the average weight of those which were kept in a warm room, in which there was occasionally a fire, was 47 lbs. 6 oz. to the cubic foot ; whereas those which were kept in a shed weighed only 44 lbs. 13 oz. to the cubic foot. This result seems to warrant the conclusion, that within certain limits artificial heat does not season wood so expeditiously as natural heat and ventilation. It should be however re­marked, that the average original weight of the specimens kept in a warm room exceeded that of those kept in the shed ; the former weighing 63 lbs. 4½ oz. to the foot, while the latter weighed 62 lbs. 3 oz. to the foot. The difference, however, is too small to vitiate the conclusion just drawn.

“ 4th, From the specimens of English oak in which the tops and buts are distinguished, it appears that in seasoned oak the top is heavier than the but ; the average weight of a cubic foot of each being respectively 48 lbs. 7¾ oz., and 44 lbs. 4 oz. On the contrary, in unseasoned oak the but is heavier than the top, the average weight of a cubic foot of each being respectively 64 lbs. 14 oz, and 62 lbs. 131/3oz. It hence follows, that there must be a medium state of seasoning, in which the top and but are equally heavy.

“ 5th, From specimens No. 37 to 42, it appears that the average weight of a cubic foot of French oak is, seasoned 48 lbs. 0¼ oz., and unseasoned 68 lbs. 2 oz. These speci­mens not having been seasoned four years, are not to be considered as having arrived at their ultimate state. Nos. 47 and 48 were not cut out until August 1840, although the trees were felled in 1836. These, however, together with 49 and 50, serve to show the degree of seasoning of the solid log, as compared with the seasoning of No. 37 to 42, being the same kind of timber cut into small portions.

“ Taking the five specimens, 37 to 41, it will be seen that, both in a seasoned and in an unseasoned state, the tops are, at least at present, heavier than the buts. Thus,—

|  |  |  |
| --- | --- | --- |
|  | **Average Weight of a Cubic Foot of French Oak.** | |
| **Seasoned.** | **Unseasoned.** |
| But | **lbs. oz.**  **46 11**½  **51 10** | **lbs. oz.**  **51 0**  **68 14** |
| Top,.. |
|  |

“ A like result will be obtained by examining the weight of No. 47 to 50, in which the logs remained some years in an unconverted state.

“ 6th, From an analysis of specimens, 53 to 59, it appears that the weight of a cubic foot of Adriatic oak, allowed to season twenty years, is 48 lbs. 6½ oz. The same specimens unseasoned weighed 65 lbs. 10¾ oz. to the cubic foot. As the tops and buts are not particularly distinguished, no con­clusion can be drawn respecting their comparative weights.

“ 7th, The specimens of Italian and American white oak are not sufficiently numerous to draw conclusions from them. The top and but of the Italian oak, No. 60 and 61, after being felled six years, were the same weight.

“ 8th, From specimens 64 to 86, it appears that the weight of a cubic foot of African oak allowed to season from thir­teen to twenty years, is 60 lbs. 3 oz. The same specimens unseasoned weighed 64 lbs. 1 oz. to the cubic foot.

“ It further appears that, both in a seasoned and unseasoned state, the buts are heavier than the tops. Thus,—

|  |  |  |
| --- | --- | --- |
|  | **Average Weight of a Cubic Foot of African Oak.** | |
| **Seasoned.** | **Unseasoned.** |
|  |
| But. | **lbs. oz.**  **62 12**¾  **58 4** | **lbs. oz.**  **66 8**½  **62 0** |
| Top |
|  |

“ 9th, The average weight of a cubic foot of teak, season­ed during the space of nineteen years, is 42 lbs. 2¼ oz, un­seasoned 48 lbs. 11 oz. Moreover, in an unseasoned state the weight of the but exceeds that of the top ; while in an unseasoned state the weight of the top exceeds that of the but. Thus,—

|  |  |  |
| --- | --- | --- |
|  | **Average Weight of a Cubic Foot of Teak.** | |
| **Seasoned.** | **Unseasoned.** |
| **But** | **lbs. oz.**  **42 134**  **41 11** | **lbs. os.**  **47 10**  **48 6** |
| Top |
|  |

“ 10th, With respect to larch, cedar, Riga fir, and a few varieties of the pines, their weights may be seen by inspect­ing the table. But it was thought that the specimens were not sufficiently numerous to justify any general conclusion respecting their weights in different states of seasoning.

“ 11th, Of the Dantzig fir, the average weight of a cubic foot of the unseasoned specimens is 39 lbs. There are only two seasoned specimens recorded ; their average weight to the cubic foot is 32 lbs. 9¾ oz.

“ Of the unseasoned specimens, from No. 103 to 112, the average weight of the buts (39 lbs. 14¾ oz.) exceeds that of the tops (35 lbs. 15½ oz.).

“ 12th, The specimens of cowdie are not sufficiently nu­merous to form a decided opinion respecting the weight of this wood. Omitting No. 121 and 122, which, when weighed, was still saturated with salt water, we find the average weight of a cubic foot of the seasoned timber to be 36 lbs. 15¾ oz. ; while the mean weight of the two speci­mens No. 117 and 118, in their unseasoned state, is 41 lbs. to the cubic foot. The but exceeds the top in weight.

“ 13th, With respect to Canada yellow pine, there are no specimens recorded in the table in an unseasoned state.

“ In taking an average weight of the seasoned specimens, No. 129 to 132 are neglected, inasmuch as two are 'par­tially seasoned,’ and two were weighed shortly after being taken out of salt water. With this explanation, the aver­age weight of seasoned yellow pine is 27 lbs. 102/3 oz. per cubic foot.

“ Out of the five trees from which the ten specimens of yellow pine are cut, it appears that in three of the trees the buts arc heavier than the tops, whereas in the remaining two the tops are heavier than the buts.”

The following articles may be referred to for information on timber: Horticulture, Planting, Strength of Ma­terials, and Ship-building. Some of the most celebrated works which may be consulted, besides those already men­tioned, arc, Sir John Hill, M. D., on the Construction of Timber as explained by the Microscope ; first published in 1770 : the work of Forsyth on Fruit and Forest Trees, which is also of importance, as he was the first to treat on vege­table surgery: the Planter’s Guide, by Sir Henry Steuart of Allanton: and especially the Arboretum et Fruticetum Bri­tannicum, by J. C. Loudon, in eight volumes ; one of the most scientific and important books published on the sub­ject. There are many other works which may be advan­tageously read, but it would exceed our limits to enume­rate them.

The concluding short table will give some idea of the immense consumption of timber incidental to our being a maritime power ; and the estimate that each ton of our merchant shipping has consumed at the very least a load and a quarter of timber, will perhaps tend to diminish the surprise which may have been excited in the early part of the article, by the assertion that the demand for timber was fast outrunning the supply, and exhausting the forests.