

BY ERNEST E. WILLIAMS.
 (Author of "Made in Germany.")

NORTH AMERICA.

ONE of the main difficulties which beset the sketching of a panoramic view of the Empire is the trouble in avoiding too frequent superlatives. Here have I been relating for three chapters some few of the industrial glories of Australasia, holding the adjectives in check with a tight rein, 'tis true; but the barest requirements of accuracy made it imperative to give them their head to a certain extent. And now, when I would fain sober down into quiet substantives, the North American Continent comes into view; and it holds the greatest of all the Empire's divisions. Let me ease enthusiasm by statistics. You could enclose Australasia within Canada's boundaries, and you would have about 400,000 square miles left over—space almost for France and Germany. You could put nearly the whole of Europe into the Canadian borders. If the British Indies were three times as large as they are, they could be fitted into Canada, and there would still be room for Queensland and Victoria. The Dominion is more than forty times the size of Great Britain, her mother, and accounts for nearly a third of the whole Empire. From north to south she measures 1,400 miles; from east to west 3,500. The distance between her extreme northern and her extreme southern points is the distance between Constantinople's latitude and that of the North Pole. Her area, in a word, is 3,456,383 square miles, of which 140,736 are covered with water.

We are too apt to think of North America as a place given over each Fourth of July to universal rejoicing at liberation from England. It is a geographical mistake to think so. All

the Yankee territory combined—saving that disjointed peninsula and strip of barren coast line which was purchased from Russia—could be fitted into British North America, and the area left over would accommodate France, Germany and Austro-Hungary. The population of Canada is something over 5,000,000. If it were 500 millions, the country would only be about half as thickly settled as the United Kingdom.

Canada (which got its name from an Indian town in the country) is ours by right of discovery. John and Sebastian Cabot were the first navigators who sighted British North America, and they sailed under King Henry the Seventh's commission. That was in 1497. The coast they touched was either Labrador or Cape Breton. Brother Sebastian, the King's Grand Pilot, found Hudson's Bay in 1517. It was not until 1524 that the Frenchmen came along; but their belated arrival did not prevent them fighting us for possession of the continent. In 1534 their representative, Jacques Cartier, formally took possession of Canada on behalf of the French; and that led to trouble. France made her first settlement at Quebec in 1608, and called the country New France. In 1698, New France, the French Possession, fought New England, the British Possession. There has been a transformation since then. New England is now the foreign state; the transmuted "New France" the British Possession. Yet through the first half of the eighteenth century the position was reversed. George Washington himself, in 1754, fought Canadian France for Great Britain. The Frenchmen struggled long for possession of North America,

and it was not until 1760 that they gave up, and left Canada to settle down to progress under the British flag. But not immediately to peace. The *Fleur de Lys* had not gone home more than fifteen years when the Stars and Stripes arose to trouble the Colony. During the Revolution Canada was true to England. Neither then, nor at any subsequent period, did she ever even flirt with separation. Not even during the miserable Forties and Fifties and Sixties, when Britons at home were snivelling at the yoke of Empire, did the Britishers in North America once dream of accepting the half-veiled invitation to cut themselves adrift from the Mother Land.

The Canadian Colony was granted responsible government in 1841, though it was not definitely established until 1847. But the first chapter in the Canadian Dominion's history really opens—the records of earlier colonization are but a preface—in 1867, when the Provinces were federated. In this branch of our Empire there are now united, in the closest bonds of inter-colonial free trade and Parliamentary union, the great eastern provinces of Ontario and Quebec, the Atlantic Coast Colonies of Nova Scotia, New Brunswick and Prince Edward's Island; Manitoba—the new western home of magnificent wheat production; British Columbia (with Vancouver's Island)—the New England of the North Pacific; the huge districts now

opening into life, Assiniboia, Alberta, Saskatchewan, Athabasca, Keewatin, Ungava, Yukon, Franklin, and the vast region generally known as the North-West Territories, stretching away to the Arctic Ocean. Only Newfoundland (with the Labrador Coast) still holds aloof.

In 1879 Canada embarked on what is known as the "National Policy," an integral part of which is a protective tariff. For Canada has manufacturing ambitions. It is right that she should not be entirely dependent on the Mother Country for every manufactured article, still more

right that she should not be compelled to go a-shopping to her jealous neighbour over the border; but Canada as a manufacturing nation is in her raw infancy. Indeed, her manufactures can hardly be said to be really born yet, despite the smoke pall which overhangs Montreal. For the present it is more important for Canada to remember that there are yet a few million acres of land to bring under the plough, and some primary industries which could bear more development. To-day the chief industries which sustain Canada's progress are Farming, Lumbering, Fishing and Mining.

FIELD AND FARM.

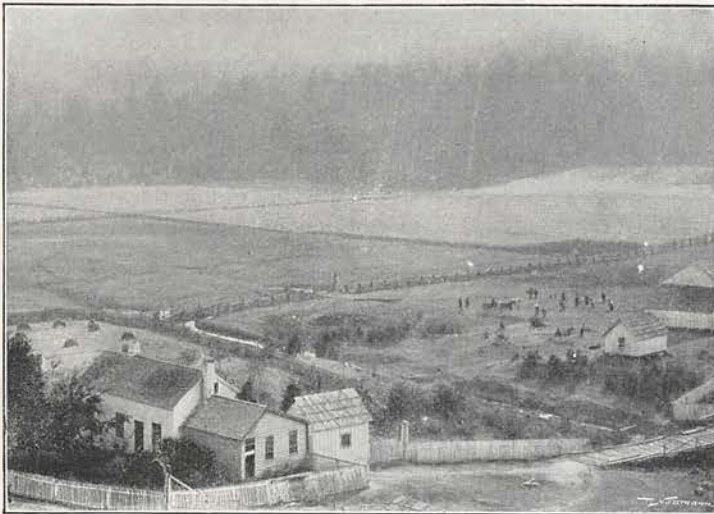
When Canada belonged to France, a French king described it as "a few acres of snow." The wisdom of Solomon is not always found on thrones; and the most elementary knowledge was in this case lacking. True, there are snow-fields in plenty for the trapper to roam over in pursuit of furs. So there are vast plains browsed by myriad cattle. So there are rich prairies whose wheat is at the top of the world's market. So there are succulent meadows



ON THE OTTAWA RIVER AT MATTAWA, ONTARIO.

which give of their increase in butter and cheese and bacon. So there are gardens and orchards whose produce is worthy of any country. Even the vineyards—Nature's warrant of genial sunshine—make purple patches on the country side. The United States' tariff gives the lie direct to the French king's silly phrase: Canadian products are mulcted in heavier penalties than similar products from other countries. Neither (for illustration of Canada's agricultural capacities) does it matter much which branch of field industry you regard. Is it grain? "Manitoba No. 1 hard" wheat took the gold medal against the world's competition at the Millers' and Bakers' Exhibition in London; and quality is not unsupported by quantity: the yield of Manitoban farms is higher than

Nearly half the population lives by agriculture. When the 1891 census was taken, the improved lands were found to reach a total of 28,537,242 acres, of which 19,904,826 acres were under crop (an increase of over 30 per cent. on the previous decade's record), and 464,462 acres were covered by gardens and orchards. About 10 per cent. of the Dominion's area was under either crop or pasture. At present the great wheat countries in the Dominion are Manitoba and Ontario, but the younger province now bids fair to outstrip her sister. She had 260,842 acres under wheat in 1883; in 1896 the area stood at 999,598 acres. 1895 had seen a yet greater acreage, but spring frosts in 1896, and a certain glut in the market caused by the huge yield of 1895, caused a reduction in 1896. 1896, too, was a lean year, the average yield being only 14.33 bushels to the acre, against the 27.86 bushels of 1895. But 1897 has set the temporary depression right. Though Manitoba's yield has been very prolific, yet, consequent on the poorness of the crops in other countries, there has been no glut. Alike in quality and productiveness Manitoba has now established a leading position, and compares most favourably not only with the Yankee wheat lands, but with those of most other new countries



From a photo by]

A BRITISH COLUMBIAN FARM.

[R. Moynard.

and of some old ones. Canada's wheat yield is nearly five bushels per acre greater than that of the United States. Her total wheat and flour export in 1896 was 14,318,607 bushels. In addition, she sent home 840,726 bushels of barley, 2,499,080 bushels of maize, and 3,488,669 bushels of other grains. But the Dominion will have to give a much better account of itself in the future. Her wheat output is still but little more than an eighth that of the United States, and it might easily be greater. Even in the older Province are possibilities of wide expansion; while the newer lands in the West—Manitoba, Assiniboia, Alberta, and Saskatchewan—contain nearly 239 million acres of land, adapted to farming of one sort or another, and less than 8 million acres are as yet occupied.

on the best farms across the border. Is it dairy produce? Watch the mounting export of Canadian butter and hams and bacon to Britain, and remember that more than half our imported cheese is made in Canada. Is it fruit? Nova Scotia's apples vie with Tasmania's and the United States' for pride of place in the London import market; while in quantity they exceed those of the United States, and, omitting the Yankee fruit, are much greater than the import of all other countries and colonies combined. Is it hops? Those grown in British Columbia command from 3 to 4 cents per lb. more than the Californian. Flax? The soil of Manitoba and the North-West Territories is so rich it can scarcely grow good fibre, but it is prolific with excellent flax seed.

I have already referred to the extensive and promising character of the Canadian dairy industry. Cheese is the speciality.



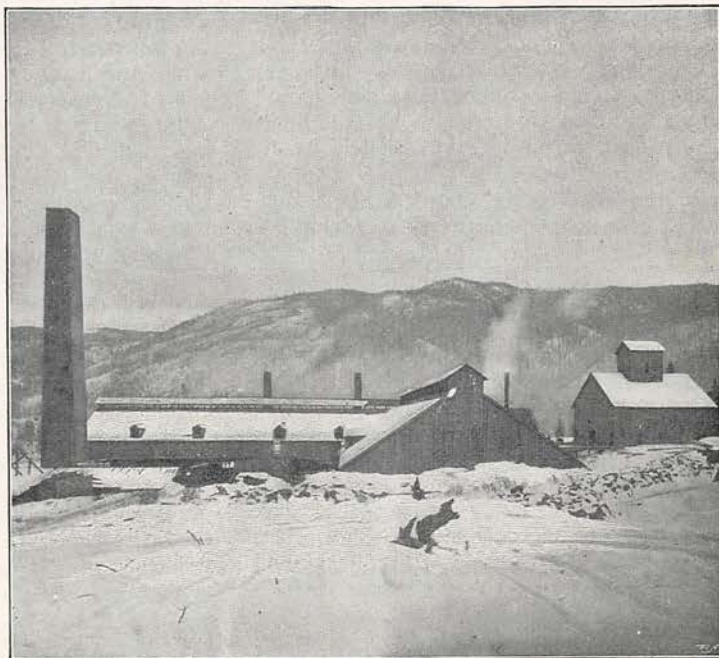
FALLS ON THE MISSISSIPPI, AT ALMONTE, ONTARIO.

Recent years show a regular progress in this branch. We received from Canada in 1868, 54,835 cwts.; in 1880, 360,435 cwts.; in 1890, 832,680 cwts.; in 1896 a total of 1,234,297 cwts. was reached. Sensible, up-to-date methods of production and uniform excellence of product, with a total absence of adulteration, are the secret here. Butter is of much smaller importance, and the statistics of recent years are too fluctuating to be valuable as guides; but there is every reason to believe that the upward bound of 1896 marks no spasmodic movement, but rather the beginning of a fresh era in the march to permanent prosperity. Even Japan has now taken to eating butter from Assiniboia. And, considering the illimitable natural resources of the Dominion, the energetic assistance to the industry given by the Government, and the recent improvement in quality, it would be strange if Canadian butter did not force itself successfully on the market. The necessity

for winter feeding is no great hardship on the farmer—certainly it is no bar to success; for Canadian farming, particularly in the older Provinces, is mostly mixed, and maize and horse beans, which can be converted into excellent fodder, grow well in most parts of the country.

As regards the meat supply, Canada's time is to come even more pronouncedly than in the case of bread-stuffs. The Canadian Year Book for 1895, working on the 1893-4 figures, makes out the annual supply of meat to England by the Dominion to be 33,165,528 lbs. This represented 2.9 per cent.

of England's total meat import: the United States had 56.7 per cent. And that, emphatically, has to be altered. True, the proportions seem to be in progress of alteration. The figures for the years between 1892 and 1896 show increases in all Canada's meat exports to this country. The biggest ratio is in fresh beef, which bounded up from



From a photo by

[Maxwell.]

SMELTER OF THE BRITISH COLUMBIA SMELTING AND REFINING COMPANY.

154 to 9,109 cwts. The biggest actual rise is in bacon, from 239,121 to 456,723 cwts. ; the total increase was from 361,344 to 657,750 cwts. The figures for the United States, on the other hand, show a slight decrease on the total, viz., from 6,871,549 to 6,848,971 cwts. In bacon, where Canada has made most progress, the Yankees have fallen off by nearly 145,000 cwts. All this is pleasing enough ; but when you compare the total figures of the two countries, and see that Canada's contribution is less than 10 per cent. of the United States', satisfaction is chastened. Taking food stuffs of all sorts, we find that England's imports in which Canada competed were valued in 1896 at 600,296,866 dollars. Towards the total Canada contributed 42,935,657 dollars' worth—a little over one fourteenth.

The Government gives land away to settlers. A comparison of farming promise and farming performance makes one wish anxiously for the appearance of emigrants willing and fitted to accept the Government's gift.

WHAT THE CANADIAN GOVERNMENT DOES.

To my mind the most impressive feature of the Canadian Governmental system is the care which it lavishes on the Dominion's agriculture. To enumerate with anything like completeness the benefits which the Government bestows upon Canadian agriculturists would be impossible within the limits at my disposal. I can but sketch briefly some specimen features.

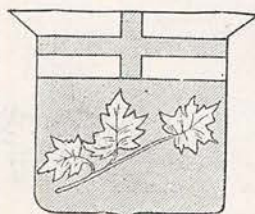
A few years ago the Department of Agriculture appointed Mr. James W. Robertson to be Commissioner of Agriculture and Dairying for the Dominion. Professor Robertson and his assistants travel up and down the Dominion giving lectures to the farmers, telling them how to establish creameries and cold storage buildings, versing them in the art of winter butter-making, doing everything possible to stir up intelligent interest amongst the farmers, and directing their interests into the right channels. In addition, these gentlemen look vigorously after the market for Canadian produce. They confer with railway and steamship companies, they come to Britain to try to push Canadian products on the British market and get a good price therefor. They are continually engaged in the preparation of bulletins and reports for the farmers'

guidance. These documents, which are widely distributed, give practical instruction in most of the subjects concerning which a farmer needs knowledge—from the preparation of poultry for British markets to the best means of handling the dreaded tuberculosis. In respect to this disease the Agricultural Department not only gives the farmer detailed printed instructions how to test its presence, but, in case the farmer feels diffidence as to his diagnosing powers, it is prepared to send down an officer to test the cattle free of charge.

The Government also encourages farmers by the offer of bonuses. At one time it gave a bonus on the export of cheese, and the figures I have transcribed to show the mounting character of the trade certainly tend to indicate that the bounty had an exhilarating effect. Having achieved its purpose, it has now been withdrawn, but other aids

have taken its place. Thus the Government offers a bonus of a hundred dollars to all creamery owners who put up cold storage rooms of a particular pattern in their creameries, illustrative drawings being furnished by the Government. Some hundreds of farmers, I understand, have applied for these drawings, and a considerable proportion of them are earning the bonuses.

Professor Robertson rightly attaches great importance to the cold storage system. It is not so necessary for hard cheese, which can stand an ordinary atmosphere, but it is exceedingly useful in the transport and keeping of soft cheese, the manufacture of which is now being encouraged in Canada ; while for butter-making on the larger scale it is almost indispensable. To the extension of the cold storage system is attributed, in a great measure, the impetus which the Canadian butter trade with England has received during the past year or two. In 1894 we bought 438,589 dollars' worth of Canadian butter ; in 1896 our purchases reached a value of 1,653,421 dollars ; and that enhanced figure represents not only an increased volume of trade, but also an increase in the prices commanded by the butter. Up to a short time ago Canadian butter had not a particularly good reputation in the British market. Now—though the price is still some way below the top—it looks like holding its own with the Danish. The advance, though perhaps mainly owing to the better and more uniform quality of



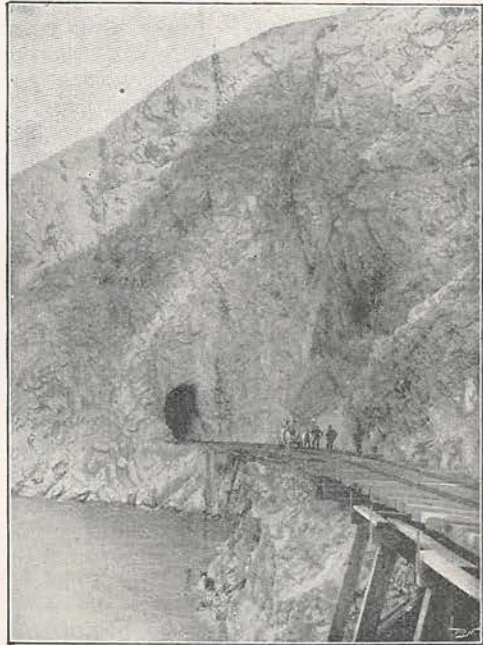
ONTARIO

butter now being made under the factory system, is yet in no small measure due to the introduction of cold storage. The Dominion Government has now arranged for what Professor Robertson describes as "a chain of cold storage service from the producer in Canada to the consumer in Great Britain"; for not only is it inducing creamery owners to have refrigerating rooms on their own premises, it has also persuaded the railway companies to put refrigerating cars on their trains, which call at different centres at stated times, and carry the produce without extra charge. Then it aids the construction of cold storage buildings at export centres, at Toronto (which is a big railway centre), and at Revelstoke in British Columbia, which is a point of distribution for the mining district of the North-West. A Government inspector is appointed to overhaul the cold storage arrangements generally, and another is stationed at Montreal to look after the consignments during transshipment from rail to steamer. Finally, the Government has induced steamship companies to put refrigerating chambers in their vessels (seventeen ships were so running in the first year—1896), has guaranteed the companies against loss in the early stages of the business, and has arranged that the extra charge for the chamber shall not exceed ten shillings for a ton of butter—less, that is, than a halfpenny for ten pounds; and the whole freight across the Atlantic only amounts to about a farthing per pound. The cold storage system is not to be confined to butter and soft cheese, but is extended to eggs, dressed meats, tomatoes and various kinds of fruit.

For the purpose of encouraging fruit growing the Agricultural Department has recently erected a cold storage building at Grimsby, Ontario, which is the centre of the Canadian fruit district. Whether these efforts will result in a large extension of Canada's fruit export trade is at present somewhat a matter of conjecture, as the thing is only in the experimental stage; but from a conversation I had a short time since with Professor Robertson in Ottawa, I gathered that the prospect is hopeful. Tomatoes, especially, look like doing well, but a difficulty was found in pushing the trade with England in grapes. The Canadian grape has not the juiciness to which an Englishman is accustomed. It is a different kind of fruit—good, but rather small, and of a pulpy texture.

Undoubtedly Canada will make big inroads on the butter market. Her wonderful

success in the cheese business warrants the rosiest expectations. The present preponderance of cheese over butter is attributed to the capacity of cheese for travelling in ordinary temperatures. Difference in quality and reputation has, I expect, more to do with the case; but there is good chance of approximation here, and in that event the provision of cold storage at so nominal a cost should put the more delicate butter on an equal footing with cheese. Butter will also get an impetus from the efforts which the Agricultural Department is making, and with success, towards getting the cheese-



From a photo by]

[R. Maynard.

CHERRY CREEK BLUFF, KAMLOOPS LAKE, ON
THE CANADIAN PACIFIC RAILWAY.

makers to practise butter-making in winter. The manufacture of cheese is a summer occupation, and if that alone is followed, the factory lies idle during the winter. Professor Robertson and his assistants are teaching the people how to turn their cheese factories into butter factories during this off-season. The Agricultural Department goes even farther. In the North-West Territories it undertakes to make the butter for the farmers, and market it, at a small charge to cover the service, for a period of at least three years: that is, for the time during which the Government loan for the creamery association runs.

To illustrate the vigilance with which the Canadian Government watches for an opportunity of promoting Canadian agriculture and bringing its products to the world's notice, let me recall to your memory the mammoth cheese which it sent to the World's Fair at Chicago in 1893. This cheese weighed 22,000 lbs. It consumed 207,200 lbs. of milk—a quantity equal to the milk for one day in September of 10,000 cows. It measured 28 feet in circumference, by 6 feet in height. Six other cheeses, weighing 1,000 lbs. each, which went to build up the pyramid, looked quite insignificant beside this monster. Even Americans, who seem to have the biggest on earth of everything, must have opened their eyes before this example of what the Canadian Dominion could do when it set itself to the work of advertisement and big production. And the cheese was a genuine cheese, of excellent quality all through; the judges bored into it to a depth of thirty-three inches, and found it uniformly solid. They reported it sound from rind to centre, with a good clean flavour, and so generally excellent that it scored 95 points out of a possible hundred. The "Canadian Mite" was afterwards appropriately shipped to the Mother Country.

Of equal importance with Professor Robertson's work is that of Dr. Saunders and the Experimental Farms over which he presides. The farms of the Dominion Government are five in number: the Central Farm near Ottawa; and the four branch farms at Nappan, Nova Scotia; at Brandon, Manitoba; at Indian Head, Assiniboia; and at Agassiz, British Columbia. There is also an Experimental Farm at Guelph, Ontario, with an agricultural college attached, which are run by the Provincial Government. It would be difficult to over-estimate the importance of these farms or the benefits which they confer on Canadian agriculture. Recently I enjoyed the privilege of being conducted over the Central Farm by Dr. Saunders. The visit removed from my mind the last vestige of surprise at the bound which Canadian agriculture has taken during recent years. Every branch of the husbandman's art is zealously and most carefully followed by experts. Numberless experiments, for example, are made with the different varieties of grains for the purpose of discovering the most prolific sorts for particular soils and the best times for planting them. New varieties are evolved by cross-fertilizing experiments, sample bags of seed grain of the choicest

kinds are distributed free to any farmer who will take the trouble to send along his address. In the laboratory the chemist is busy testing different sorts of soils and the manures most suited to them. He has also recently conducted some valuable experiments as to the food properties of certain plants. One other branch of his work must be quoted. He invites farmers to send him samples of their well water, that he may test them and report upon their purity. This is done free of charge, and last year forty-four farmers availed themselves of the opportunity. 'Twas as well they did, by the way; for nearly half were condemned as quite unfit for use, and several more were returned as suspicious.

Similarly, experiments are being conducted with live stock. I saw pigs of different breeds undergoing dietary experiments. Careful data were being collected concerning the effect on the weight, etc., of the animals under the varying food treatments. The Farm also keeps boars and bulls of the most valuable breeds for the use of farmers who would otherwise find it difficult to get their cows and sows served by animals of the required kind. Then there is the Department of the Botanist and Entomologist, who, among other matters, devotes a lot of attention to insect pests and the best means for their removal. There are also the Horticulturist and the Poultry Manager, who strive to promote those branches of rural work which lie within their scope. Constantly advice is being given by letter to farmers who apply for it, and in addition printed bulletins are from time to time prepared for their guidance. I have a selection of these bulletins before me as I write. They give practical information concerning the cultivation of flax and raspberries and strawberries, detail the result of experiments on trial plots of various crops, tell the farmer how to spray his fruit trees to avoid fungous diseases, how to get rid of weeds and potato blight and the black knot in plums and cherries. But I could descant for pages on the numerous excellent features of the Canadian Experimental Farms. Let what I have written suffice as specimens of their work. Enough at any rate has been said to prepare the reader for almost anything in the way of progress in agricultural Canada. Enough also has surely been said to set the reader wondering why the wealthy Mother Country, with her expensively organised Board of Agriculture, cannot do something similar for the sorely depressed rural industries of

Britain. Truly the Daughter has put the Mother to shame.

It may perhaps be asked, Do the farmers take advantage of the experiments conducted on their behalf? Doubtless they do not to the full extent they might; for farmers the world over are characteristically slow to get out of a groove, and the farmers of Canada live for the most part in scattered loneliness, where the absence of frequent communication with any considerable number of their fellows must tend to damp the progressive spirit; and, moreover, the Experimental Farms only commenced their existence about ten years ago. It is nevertheless a fact that farmers do avail themselves to no small

silly to ignore facts: Canada has a cold winter; in the north central districts it is long and intensely cold. But people who have not been to Canada form exaggerated views of the matter; it is not half so bad as they imagine. Indeed, take it on the whole, one may doubt if it is any worse than, though it differs from, an English winter. Most people prefer its sunshine and exhilarating air to the damp fogs and chilly winds of England. But the point I would have you note now is that Canada shows a marked capacity for growing many kinds of fruit; and the country which exhibits that aptitude obviously cannot be an unbearably cold place to live in. The orchard, and more



RAPIDS IN THE GATINEAU RIVER, AT CHELSEA, QUEBEC.

extent of these advantages. Dr. Saunders, for example, reports encouragingly of the practical results which are following the introduction by the Experimental Farms into the North-West of the Awmlless Brome grass, which is of great value there both for hay and pasture, enduring severe drought and cold with impunity. He speaks of its general introduction as preparing the way for vast extensions of the stock-raising and dairy industries.

THE FRUIT TEST.

Canada's development has been much retarded by the evil reputation under which its climate has laboured. Now, it would be

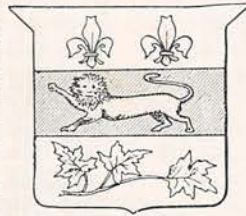
particularly the vineyard, form a reliable criterion of a country's habitableness. Of course, I am not contending that the whole, or anything like the whole, of the vast Dominion is suited to fruit culture; though it is worth remembering that Miss E. Taylor has collected native wild raspberries on Peel's River, thirty miles north of the Arctic Circle, and other travellers have gathered specimens of the same fruit in remarkably high latitudes. But in many large areas of Canada the open-air culture of various fruits is not only possible, it is profitable and will doubtless be extended as the years go on. Nova Scotia and Ontario are already famous for their apples, the Niagara Peninsula, where grapes

grow as a field crop, producing enormous yields, and peach trees also are planted out in orchards, and plums and small fruits of all varieties known to temperate climates attained high rank at the World's Columbian Exposition; while many parts of the Pacific slope and Vancouver Island are eminently adapted for fruit growing, and it will be surprising if the market does not hear a good deal of their produce before many years. Even that final test of genial weather—the local production of wine—is present in Canada. Canadian brands do not yet figure on our hotel wine lists; but that is only because the industry is in an undeveloped and infantile stage, and because, of all people, wine-bibbers are the most conservative devotees of old established reputations. Of course, as in every other branch of useful industry, the Government is doing its best to encourage production. The Ontario Government has recently established fruit experiment stations in the Province, and, as I have shown, the Dominion Government is doing its best to promote cheap transportation and good markets. In a country where almost everything is in the earliest stages of development, statistics of achievement give but a poor notion of future possibilities; but it may be interesting to learn that, according to the estimate of the Ontario Bureau of Industries, that Province alone held, in 1896, 5,913,906 apple trees of

bearing age, yielding a total product of 55,895,755 bushels. It is also estimated that in the same year the Province contained 700,000 plum trees, 500,000 cherry trees, the same number of pear and peach trees, and 2,000,000 grape vines; which, after all, is not a bad record for "a few acres of snow."

But it is only within recent years that the Canadians themselves have begun to wake up to their possibilities as fruiterers.

Strawberry-growing is a case in point. As Mr. John Craig, horticulturist to the Central Experimental Farm, pointed out in a recent bulletin on the subject of strawberries, ten years ago the cultivation of this fruit was restricted to a few localities, and many districts which now grow strawberries freely were supposed at that time to be quite uncongenial, and beds were never planted. Now a flourishing industry is growing up, and along the St. Lawrence River and the eastern shore of Lake Ontario strawberry culture has already become quite a feature of rural industry. Mr. Craig even gives directions for the growth of strawberries in Manitoba and the North-West Territories, and is evidently of opinion that there, too, they can be ripened successfully, if proper precautions are taken in summer to protect the plants from wind and drought, and extra protection be given them against the cold in winter.



QUEBEC



HIGH FALLS AND LUMBER SLIDE ON DU LIÈVRE RIVER, TWENTY-FIVE MILES ABOVE BUCKINGHAM, QUEBEC.