

mill can get through in a year is enormous, and the total output of the North American sawmills is almost incredible. Some years ago it was calculated that Chicago used a thousand million feet of lumber, six hundred million shingles, and one hundred and twenty-one million laths, or altogether sufficient timber to make a "pig-tight" fence enclosing an area double that of our globe! In the three great timber states—Minnesota, Michigan, and Wisconsin—there was a production of ten thousand million feet, enough to load a railway train eight thousand four hundred miles long, or to form the full cargo of fifty thousand of the vessels on the lakes. On the Canadian side the rate of consumption will soon be as great.

The growth of a trade is generally a subject for congratulation; it may be doubted, however, if the growth of the timber trade is not a subject for alarm. It takes one hundred and fifty years to grow a pine-tree; it averages as many minutes to fell it, float it, and saw into lengths. "Easy come, easy go," is the motto of the timberman; and not only of the timberman, but of most of his relations. To clear a potato-patch, a settler will fire a tree, and the fire will be allowed to rage unchecked for miles and miles. On the Pacific slope hundreds of square miles have thus wastefully been denuded of their wood. In Canada, picnic parties have lighted a fire to boil the kettle, left it alight when done with, and it has raged over thousands of acres.

That trees affect the climate and thereby the production of the land is an accepted fact. The denudation of the Indian and Chinese hill slopes is the chief cause of the famines in the plains. The destruction of the forests round the gathering grounds of the Volga has reduced the volume of that river, and lowered the level of the Caspian Sea. The world is

waking up to what it will have lost when the forests are gone, and everywhere a cry is rising for legislation to encourage planting, discourage waste, and keep the crop within the increase. Let us then see what has been done, and in our survey note the principal trees that need protection.

In Canada a start has been made. In Quebec no pine can now be cut less than a foot in diameter. In the North-West Territories and Manitoba, the Dominion Government has taken over the forests, but in the other provinces they are the property of the local governments who own and dispose of the uncleared tracts. To fell timber a license is granted, and a fixed duty is payable on all logs cut.

The United States have not got much further than the encouragement of planting, but the subject is fairly under way. The waste in their huge territory has been greater than elsewhere, though the wealth still left is enormous.

France was one of the first countries to encourage forest protection, and the wise enactments of Sully bore good fruit down to the days of the Revolution. In 1860 legislation was resumed, and the result we see in the Nancy School of Forestry, which is one of the best in Europe. In Switzerland the management of the forests rests with the several cantons, and very stringent rules are in force. As long ago as the fifteenth century the Venetian and Genoese Republics had their forest laws, which were suffered to become obsolete, with the usual results. One of the curiosities of Italian tree culture has been the introduction of the Australian eucalyptus to the Roman marshes, whose climate it has greatly improved. Germany is the land of forests and of forest schools. In the estate maps every tree is recorded and felled in rotation.