TAPERED PINE-CONES.

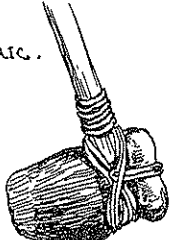


CONTROLLED BURNING AND AXING AWAY THE CHAR ULTIMATELY LEVELED THE PINE. THE TOP AND BRANCHES WERE REMOVED IN LIKE MANNER TO GIVE A TRUNK OF THE DESIRED LENGTH. SUPPORTS RAISED THE PIECE TO A WORK-ABLE HEIGHT.

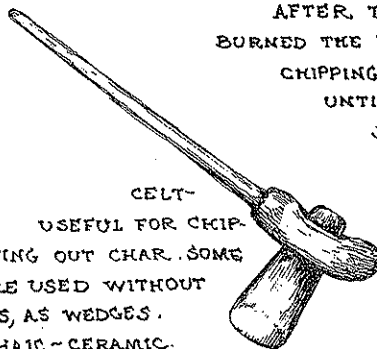
AFTER THE BARK WAS STRIPPED FREE, A FIRE BURNED THE TOP DOWN TO THE GUNWALES. CHIPPING AND SCRAPING THE CHAR CONTINUED UNTIL THE INSIDE WAS HOLLOWED. THE JUDICIOUS USE OF WATER SNUFFED OUT ANY FLAMES THAT MIGHT EAT INTO THE DUGOUT'S SIDES AND BOTTOM.

HATCHET - WILLIAM WOOD NOTED IN 1634 THAT THE INDIANS FINISHED THEIR DUGOUTS BY "CUTTING THEIR OUT-SIDES WITH STONE HATCHETS." LATE ARCHAIC - CERAMIC.

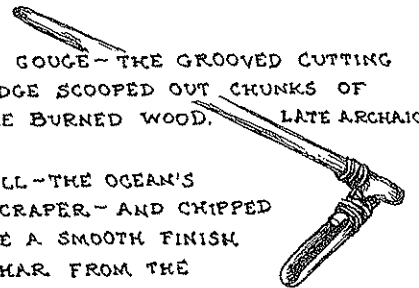
GROOVED AX - A HEFTY PIECE OF STONE THAT COULD FELL A TREE WITH THE HELP OF FIRE. LATE ARCHAIC.



CELT - USEFUL FOR CHIPPING OUT CHAR. SOME WERE USED WITHOUT HANDLES, AS WEDGES. LATE ARCHAIC - CERAMIC.

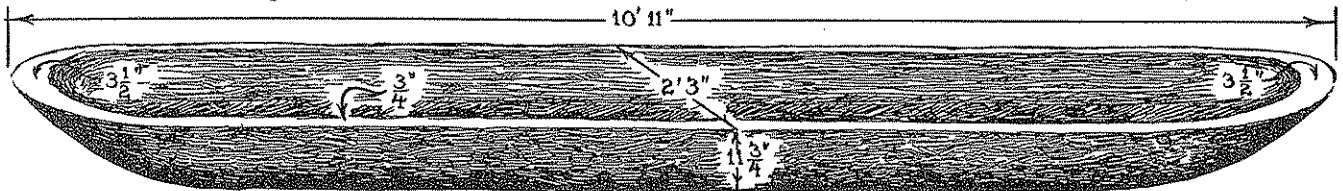


GOUGE - THE GROOVED CUTTING EDGE SCOOPED OUT CHUNKS OF THE BURNED WOOD. LATE ARCHAIC.



QUAHOG SHELL - THE OCEAN'S READY-MADE SCRAPER - AND CHIPPED STONE SCRAPERS GAVE A SMOOTH FINISH BY REMOVING RESIDUAL CHAR FROM THE INSIDE OF THE CANOE.

Ancient descriptions cannot compare with actually SEEING a 500-year-old dugout. In 1965, a severe drought had reduced much of the Great Pond reservoir to muck at Weymouth, Massachusetts. The discovery of the decade began when a group of boys chanced upon a protruding chunk of water-soaked wood. Armed with shovels, they gradually exposed an extremely rare Algonquian dugout canoe, preserved in the mud bottom since A.D. 1450. Now safely displayed in the Tufts Library at Weymouth, the canoe stands as a monument to the ancient art of burning and scraping a seaworthy craft from a log.

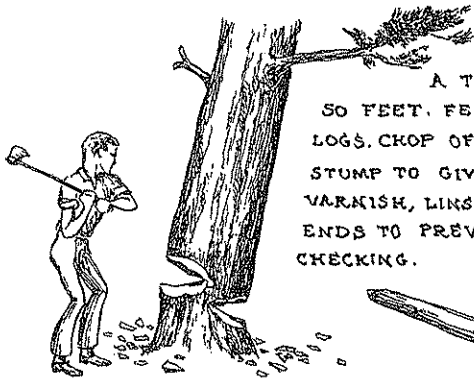


APPROXIMATE MEASUREMENTS OF WEYMOUTH DUGOUT - "MASSACHUSETTS ARCHAEOLOGICAL BULLETIN"

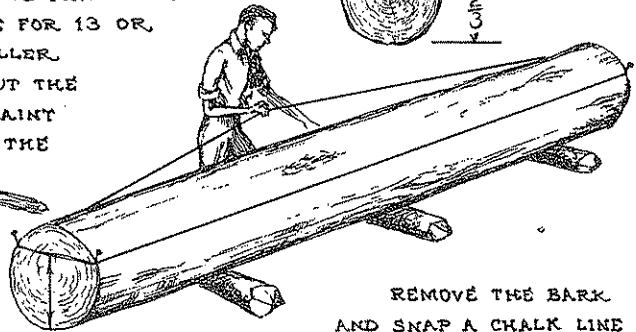
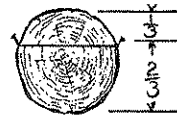
OCTOBER 1968

REPRODUCING THE DUGOUT

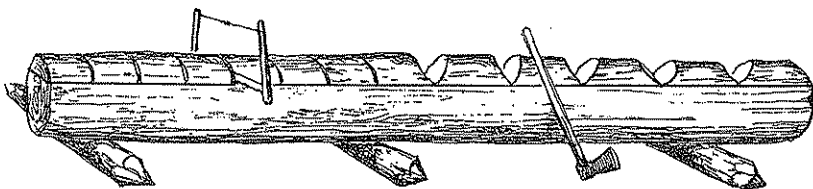
Ever since the Weymouth discovery, I hankered to see if a dugout afloat handled more like a log than a canoe. A twentieth-century copy was the answer. It happened that a nearby white pine - just the dimensions of the drawing above - had been struck by lightning. A logger friend dropped the trunk off at my back yard. I attacked the giant with some typical colonial tools. You may wish to burn and scrape in the old way - or even to be ultramodern with a chain saw - your choice.



SELECT A STRAIGHT WHITE PINE WITH A TRUNK FREE OF BRANCHES FOR 13 OR 50 FEET. FELL IT ON A BED OF SMALLER LOGS. CHOP OFF THE BRANCHES AND CUT THE STUMP TO GIVE AN 11-FOOT LENGTH. PAINT VARNISH, LINSEED OIL, OR SHELLAC ON THE ENDS TO PREVENT CHECKING.

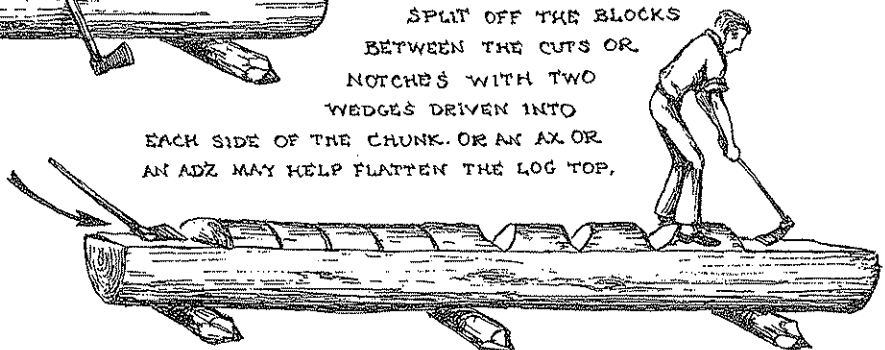


REMOVE THE BARK AND SNAP A CHALK LINE TWO-THIRDS OF THE WAY FROM THE LOG BOTTOM. USE WET CHARCOAL DUST ON THE CHALK LINE IF THE CHALK IS DIFFICULT TO SEE.

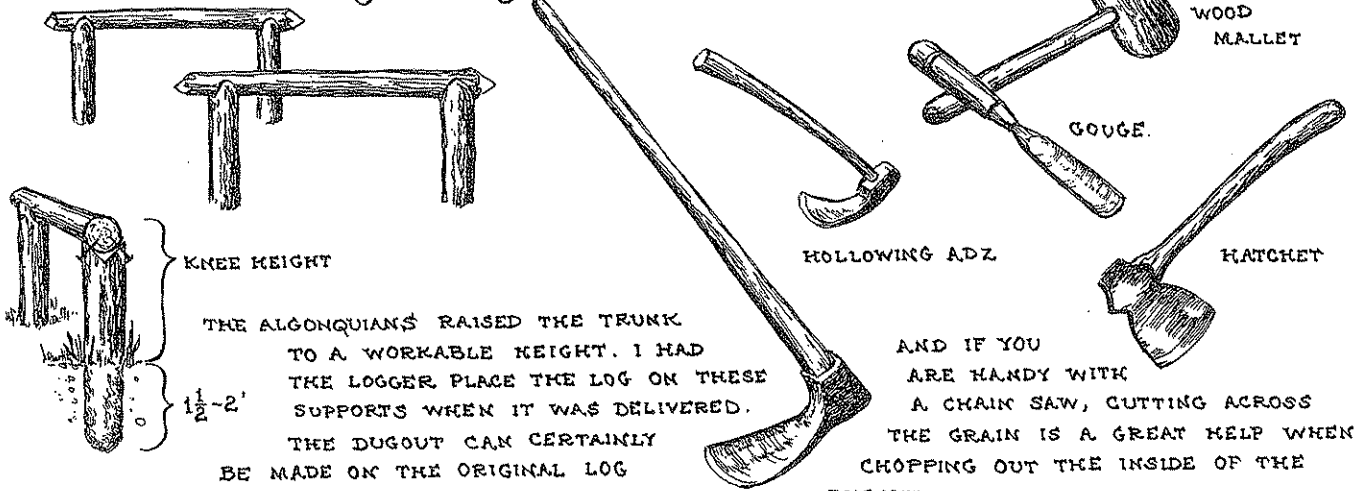


CUT DOWN TO THE CHALK LINES WITH A SAW. SPACE CUTS ABOUT 8 OR 9 INCHES APART, OR CUT NOTCHES DOWN TO THE CHALK LINES. MAKE NOTCHES ABOUT 12 INCHES APART.

SPLIT OFF THE BLOCKS BETWEEN THE CUTS OR NOTCHES WITH TWO WEDGES DRIVEN INTO EACH SIDE OF THE CHUNK. OR AN AX OR AN ADZ MAY HELP FLATTEN THE LOG TOP.



Before hollowing the dugout, consider these helpers:



KNEE HEIGHT

THE ALGONQUIANS RAISED THE TRUNK TO A WORKABLE HEIGHT. I HAD THE LOGGER PLACE THE LOG ON THESE SUPPORTS WHEN IT WAS DELIVERED.

THE DUGOUT CAN CERTAINLY BE MADE ON THE ORIGINAL LOG BED, LAID AT THE TIME OF FELLING.

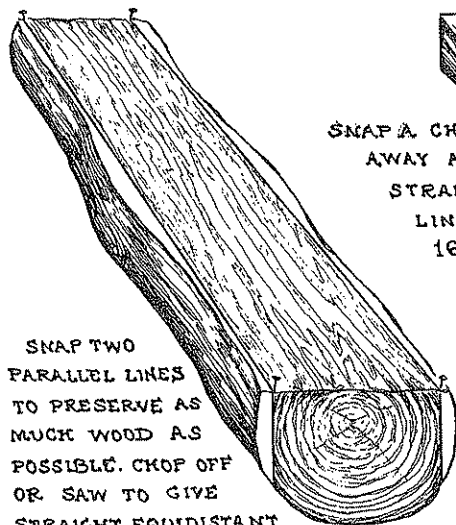
HOLLOWING ADZ

GOUGE.

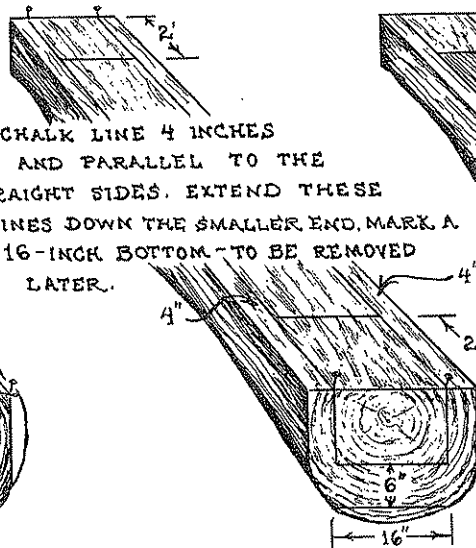
WOOD MALLET

HATCHET

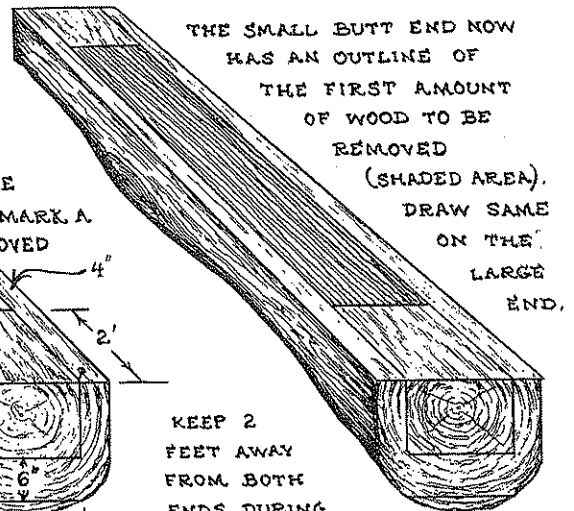
AND IF YOU ARE HANDY WITH A CHAIN SAW, CUTTING ACROSS THE GRAIN IS A GREAT HELP WHEN CHOPPING OUT THE INSIDE OF THE DUGOUT.



SNAP TWO PARALLEL LINES TO PRESERVE AS MUCH WOOD AS POSSIBLE. CHOP OFF OR SAW TO GIVE STRAIGHT, EQUIDISTANT SIDES.



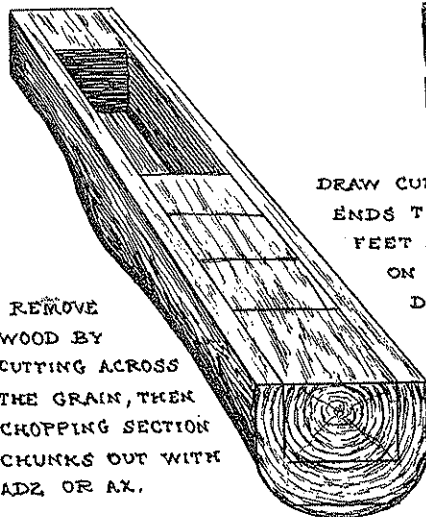
SNAP A CHALK LINE 4 INCHES AWAY AND PARALLEL TO THE STRAIGHT SIDES. EXTEND THESE LINES DOWN THE SMALLER END. MARK A 16-INCH BOTTOM TO BE REMOVED LATER.



THE SMALL BUTT END NOW HAS AN OUTLINE OF THE FIRST AMOUNT OF WOOD TO BE REMOVED (SHADED AREA).

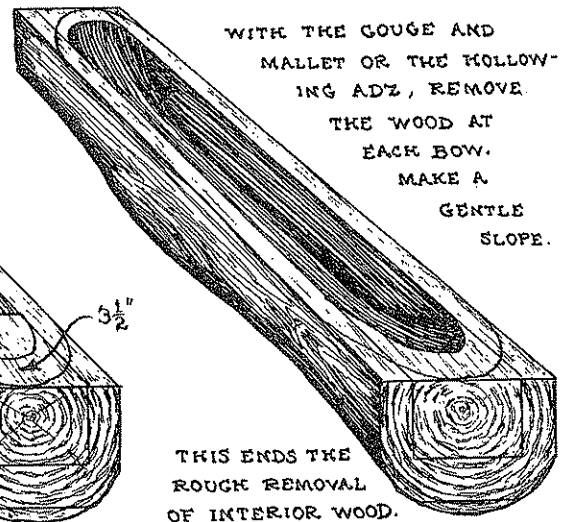
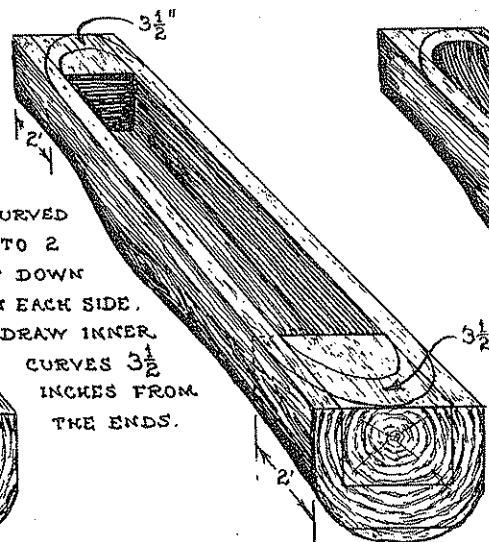
DRAW SAME ON THE LARGE END.

KEEP 2 FEET AWAY FROM BOTH ENDS DURING THE ROUGHING OUT.



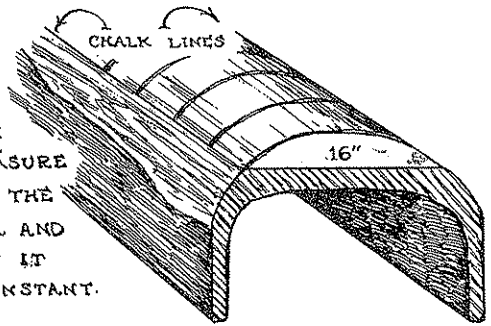
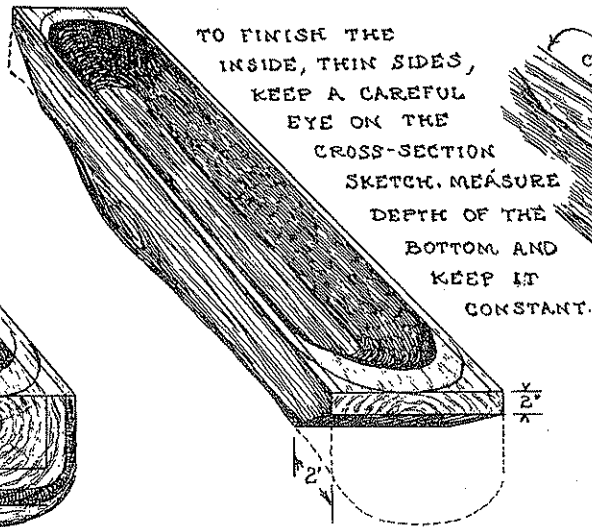
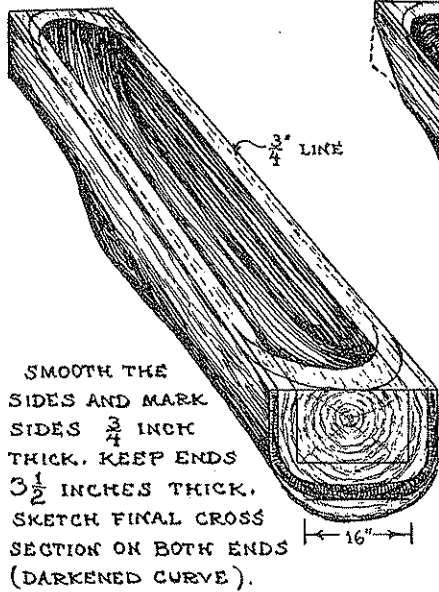
REMOVE WOOD BY CUTTING ACROSS THE GRAIN, THEN CHOPPING SECTION CHUNKS OUT WITH ADZ OR AX.

DRAW CURVED ENDS TO 2 FEET DOWN ON EACH SIDE. DRAW INNER CURVES $3\frac{1}{2}$ INCHES FROM THE ENDS.

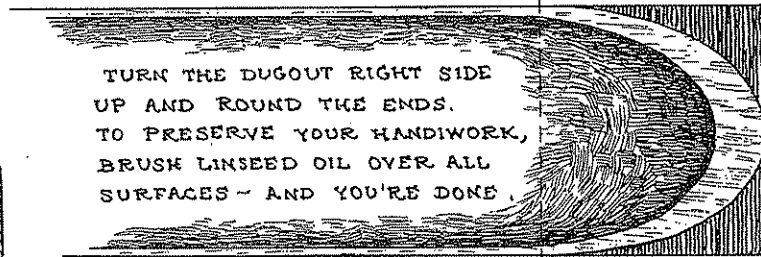
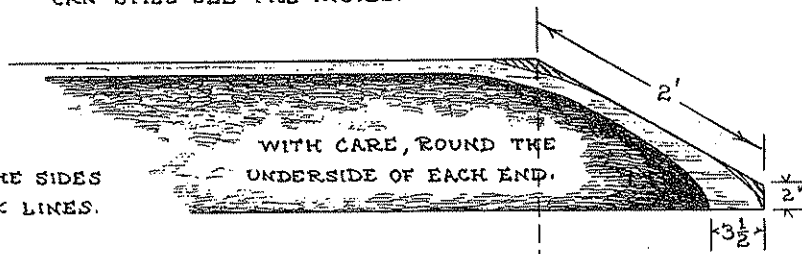
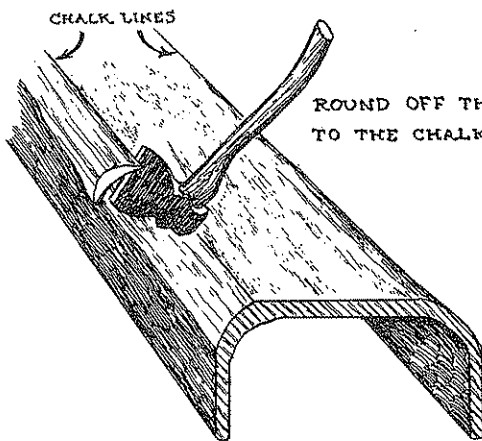


WITH THE GOUGE AND MALLET OR THE HOLLOWING ADZ, REMOVE THE WOOD AT EACH BOW. MAKE A GENTLE SLOPE.

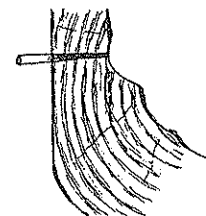
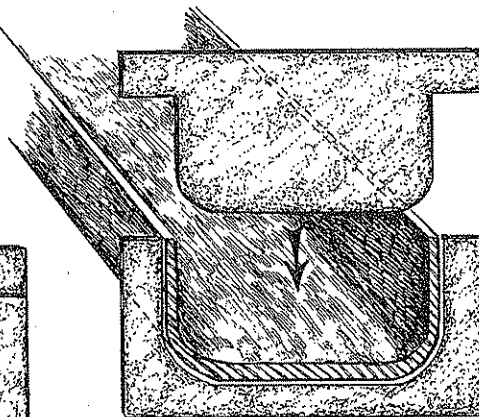
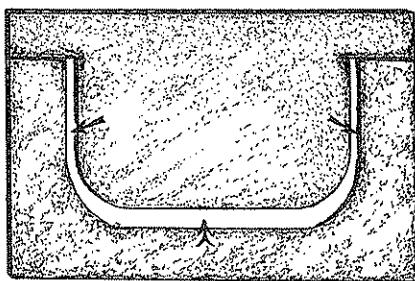
THIS ENDS THE ROUGH REMOVAL OF INTERIOR WOOD.



CUT BOW SLANT WHILE YOU CAN STILL SEE THE INSIDE.



CONCERNED THAT DIGGING OUT THE DUGOUT MIGHT CHOP HOLES THROUGH THE SIDES OR BOTTOM? YOU MIGHT TRY THESE TWO IDEAS TO AVOID MAKING A LEAKY WOODEN BATHTUB.



CUT OUT A CARDBOARD PATTERN TO FIT YOUR PARTICULAR LOG. CUT OFF $\frac{1}{8}$ INCH EXTRA ON INSIDE AND OUTSIDE PATTERNS FOR EASIER INSERTION IN THE DUGOUT.