

THE GREAT PINERIES.

The Chicago correspondent of the New York Tribune writes as follows:—Of the rather more than 2,000,000,000 feet of white pine lumber that yearly reaches the docks and yards of Chicago, nearly all comes from the western half of Michigan, the northern peninsula of the same state and the Green Bay districts of Eastern Wisconsin. Of the total amount, as much as 1,200,000,000 is derived from a dozen places along the Eastern shore of Lake Michigan. Muskegon alone in 1881 furnished 491,824,000 feet, and 25,715,000 shingles, while Manistee sent forward 151,130,000 feet of lumber, and 257,000,493 shingles, the latter place being the greatest shingle manufacturing place on that shore. The chief district of lumber manufacture on the upper peninsula is at the mouth of the Menominee River, which empties into Green Bay and divides the States of Michigan and Wisconsin. The mills are located at Menominee, in Michigan, and Marinette, Wisconsin. A large proportion of the lumber stock that goes to make up the residue of Chicago's 2,000,000,000 feet is produced at these two points. The Menominee district in 1881 furnished 265,017,000 feet of lumber, and this year it is thought the amount will reach over 300,000,000 feet. The other Green Bay and Upper Peninsula ports of importance in 1881 shipped as follows:—Peshtigo, 52,260,000; Ford River, 25,724,000; Escanaba, 5,680,000; Oconto, 7,210,000. Of Saginaw lumber in 1881 37,573,000 feet were received, but it probable that much more will have arrived at the close of the present season, on account of the unusual reaching about after stocks this year. Alpena, on the Huron shore, in 1881 supplied Chicago with 9,439,000 feet, and more than that will arrive from that port this year. Some is furnished from other Lake Huron points. Latterly the Lake Superior region has produced considerable lumber, most of which has reached the Chicago market, the arrivals from Ashland in 1881 amounting to 20,935,000 feet, and from Ontonagon to 1,360,000. The lumber industry of that section is being greatly developed, and the time will soon come when the output along the south shore of the great lake will swell the yearly total to 250,000,000, but a large part of it will no doubt go to supply the markets of the new Northwest by way of Duluth and the three Northern Pacific railroads.

It is impossible to estimate the influence the pine of Michigan and Wisconsin has had in the development of the Northwest and of the entire country. An important factor in this great agency is the fact that a water way existed between the forests and the prairies. White pine is a light and portable timber, eminently adapted to the wants of new settlers, easily worked by partly skilled labor. It has furnished a material for the building of houses, the improvement of farms, the sudden growth of cities and villages, and by its means an empire has been created, as it were, in a day. Comparison is the most conclusive argument; and if one compares white pine with the yellow or pitch variety of the south, it will be seen that if the northwest had been dependent upon the weighty and hardly worked pine of the southern sections of the country, the progress of the prairie states would have dragged far behind its present advanced condition. Even to this day, when railroad facilities from south to north are quite ample, the weight of yellow pine amounts to almost an embargo on shipments to the northwest, though strenuous efforts are being made to overcome this difficulty by cheaper freights.

The estimate placed on the standing pine of the northwest by the Federal census forestry bulletins, however much they may be criticised, has served to awaken much interest in the present and prospective pine supply. Ten years ago it was claimed in the Saginaw Valley that the available pine in that section would be used up in ten years; yet the yearly product since then has steadily increased, and last year the output was greater than ever before. The same is true of the Lake Michigan districts. This at first blush seems an inconsistent proposition, but being better understood, it appears more reasonable. When the first estimates of Michigan pine were made, the operators took into account only such timber as was accessible to the streams, and was of certain proportions. For

instance, the time was when a pine less than fourteen inches in diameter was never cut. Now, such has become the insatiable demand that trees no more than eight inches in diameter are sacrificed to the greed of the lumbermen; and it is a common joke among the red-shirted brigade that sawed sticks 6x6, are often seen with all four corners "waney." In the early days of the industry Michigan lumbermen penetrated the forests no further than would make a short haul necessary to bring the sticks to stream. After timber became scarce on short hauls, long hauls were undertaken. At length operations had become so thorough that teams could no longer bring the logs to bank, and there was a pause and a consideration of further appliances. At each stage of denudation the pine was said to be exhausted. Estimates of standing pine were always made with reference to the operator's ideas of what constituted available timber, both as to size and distance from water. When lumber was cheap it was, of course, impossible to put too much expense into logging. The cost of stumpage came in for consideration. At first it was worth nothing but the value of the land on which the trees grew, which was obtainable at Government price. In process of time, as the demand for lumber increased, stumpage began to rise in value, and passed through the scale from 25 cents a thousand to its present average Michigan price of \$1.50; that is, the trees are worth that much a thousand as they stand on the stump, or two-thirds the average price of sawed lumber fifteen years ago. Stumpage in Michigan is now often sold at \$5, \$6 and \$7 a thousand, according to quality and accessibility.

Recent estimates of the quantity and value of standing pine have become very different from what they were ten or twelve years ago. Now estimates are made as to quantity on a basis of eight inches in diameter and upward, and all the standing pine is reckoned, be it never so far from stream or lakeside. The demand for lumber has wrought the change in regard to size, and the new method of logging by pole and iron railroad has brought the remotest pine within reach of mills and market.

In the earlier days of the lumber industry of the north snow was relied upon for moving logs from the stump to the stream or lake, and is still to a large extent. But in Michigan the demand for raw material to feed the mills has become so urgent that snow and frost are elements too fickle to base a year's operations upon. In the old days the loggers operated near streams, had an investment of a limited capital, were supplying a rather profitless demand, and did the best they could with ice and snow. In open winters they brooked the loss of idle men and teams and unfulfilled contracts as best they could. Latterly lumbering has become a profitable enterprise. Vast capital is invested in lands, stumpage mills and outfit. The yearly demand calls for 7,000,000,000 feet of lumber, and it must be met by a supply. The energy of money has grappled the logging industry, and dispenses with the agency of frost. Logging railroads have largely taken the place of the sled for long hauls. Pole roads are used for shorter hauls, and together they furnish a means whereby logging is carried forward in the snowless season as well as in the winter. The log supply no longer depends on the character of the season, as was once so much the case. The requisite number of sticks can be put in to keep the mills running in any event.

The pole road is a simple tramway of poles, flattened for the car wheels, and placed end to end along the surface of the ground. Broad flanged wheels run on this rude track, and bear up immense loads of logs and convey them from the stump to the water with a great saving of power. The cars are drawn by horses, mules or oxen. This kind of road is much used in the south. But the iron or steel track logging railway is triumph of modern forest industry. By its agency vast forests of splendid pine in the interior of Michigan have been penetrated, and their crude wealth brought out to the manufacturing centres. But for this means the annual forest product of Michigan would have been one-third less than it is to-day, but regions that are now denuded would still have been clothed with a heavy growth of pine. Still it must be said that the logging railroad has saved a

vast amount of timber wealth from destruction by fire. It is well known by those familiar with forestry that in all the pine regions, especially in Michigan, devastating fires annually sweep over wide areas, and a large proportion of the most valuable timber is scorched and killed before the lumbermen can reach it. If pine is not cut and put into the water during the winter following its being killed by fire, the succeeding season it becomes worm-eaten and "powder-pasted," and nearly or quite useless for sawing into lumber. Immense amounts of pine were formerly lost in this way. But since capital and enterprise have promoted the building of logging railroads, a great saving of burned timber has been made. A pine owner nowadays would be considered considerably lacking in enterprise if he permitted a large tract of burned pine to go to waste by neglecting to penetrate it with a railroad. The construction of railway lines like the Grand Rapids and Indiana, the Flint and Pere Marquette, the Detroit, Mackinac and Marquette, and others, through northern Michigan, has greatly developed the lumber industry of the State, by furnishing facilities for conveying the product to market. Like railroad facilities are being extended through northern Wisconsin, and are bringing the remotest timber resources of that State within reach of the lumbermen.

THE LUMBER INDUSTRY OF THE UNITED STATES.

The census department has issued a bulletin upon the lumber industry of the United States, from which we have compiled some interesting figures. The number of establishments for the entire country is 25,793, having an aggregate capital of \$181,186,122, and employing 148,000 hands. During the census year the value of lumber used by these mills was \$139,835,869, and the value of the product, after being sawed, was \$233,367,729. Over \$31,000,000 was paid out in wages. According to the value of products, Michigan ranked first, with \$52,449,928; Pennsylvania second, with \$22,457,359; Wisconsin third, with \$17,652,347; New York fourth, with \$14,336,910; Indiana fifth, with \$14,260,830; Ohio sixth, \$13,864,460; Maine seventh, 7,933,568; and Minnesota eighth, \$7,366,038. The statistics for the southern states are as follows:

State.	No. of establishments.	Capital, in millions.	Value of product.	Value of lumber used.
Alabama	354	\$1,542,655	\$2,940,024	\$2,940,024
Arkansas	310	\$1,007,040	1,714,700	1,714,700
Florida	135	\$210,560	500,291	500,291
Georgia	655	\$1,011,458	2,020,310	2,020,310
Kentucky	670	\$900,558	1,764,361	1,764,361
Louisiana	115	\$233,050	1,193,532	1,193,532
Maryland	300	\$1,033,681	1,700,000	1,700,000
Massachusetts	774	\$1,743,217	3,020,708	3,020,708
Michigan	420	\$1,054,503	52,449,928	52,449,928
Minnesota	175	\$1,003,093	7,366,038	7,366,038
Mississippi	324	\$2,023,093	3,021,413	3,021,413
Missouri	472	\$1,660,920	2,431,557	2,431,557
Texas	6,028	\$23,550,070	\$23,367,729	\$23,367,729
West Virginia	472	\$1,660,920	2,431,557	2,431,557
Total	25,793	\$181,186,122	\$233,367,729	\$139,835,869

While these figures show that there is a large lumber business at the south, yet at the same time, they give some idea as to how very small it is with what other sections do, or when compared with the amount of standing timber in the South. A few comparisons may show the force of this. During the census year the value of the lumber cut in Michigan was over \$52,000,000, against \$3,600,000 for Texas; but the latter state now has 67,000,000,000 feet of pine standing, while the former has 35,000,000,000 feet. Louisiana has 48,000,000,000 feet of pine standing, and the value of her lumber products for the census year was only \$1,751,640, while Wisconsin has 41,000,000,000 feet standing, and her lumber product was valued at nearly \$18,000,000.

The vast lumber interests of the south are just beginning to attract the attention they deserve, and there are already signs of a local development which promises to be very rapid in the future.

The northern and western states have in many instances cut the bulk of their best timber, and the mill owners are now looking to the south with a view of transferring their operations to that section. In some of the southern states, especially Florida, the demand for lumber for building purposes is very active, due to the heavy immigration, and this must continue for many years. — *Baltimore Journal of Commerce.*

THE SAWDUST CONTROVERSY.

The *Northwestern Lumberman* says:—Notwithstanding the result of the investigation of the Minneapolis Minn., sawdust committee on the navigation question, the St. Paul opposers are as aggressive as ever, and propose to clean out the Minneapolis interests on general principles, whether they are injuring or benefitting navigation. Ignoring entirely the subject-matter of the committee's report, the irrepressible Chamber of Commerce of St. Paul proceeds to "resolute" the Minneapolis mill men out of existence, as follows:—

Resolved,—That this Chamber of Commerce, in behalf of the citizens of the state of Minnesota and the entire Northwest, respectfully requests the attorney-general of the United States to ask for an injunction restraining all saw mills in the state of Minnesota from depositing mill refuse and sawdust in the Mississippi and Rum Rivers, and other navigable rivers of this state, as recommended by Col. Farquhar, United States engineer, formerly in charge of the improvement of the Mississippi at and below St. Paul, and by Maj. Mackenzie, now in charge of the same work, in his recent report to the chief engineers, the deposits being, in the opinion of the government engineers and steamboat men, the fruitful cause of obstructions to navigation, and injurious and destructive to the works of the government now in progress.

The above was unanimously adopted. There is one feature about the sawdust controversy, which is to be deprecated. The matter has been utilized as political capital to furnish the basis for continued agitation. St. Paul and Duluth are red-hot after Minneapolis and its "pine land rings," and its journals pour out gall and wormwood in endless quantity, as tonic bitters for their river neighbour. For this reason much that is said on the sawdust question is apt to be the product of prejudice, and largely political fustian. That is no way to treat an important question. If the agitators have any real grounds for complaint, and can disprove the assertions of the committee that has reported in the premises, they should go about their work intelligently and prove what they allege. The milling interest is a heavy one, contributing in an enormous degree to the general prosperity of the Mississippi valley, and navigation as a whole is of immense importance likewise. To warrant inconveniencing the former interest it is necessary to show that navigation will suffer the most by the alleged evil.

While very radical in their assertions the agitators are decidedly meager in their demonstration, and it is an important fact that nearly all the volcanic wrath on the subject has emanated from the jealous rivalry of sister cities, the general community having rested very easy on the question.

The *Pioneer Press* is inclined to believe that the hullabaloo that has been raised up is without much ground, and produces the following as a probable proof that the St. Paul agitators are on the wrong track:—

"Canada furnishes an interesting contribution to the current discussion of the sawdust question in the shape of a pamphlet containing the reports, made in 1873, by Hon. Wm. J. Alpine and Prof. D. M. Greene, civil engineers, on "Wood and Sawdust Deposits in the Hudson and Ottawa rivers." The points considered are: "What are the causes that induce the formation of bars and obstructions in navigable and other streams? What material usually compose such bars and obstructions? What are the specific gravities of these materials? What velocities of current are necessary to take up and transport these materials to a point of final deposition in the bar?" The conclusion reached, after careful investigation and experiment, accord with the facts found by the committee of the Minneapolis board of trade in their recent investigation of the channel of the Mississippi