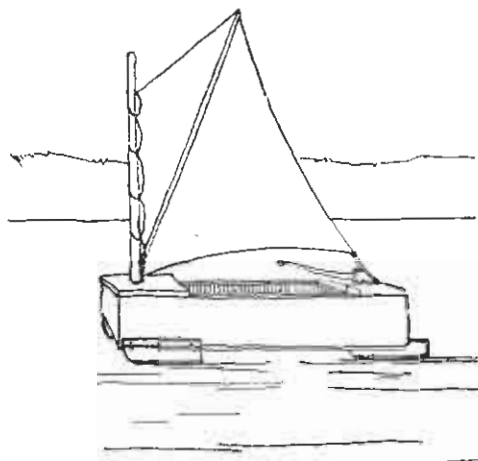


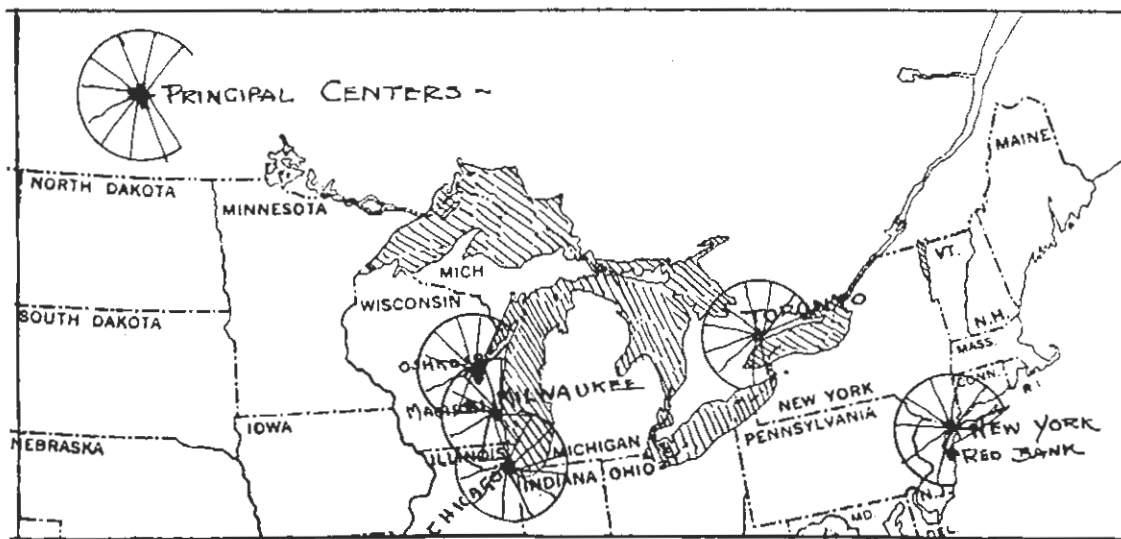
At the stern is a regular "seagoing" rudder to the bottom of which is attached a runner for steering purposes on ice. Apparently all the owner had to do in the summer time, to transform his ice boat into a seagoing sail boat, was to disconnect the cross plank, stop up the holes through which the fastening bolts ran, and stick the boat in the water!

They are still building boats like this in Holland today (see page 12) where the idea of a quiet, family sail on the ice apparently has its appeal. In this country a direct descendant of this idea is our "Scooter," with the notable difference that the scooter can go from ice to water, and back to ice, without the embarrassment of dragging a cross plank through the water; and that the scooter has no rudder, being steered entirely by trimming sail and shifting weight.

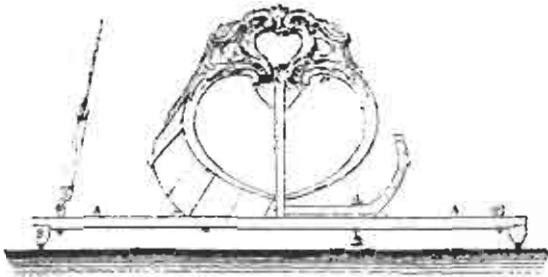
In 1790 one Oliver Booth built the first authentic ice boat in this country, at Poughkeepsie on the Hudson River. This boat consisted of a plain rectangular box, with a runner at each side forward, and a steering runner aft with a tiller.



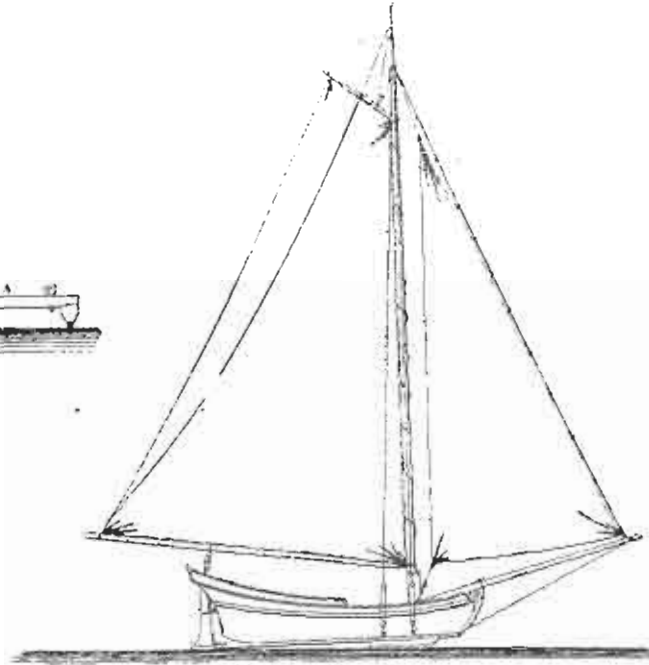
The first authentic Ice Boat built in the United States. From a drawing by H. P. Ashley in the Encyclopaedia Americana.



The principal present Iceboating area and centers of Activity of North America

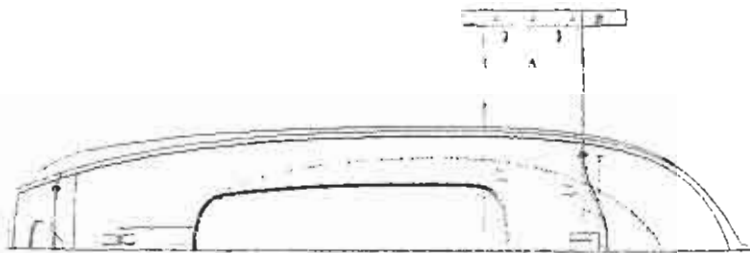


Stern view and section

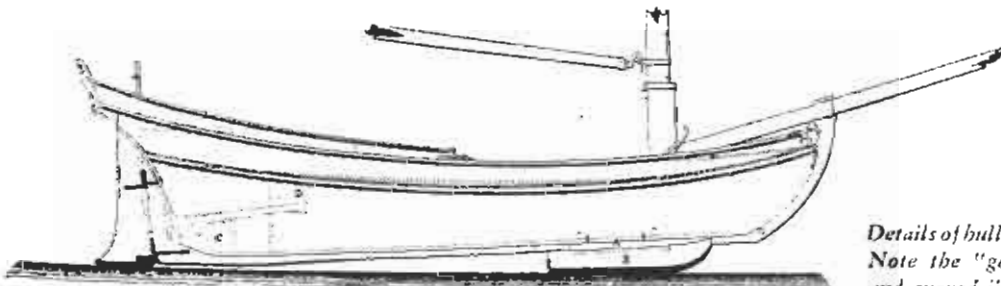


Profile and sail plan

These drawings are reproduced from the "Architectura Navalis Mercatoria" of Fredrik Hendrik Chapman, published in 1768 A.D. The "floatable" qualities of this design forecast our present "Scooter," while the runner arrangement forecasts the Stern Steerer



Half plan



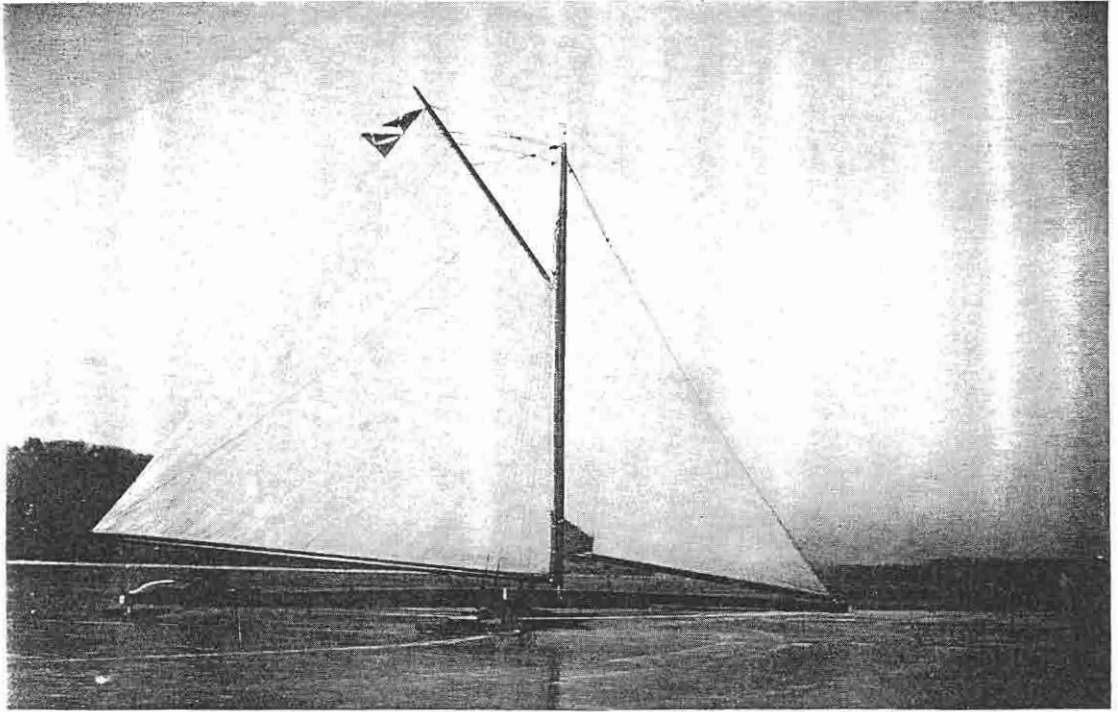
Details of hull and spars, Note the "gooseneck" and curved jib traveler

A mast was stepped in the box, a sail (sprits'l) was bent on, and away he went over the frozen waters of the Hudson. While ice boat design and construction has progressed far since that day, this crude effort is interesting for two reasons: it started a precedent in design which lasted for over half a century, until, in 1856, after the desire for increased speed had started head scratching among the designers, a skeleton type of hull appeared — built like a kite or cross-bow — which lowered weight and wind resistance; and the box type design is still the simplest and cheapest form of ice boat to build, as about all you need is a good sized packing box with a little extra bracing, and the biggest part of your job is taken care of.

As the ice boat has been used and developed almost entirely for sport, and particularly in this country for the sport of racing, it is only natural that sail, and not power, has been the general means of propulsion. At least one abortive attempt was made (1859) to use a power ice boat commercially, when Norman Wiard of Wisconsin got out an ambitious prospectus to raise money to build a steam ice boat, with a floatable hull, to carry about sixty passengers. So far as I can discover the project died aborning; but if not commercially practical, it at least showed imagination. For their own amusement and pleasure, a number of people have built motor ice yachts in recent years, some with spiked driving wheels which grip the ice; others with aeroplane type propellers to drive them. While sail will, unquestionably, maintain its supremacy on the ice, I can see the possibility that power may come to be more generally used than it is now, particularly during those periods when the snow is too deep over the ice for sailing. At such times the use of ski-runners will make it entirely possible to get up speed under power.

The casual observer may be under the impression that the person who knows how to sail a boat on the water, need only get aboard an ice boat and sail her. In the basic essentials this is true. That is to say, an ice boat will reach and run, it will come about or jibe, it will heel in a breeze, and it will stand still in a flat calm! That, however, is about as far as the similarity goes. A Chinaman describes coasting as: "Whsst — walkee miley!" He would probably describe ice boating as: "Whsst — slidey miley!"

In a light breeze, an ice boat handles much like a sail boat on the water,



Courtesy of George J. Seger

A typical, and in her day famous, Hudson River Ice boat the "Icicle." Built by Jacob E. Buckhout, Poughkeepsie, N. Y., about 1870, for John E. Roosevelt, seen at the helm

although its speed will be considerably greater. In sailing on the water, the lightest puff will put way on your boat, but with an ice boat you must start her with a good stout push, and then *keep her going*; if she stops you have to get out again and push.

But the great difference between the two forms of sport, is when it begins to breeze up. That is the condition which is apt to prevail in the winter time, and the condition which all ice yachtsmen want. I asked a winner of many ice boat races how he would describe the difference between sailing on the water, and ice boating.

"Well," he said, "in light breezes you sail 'er something like a boat, but when it breezes up you drive 'er like an automobile!"

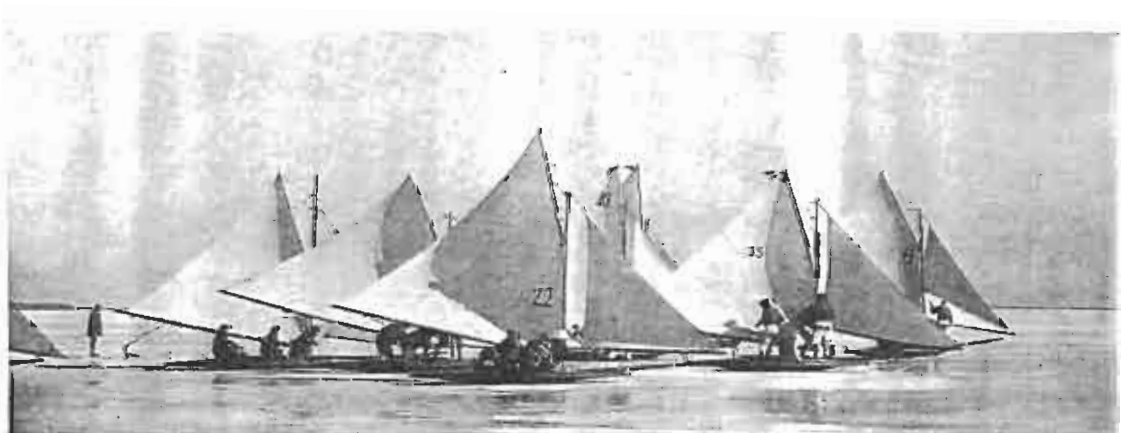
In a breeze, ice boat maneuvers are a matter of seconds, as compared with minutes when sailing on the water. The ice boat is the fast, highly nervous, thorough bred stallion of sailing. To handle his boat successfully the ice boat

skipper must be on the alert every instant, he must have a split second eye for what is ahead of him, he must have a feel for the helm like the feel of a surgeon's fingers in a delicate operation, and he must have a quick strong hand on the main sheet, and keep it trimmed flat nearly always.

All of this has had its influence on the development of ice boats. It brought about the cross-bow body, reduction and concentration of sail area (without reduction of speed, but rather the opposite), the "front-steerer," followed just last year by the "four runner boat"; the wishbone tiller and the application of automobile steering gear; enclosed cockpits and streamlined fuselages, and so forth.

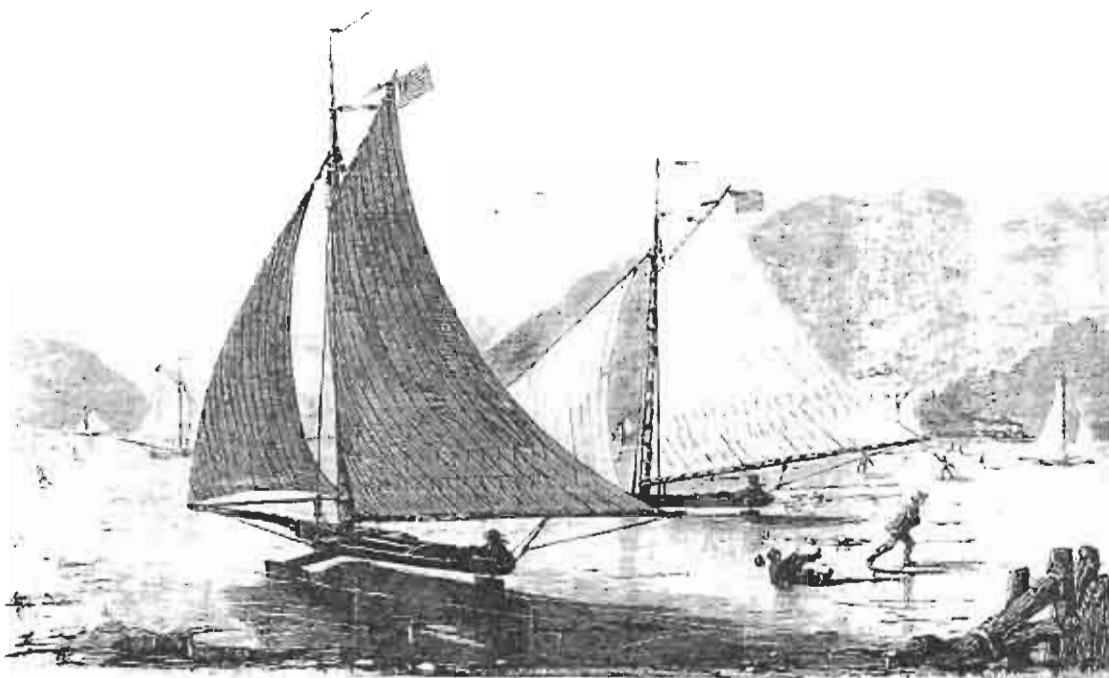
Until recently the development of ice boat design has been leisurely. Of the changes noted in the foregoing paragraph, all but the first have appeared since 1930. During and immediately after the World War, ice boating took a breathing spell, and the greatest impulse in this country since then came with the successful tests of the front steerer in Wisconsin in 1932. Apparently the first front steerer was a small, home made job which appeared on the Shrewsbury River, New Jersey, in 1907. It made little impression, evidently, as there was no further development in the East, but the Western boats began to win races from the "stern steerers," and proved so much faster under certain conditions, that they rapidly became popular.

Designed originally to overcome a tendency inherent in the stern steerers, until then the standard design, to lose traction on the steering runner and go into a "horizontal tail spin," the front steerers accomplished this, as well as showing speed.



A fleet of "Scooters"

Courtesy of George J. Seger



Ice boating on the Hudson in the '70s. From the publication "Every Saturday," March 4, 1871. Note the great length of boom, and the long jib club.



A modern group in contrast

Rosenfeld

Scout ↓

being, for "Scooting" is an example of a sport which developed from a purely utilitarian start.

Some years ago two members of the U.S. Coast Guard, on duty at a station from which it was necessary to travel about four miles by water to get supplies, conceived the idea of "pike poling" a duck punty over the ice in the winter time as a labor and time saving device. With this small, pumpkin-seed like boat, they could get along over the ice and then take to the water where the ice gave out, dragging the boat up onto the ice again when opportunity offered.

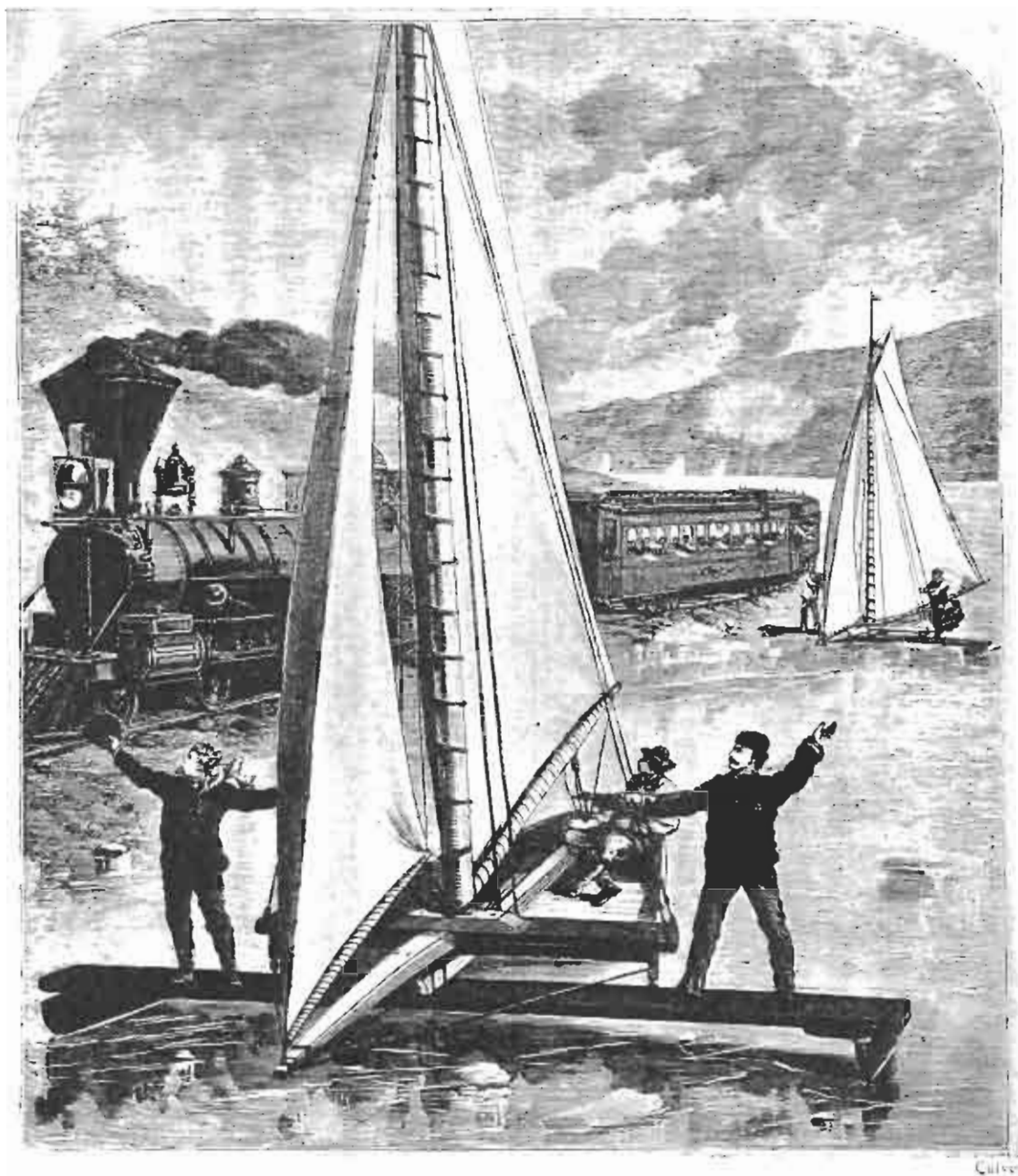
One day, in a stiff breeze, they noticed that the punty would almost move over the ice without effort on their part. So they decided to try out a sail, and set a small sprit rig. (Originally they had fastened a broad strip of brass to the bottom planking, for traction on the ice; later they built on two wooden runners and shod them with brass.) The rig worked beautifully before the wind, and so



An important operation on a "Scooter" — sharpening up the runners



"Scooter" enthusiasts say that "Scooting" is the greatest sport in the world.



ICE BOATS BEAT TRAIN

The "Icicle" (see page 17) and the "Zephyr" win over the New York-Chicago Express Jan. 20, 1871. From Frank Leslie's Illustrated Newspaper, Feb. 11, 1871. Streamlined trains are faster today, but they still cannot beat the 140 mile per hour Ice Boat record!

264

The Scooter

Specifications for the Scooter

- Deck beams — $\frac{7}{8}$ " x 2"
- Forming piece — $\frac{7}{8}$ " x 4"
- Mahogany band — $\frac{1}{2}$ " x 4"
- Deck — $\frac{1}{2}$ " Cedar
- Planking — Double $\frac{5}{8}$ " "Weldwood"
- Coamings — $\frac{1}{2}$ " Philippine Mahogany
- Runner woods — $2\frac{1}{2}$ " x 3" oak. Fastened with galvanized iron bolts
- Right angle steel runners — $\frac{3}{16}$ " by 1"
- Bowsprit — fir — 3" x 5"
- Mast — 3" x 3" — spruce
- Boom — $2\frac{3}{8}$ " x $2\frac{3}{8}$ " spruce
- Jib Club — $2\frac{3}{4}$ " x $2\frac{1}{4}$ " spruce
- Standing Rigging — $\frac{3}{16}$ " gal wire rope or $\frac{3}{16}$ " stainless steel

