

A NEW DEPARTURE.

The lunch meetings of the lumbermen of this city have resulted in much good. Nothing could have been devised that would do more toward creating a brotherly feeling, and bringing about an understanding between the members of the trade. Several questions of great moment have been discussed, and no doubt with much profit. Over the lunch and cigars good feeling invariably prevails, and when such is the case there is always exhibited a degree of frankness which is not at other times observed. The benefit thus far is almost incalculable, but it need not rest here. There are other steps that can be taken, and which, possibly, would be more valuable than any that have been taken.

The Lumberman's Exchange is a great power. Among its members are included men of unusual intelligence, as well as business ability. It represents a vast capital, and its united voice is one which would not be likely to be ignored. When it speaks it represents one of the leading industries of the nation, and its voice proceeds from the headquarters of that industry.

A question that the members of the Exchange could profitably discuss is, What steps can be taken toward bringing to the notice of the government the necessity of protection against forest fires? It is a question that has a direct bearing, not only on the interest of every owner of pine lands, and manufacturer, but every wholesaler as well. The interests of these classes are inimicable, and any action by government toward the protection of the pine that forms the stock in trade of each, would be of mutual advantage. Individuals have labored to interest our law makers in the question of fire protection, as well as forest protection from other sources, but with little success. We believe the voice of the Exchange would command attention, and attention is the first thing to be desired. Some of the states have made provisions for the cultivation of trees, and it would be eminently proper for government to arrange for the protection of trees.

We believe there is no lumberman who owns pine lands who will disagree with us. A man who purchases timber lands is of course the owner of them, but it does not follow that ownership should give him the liberty to do with them as he likes. If his timber patch is isolated let him operate as he desires. If his neighbors are permitted to accumulate and dry, and at last be the means of his standing timber being destroyed, he alone will suffer. But when his timber stands on land adjacent to other of the same kind, or if in case his possessions were swept by fire it would hazard the homes and property of others, the question takes another form. The same law should hold good that is forced in other directions. Under good municipal management a tinder box is not permitted to be constructed in a city where the burning of it would hazard the property of others. By common consent a man must pay some respects to the rights of others, but in the logging business he does not. If he steps over the line and steals a few trees from his neighbour, the law stands ready to make him suffer a penalty, but it is in reality a small offence when compared with the course he does pursue—a course to prevent which there is no law. It is the absence of such a law, and its enforcement, that so often makes pine lands risky property to own. A single winter's operation, as logging is now conducted, forms a good excuse for the flames, if once started, to make havoc that, while deplorable, might easily have been prevented. When the ground is covered with dry tree tops, fire finds food to feed upon, and gets such headway that it sweeps through forests which it would not except for the force which it had already obtained. To do away with these conditions would require considerable work, but no work could be done in the woods that would pay better. As a proof of this we may instance the loss in Canada by forest fires for the year recently ended. In the Ottawa Valley it has been estimated at \$5,000,000, and in the entire Province as high as \$10,000,000. That amount of money would pay for a vast amount of labor, and a small proportion of it expended at the proper time would have prevented the loss of the balance.

It is a fact that most men learn sooner or

later that there is a cause underlying every effect. With no material for fire to feed upon there will be no fire. It is not an impossible thing to get this material out of the way. The tree tops could be piled into heaps and burned under the supervision of men who would see that the fire did not spread. There are wind-falls which leave vast areas in shape for conflagration. In this territory the match of the careless hunter or woodsman will, to the end of time, for aught we know, set the dead timber ablaze, but beyond this forest fires need not be extensive, or occur often.

No state in which the lumber business has been extensively carried on has suffered so little from forest fires as Maine. The reason is very apparent, and is due to a species of forest preservation which is practised nowhere else in America. The larger trees are cut, leaving the smaller ones to shade the earth, and thereby so much humidity is retained as to make the running of a fire next to impossible. We do not make this statement, however, with the expectation that such a course will be pursued in Michigan, Wisconsin, or Minnesota until timber is much scarcer than it is now. It shows the wisdom of the Maine lumbermen, nevertheless, and gives them a solid foundation upon which to stand when they assert that there will be timber in that state for the coming generations, in response to the oft-repeated statements made by the western lumbermen for the past twenty years that the timber resources of Maine are exhausted.

It is the experience of nearly every man that to make a success of life he must unlearn much that he has learned. Our pine has been so plentiful that operations have been carried on recklessly. If a portion of it burned, there was thought to be plenty left. It is time that such operations were checked. A habit of carelessness that has been prevalent since the first blow was struck by the lumbermen in the Michigan woods, and an indisposition to spend a few dollars, when the expenditure of them would be an almost perfect assurance against losses which are irreparable, should be rebuked and corrected.

There are no hopes that men in the woods will so conduct their work that fires will be less frequent, unless they are obliged to. They plainly see the necessity of it, and many of them would welcome a law that would force them to do as they are conscious they ought to do. The members of the Exchange can discuss no question that is of more interest to most of them financially. They can decide among themselves what ought to be done, and then take the proper steps toward its accomplishment.—*Northwestern Lumberman.*

TREE CULTURE AND ITS EFFECTS ON RAINFALL.

The rapid denudation of the forest lands of the country has been the subject of much thought and study, not only on the part of those interested in a pecuniary sense, but has called forth numerous lengthy discussions in regard thereto on the part of literary and scientific men whose motives may be less sordid than those of the former class, and whose only object apparently has been the prevention of the wanton waste of one of nature's great donations to humanity, in order that future generations may reap a portion of the benefit thus lavishly bestowed, but of the value of which many people of the present day and generation appear to have a very faint conception. Forest culture to supply the present use and waste of timber has been urged upon the government, and has received such serious consideration on the part of our national legislature that the commissioner of agriculture has been induced to form a distinct division in that department, to be devoted entirely to the investigation of this subject, with a distinguished professor at its head, who has been to Europe for the sole purpose of the investigation of this subject, and who is at present engaged in the preparation of recommendations to congress, having in view the planting, preservation, and maintenance of forests on the prairies of the west; the principal object of which, of course, is to supply the future demands of that country, in regard to lumber.

But another and very different motive for the consideration of this subject has lately at-

tracted the attention of writers thereon. Not only do forests supply a necessary want—the supply of the material on which such a vast number of the industries of the country are based, but the influence of the forests on the rainfall of a country is receiving at the present time thoughtful and serious consideration. That they do exert such an influence there is no possible room for doubt. Not only is the view sustained theoretically, but the actual practical experience of thoughtful and observing men, whose interests and occupation has led them to an investigation, coincides precisely with the views of scientific men in this connection.

The writer remembers several years ago, during a trip through Iowa, Kansas and Dakota, having his attention called particularly to this subject, by the pioneer settlers, some of whom had so far succeeded pecuniarily that they were enabled to make practical tests, in order, if possible, to demonstrate the correctness of the theory, that tree-planting or forest culture, systematically carried out on the prairies of the great west, would supply the much needed and anxiously coveted rainfall, the lack of which was the only obstacle to the immediate pecuniary prosperity of the pioneers of civilization, whose influence on the development of the resources of that country has never yet been properly estimated or recognized. So serious consideration had this subject received at that early period in the history of those territories that very many of the settlers were already carefully watching and noting the results of their tree culture, and its influence, and the invariable testimony was that in proportion to the extent to which it was carried on, the increase in the amount of rainfall kept steady pace. Of course when pressed for an explanation as to the manner of this influence, they were unable to give any very definite ideas, but the fact was there nevertheless, and that was satisfactory to them at least.

That forests do therefore induce and increase the rainfall to no inconsiderable degree is indubitable, but as to the manner or methods by which their influence induces such a result it is not quite so comprehensible to ordinary mortals. Experiments not only in this country but in Europe, prove beyond a peradventure that tree planting is beneficial in more directions than one, but especially in regard to the increase of the humidity of the atmosphere.

The *Cincinnati Commercial* of a recent date, in a well written article on this subject, in a measure explains the influence of tree culture on the atmosphere. It says:—

"Forests influence the atmosphere, though, more powerfully by their effect on its general humidity than in any other way. An evaporation of moisture from both earth and trees takes place constantly. The evaporation is greater from open soil than from woodland, but the difference is far more than made up by what is called 'transpiration' of leaves of the trees. This corresponds in a degree to the insensible perspiration of animals. Some conclusive experiments have been made with growing pot plants, going to show that leaves do not absorb moisture, but that, on the contrary, they give it out. The moisture is absorbed through the roots.

"The quantity of insensible vapour that is given off through leaves is immense, amounting to one and a quarter ounce to the square foot of leaf surface. The world-old metaphor of counting the leaves of the trees has a new significance in the light of science. Painstaking experiment has enabled those studying the matter to make an approximate estimate of the comparative amounts of vapour given off by earth surface and leaf surface. They have calculated that a square foot of soil sets free about six times as much moisture as a square foot of leaf. The leaf surface is, however, many times greater than the soil surface—twelve times greater, the scientists put it—so that twice as much evaporation takes place from forest as from open land. When the wood of the country is cut away, therefore, other things being equal, two-thirds of the moisture-giving material of the atmosphere is gone with it. Hence the long, fearful droughts on lands bare of trees."

A writer in the *American Naturalist* also says in this connection:—

"From the data obtained it would seem safe

to infer that when the percentage of woodland is fair (25 to 30 per cent) at least twelve inches of water is transpired in the course of a season in mild or temperate climates, or, in other words, twelve inches of the total annual terrestrial evaporation. All this vast amount of water is transpired in about six months, or during the vegetative period. Under these circumstances an equivalent of nearly half the rainfall during the warm season may be accounted for by the transpiration. These are striking facts, and tell in indisputable terms of the happy effect of plant life upon the humidity of our atmosphere, as this substance in due proportion is very essential to an equable and salubrious climate. Were it not that the atmosphere was properly moistened so as to intercept nocturnal radiation from the earth, our cereals and other products of husbandry as well as vegetation generally, would greatly suffer if not be entirely destroyed by the resulting frost.—*Lumberman's Gazette.*

A TALK WITH A TIMBERMAN.

When an *Advance* reporter dropped into the office of Messrs. Burton & Bros., yesterday, he found Mr. James Burton, the senior partner in the firm, scanning a map of the Muskoka and Parry Sound Districts. "No, we don't own the whole district, my gentle gazelle," he said with a laugh at the reporter's little familiarity. "But we have a stake in the country. You see these colored sections. Well, they represent \$750,000 of timber limits. A nice little figure, and don't you wish you had it to your credit in the bank?" The newspaper man disclaimed any such sordid ambition. It was glory he was after,—and local items. "Our limits," continued the timberman, "are in those townships. They embrace about seventy square miles. In this one, Armour, we have now at work over 100 men and teams." "How do you get out the timber, and where do you ship it, Mr. Burton?" queried the scribe. "The Magnetawan runs right through our limits. We take our stuff down that river to Byng Inlet; there our boats take it on down to Kingston where it is rafted and sent down the St. Lawrence to Quebec." "You are not in the lumber business now, I believe." "No. Last year we sold our lumber interests in Michigan for \$50,000. But we have land there—15,000 acres of good land, and the Marquette railway runs right through it." "Business good?" "Splendid!" "Paying?" "At present prices I should think it was. Nobody needs to lose money in the timber business in this country now. The demand is constantly increasing while the supply is rapidly decreasing." "You are one of those alarmists who believe that our forests are disappearing and that before many years there will be a wood famine?" "That's a fact; unless some means are taken to repair the waste going on we must exhaust our timber resources. What with bush fires and wasteful cutting, timber is becoming more and more scarce and dear. Take a look around you in this very county. Twenty years ago Cook Bros. bought 1,800 of bush land in Tiny township for 10 cents an acre. To-day they refuse \$90,000 for it. This may be hard to believe, but it's truth. Oh, yes! There is money in timber just now." The lumberman turned to his map and the reporter turned to his heel.—*Barrie Advance.*

PLANTING FORESTS.

A correspondent of the *Timber Trades Journal* says:—"In our day we have seen the desirable policy of planting forest trees largely pursued. In the hands of those interested in this national work the old stock of native trees has not been neglected, overlooked, or despised, but along with them have been planted great numbers of soft-wooded trees, which were previously strangers to the land, viz., the Scotch fir, the Norway spruce, and the European larch. As these trees are ready for the market, we have for the first time in English history a native-grown soft wood, which can be used for the thousand and one purposes to which the soft imported woods of the Baltic provinces are applied."

"AND fools who came to scoff remained to pray."—We receive many letters from those having tried while doubting, yet were entirely cured of dyspepsia and liver troubles with Zopena. Clergymen write us earnestly to its wonderful effects.