

covered with one skin, but larger craft were constructed, which required two, three or more skins to cover them. There is a curious and very interesting survival of the coracle in present-day ship-building technical terms. Where more than one skin was required to cover the wicker framework, there was a seam that had to be made water-tight. Thus, in the construction of these primitive craft there was the skin and the seam. These two terms have persisted right down to the present. The ocean liner also has a skin, *i.e.*, the outer plating, and where the plates are butted or riveted there are *seams* that have to be caulked to render them water-tight. The skin and seam of the early craft are thus commemorated, although few things could be less alike than the steel plating of a modern steamship and the hide covering of a coracle.

When mankind produced more efficient tools, and was able to burn down or cut down a giant tree, the possibility of making the

Evolution of the Boat.

tree into a boat soon occurred to some quick-witted native. Probably fire was used to hollow out the tree, and form a bow and a stern. The wooden canoe became a practical fact and with this the adaptation of wood to ship or boat-building began. A canoe hollowed out of a tree was a cumbersome affair compared with a coracle. Thus, as soon as it was found possible to split trees into thin planks, the framework of the coracle was somewhat modified, and, in place of the hide covering, thin planks were used. But as yet there were no such things as nails or rivets, so the planks were sewn together as the edges of the hides had been. There was still, in the true sense of the word, a seam. Wooden boats with the seams sewn together, instead of being nailed, can still be seen in Northern Europe.

With the introduction of wood as the material for shipbuilding very great possibilities opened out before the shipbuilder and trader.

The Growth of the Ship.

The dimensions of the ship could be enormously increased. This necessitated, however, many modifications, in form, construction, propelling force, and method of steering. But it was no great distance from the first clinker-built boat to the Viking ship—a craft prepared, under the conditions of water transport in those far-off days, to go anywhere and do anything. The long, swift Viking ship could not only cross to England or Ireland but could brave the crossing of the Bay of Biscay (or coast round it), and passing through the Straits