

## *How Timber Is "Cruised"*

*From "Pointers" by Jas. D. Lacey Co. Chicago*

Having a tract of timber to cruise after the most accurate manner practicable in consideration of cost, we first send an expert woodsman, preferably the head cruiser who will be in charge, over the tract to fix upon a general plan of operations and prepare a preliminary report on the character of the timber. This report is the basis of instructions issued to the cruisers. Survey crews are then sent to the tract to locate the corners and lines, established perhaps many years before by government surveyors, and to survey and plainly mark out the minor subdivisions; also to set "tally stakes" for the guidance of the cruiser's compassmen.

When this work is well under way the cruisers are sent in and the actual estimating of the timber begins.

Before the cruiser actually begins the work of estimating the timber, he endeavors first to find windfalls of each species, which are representative types. If this is possible he measures the down tree with his tape. He ascertains the exact butt diameter, having chopped away the bark, and the diameter of each succeeding 32-foot or 16-foot log according to the basis of the estimate. By this method he is able to compute from the standard log scale the exact volume of the tree, taking it log for log, the average taper and the number of merchantable logs it contains. He uses these fallen trees as a standard of comparison by which to judge of the contents, the height and taper of those standing. His experience has taught him that trees of approximately the same age growing under the same conditions, will attain to approximately the same height, and will maintain the same degree of taper. It is vital to the accuracy of his work that the cruiser keep careful watch on the changing age, conditions and types of the timber through which he passes in the course of a day's work. Unconsciously he

expects to find the tall clean timber in the draws or on well protected benches; while on the poorer exposures his woodsmanship prompts him to look for the shorter and more imperfect specimens. In a country notoriously free from windfalls, as is frequently the case in the western pine, the estimator often carries some one of the numerous mechanical devices designed to determine the height of standing timber. His steel tape is always in use as an aid and a check to his trained eye in arriving at the butt diameters. Experience has made the expert cruiser a good judge of taper—given him the ability to see at a glance whether a tree holds its size well up into the branches or whether it tapers off rapidly and fails to contain the amount of lumber that its butt diameter would indicate.

Years of practice have imprinted indelibly on the mind's eye of the competent cruiser certain forms and types and sizes, which to him represent certain known contents, and subconsciously these form standards of comparison upon which he bases his estimate upon given trees. By frequent reference to his volume table he has come to know, for example, that a tree 24 inches in butt diameter, containing three 32-foot logs with an average taper of 4 inches of the log—will cut 1,000 feet board measure, also that a tree 31 inches in diameter, four logs high, with a 5-inch taper contains 2,000 feet. Such standard trees are simply an index upon which to work; a rule of thumb, as it were, to systematize and simplify the work of the estimator and to add both speed and accuracy to his efforts. In other words, they serve to standardize his judgment. Should he find trees defective or malformed, he must deduct accordingly. Further, should he find trees that are seriously affected by fungi or any similarly serious diseases peculiar to certain species, he disregards them entirely.