become a very important one, for we find that, in the Eastern Townships and on streams entering the St. Lawrence River, as well as in the Georgian Bay and Lake Superior districts, large amounts of spruce and other pulpwood are being likewise exported free of export duty to the United States, while heavy duties are exacted on the American frontier on any pulp exported from Canada; so that on all sides we are frittering away our heritage of timber with little benefit to our own people, when a proper policy on this subject would at once make us masters of the situation, since our American neighbors have now so far exhausted their immediately available supplies of white pine and spruce timber, from which to make lumber and pulp, that they must in the future depend largely on Canada for such material, and we would be enabled to get satisfactory prices therefor, instead of as we have heretofore been simply hewers of wood for others, whence our country barely derived compensation for the labor expended in our efforts "to get rid of the timber."

Apart, moreover, from the serious loss to Canadian labor in being deprived of its manufacture, there is, in the transfer of such a vast amount of manufactured timber to the United States- an amount that would give employment to fifty ordinary Canadian mills - a loss of revenue to be sustained this year of probably a million dollars, when all logs and pulp wood are included, while at the same time our railways and vessels are wholly deprived of any participation in the freighting of these products, sufficient to give a railway traffic of 50,000 car loads or a vessel tonnage of 700,000 tons in a single year; every foot of this not only to give employment to American mills, but go to swell the traffic of American railways and vessels, and to stock the American market with the great amount of lumber and pulp made from our timber, to supplant an equal amount that would otherwise be profitably supplied by our own manufactures.

Not only is this policy ruinous to our own people, but it is unjust to the Americans to allow it to be continued any longer, for it is leading them into expenditures that will be valueless when it is changed, as soon it must be, and in justice to all it should be now.

In connection with this subject, as it was a matter of debate in Parliament, I may here state that the pretensions made by some persons of a great amount of American whitewood (called yellow poplar) still existing in the United States, which was to be a substitute for our white pine, do not appear to be based on a correct knowledge of the situation, for at the recent meeting of the Poplar Manufacturers' Association, the Secretary, Mr. A. H. Winchester, gives estimates made largely from personal explorations, and places the total United States' supply of merchantable poplar timber available at 6,500,000,000 feet, and adding small and remote timber, the whole not to exceed 10,000,000,000 feet, which is less than the amount of pine timber cut in a single year (1890) in the three states, Michigan, Wisconsin and Minnesota. And he directly scouts any supposition that this wood exists in such quantity as to furnish

A SUBSTITUTE FOR THE WHITE PINE,

for he says: "No remark is so irritating to one who knows the true condition of the poplar field as the one we so often hear as to poplar being the coming substitute for white pine when the fact is, as we see it, that the last poplar log will have become a tradition before the output of white pine has been materially curtailed. Every day sees us looking for new uses for poplar, when we cannot supply our existing demands. Our grand poplar field is obliterated. Stranded, detached bunches of stumpage remain, but are fast disappearing."

Here also permit me to say that fresh evidences are constantly appearing to show how limited our own supplies of white pine are becoming. In the last Crown Lands Report of Ontario, the Hon. Mr. Hardy clearly shows that nearly the whole remaining timber reserves in the Nipissing district south of the Ottawa and east of the Georgian Bay have been sold, for although he does not so state it, yet this is evident from a consideration of his remarks, for he says: "Of the total area (of limits sold), 410 miles were in the district of Nipissing on the headwaters of the Muskoka, Madawaska and Petawawa rivers, surrounded by licensed lands upon which lumbering is being actively carried on." For when you consider that the waters of the Muskoka flow into Georgian Bay, while those of the Madawaska and Petawawa run to the Ottawa, and that the most valuable of those limits were purchased with the intention of taking the timber across this height of land to the waters of the Trent flowing into Lake Ontario, and as he says, they are surrounded by licensed lands upon which lumbering is now being actively carried on, it becomes at once apparent that the whole intervening country, up to the headwaters of these rivers, has been overrun by our lumbermen for supplies of white pine timber, and this last block of limits is now to be lumbered on. There is then left in that province only that portion bordering on Georgian Bay and Lake Superior, from which the Michigan lumbermen are now deriving a large amount of their supplies, together with insignificant patches here and there in the Lake of the Woods district on islands and in small groves, most of which is tributary to waters flowing into Hudson Bay, and being in many instances of little greater value than the Banksian pine (cypress) of this province, which has hitherto been considered valueless. In rear of the streams on the north shore from which the Michigan mill men are now getting stock, the character of the country is correctly represented in the same report by Mr. John McAree, O.L.S., who made an exploration along the line of the Canadian Pacific Railway for 79 miles, from Woman River to Windermere, when he says: "The timber is that which is common to this whole northern country, viz.. spruce, tamarac, banksian-pine, white birch, balsam, poplar, cedar, etc., and extensive fires appear to have swept over the country in former years, so that over most of the land that we saw the trees are of second growth and small in size."

And lest it might be thought that his failure to mention the white pine was an oversight he says, in concluding his report: "I beg leave to add by way of addenda that we saw not more than two score trees of red or white pine in the whole survey."

And this is unfortunately for us the character of most of the country of which an hon. gentleman informed Parliament,

THE ONTARIO GOVERNMENT,

with that wise regard for the future which has characterized almost all its policy, has reserved out of its entire area of timber limits, 150,000 square miles," and which are to "furnish supplies for three hundred years."

The fact is the more this matter is enquired into the more serious appears the effects of our lack of any judicious policy on the subject of our timber, which we have frittered away in the past in a manner that has not been incorrectly styled wanton vandalism, while our present policy, which includes the evils of the past, actually offers a premium to strangers to "rob" us of what little pine timber is left, and the Canadian public supinely looks on with apparent indifference at this national suicide.

While by no means desirous of depreciating in any way the value of our country's resources, my own judgment assures me that they are not so great that we can afford to sacrifice one of the most valuable we possess —the timber—without reasonable compensation, which we have been doing in the past and which, I regret to have to add, we are still doing with apparent satisfaction on the part of both government and the people.

A CONSUMING TOPIC.

SOME one in Germany has lately revived the old idea of using coal in the pulverized form for the prevention of smoke. This idea comes up at frequent intervals, but never amounts to anything except considerable talk on the subject. The frequency with which this plan is advanced shows the desirability of smokeless combustion, but as there are numerous devices on the market at the present time, which, if applied and intelligently handled, will give smokeless combustion with soft coal, there is no necessity for a scheme which involves the handling of the fuel three or four times more than at present.

THERE is only one wood known to be better for pump stocks than poplar, and that is cucumber, a kind of magnolia, and not very plentiful.

VIEWS AND INTERVIEWS.

A Pinch of Dust.

The dangers that lurk in the air form the subject of an essay by M. de Nansouty on "The Atmosphere of Large Towns and Micrography." He points out the increased pollution of the air in Paris from the factories worked by steam machinery. An analysis of dust and rain particles reveals that a remarkable collection of divers objects may be absorbed at every breath in the street of a large city; silex, chalk, plaster, pulverized rock, charcoal, hairs, fibres, vegetable refuse, starch, pollen cells, etc. A specimen of dust collected from furniture on the third floor of a street in Rennes contained all this and nearly three million bacteria in addition. A gramme of dust (about fifteen grains) in movement in the streets encloses about 15,000,000 bacteria.

Sawdust as Horse-Fodder.

Stories have been told of experiments made in bread-making from sawdust, and it is possible that in Russia, when dread famine has threatened its thousands, and the inhabitants have been glad to eat bread made of the bark of trees, that a loaf of sawdust bread might be accepted. But further than this the stories of sawdust bread-making are very mythical. It is from an Englishman, however, in Sussex county, that comes the information that owing to the scarcity of fodder in that part of the country cart-horses are being fed on a mixture of one half fresh elm saw-dust, the other crushed oats and bran. They heartily enjoy it, so it is said, and appear to thrive upon it. Fable has depicted the horse fed on shavings, though we never learned that he thrived on the diet. Sawdust, it may be expected, will no longer be procurable at about the cost of carting it away.

Emergency Surgeons.

A glance at the news pages of the LUMBERMAN each month will tell its own tale of the number and serious nature of the accidents that occur in the various saw and planing mills of the country. What to do till the doctor comes is worth knowing and may often mean the saving of a life. An emergency surgeon, says the Tradesman, should exist in the person of the foreman of every shop or factory where accidents are liable to occur. "He should be required to know enough of surgery to give the injured employe immediate and temporary relief until skilled aid can be summoned. If an artery is cut, the foreman, or some one else in the shop or factory should know how to apply a tourniquet to stop the flow of blood and perhaps save a life. A workman may be prostrated with heat; may have a finger, hand or a foot mashed, and a little timely knowledge may save a great deal of suffering and, possibly, fatal results. It will require but little time and study for anyone to acquire sufficient knowledge of surgery to be of great help in an emergency. A foreman is hardly fitted for his duties unless he possesses some knowledge of the simple forms of surgery that can be used in a case of accident."

Tree of Solid Agate.

A mining expert sent to investigate some Arizona properties for Denver capitalists recently returned and reports the finding of a most remarkable natural bridge, formed by a tree of agatized wood, spanning a canyon forty-five feet in width. The tree had at some remote time fallen and become imbedded in the silt of some great inland sea or mighty overflow. The silt became in time sandstone and the wood gradually passed through the stages of mineralization until now it is a wonderful tree of solid agate. In after years water washed and ate away the sandstone until a canyon forty-five feet in width has been formed, the flint-like substance of the agatized wood having resisted the erosion of the water-flow. Fifty feet or more of the tree rests on one side and can be traced, but how far its other side lies buried in the sandstone cannot be determined without blasting away the rock. The trunk visible above the canyon varies in size from four feet to three feet in diameter. Where the bark has been broken and torn away the characteristic colors of jaspar and agate are seen. To the naked eye the wood is beautiful. Under a microscope or miner's magnifying glass the brilliancy of the colorings is clearly brought out in all its wondrous beauty.