



Making a Coasting Toboggan

By A. M. PARKER

ESSENTIALS of a good toboggan, whether for coasting or use in transportation, are strength and lightness, and when it is to be made in the home shop, the construction must be simple. That shown in the illustration, and detailed in the working sketches, was designed to meet these requirements. The materials for the toboggan proper and the forms over which it is bent, may be obtained at small expense.

Smoothness of finished surface, freedom from tendency to splinter, and ability to stand up under abuse being requisite qualities in the wood used to make a toboggan, three varieties may be mentioned in their order of merit: hickory, birch, and oak. Birch is softer than hickory and easily splintered, but acquires an excellent polish on the bottom. Oak stands bending well, but does not become as smooth on the running surface as close-grained woods. Do not use quarter-sawed oak because of the cross-grain flakes in its structure.

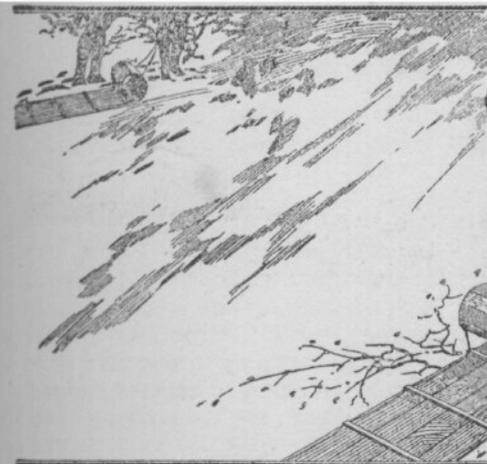
While the best toboggan is made of a single board, both the securing of

material and its construction are rather difficult. Narrow strips are easily bent to shape, but do not make a durable article. A toboggan made of four boards is practical. The mill bill for one 7½ ft. long by 16 in. wide and for the bending frame, is as follows:

- 4 pieces, .312 by 4 in. by 10 ft., hard wood.
- 7 " 1 by 1 in. by 16 in., "
- 2 " ½ by 1 in. by 16 in., "
- 2 " 1 by 6 in. by 6 ft., common boards.
- 6 " 1 by 2 in. by 18 in., "
- 1 cylindrical block, 12 in. diameter by 18 in. long.



This Toboggan Is Strong and Light; It will afford the Maker Much Pleasure Both in the Interesting Process of Construction and in the Use for Coasting or Transportation. It may be Made as an Individual Project or as a Joint Undertaking by Several Boys



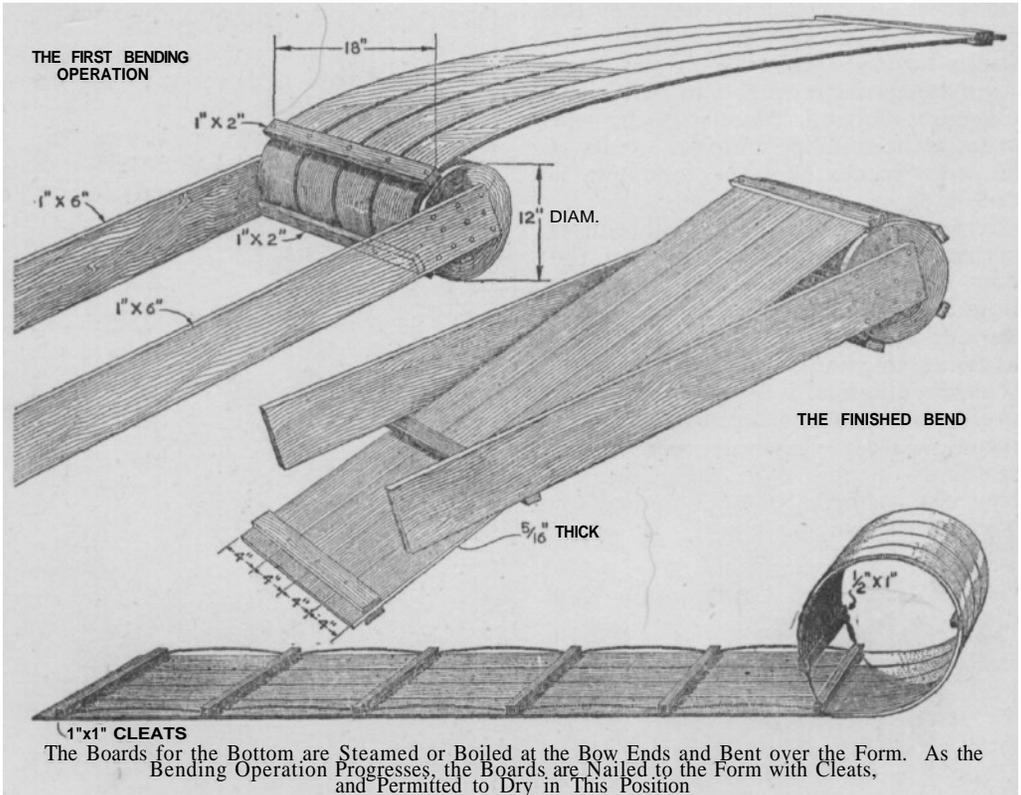
The form for the bending of the pieces is made of the common boards and the block. A block sawed from the end of a dry log is excellent. Heat it, if convenient, just before bending the strips. The boards for the bottom should be selected for straightness of grain and freedom from knots and burls. Carefully plane the side intended for the wearing surface, and bevel the edges so that, when placed together, they form a wide "V" joint, half the depth of the boards. The 1 by 1-in. pieces are for cross cleats and should be notched on one side, 1 in. from each end, to receive the side ropes. The two ½ by 1-in. pieces are to be placed one at each side of the extreme end of the bent portion, to reinforce it.

Bore a gimlet hole through the centers of the 1 by 2 by 18-in. pieces, and 4¼ in. each side of this hole, bore

With 3-in. nails, fasten one of the bored pieces to the block between the boards, inserting, temporarily, a ½-in. piece to hold it out that distance from the block.

Steam about 3 ft. of the ends of the boards, or boil them in a tank. Clamp, or nail, the boards together, at the dry ends, edge to edge, between two of the 1 by 2-in. pieces, leaving about ¼-in. opening between boards. Thrust the steamed ends under the cleat nailed on the block, the nails which hold it slipping up between the boards. Bear down on the toboggan carefully, nailing on another of the bored cleats, when the toboggan boards have been curved around the block as far as the floor will permit. The nails, of course, go between the boards.

Now, turn the construction over and bend up the toboggan, following the



two others. Nail the end of one of the 6-ft. boards to each end of the block, so that their extended ends are parallel.

boards around the block with more of the nailed cleats, until the clamped end is down between the two 6-ft. boards,

where it can be held by a piece nailed across. More of the cleats may be nailed on if desired; in fact, the closer together the cleats are the less danger there is of splintering the boards, and the more perfect the conformity of the boards to the mold.

Allow at least four days for drying before removing the boards from the form. Clamp the $\frac{1}{2}$ by 1-in. pieces one each side of the extreme ends of the bent bows, drill holes through, and rivet them. A 1 by 1-in. crossbar is riveted to the inside of the bow at the extreme front and another directly under the extremity of the curved end. These cleats are wired together to hold the bend of the bow. The tail end crossbar should be placed not nearer than $2\frac{1}{2}$ in. from the end of the boards, while the remainder of the crossbars are evenly spaced between the front and back pieces, taking care that the notched side is always placed down. Trim off uneven ends, scrape and sandpaper the bottom well, and finish the toboggan with oil. Run a .375-in. rope through the notches under the ends of the cross pieces, and the toboggan is completed.

Screws are satisfactory substitutes for rivets in fastening together the parts, and wire nails, of a length to allow for about $\frac{1}{4}$ -in. clinch, give a fair job. Indians overcome the lack of hardware by the use of rawhide, laced through diagonally staggered holes bored through the crosspieces and bottom boards. Rawhide, which they sometimes stretch over the bow as a protection, affords an opportunity for elaborate ornamentation.