horizontal bar, the similar threads of the woof being interlaced by means of needles of bone or wood. That the flax was cultivated is shown by the stores of linseed which have been found. In some of the earlier settlements in Southern Germany, where flax was unknown, ropes and mats were made of bast, prepared from the bark of the clematis or the lime. There is no evidence that hemp was known in the age of stone or even of bronze.

Curiously enough, though flax was so commonly used for weaving in the stone age, there is no evidence in the pile dwellings of Switzerland or Italy of the weaving of wool, even in the bronze age, when sheep had become numerous. Evidently the sheep skins were worn with the wool on, as is still the case with the peasants of Central and Southern Italy. Woollen fabrics have, however, been found in Jutland, and in Yorkshire, associated with interments of the bronze age. . . .

The Boat

Some sort of boat, or rather canoe, must have been constructed in the primitive period, since the Latin *navis* can be traced in Sanskrit, Greek, Celtic, and Teutonic. But the word cannot at first have denoted more than the trunk of a tree hollowed out by the stone axe, with the aid of fire. This is indicated by the etymological relation of the Sanskrit *daru*, a boat, to the English *tree*, and the Celtic *daur*, an oak. Similarly the old Norse *askr* denotes a boat as well as an ash tree. Several "dug-outs," hollowed out of a single trunk, have been found in the neolithic lake settlements of Switzerland, Italy and Ireland. The Celtic *barca*, the old Norse *barki*, and the English *barge* and *barque* are indications that the Northern Aryans also constructed canoes of the bark of some tree, probably the birch.

The canoes were propelled by oars or poles, since the Latin *remus* can be traced in Sanskrit, Greek, Celtic, and Teutonic. Sails, however, were unknown in the primitive period, as is shown by the fact that the German *segel*, our *sail*, is a loan-word from the Latin sagulum. Thus the Teutonic invasions of England were only made possible by previous contact with Roman civilisation.

An examination of the nautical terms in Latin yields some curious results. According to George Curtius, they divide themselves into three classes. We have first the proto-Aryan words *navis* and *remus;* secondly, *velum* and *malus*, which are words of Italic origin, not belonging to the general Aryan vocabulary; and thirdly, a large number of loan-words from the Greek, such as *gubernare, ancora, prora, aplustre, anquina, antenna, faselus, contus,* and *nausea.* Hence it would appear that the undivided Aryans had invented canoes and oars, that the mast and the sail were used on inland waters after the linguistic separation of the Italic and Hellenic races, while the fact that the Latin word for sea-sickness is a loan-word from the Greek may indicate that the Italic peoples did [not?] venture to navigate the sea before they came in contact with Greek civilisation. It has already been noted that while the words relating to pastoral and agricultural pursuits are to a great extent identical in Greek and Latin, those referring to fishing, such as the names of the net, the line, and the hook, are entirely unrelated.

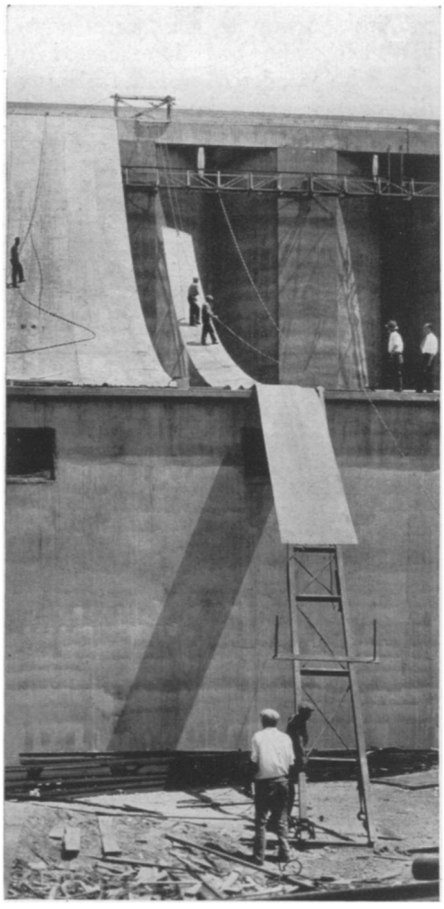
The Ox-Waggon

Indubitably the greatest invention of the primitive Aryans was the ox-waggon. The names of the wheel (Latin, *rota*), of the yoke (Latin, *jugum*), of the wain (Sanskrit, *vahana*), and of the axle (Sanskrit, *aksha*), are common to all Aryan languages. The old Irish *carr* and the Latin *carrus* may also be compared with the *karama* which Hesychius tells us was the name of the covered waggon, or tent upon wheels, in which the nomad Scythians moved from place to place in search of pasturage for their cattle.

On a Thracian coin of the beginning of the fifth century B. C., which is attributed to the Odomanti, who inhabited the pile dwellings in Lake Prasias, we have the earliest representation of the primitive Aryan ox-cart. The body is of wicker-work, poised over the axle, and is drawn by means of a pole by a yoke of oxen. . . .

The primitive ox-waggon must have been constructed without metal. The wheel and the axle were probably in one piece, made out of the section of the trunk of a tree, thinned down in the middle so as to form an axle, and leaving the two ends to serve as wheels. Such waggons are still used in Portugal. They are drawn by oxen, and have two wheels only. A log is cut from the trunk of a tree, and the centre is hacked away, leaving two solid wheels united by an axle.

Science News Letter, October 29, 1932



SWINGING ROOF GOES UP

ENGINEERING

Sheet Steel Roof Swings Over Building

A STRIP of a novel sheet metal roof is shown by the view above swinging into place over grain elevators at Albany. The long ribbons of steel hang 140 feet between sides of the building as a grape vine swing might loop from tree to tree in the forest. It is claimed that this novel, self-supporting roof, without columns, stanchions or purlins common to other types, is more economical than the usual kind. The strips of steel, which are slightly more than four feet wide, were welded together by the Lincoln Electric Co. More than 400 tons of metal were used.

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Latest scientific methods of removing coats of varnish and dirt from valuable old paintings reveal that modern concepts of some of the old masters' favorite colors have been considerably off-key.