

ways. The necessity of disposing of all the fallen timber of every sort as a safeguard against fire and as a prevention of waste, necessitated an extension of their plant beyond a mere saw mill, and brought about the extensive charcoal, chemical, brick, cement, and other industries located at Deseronto.

The fact that this company is still operating in limits that have been worked for many years is not the result of chance. They have been saved because precautions were taken to protect them. The question of disposing of the waste after logging is a very serious one. We cannot dispose of it here as is done in Germany, where even the little twigs are used for firewood. It is extremely dangerous if left in the woods, yet the expense of taking it out renders that plan impossible. The plan followed by one or two Michigan lumbermen, of burning the tops and branches as they lie on the ground early in the spring, has been pronounced impracticable by many of our principal lumbermen, yet this plan has been in successful operation in the county of Hastings for some time. Mr. James Scantlin, chief fire ranger in Rathbun's Hastings limits, in reporting to the Department of Crown Lands on the season's work, writes :

"I have made it a practice for the past five years to burn all the tops and rubbish of our previous winter's cut as early in the spring as it is dry enough to burn, and watch it so that it does not burn into the green woods. In this way we have had no heavy fires in the summer. Another advantage I find is that the young pines, both white and red, come right up and grow well, but I find where the heavy summer fire goes it burns too deep into the soil and seems to burn all the seed of the pine, so that other kinds of timber grow up, poplar and birch taking the lead and outgrowing all the other trees."

Mr. Scantlin writes that if the fire rangers, after this early spring burning, would give careful attention to the young pines, another cut could be taken out from them in 25 or 30 years. While Mr. Scantlin may be slightly optimistic in his views as to the time required to grow a pine tree to timber size, his experience in preventing fires is valuable, and his conclusions as to the conditions of growth of young pine correct.

Does it pay? Would it not have paid the Rathbun Company better to cut off the valuable timber as soon as possible, and then buy other limits? This question is frequently asked by those among whom the Rathbun methods are known. I have no doubt more immediate profit could have been shown by the speedy method of getting over a limit and taking out the pine. The expense of logging and driving per thousand feet would perhaps be less and the returns on the investment quicker, but that method of figuring does not take into account the permanence of the business, and a visit to the Rathbun limits in the

township of Grimsthorpe will afford a fairly satisfactory answer to part of the query. The limits alongside have long been burned over, and the mills they supplied are idle, yet in this old limit that has been worked for many years it is estimated there is from 150 to 200 million feet of white and red pine still standing, most of it of good timber size. About ten million feet B. M. was taken out of it this season, and, to one not an expert no thinning out of the forest was apparent, except where a cyclone had left an extensive blow-down, which was cleared up by the loggers down to "anything that would make matches," as Mr. E. W. Rathbun's instructions to the efficient manager, Mr. Callahan, tersely put it. The photo appearing on the previous page was taken by the writer before the loggers had completed their work in the "blow down." Notwithstanding that many very small trees blown down in this cyclone were made into logs, thus reducing the average, I was informed by the government culler that the whole drive would



RATHBUN'S HASTINGS LIMITS, SHOWING CLEARING AROUND CAMP.

average 90 feet B. M. to the log, thus showing the timber to be of good average size.

Good permanent roads have been built all through the forest, and the camps are in better shape than would likely be the case if they were only intended for temporary use. Around each camp a space of about five acres has been completely cleared, as shown in the accompanying illustration, and I understand it is proposed to cultivate and seed to pine and other trees each of these five acre plots this spring. While I believe this method of lumbering has paid the Rathbun Company better than the other, there certainly can be no doubt of its greater advantage to the province in the increased stumpage dues on timber that is cut instead of burned up.

Have any changes taken place in the lumbering business in your locality? If so, write a few lines to the CANADA LUMBERMAN giving the particulars.

The most beautiful trays and cabinets which come from Japan are made of the dark, irregularly-grained and wavy-lined wood of the kiaki, a tree closely allied to the elm.

ONTARIO TIMBER LANDS.

A COMPARISON of the quantity of timber cut from the crown lands of Ontario in 1896 with that of the previous year shows a considerable increase in the output of white pine. Of hardwoods no definite returns are given. The following table, compiled from the reports of the Commissioner of Crown Lands, shows the estimated cut of different classes of wood :

	1895.	1896.
Saw-logs, pine.....	800,665,355	904,379,710 feet B.M.
" other than pine.....	12,917,017	15,197,757 "
Boom and dimension timber, pine.....	37,170,013	34,373,475 "
" other	1,854,051	2,056,670 "
Square timber, white pine.....	873,304	1,128,606 cub. feet
Pulpwood.....	31,115	31,057 cords
Railway ties.....	907,862	708,451 pieces
Telegraph poles.....	1,518	655 "
Stave and shingle bolts.....	2,430	1,339 cords
Piles and head blocks.....	69,354	55,623 feet.

In the year 1895 the area covered by timber licenses was given as 17,851 square miles, while last year only 13,722 miles were under license.

Regarding forest fires, the Commissioner in his report says :

"It has become evident that if the Crown domain is to be protected from forest fires some

organized system of fire ranging will have to be put in force on the unlicensed territory similar to that which is in operation on the licensed lands. Owing to the excitement which now prevails in connection with gold mining and to the wide area over which the precious metal has been found to exist, there will scarcely be a corner of the newer parts of the province in which the explorer will not be plying his vocation during the coming summer. Explorers, like others, are good or bad, careful or careless, and as they continually use fire for cooking, keeping off flies, lighting their pipes, etc., the danger to the forest areas will be considerably increased. Every precaution possible has been taken to

keep explorers out of the pine areas. Notices have been posted in the Rainy River district warning them not to survey or attempt to take up as mining lands areas which are covered with pine timber, and the surveyors have been instructed not to survey in pine areas. But notwithstanding all this it is found that explorers pay little attention to these regulations and notices, where they have reason to believe there is a prospect of finding gold. Nothing short of an active surveillance of the pine areas by a staff of fire rangers will have any deterring effect in preventing explorers entering upon pine lands in the prosecution of their search for gold. There is a large area of pine territory in an exposed position in the Rainy River district which ought to be carefully guarded during the coming summer, and in the territory north and east of Wahnapiatae there is understood to be an immense body of pine timber which ought to have some supervision, with the object of preventing its being damaged by fire."

Another log raft will be built on the Columbia river at Stella, Washington, for San Francisco.