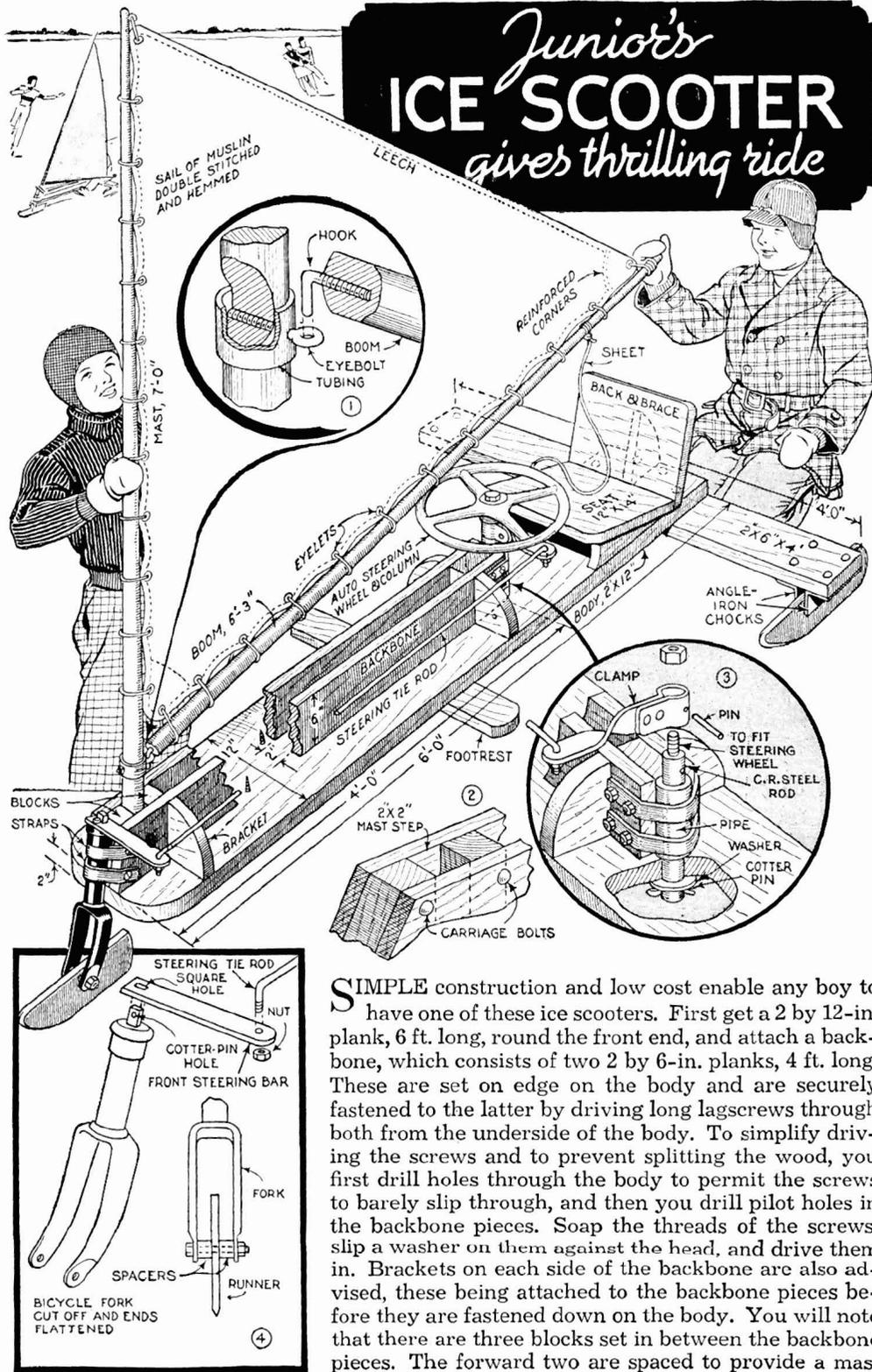
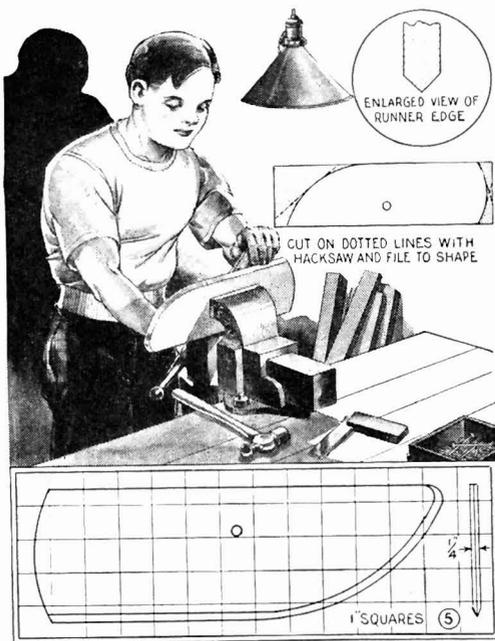


Junior's ICE SCOOTER

gives thrilling ride



SIMPLE construction and low cost enable any boy to have one of these ice scooters. First get a 2 by 12-in. plank, 6 ft. long, round the front end, and attach a backbone, which consists of two 2 by 6-in. planks, 4 ft. long. These are set on edge on the body and are securely fastened to the latter by driving long lagscrews through both from the underside of the body. To simplify driving the screws and to prevent splitting the wood, you first drill holes through the body to permit the screws to barely slip through, and then you drill pilot holes in the backbone pieces. Soap the threads of the screws, slip a washer on them against the head, and drive them in. Brackets on each side of the backbone are also advised, these being attached to the backbone pieces before they are fastened down on the body. You will note that there are three blocks set in between the backbone pieces. The forward two are spaced to provide a mast



step and the aft one helps to support the steering column. The blocks are fastened in place by means of carriage bolts as shown in Fig. 2.

The front runner support is an old bicycle fork, which is cut off, flattened and drilled to suit as shown in Fig. 4. The fork is clamped to the front end of the backbone with heavy flat-iron straps, these being welded to the fork, or bolted to it with short machine screws so they will not interfere with the inside piece that turns. The steering post is similarly attached with flat-iron straps. It consists of a length of

pipe which serves as a bearing for a steel rod. A short arm about 6 or 8 in. long is attached to the steering fork, and one of similar length is pinned and clamped to the steering column, both extending out toward one side and linked together with a $\frac{1}{4}$ or $\frac{3}{8}$ -in. iron connecting rod. This is threaded at both ends, after which the ends are bent over at right angles to fit holes in the arms. Be sure that the pivot points work freely. Two nuts on each end, locking each other, are better than only one nut, which is likely to come off.

Runners are all the same size. They are cut out of $\frac{1}{4}$ -in. boiler plate by means of a hacksaw, and the lower edges are filed to a sharp edge as shown in Fig. 5. One of the runners is attached to the front fork by means of a steel rod, threaded at both ends for nuts, and a couple of spacers that center the runner between the ends of the fork. The spacers may be cut from pipe. The rear runners are pivoted between two lengths of angle iron bolted to the ends of the rear crosspiece, which is a 2 by 6-in. plank, 4 ft. long.

For a sail you can use muslin, double stitched and hemmed. The corners should be reinforced for strength. Eyelets (grommets) are inserted along the mast and boom edges of the sail for light rope lacing. The boom should extend upward at an angle sufficient to clear the rider's head as well as the steering wheel. Fig. 1 shows how a hook on the bottom fits an eyebolt through the mast. However, an eye welded to a ring that can be clamped to the mast is preferable because any hole through the mast tends to weaken it.

Ice Marked Off for Hockey Game With Salt and Ochre



To mark the ice with indelible boundary lines for a game of hockey, mix equal parts of salt and red ochre powder and apply as shown in the drawing at the left. The salt will melt the ochre into the ice to leave a line that is easy to see and will last as long as the ice remains frozen.

Waxing Ski Runners

A chemical heat pad will be found effective in warming ski runners for the application of a coat of wax. When the wax is put on the warm runners it will flow freely and can be rubbed down to a smooth finish in a few seconds.