Jottings of a Trip over the Maritime Provinces.

By L. A. Morrison.

In some respects the provinces are about on a par. In both of them the lumbering up to 1870 cleared out the most of the good timber, so that the present lumbering operations are making a very thorough clean-up of all the timber and material, such as spruce, cedar, hemlock, birch, etc., and by the end of this century, or very early in the next, the lumbering business of both provinces will practically be at an end and the forests exhausted. This will be a serious matter in a number of ways :—

(1). Lumber will have to be brought from Ontario and Quebec for necessary purposes of building and manufacturing.

(2). A very considerable portion of the population now employed in lumbering, saw-milling, and shingle milling operations, will have to find remunerative employment in other lines of industry, or emigrate.

(3). A considerable amount of invested capital and plant will become unremunerative to a very great extent, and therefore practically almost valueless.

(4). Present and added capital and labor will have to seek employment in other and more permanent lines of industry, national development and usefulness.

If this were the only important industry of these provinces which was likely to assume such a condition as I have indicated, it would seem almost as if the disturbance in financial, mechanical or industrial aspects would soon rectify itself, but what I have indicated as likely to result in lumbering business has already taken place to some extent, in ship-building, shipping and fishing business. The first of these industries (ship-building) has been an important factor in financial and mechanical matters in both these provinces for sixty years past, and where twenty years ago it was nothing unusal to find fifty to one hundred vessels on the stocks each winter in the harbors of St. John and Portland, many of them of large proportions, during this present winter scarce a dozen were built, and these altogether fishing craft of no particular value or importance. The settlers along the East River, at New Glasgow, N. S., also tell of the river for miles being lined with vessels under construction each winter in years gone by, but this winter scarce a vessel is on the stocks over the whole range of the river, and these are only examples of every other ship-building place in the whole range of the ports and rivers of the provinces. This is the result of the unprofitableness of investment in wooden shipping, and the general dullness and scarcity of freights for this class of shipping, growing out of the partial decline of the lumbering and fishing interests, and the desire for rapid freight transit, which while it gives profitable employment to faster (iron) steamships, leaves much less to do for the old style coasting craft.

Many of the wealthier men of Halifax, who have made their money to a large extent in shipping and commission business, have been putting it of late years into bank, loan and insurance stocks, and as a result, this little city has five chartered banks with a paid-up capital of four millions, beside three private bankers with a reported capital of a quarter of a million, and with loan-company insurance and other stocks, making a sum total of about eight or ten millions invested this way. This thing can be overdone. Banks serve a useful purpose, but are only a means to an end. In the development of the agricultural, mineral and mechanical industries, requirements and resources of a country, banking establishments have their legitimate place and sphere of usefulness. Their multiplication beyond the necessities of commerce retards rather than advances progress. To make them an end, practically defeats their purpose. It may serve the desire of investors in bank stocks and grant them a life of comparative indolence, but the industrial resources of a country are not developed, nor the wealth permanently increased, by investments in this way.

These provinces have within their borders, in practically unlimited abundance, all the natural materials required for the profitable permanent investment of all the brains, capital and labor they can command. There ought not to be a single pound of merchant iron or steel, pig, bar or plate, imported into this Dominion. It is the fault of the people of Nova Scotia that there is, because I do not believe that any one of a dozen sites in Pictou county in that province, can be excelled on the face of the earth for the location of a profitable puddling furnace for smelting iron, on account of the quality and apparently unlimited quantity of iron ore, limestone and coal, in immediate and convenient proximity to each other.

I consider it quite within the range of any intelligent mechanic to form a fairly correct estimate of the growth, extent and condition—past and present—of the mechanical appliances and development of any country by a visit to its machine shops.

Some of the larger manufacturing concerns in both provinces, have a fairly good equipment of tools for their work, modern in their build and capable of producing work up to a measure of similar tools anywhere in the same branch of industry, but the management of the shops, the placing of the tools, the convenient handling of the production, the system that takes the raw material in at one end of the shop and keeps it on the move until it passes out finished at the other end of the shop, seems to be lacking in every one of them. A good deal of hurry-scurry, carrying work back and forward more than is profitable or necessary, is done in all of them. Shops were evidently built piece by piece and little by little, as the necessities or demands of the business required the extension, so that in some of them, where a renumerative business is being done, even a fire would not be an unmixed evil, as it or any other radical cause that would result in a modern outfit and the adoption of improved methods and appliances would make the business interested much more profitable. If, however, what I have said of the best shops is true, then the condition of the ordinary jobbing machine shops can be easily understood.

Natural privileges are not always taken advantage of by our Eastern brethern any more than by ourselves. (1) *Light.* It is not a very expensive affair in any machine shop to keep the windows clean, nor does it cost a great deal to sweep down the walls once a year, and give them a coat of whitewash. It pays well to do it; men can do better work, and more of it with better light. (2) *Order.* I do like in a machine shop to see a rack for the boreing bars, a box for nuts, a box for bolts, another for cap screws, a corner in which to put castings and short bars, shelves for castings, etc., in short, a place for everything, and everything in its place. I saw some machine shops in New Brunswick with piles of *debris* in every convenient place over the floor, with no evidence that there had been a straightening up in the shop since it was built, away back in the forties, and every one of these heaps representing from $25 to $500 in cash.

It is evident from the smallness of the staff and the general appearance of some of the shops, that a considerable portion of the machine business which ought to be done by the local men in the provinces, is done by the more progressive Ontario manufacturing concerns, who can bring the iron from Nova Scotia, pay five or six dollars a ton for coal, manufacture the raw material into tools, machinery, engines, boilers, etc., and pay a dollar per hundred weight of freight back into these provinces, and undersell local shops right in their own legitimate market. This ought not to be so. With abundance of raw material, with coal costing not over two dollars per ton; with plenty of room to build commodious shops; with first-class tools to be obtained and mechanical skill within easy reach, I do not hesitate to say that the manufacturing concerns of these provinces are in a far better natural position to supply goods to Ontario and other provinces, than Ontario and the other provinces are to supply manufactured goods to them.

THE OCCURRENCE OF FOREST FIRES IN MAINE AND NEW BRUNSWICK.

Those parts of the State and the adjoining provinces that are most subject to the action of forest fires are such as are covered by the growth of Pine, Spruce, Hemlock or Fir; the first named tree being the most easily destroyed.

The nature of the soil on which Birch, Beech, Maple, and other hardwoods grow prevents fires from doing so much damage as they do in dryer localities. Through a growth of Hardwood fire runs in spring only, in general. At this time the ground contains much moisture, the wet resulting from the melting of the winter's snow having not yet entirely evaporated, and the small streams yet carry much water. After the small growth of broadleaved plants is fully developed, fires will only run to a very limited extent, while these are green.

The character of the soil, as well as that on the rock on which it rests, has much to do with the extent of forest fires. Sandy soils are especially favorable to their progress, such being largely the nature of the soil in Central New Brunswick. It has consequently been much devastated by fires. As regards the mineralogical structure of rocks, trap rocks, and feldspathic rocks in general, as well as those which we usually denominate granitic, are the ones most subject to forest fires, as these constitute extensive hill and mountain formations in Maine and New Brunswick, and as the soil resting on them is generally thin, and as they are compact and do not absorb much water, they are the first to feel the effects of drought and its usual accompaniment of forest fires.

The friable slates of the Upper Silurian, which in Maine and New Brunswick have a nearly vertical dip, hold water well and feel the effects of dry weather much less than the crystalline and compact rocks mentioned above. The truth of this statement is verified from the fact that the fertile belt of the upper St. John, which crosses Northern Maine, has suffered much less from fire than any other part of the State. Here the rock is of the last named geological period.

Moss is a great fire-carrier and will grow where hardly anything else will. In Maine and New Brunswich moss often occurs in great quantities in Spruce and Fir lands, while it avoids Hardwood growths. The moss among these former trees will, in dry weather, carry fire for days, and that only in a smoldering manner, liable to burst into a blaze at any time. Thus it often eludes notice, and while a party of men with switches can often arrest and completely extinguish fires running in Hardwood lands, when they once get under way among moss-surrounded Spruce trees, they are only to be conquered with the greatest difficulty, since you may think that you have succeeded in quenching, with water, every trace of fire in such a growth, and when you come back to the same spot two or three days after, find that fire, which you had taken such pains to put out, again bursting forth.

The causes of fires in Eastern forests are various sometimes, but rarely are they the result of lightning. Generally, however, they are caused by the carelessness of men, and could have been quenched by a little care and attention.

The genuine hunter, as well as the Indian, extinguish the fire before leaving their camping ground.

Lumbermen and river drivers are very frequently more careless, and if stringent laws could be enacted, whereby more attention would be required to be given to this very necessary subject, great destruction of valuable woods might often have been prevented. As regards river drivers, a law might be enacted whereby, on proof that a destructive fire had been caused by the carelessness of the men on a drive, the lumber being driven might be made chargeable with the damage resulting from such fire. Were this is the case, more attention would be paid by river drivers to the extinguishing of fires before leaving their camping grounds. This would be the more important, as the time usually occupied in river driving is one in which fires are most apt to occur.

In back settlements, especially where large forests are in near proximity, there should be a regular system of forest fire supervision established, and competent and paid men appointed to carry out such regulations for the prevention or extinguishment of fires in the woods as the circumstances of such places might necessitate. The subject of the prevention and extinction of forest fires is one which, as yet, has received but little effective attention anywhere in America, although the necessity of doing so is yearly becoming more and more manifest.

Fredericton, Canada. Edward Jack.