

it has not been satisfactorily solved. Wood pulp is so largely in demand that factories for making it can be established with the certainty of doing a good business. So scarce was wood pulp in the United States during the past season that some of the mills, unable to obtain enough, were obliged to shut down on certain grades of paper.

Two kinds of wood pulp are used in the manufacture of printing paper, respectively designated as "mechanical pulp" and "chemical pulp." Any ordinary wood which is fibrous, free from knots and decay, and is easily disintegrated, is suitable for making chemical pulp, though the whiter the wood and the less acid it contains the better. The wood is cut into small pieces, diagonally with the grain, by revolving knives, just as logwood is cut for dyeing purposes. It is then treated with a superheated bath of caustic alkali, and afterward subjected to the same processes as are clear rags. In making mechanical pulp no chemicals are used—not even lime. An ordinary white wood is suitable for the purpose, but poplar is preferred, although the dark heart is not used. The process of manufacturing is the most stupid that could have been devised, yet it is cheap. Water power is used, and it is estimated that one cord of wood, with two stones or emery wheels and 30 horse power will produce the equivalent of from 1,200 pounds of dry pulp per day, with the labor of three men—one to attend to barking and sawing the wood, one to attend to the stones, and one to look after the pulp. The wood is used soon after it is cut, or, if seasoned, it must be steamed. The sticks are pressed endwise against the stones or wheels, and with a plentiful supply of water they are literally ground to pulp, thus destroying the fibre. Unlike the chemically prepared article, this pulp is not allowed to dry before being used. The damp sheets are folded, packed in bundles and sold, with an allowance of 40 per cent. for the moisture. To manufacture paper from it, the addition of some kind of fibre is essential—say from 20 to 80 per cent., according to the kind of paper required. Good printing paper is made from the chemical pulp without the addition of any other fibre, and the use of it is desirable in making even the best book paper. Some excellent book paper is made of 40 per cent. of this pulp, and the printing paper now being used by the government is made wholly of white spruce pulp. Machinery of the capacity for making, say 7,000 pounds of rag paper per day, will turn out from 12,000 to 15,000 pounds per day.—*Philadelphia Record.*

THE COMING WINTER'S SUPPLY.

Considerable speculation has been indulged in as to the extent of operations in the woods during the coming winter. By many it is maintained that the enhanced cost of all kinds of camp supplies, increasing the expense of putting in stock, will lead to less endeavor being made to put in a large quantity. Such reasoning is not in accord with the well known practice of lumbermen, which is to run a lumber camp for all there is in it, and cease only when the weather compels a cessation of labor. It is reasonable, then, to conclude, that no man who has ever had a camp, will refrain from establishing one this winter, provided, of course, he has any timber of his own, or can get a job of lumbering from others. Of course it is impossible to predict, or even give a shrewd guess, as to the quantity of logs which will be put into the streams, or placed convenient for the operation of the mills; there are too many contingencies of weather to be taken into account, but it is perfectly safe to say that, good winter or bad winter, high prices or low prices for provisions or labor, all the logs will be cut that the streams can take care of, and if the spring freshets are ample to bring the timber from the forest to the mill beams, it will be a perfectly safe proposition that the mills will have all they can do to saw it. And contrary to the experience of former years, not so long back, there is no good reason why this should not be the case. With the present prosperity of the country, largely the result of legitimate, rather than speculative causes, the present mill capacity is none too great in the Northwest, to produce the lumber which a rapidly developing country demands for actual consumption, except under the most

extraordinary conditions of the season, such as great floods or drouths, that may bring ruin to the consumer and destroy his purchasing ability, the day of overstocks in lumber has, practically, passed. There was a time when through causes induced by speculation and apparent, rather than the real wants of the country, causes the result of war rather than of peace, the mill capacity was in excess of the demand for consumption, and yearly increasing stocks of lumber at the great distributing points led to a loss in values, through the necessity of keeping the money in active motion, in order to gain even the smallest interest from its possession. Emigration was at its lowest ebb, and the era of development of the prairie, and more especially of the mining districts of the west, had scarcely given notice of its coming.

The market for lumber was then restricted to less than half the territory from which there is now an active demand. Ten years has seen an increase of one-third in the population of the United States, and the prosperity attendant upon good crops, a revival of business confidence, the development of new industries, the extension of old ones, the unprecedented increase in railway mileage, and the opening up and development of immense states, which were formerly known only as sparse settlements upon an extreme frontier—all these, aided by such an immigration as the country has never before realized, have created a use for products of the forest that almost forbids the belief that it can again be said that there is an overstock of logs in the streams, or lumber in the yards. An increased half a dollar, or dollar, in the cost producing logs never frightens a lumberman, especially when he is realizing higher prices for his manufactured stock than he ever did before; and when we see such prices quoted as \$9 for culls, \$18 and \$20 for common, and \$33 and \$40 for uppers, even for such timber as the famous Cass river pine of the Saginaw valley; or where we hear of logs selling at \$19 per thousand, even allowing them to be the best timber which ever stood out of doors, and remember that these prices are several dollars higher than the same timber ever commanded before, it is fully to think that its owners will be deterred from putting it in because of an extra dollar above the cost of other years in the expense. When, again, such prices as we have quoted can be obtained for the very best of lumber or logs, it is pre-supposable that more ordinary timber will be held at a proportionate advance upon former rates.

Recurring to the original question as to the extent of operations in the forests this winter, we reply that the stocks of next spring will be as large as the ingenuity of man—and these men ingenious and determined lumbermen—can make them by the aid of snow, if the winter be favorable, of rain, if it be wet, of logging railroads, if it be dry; the logs will be put into the full capacity of the saw mills, which capacity does not now seem to be in excess of the demands of that great territory, North, South, East and West, which may be said to stand ready to consume the lumber at an equitable valuation.—*Northwestern Lumberman.*

Timber Limits.

We learn that Messrs. R. and G. Strickland have purchased the Dominion Bank timber limits in the townships of Oakley and Hindon, County of Victoria. We have not learned the price paid, but understand that the limits are among the most valuable in the back country.

According to the *Times*, 149 new buildings have been erected in St. Thomas this season at an outlay of \$178,350. Last year the number of new structures was 108 and the expenditure \$133,650. There are three huge contracts on the boards for next season—the Government buildings, the Grand Central hotel, and the new Presbyterian church.

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