A Portable Folding Boat.

This objection to boats in general is the room they occupy when not in use, and their weight. An ordinary small boat is not only a wagon-load, but so bulky as to be one of the most cumbersome objects which is ever transported over wheels. Even on shipboard, where there appears room enough for almost anything, a number of boats take up a large space, and are often very much in the way. It is not strange that a great deal of ingenuity has been exercised to make boats not only light, but so constructed that they could be folded up so as to occupy little space.

The first attempts of this kind have been made for Arctic travelers, and were partially successful. However, the claim of ingenuity appears to us to have been reached by Mr. Hageman in his patent portable folding boat, of which we give a representation on this page, Fig. 1 showing the boat as folded up for transportation, and Fig. 2 as unfolded for use in the water. The greatest strength of material is so judiciously combined with the least possible weight that it can be carried in a light wagon, or on horseback, or even by a single person, a feature which enables any tourist or sportsman to travel with the greatest facility with the most distant streams and lakes.

Persons living at a distance from the water can not keep an ordinary boat without going to the expense of a boat house, or keeper to take charge of their boat; but if they have a boat of this kind, they can easily take it home and be sure to have it on hand when they want to use it, while tourists, trappers, sportsmen, and exploring expeditions can not at the present day be said to be completely organized without having such a boat.

But a still more important use, is perhaps that for surface in the water, and light, they have a surprising light draft, a boat carrying three persons drawing scarcely one inch; they are therefore adapted to navigate the shallowest reaches as well as the deepest waters. This buoyancy is increased still more by means of cork fenders placed underneath the gunwales, and setting no life-preservers, this renders the boat still less liable to sink or capsize.

The manufacturer, Mr. John Hageman, of Ballston Spa, Saratoga Co., N. Y., is prepared to send such a boat by express (11), or, mostly packed, to any person ordering it and sending ten per cent of the price. The freight is low, as the bulk of the boat when packed up, they can be folded up flat so quickly for transportation, while the Secretary of War calls them indispensable for the success of the army, saying that no wooden boats could possibly have resisted the rough usage bestowed upon them, while the American Institute judges were satisfied that if the late ill-fated steamers had had such boats, no lives would have been lost.

Seasoning and Preserving Timber.

There are different ways of seasoning timber; the most simple is to dry it in the air under a shed the next to immerse in water for a season, salt water by preference, which dissolves some of the sap, which otherwise may promote decay; the next is to put it into a warm place, artificially heated, for instance by steam pipes; this produces a wilting drying. A still better way is to place it in a chimney, where steam under high pressure is introduced; this penetrates into the fibers and prepares the wood for a more equal shrinkage when dried afterward, it is a kind of cooking process which accustoms the albumen, and thus augments the solid matter in the wood, preventing lumber thus treated from collapsing afterward by dampness, and to shrink by dryness only half as much as other lumber.

The exposure to steam-pressure is no doubt among the simplest of the thorough methods. Experience has shown that an exposure of timber during two or three weeks to high pressure steam will thoroughly season inch lumber, however green or wet it may be. Such seasoning sets to some extent a conserving; however there are more thorough methods of preserving wood, which we have described on page 106, based on the joint action of tobacco and iron. We are able to corroborate this principle, having before us a sample...
military expeditions. The first boat of this kind was used by a member of the Engineer Corps of Gen. Sherman's army, and found to be especially adapted for military purposes, owing to its great strength and capacity with lightness combined. The boat here described is an improvement on those used in Gen. Sherman's army, where large sizes of them served for pontoon bridges, while the sledge journey across the ice toward the north pole during the expedition of the late Capt. Hall with the Polaric, was accomplished with the help of such a boat.

The required stiffness is obtained by a frame made as light as possible, and therefore of carefully selected tough timber, hickory, ash, etc. The connections are made of gun-metal, so as to be secure against rust.

Fig. 1.—HeGEMAN'S PORTABLE FOLDING BOAT, UNFOLDED FOR USE.

is quite small. The sizes vary from 9 feet in length, weighing 36 pounds, carrying one person with his traps, and costing $25, to 20 feet in length, weighing 100 pounds, carrying 7 persons and traps, and costing $175, while there are three intermediate sizes—in all five. Other larger sizes for special purposes, expeditions, etc., can be built to order at reasonable prices.

Tourists who have used these boats in the Artic regions and in Florida, are unanimous in their praise, while the American Institute, as a result of experimental test, gave to the inventor a medal and diploma of special award.

We have no room for the different letters and inscriptions which we have before us, and will only mention that Gen. Thomas praises the convenience with which of less antiquity, but sufficiently old. It is a piece of white oak dowel which was for some 30 or 40 years in the pine flooring of Tiber Creek arch, Washington, D.C., and was sent us last year by the kindness of Mr. N. J. M. Van der Wyck, G.E., as at that time superintendent of public works there. It is black, perfectly sound, and as hard as ebony, it evidently owes its black color and hardness to the combined effect of the lye in the soil on which it was placed and the tannic acid in the wood itself. The cost of materials for this piece is small, as tannic acid pure enough for this purpose can now be produced for about 10 cents a pound, and even much less in the future, as it can be made from bark, young branches, and leaves of many trees, which owe so that acid their astringent properties.