

one-eighth of an inch thick. But before the fall of melted iron reaches the boxes it is intercepted, or rather crossed at right angles, by a thin fall of pulverized iron ore, which runs out of a wide spout from a reservoir above. These two streams or falls are of about equal volume, say one-quarter of an inch deep and twenty-four inches wide.

The thin layers of iron and ore at once chill and solidify, so that by taking out the outer partition of the boxes (which form the rim of the turn-table) they may be removed in cakes of the size of the boxes, and weighing about one hundred pounds each. These cakes or blooms are put into a reverberatory puddling or heating furnace, and raised to a bright yellow heat. They will not melt at this heat, but become softened so as to be easily broken up with a bar. The four blooms are formed, in the furnace, by the "rabble" of the workmen, as in ordinary balling operations, into balls. The balls are brought out, one after another, squeezed in the ordinary "squeezers" to expel the cinder and superfluous ore, and then rolled into wrought-iron bars, which are now ready for market, or for further reduction into smaller finished forms.

One great advantage gained by this process is the saving of fuel and labour, in dispensing with the old method of puddling. The estimates at the "Junista Works" show a saving of \$15 per ton, in U. S. currency, in labour alone, in the manufacture of horse-shoe bar, and this, too, without complete facilities and working under difficulties. It is stated that the same fuel, labour and furnaces for the production of one ton of puddled iron, turn out two tons by this process, and that the iron is greatly improved in quality and uniformity. It also appears that while the better the ore, the better the iron produced, there is no ore now used which does not yield good iron under the new process, and that consequently a great deal of ore now passed by will be utilized, and a great saving effected. A recent number of the *Pittsburgh Courier*, to which we are indebted for a portion of the information we have given our readers, speaks very highly of the value of the discovery, of the appreciation in which it is held by the trade generally, and prophesies the triumph now close at hand for the Bessemer iron. The leading mills in the vicinity of Pittsburgh are already preparing to adopt the process, and in some of them it will soon be in complete operation, and from its simplicity and the moderate cost of adapting the old machinery to its use, there is no doubt but that it will make its way rapidly. Mr. Blair, of the firm above mentioned, has, we believe, gone to England for the purpose of introducing it there, and if it meets with the same success there it is done in the United States, we may even expect to see practical results in the shape most desirable, that of reduced prices in all kinds of wrought iron, and a corresponding reduction in the cost of manufacturing into which, in one shape or another, iron so largely enters.

AFFAIRS IN THE WEST.

(From our own Correspondent.)

THE month of January, 1863, will long be remembered. Seldom has Ontario ever experienced such weather. New Year's day was cold and stormy, and in conjunction with the cold weather in December, caused most people to believe we were in for another severe winter, but appearances are often deceptive, and so it proved in this case, for almost from the first day of January, we have had as mild open weather as is often experienced at the beginning of summer. The "oldest inhabitant" of each locality says he has never known such weather before, and all classes are agreed that whilst fine, sunny days in January are pleasant enough, yet they are sadly out of season, and decidedly injurious to the country.

HOW IT AFFECTS BUSINESS.

Your correspondent has lately visited many of the most prosperous places in this Province. Hamilton, Toronto, Newmarket, Brampton, Galt, Stratford, Seaforth, Goderich, Woodstock and Brantford, the business men of all these localities are complaining loudly of the injurious effect of the open weather upon trade. The truth is, in some places, business has been insufferably dull since the New Year, and until there is good sleighing, it is doubtful whether there will be much improvement. It is a mistake, however, to suppose that the want of snow is the sole cause of the existing business. Another reason to be found is the fact that the farming community are far from satisfied with the present prices of grain, after having received so much

during the past few years; and in quite a number of different districts, it is well known that however good the roads, many of them would not dispose of their produce at present, as they are holding back in anticipation of higher prices towards the spring. Whether such hopes will be realized, must be seen shortly. Spring is drawing near rapidly, and if we have three or four week's sleighing, business will probably be excellent during the period, and a great deal of money exchanged hands. Under these circumstances, it need hardly be added that all classes in the West are praying earnestly for snow—and plenty of it!

HEALTHY CONDITION OF THE COUNTRY.

Notwithstanding the dullness in trade referred to above, the condition of the Province generally, is sound and healthy. There is plenty of money in circulation, and you can borrow capital on good Real Estate to almost any amount, in many cases at 7 per cent. The business public—in fact all classes—were seldom less in debt than at present. This is a very favourable sign, as is also the decrease, to a large extent, of the ruinous system of long credits. The progress which has been made of late years in the older settled districts, towards the cash principle or short credits, is more than could have been anticipated, and affords grounds for sincere congratulation. It adds so much to the safety, success and comfort of business, that it is to be hoped short credits will soon be universally adopted. The nearer we can get to the system of cash payments, the better it will be both for the buyer and seller.

SUFFERING FROM WANT OF SNOW.

The want of sleighing throughout Ontario is being felt very much by those engaged in lumbering. It is when our roads are smooth as glass, when the air is clear and frosty, that they lay in their stock of sawlogs to keep their mills running during the spring and summer. For the past few weeks, they have been almost at a stand-still in many places, although in some remote districts they have been able to run the sleigh part of the time. Among the different lines of railway, there are to be seen ready for shipment, considerable quantities of lumber wood, railway ties, tan bark, staves, hoop-poles and similar articles. But the quantities of these are nothing compared to what they would have been had January manifested its usual character instead of attempting to strut in the "borrowed plumes" of summer.

"HAS THE FALL WHEAT SUFFERED?"

This is a very general enquiry at present. The prosperity of Ontario depends so much on obtaining a good crop of wheat, that it is always a matter of interest to business men how it is faring during winter's cold and chilling blasts. So far as can be judged by extended observation, and from enquiries made in various localities, no great damage has yet been done, although it is self-evident that the prospects would have been better if the wheat had been covered with the usual fleecy mantle, instead of being uncovered and exposed. At the time of writing we have just had several showers of rain. This has taken the frost partly from the ground, and there is certainly reason to fear that considerable injury may yet be done. It is the frost which succeeds the thaw which generally does the damage. This is apt to throw the plant out of the ground, when it soon withers and dies. It is to be hoped that the danger will be averted, but it will be a piece of unusual good fortune if the wheat escapes unscathed.

A REVOLUTION—BUT ONE QUITE BLOODLESS.

What a revolution has taken place throughout Canada in the mode of ordering goods! The old-fashioned trip twice or thrice a year to the commercial centres—the great event of the season to the country dealer—is now far from generally taken. The mountain now goes to Mahomet, and on every railway train, in every town, on the stages, and in conveyances driven by themselves commercial travellers are to be seen as thick as blackberries in the month of July. This class of the *genus homo* are, like the largest of living animals (we hope they will pardon the comparison!) known by their trunks, and an intelligent, faithful and laborious class they generally are. At the present time they are scouring Ontario in every direction, and not a few amusing circumstances occur between the representatives of rival establishments. Every traveller of the true stamp, is anxious to bring home as many spring orders as he can, and so neither toil, eloquence nor cunning are spared to "get the start" of ones or Smiths, the

agents of the opposition house. Sometimes buyers are puzzled to know from whom to purchase, but generally each firm has its own customers, and so the commercial traveller gets along agreeably and with comparatively little rivalry of an annoying character. Judging from present appearances, purchasing by samples—which is the English method—will soon supersede the old system entirely.

GEORGIAN BAY CANAL.

This Canal project has received a severe blow from the condemnatory resolutions passed by the Toronto Board of Trade. The first meeting which condemned was objected to by Mr. Capreol and its friends. Another one was then called, which passed similar resolutions to the first. The writer fully agrees with the conclusion arrived at by the Board of Trade, believing the scheme to be impracticable and dangerous. If such a Canal is ever to be made, that by the Ottawa River is the route which should be chosen.

THE MILLING BUSINESS.

The operations of millers and grain dealers in Ontario, have been rather unsatisfactory so far this season. So far as can be learned, those engaged in this line have acted with more than usual caution since last harvest; there has, consequently, not been many losses made. Here and there a few have done tolerably well. But the great bulk of dealers have been doing little more than "holding their own."

BRITAIN AND THE UNITED STATES.

IMPORTANT TREATY.

THE San Juan Boundary treaty is to the following effect:—

Her Majesty, the Queen of the United Kingdom of Great Britain and Ireland, and the President of the United States of America, being desirous to close all further discussion with regard to the true direction of the line of a water boundary between their respective possessions as laid down in article one of the treaty concluded between them on the 16th of June, 1816, have resolved to conclude a treaty of this purpose, and have named as their Plenipotentiaries, that is to say, the President of the United States of America, Reverdy Johnson, their Envoy Extraordinary and Minister Plenipotentiary near the Court of St. James, and Her Majesty the Queen of the United Kingdom of Great Britain and Ireland, Right Honourable George William Frederick, Earl of Clarendon, Baron Hyde of Hindon, a Peer of the United Kingdom, a Member of Her Britannic Majesty's most honourable Privy Council, Knight of the most noble Order of the Garter, Knight Grand Cross of the most honourable Order of the Bath, Her Britannic Majesty's principal Secretary of State for Foreign Affairs, who, after having exchanged their respective full powers found to be in due and proper form have agreed upon and concluded the following articles:—

ARTICLE 1.—Whereas, it was stipulated by article one of the treaty concluded at Washington on the 15th June, 1843, between Her Majesty the Queen of the United Kingdom of Great Britain and Ireland and the United States of America that the line of boundary between the territories of Her Britannic Majesty and those of the United States, from the point on the forty-ninth parallel of north latitude up to which it had already been ascertained, should be continued westward along the said parallel of north latitude to the middle of the channel which separates the continent from Vancouver's Island, and thence southerly through the middle of the said channel and of Fucus Straits to the Pacific Ocean; and whereas, the Commissioners appointed by the two high contracting parties to make out that portion of the boundary which runs southerly through the middle of the channel aforesaid, have not been able to determine which is the true line contemplated by the treaty, the two high contracting parties agree to refer to the President of the Swiss Confederation to determine the line which, according to the terms of the aforesaid treaty, runs southerly through the middle of the channel which separates the continent from Vancouver's Island, and of Fucus Straits to the Pacific Ocean.

ART. 2.—If the referee should be unable to ascertain and determine the precise line intended by the words of the treaty, it is agreed that it shall be left to him to determine upon some line which, in his opinion, will furnish an equitable solution of the difficulty and will be the nearest approximation that can possibly be made to an accurate construction of the words of the treaty.

ART. 3.—It is agreed that the referee shall be at liberty to call for the production of and to consult all the correspondence which has taken place between the British and American Governments on the matter at issue, and to weigh the testimony of the British and American negotiators of the treaty, as recorded in that correspondence, as to their intention of framing the article in question, and the referee shall be at liberty to call for the reports and correspondence, together with any documents maps or surveys bearing on the same, which have emanated from or were considered by the Commissioners and have recently been employed by the two Governments, to endeavor to ascertain the line of boundary as contemplated by the treaty, to consider all evidence that either of the high contracting parties may produce, but the referee shall not depart from the true meaning of the article, as it stands if he can deduce that meaning from the