## Scientific American

## THE "SCOOTER."

That "necessity is the mother of invention" finds singular and forcible illustration in the ice-scooter, which, essentially a Long Island creation, is almost as necessary there in the winter as are the yachts in

the summer season. It is an amphibious craft, combining in its construction a modification of both the yacht and ice boat, the advantages of each of which it possesses in a remarkable degree.

Reference to the illustrations will show both the sail arrangement and runners on the bottom. It is to these latter, perhaps, that the speed and steady flight of the ice-scooter is due, as well as to the absence of a rudder, which would necessarily arrest the free motion. The jih is utilized for a rudder, serving the double purpose of directing the course and tacking. Steel runners are said to be preferable to those of brass, through their superior hardness; which prevents any sliding when a tack is being made. Such an amphibious boat will lay within five points of the wind, and can execute, in less time and space, any evolution which an ice boat or vacht can perform. Incredible speed is attained by the larger and more completely equipped scooters, and when their respective courses run parallel, they can often maintain their lead over a fast express train. While a boy can manage one of these strange

craft, the requirements and possibilities are such as to afford exhibitanting sport for a strong man in handling the sails and obtaining the maximum degree of speed possible under given conditions.

The sail area is always determined by the capacity for carrying canvas on the ice. When the water is reached there is consequently, under normal wind conditions, a dangerous excess of sail, and the utmost skill is required to avert an accident. Such is the proficiency attained by the votaries of "scootering," however, that injury to the owners or scooters is rarely if ever witnessed.

There are, perhaps, few more interesting sights seen



SQUARE-END SCOW FITTED UP AS A "SCOOTER."

than those afforded by a scooter plunging at full speed from the ice into the water. At such times the water, cleaved as by a shot hurled from a cannon, is thrown into the air a distance of twenty feet, completely enshrouding the scooter from view until, with speed little diminished, it glides smoothly and triumphantly out upon the ice at the other side of the opening.

While "scootering" provides a healthy and hearten-

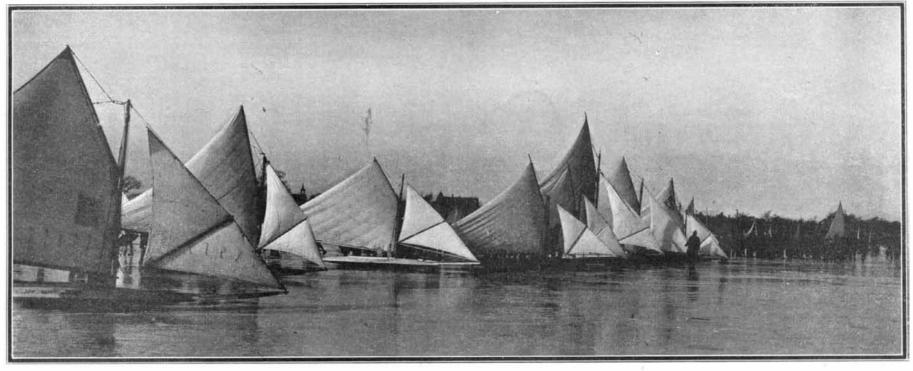
ing sport for the South Beach life savers during their long period of enforced leisure, its value consists chiefly in permitting them to cross to their mainland homes over thin and treacherous ice when no other means would permit of such visits. It also affords an

easy and speedy access to vessels caught in the ice when intervening open-water patches or unsafe ice would render the tendering of assistance impossible.

Long Island sportsmen have also adopted the craft, and successfully employ it in carrying them to favorite duck and goose hunting grounds on the ice, miles away from the shore. When the point for shooting operations is reached, the sail can be furled and the mast removed. Then, by covering the scooter with cakes of ice or snow, it provides an ideal concealed shelter from which to shoot birds.

The scooter has been suggested as a more sure, safe, and speedy method of reaching the North Pole than any hitherto devised. It can be carried on the vessel as far as open water will admit, and, after it has been loaded with provisions, the journey can be continued with it, as neither ice nor water presents any obstacles to its progress. While, like the summer yacht, these boats may be built with any degree of elaborateness, those used on Long Island are made with a view to speed and lightness rather than to other objects.

One of our illustrations also shows a square-end scow fitted up as a scooter. This boat is a home-made affair, and, to be properly steered, requires the use of a rudder. The rudder, it will be observed, consists of a metal blade secured to a pole in such a manner that when in water it can be used as an oar blade, and when out of the water its edge will cut into the icc. thus affording a suitable means for steering the boat.



FLEET OF "SCOOTERS" AT GREAT SOUTH BAY, LONG ISLAND.



OVERTURNED "SCOOTER," SHOWING THE STEEL RUNNERS ON THE BOTTOM.