

the case grows worse when we come to the Doyle rule, now much in vogue, and inserted in the later editions (no date) of Scribner's Log Book. In the preface it says, "Doyle's rule for measuring saw logs has been substituted for Scribner's and the whole book has been carefully examined by Daniel Marsh, a practical civil engineer." Now what does a civil engineer know about how many feet of boards a practical sawyer can cut from a round spruce log? Further on the publisher says: "Hence after repeated correspondence and consultations with large lumber dealers and practical sawyers in various parts of the country, we have become satisfied that the calculations given in this table are universally considered the only fair measurement for both buyer and seller." Mark you this "correspondence and consultation" is always from *lumber dealers and sawyers*, and so also are the favorable testimonials in the book. Could we but hear the expressions of those who of late years have been driven to cutting even their best butt logs into pulp wood in order to avoid the ruinous measurements of log scales of which but few have the opportunities of understanding, we should say at heart that the Doyle rule was not "universally" approved. Again, as the Doyle rule is not figured for logs under ten inches in diameter, millers are in the habit of "jumping" the scale of all such as containing 24 feet, (for 16 ft. logs.) Now if we take an 8-inch, a 9-inch and a 10-inch log and measure them by the Doyle rule, the total result will be 84 feet, while the same logs scaled by the Bangor rule, will give 164 feet, or nearly 100 per cent. more! In other words it would take about 18 logs of these three sizes to make 1,000 feet of lumber by the Bangor rule, while the Doyle rule would exact about 36 logs for the same amount. Now the only inference that one can draw from these conclusions is, that if the Government continues to refuse to establish a uniform legal scale they must have some interested motive for doing so.

#### LUMBERING IN THE NORTHWEST.

The Dominion government agent of the crown timber agency for the province of Manitoba and the district of Assiniboia, has furnished the government with some interesting facts regarding the development of the timber and lumber industry of that agency. He reports that last year was not a favorable one to those engaged in lumbering in his district. The winter was short and the snow fall light. Instead of four months' sleighing, as is usual in Manitoba, there were hardly three, hence the season in which hauling could be done was greatly shortened. Fully one-half of the whole winter's cut was left in the woods or hung up on the streams, in consequence of low water. But if the quantity of timber cut and left in the woods, from the causes just mentioned, be taken into consideration, a larger business by several million feet, was done than in the preceding year. The total quantity of lumber manufactured by the mills operating under government license amounted to 13,826,827 feet, which compared with 1888, shows a falling of 3,582,309 feet. It must be remembered, however, that the amount of lumber manufactured for the preceding year included the output at the mills at Rat Portage and Keewatin, while last year the operations there were carried on under the supervision of the Ontario crown timber agent, who collected the revenue therefrom. No pine lumber is now manufactured within the agency except what is brought down the Red River from Minnesota, of which last season there was about 3,000,000 feet. The only standing pine, excepting jack pine, is in that part of the district of Keewatin to the north of the English river and Lac Seul. Lumbering is almost exclusively confined to spruce. Tamarack is the only other available timber to be found in any quantity, and as it rarely exceeds a diameter of 12 inches at the stump, it is found more profitable to make it into ties and piles for railway purposes. The following is a nearly correct statement of the lumber sold during the year: Canadian manufacture, 37,464,454 feet; United States manufacture, 10,429,017 feet. The above shows a large increase in the importation of United States lumber over that of 1888. This lumber is manufactured at Duluth and other points in Minnesota, with a

view principally of supplying the trade in the American territories to the west but owing to the lightness in the demand, brought about largely by the failure of the grain crops in many districts, notably northern Dakota, the Manitoba market is looked to. Shipping facilities have so improved by the incoming of the Northern Pacific railway that no difficulty is now experienced in placing this lumber upon the market in competition with that from the mills at Rat Portage and Keewatin. No timber or other products of the forest were exported from the agency to the United States during the year. The country lying to the west and northwest of Lake Winnipegosis, as far as the Saskatchewan river, has been pretty generally burned over, including the valuable timber on the berths on the Bird Tail creek, the western slope of the Riding mountains, Shell river and Duck Mountain district. Swan and Etoimami rivers, and the Porcupine hills. The quantity of timber in the districts named, as nearly as can be estimated, is upward of 900,000,000 feet, of which a large part has been damaged by fire. Little damage occurred during the past year through prairie fires to the timber on Dominion lands in the settled districts, the settlers having taken greater precautions than in former years to prevent them. Many are still of the opinion that these fires are frequently started by sparks from locomotives, but since coal has been substituted for wood as fuel on the engines, and an improved spark arrester has come into use, fires from this cause are of comparatively rare occurrence.

#### LUMBER INDUSTRY IN WESTERN CANADA.

The minister of the interior in his annual report recently issued, supplies some interesting details regarding the lumber industry in the Northwest territories and British Columbia. There was a decrease of \$14,781 in revenue from timber dues during the year 1889, as compared with 1888. The revenue received from the British Columbia crown timber agency during the last year was \$18,044.77, a decrease of \$7,522.74. Of the amount collected the sum of \$4,092.50 was received for bonuses of berths put up to public competition. The total area so acquired was about 45 square miles, averaging a bonus of \$90.32 a mile. The total quantity of lumber manufactured for the year amounted to 23,759,942 feet, as compared with 24,436,895 feet in 1888, and sold at the rate of \$9 and \$10 a thousand. There are 11 mills cutting timber within the agency. The McLaren-Ross Lumber Company has erected the largest saw mill in British Columbia, having a capacity of 250,000 feet in 12 hours.

The total amount of dues collected for timber within the Calgary agency during the year amounted to \$16,811.12, being an increase of \$6,211.73. The total quantity of lumber manufactured was 1,149,248 feet. The price of lumber at Calgary was from \$12 to \$18; at Cochrane, \$12 to \$16; at Fort McLeod, \$15 to \$43; at Lethbridge, \$30, and Cypress Hills, \$13. Six saw mills were cutting lumber within this agency under government license, and several portable mills under permit.

The total amount of dues collected within the Edmonton agency was \$4,041.73, being a decrease of \$2,691.57, as compared with the previous year. The price of lumber at Edmonton during the year was \$20 to \$25 a thousand, and at St. Albert \$23 to \$25. The agent reports two saw mills in operation within this agency. Two mills were burnt last summer; one is being rebuilt, but it is not the intention to rebuild the other.

The total amount of dues collected within the Prince Albert agency was \$4,093.59, being an increase of \$674.57, over the previous year. Lumber sold at Prince Albert from \$20 to \$42 a thousand, and at Battleford from \$30 to \$35. There is only one saw mill in this agency cutting timber under license, the one at Prince Albert, erected by Moore & Macdowall in 1876. There are also several saw mills at Prince Albert and Battleford cutting timber under permit.

Saw mill returns received at the head office give the following quantities of building material as having been manufactured and sold during the year within the five agencies: Lumber manufactured, 39,849,554 feet; sold, 41,071,655 feet; shingles manufactured, 1,621,750; sold, 2,404,750; lath manufactured, 682,400; sold, 675,098.

Sixty licenses to cut timber over a total area of 2,289.

35 square miles were issued during the year. The areas licensed in Manitoba, the three provisional territorial districts, and on Dominion lands in British Columbia, are as follows: Manitoba, 497 miles; Alberta, 1,492; Assiniboia, 59; Saskatchewan, 197; British Columbia, 41. The area under license in British Columbia seems small, seeing that the authority of council has been obtained to issue licenses to cut timber over 70 berths containing, approximately, a total area of 663 square miles. This is caused from the fact that the returns of the surveys of the majority of these berths have not yet been filed. The regulations provide that this must be done before a license issues. In addition to the 2,247.56 square miles in Manitoba and the northwest territories under yearly license, an area of 791 square miles is covered by 21-year leases, which were issued prior to December, 1883. Of this latter area 559 square miles are situated on the shores of Lake Winnipegosis. The leases in question were acquired at public auction. The number of applications received during the year to cut timber was 81, of which 45 were licenses to cut timber in Manitoba and the northwest territories, and the remainder to cut timber upon Dominion lands in British Columbia. The number of applications during the previous year was 107. Within the past year 11 orders in council, which authorized the issue of yearly licenses to applicants to cut timber on lands in Manitoba and the northwest territories upon their complying with certain conditions, were canceled for non-compliance.

The total area of the berths described in these orders in council was, approximately, 506 square miles. The number of berths still under license or authorized to be licensed in the province and territories is 149, but it is probable that the orders in council, which authorized the licensing of some of these berths will soon be canceled for non-fulfillment of the conditions. The regulations governing the granting of yearly licenses to cut timber in Manitoba and the northwest territories, approved March 8, 1883, as amended by orders in council passed since that date, have been superseded by regulations authorized by council on September 17, 1889, which regulations also govern the disposal of licenses to cut timber on Dominion lands in the province of British Columbia, with the exception that the yearly rental of timber berths situated west of Eagle pass, in British Columbia, is 5 cents an acre—the same rental that is charged by the provincial government—instead of \$5 a square mile, the rental charged for berths in Manitoba and the northwest territories. By the same order in council the timber permit regulations for Manitoba and the northwest territories were amended, and were also made applicable to Dominion lands in British Columbia. It will thus be seen that the department has now one set of timber regulations for all Dominion lands, instead of, as formerly, three distinct sets.

#### Sugar Pines of The Sierras.

An American paper says, the sugar pines of the Sierras is the most superb of all the pines, and the territory it occupies from an elevation of 3,000 feet to 8,000 is, beyond doubt, the most interesting portion of the mountains for campers, tourists or botanists. Specimens have been measured that were forty feet in circumference and 300 feet in height. This pine has a smooth, round and columnar trunk, rising without limbs for two-thirds of its height. It is the most valuable timber tree of the Sierras, is rapidly disappearing, and is not well represented among the younger growth of the forest. A few large trees growing on private estates will remain to be famous generations hence over whole countries. David Douglas, the discover of this species, measured a fallen tree whose circumference at three feet from the base was nearly fifty-eight feet. Trees of 250 feet in height can be found still standing near some of the old towns of the upper Sierra region. In wonderful contrast to these giants of the California forest are the dwarf pines that grow from the limits of the third climatic zone of the Sierras to the very base of the glaciers. James Muir once cut a dwarf pine whose trunk was three and a half inches through, and counted 420 rings. The little tree was tough as a whip cord, as it had need to be in the Alps of California, on the very limits of eternal snow.