



[Photo R. B. Miller.

Forestry Students of the University of New Brunswick Scaling and Tallying Logs.

A Uniform Log Rule for all Canada.

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Up to the present time, no less than 54 different rules have been devised for the purpose of estimating the contents of logs of given diameters and lengths. Some 46 of these may be described as board measure rules, and the remaining 8 as volume rules. The board measure rules profess to give the number of "board feet" of inch lumber that may be sawn from logs of given dimensions, and the volume rules give a more or less accurate estimate of the cubic contents of the logs.

As milling operations extended into new regions, and as improvements were made in the machinery used, it was found necessary to devise new rules to suit the changed conditions; hence the great number of rules in use in the different lumbering regions. Of the 46 board measure rules, 17 may be described as formula rules, 17 as diagram rules, 8 as mill tallies, and 4 as combination rules.

What I have designated as formula rules include the International, Champlain, Universal, British Columbia, Preston, Baxter, Doyle, Ake, Square of Three-Quarters, Square of Two-Thirds, Cumberland River, Forty-five, Ropp, Vermont, Winder, Stilwell and Orange River Rules. A comparison of the formulæ upon which these 17 rules are based brings out some very interesting regulations.

To the diagram class belong the Scribner, Maine, Bangor, Parsons, Quebec, Spaulding, Favorite, Hanna, Drew, Baughmann Rotary Saw, Baughmann Band Saw, Derby, Part-ridge, Wilson, Finch and Apgar, Warner and the Younglove Rules.

The mill tally rules include the Carey, Chapin, Dusenberry, Saco River, Northwestern, Wilcox, Herring and Schenck. From the nature of the case, these rules have only a local value.

In the combination class we have such rules as the Doyle-Scribner, Doyle-Baxter, New Brunswick and Boynton. The first of these has been adopted by the National Hardwood Lumbermen's Association, because the hardwoods are generally very defective. It is a combination of the Doyle figures up to 28 inches and the Scribner figures above that diameter. The New Brunswick rule is a combination of the Vermont figures from 11 to 18 inches and the Maine figures from 19 to 24 inches, but is too limited in its range to be of much practical value.

The volume rules include four 'standard' rules: the Ohio River Cube, the Constantine, the Ballon and the New Hampshire.

The Nineteen-inch Standard, or 'Market,' is equivalent to the volume of a log whose middle diameter is 19 inches and whose length is 13 feet. As the volumes of logs of other dimensions vary as the squares of