length of the stick. Between the partners and the top- end certain measuring places are determined, at each of which places, called “ quarters,” the diameter of the stick must be in a given proportion to the diameter at the partners ; and all these conditions must be fulfilled before the stick can be received at the number of inches first as­sumed as the diameter at the partners. If the sticks are intended for yards, the measuring place is at the slings, in the middle of the length, and the stick is measured from that point towards each end, the quarters being set off each way. If the sticks are intended for bowsprits, the given diameter is at the bed, and the quarters are set off towards each end.

All these proportions for masts, yards, and bowsprits, are determined from tables which have been drawn out for the purpose, and framed to suit the peculiarities of the growth of the various sorts of timber to be applied to these different uses.

Hand-masts are measured in their round state, accord­ing to the number of hands they are in circumference at the but, the hand being four inches. Their length must be cighteen feet more than three times the number of feet that they are hands in circumference, and the top-end must measure in circumference two thirds of the measure­ment of the but. Sticks which measure less than six hands are received under the general name of spars, and are de­signated as cant, barling, boom, middling, and small spars, according as they measure above five, four, thrce, two, or one hand respectively.

*On the Woods of India.*

The following account of woods, the growth of our pos­sessions in the East Indies, is compiled from a scries of re­ports with which the writer of this article was favoured, through the enlightened liberality of the Court of Directors of the Honourable East India Company, and also from a paper in the Asiatic Annual Register, written by Daniel Lambert, Esq., which accompanied those reports. The re­ports were made to the honourable court by their surveyor of shipping in Bengal, John Millingar Seppings, Esq., a son of the late able surveyor of the royal navy, Sir Ro­bert Seppings. The account embodies all those points in the reports which contain information consistent with the purpose of this article ; and, as nearly as has been possible in such a compilation, in order to insure correctness of in­formation, the language of the reports has been adhered to. The report of the experiments made by Captain H. C. Baker has been given entire, as it would not admit of con­densation ; but in order to economize space, only the mean results of the experiments have been printed ; and the number of experiments of which the given results are a mean, has been inserted in the table.

We have also been enabled, through the great kindness of a friend, to enrich this article by a most valuable tabu­lar series of original observations on the effect which sea­soning produces on almost every species of timber that has been treated of in the course of the foregoing remarks: to which are appended some most interesting and judi­cious observations and deductions by the author of the table, Mr Bennett, of her majesty’s dock-yard at Ports­mouth, a member of the late School of Naval Architecture.

The woods used in India for ship-building are, teak, saul, sissoo, jarrol, poon, and toon. Teak is the most durable among these timbers, but it varies very much in quality. There are two kinds of the Malabar teak, the northern and southern ; the first is far superior in point of durability, but is the most difficult to procure. The Mala­bar teak is classed at Bombay as follows. No. 1, Northern, curved timber, which is brought a distance from Bombay of from 130 to 140 miles; No. 2, Southern, Calicut teak;

No. 3, Northern Pattey, or straight timber, used for small vessels and boats ; No. 4, Bassein, or curved timber.

The great length of time which several vessels built of Malabar teak have lasted (from thirty to fifty years, in some particular instances nearly a century) has established the prime Malabar northern teak as the most valuable timber in the world for ship-building. It is, however, like every kind of wood, liable to early decay, if not properly or gra­dually seasoned, by exposure to a moderate current of air after being felled. Malabar teak is so seldom imported into Calcutta, from the expense of bringing it round Ceylon, and on account of the distance, that it may be said never to be used there for ship-building.

Pegu and Moulmein teak is extensively used by the ship-builders of the Hooghly, and is the only description of teak timber imported in any quantity to the Calcutta markets. It is brought in a half-wrought state, the logs or planks being squared. Pegu and Moulmein teak is a coarse, porous, open-grained wood, when compared with Malabar teak. It is not a timber which can be depended upon, particularly that which is of a pale-brown colour, which frequently goes very rapidly to decay. It is also of such a mixed quality, and the importation to Calcutta is so limited, that it is frequently difficult to select sufficient prime dark timber out of all the cargoes to build a ship of 200 tons burthen. Its weight, when moderately seasoned, may on an average be stated to be forty-two pounds per cubic foot, while the weight of Malabar teak on an average is from forty-five to fifty-two pounds per cubic foot. The forests of Tonga and Irrawaddy supply the whole of the Pegu teak. That of the Tonga forests is of the best qua­lity, the country being high, and not flooded during the rainy season ; whereas the forests of the Irrawaddy are al­ways in a swampy state, and are part of the year covered with water sufficient to allow of the trees being floated from where they are felled. The Birmans are in the habit of tapping the teak trees, particularly those which are straight grown, to extract a varnish or oil, which is highly prized by them, and used chiefly for protecting their pa­godas or temples from the weather, for which purpose it is very effectual. These edifices are built entirely of untapt teak, as the Birmans consider the timber to be much in­jured, both in its strength and its durability, by being de­prived of this oil. The principal parts of these temples are sunk in the ground, and although so fixed, the timber re­mains perfectly sound, notwithstanding many of them have stood nearly a century.

The importation of teak from Moulmein and the Tenas­serim coast has only taken place since the Birman war. Prior to that period, Calcutta was supplied almost exclusive­ly from Rangoon, but only with straight teak. The Moul- meia market first supplied crooked teak timbers, which sold at such prices as to induce the Rangoon merchants also to send crooked timber from thence. The quantity, however, is so very limited, that the greatest difficulty is at present experienced upon the Hooghly in completing vessels from 100 to 400 tons entirely of teak.

Inferior as the Pegu and Moulmein teak is in quality when compared with the Bombay teak, it is preferable either to the saul or the sissoo, which has been brought to Calcutta within the last fifteen years, and which will be presently noticed. The accounts of the forests of Pegu and Tenasserim are, that they are inexhaustible, and, if encouraged and properly worked, would supply timber of the largest size, and in sufficient quantity to meet the whole demand of the royal yards of Britain. In the batches of teak brought from the Tenasserim coast, a species of dark- coloured teak, approaching to black, may be noticed, which appears to be a superior description of timber. It is very tough, with the grain close and irregular. It is said to be brought down from the forests mixed with the common