M. BUFFON, on the other hand, says that his experience has taught him that the heart of a sound tree is the strongest, but he gives no instances; it is certain, from other experiments on large oaks and firs, that the heart is much weaker than the exterior parts.

2d. The wood immediately next to the bark, commonly called white or blea, is also weaker than the rest, and the wood gradually increases in strength as we recede from the heart to the blae.

3d. The wood is stronger in the middle of the height of the trunk than at the springing of the branches, or at the root, and the wood of branches is much weaker than that of the trunk.

4th. The wood on the north side of all trees, which grow in the European climate, is the weakest, and that of the south side is the strongest; and the difference is most remarkable in hedge-row trees, and such as grow singly.

5th. The heart of a tree is never in its centre, but always nearer to the north side, and the annual coats of wood are thinner on that side. In conformity to this it is a general opinion of carpenters, that timber is stronger whose annual plates are thicker. The tracheæ, or air vessels, are weaker than the simple ligneous fibres. These air vessels are the same in diameter and number of rows, in trees of the same species, and they make the visible separation between the annual plates. Therefore, when these are thicker, they contain a greater proportion of the simple ligneous fibres.

6th. All woods are more tenacious while green, and lose very considerably by drying after the tree is felled.