

utility in the various industries where timber and lumber become important and indispensable factors.

In the "Yo Semite Book," a work prepared under the auspices of the California State Geologist, and published by order of the Legislature, there is presented a "Table of the Measurements of Height and Circumference of Trees in the Calaveras Grove." The girth of these trees is taken at a distance of six feet from the ground. The table gives the name and measurement of thirty-one trees, the average height of which, in round numbers, is two hundred and sixty-nine feet, and the average circumference forty-one feet; answering to an average diameter of thirteen feet. These figures being assumed as correct, or approximately so, it turns out that the *mean ratio* between diameter and height will range from twenty to twenty-one. Now it is a patent fact that the greater this ratio between diameter and height, the more valuable is the tree for lumbering purposes. The reason of this is clearly apparent to every mechanic, and the general reader stands in no need of an explanation from us. Extreme cases, of course, either way, will cause a wide deviation from the results above stated. For example, the specimen which the earlier tourists christened "Keystone State," standing in the same grove, is said to be the tallest individual of vegetable growth on the American continent, so far, at least, as discovery has made known. This tree is three hundred and twenty-five feet in height, and fourteen feet in diameter above the "swell" of the roots, giving a ratio of twenty-three. The "General Jackson," three hundred and nineteen feet in height and twelve feet in diameter, gives a ratio of twenty-six. The "Mother of the Forest," three hundred and fifteen feet in height and twenty-one feet in diameter, gives a ratio of only fifteen; while the "Dr. Kane," two hundred and seventy-one feet in height and sixteen feet in diameter, affords a corresponding ratio so low as eleven.

Let us see now what is true of some of our own monarchs of the forest. We have, with our own hands, carefully measured the heights and diameters of a great many Washington Territory firs. Many of these beautiful specimens stand three hundred feet high, their dark green and densely

matted crowns supported by taper shafts of no more than from six to eight feet in diameter; thus, far exceeding the famous *Sequoia Gigantea* in point of lightness and symmetry of outline. In these investigations, we have discarded all trees below two hundred feet in height; the greater number of those measured might, in fact, be included between two hundred and twenty-five and three hundred feet. From some dozen or more prostrate and standing trees, measured in various parts of the valley of Puget Sound, we have deduced an average height of two hundred and forty feet, with a mean diameter of seven feet. Here, then, are the data for obtaining a fraction over thirty-four as a mean ratio between diameter and height. But lumbermen do not like to attack overgrown timber of any sort; and hence, we think it is safe to conclude that the great majority of firs utilized for lumbering purposes, in Washington Territory, will furnish ratios all the way from thirty to forty, while in extreme cases they run as high as fifty. Let it be understood that the mean height of two hundred and forty feet, announced above, does not relate to the *conifera* as they are met with indiscriminately in our forests, but only such specimens as we have personally singled out and measured; and in all cases, we selected the tallest and most perfect trees.

It may not be amiss to explain, here, to the uninitiated, what we mean by the term "ratio" as used in this article. In a mathematical sense, ratio is the quotient arising from dividing one quantity by another. Thus, the ratio between five and ten, is expressed by dividing ten by five, giving two as the required ratio. Now suppose we measure a fir and find it to be two hundred and sixteen feet high and six feet in diameter. Dividing the greater dimensions by the less, we have a quotient of thirty-six; this quotient, then, is the ratio in question. Without further ado, it will be readily seen why it is that a large ratio implies a correspondingly large commercial value; since it is plain that a greater number of "cuts" of a given length and availability can be taken from a long, taper trunk, than from one of a thick, stumpy growth.

In fact, the best quality of rough and dressed lumber shipped from Oregon and Puget Sound mills to home and

foreign markets, is made from logs which are less than five feet in diameter.

What has been said of the *Sequoia Gigantea*, of California, might be said, in many respects, of the noted redwoods of that State, the *Sequoia Sempervirens*. In the same forest belt, thousands of these trees may be found from seven to twelve feet in diameter. And hence, on the score of convenience and ultimate profit, the smaller sizes alone are selected and felled for legitimate lumbering purposes.

We would not, for a moment, doubt that trees of the most gigantic growth in all lands have their respective uses. Nay, it were dishonoring the Creator of all things to think and speak otherwise. But we think quite enough has been said to show that the timber of our own immediate part of the Pacific Coast is pre-eminently adapted to all the varied wants of builders and wood-working mechanics.

As has been stated, the measurements of the girth and altitude of trees along this part of the Coast, have been made under our immediate supervision. While we have seen much of the magnificence of forest growth in the mountain fastnesses of Eastern California, we have depended wholly upon official reports for the details of measurement as to the individual specimens referred to in this article.

A certain young woman named Hanna,  
Slipped down on a piece of banana;  
She shrieked and oh my'd!  
And more stars she spied  
Than belonged to the star-spangled bannah.

A gentleman sprang to assist her,  
And picked up her muff and wristor;  
"Did you fall, ma'am?" he asked her;  
"Do you think," she replied,  
"I sat down for the fun of it, mister?"

—[New York World.

There was a young man in Alaska  
Who thought he would like to ask a  
Young woman to wed;  
In the face he grew red,  
He stammered and threw himself down at her feet,  
And the next thing he knew, he was out in the street,  
And a six-by-nine boot tore a hole in the seat  
Of the pants of the man in Alaska.

"Blessed are the peacemakers," said the small boy when he dropped a costly porcelain ornament.

"If I punish you," said mamma to her little girl, "you don't suppose I do so for my pleasure, do you?" "Then whose pleasure is it for, mamma?"