CANADA 1934

The Official Handbook of Present Conditions and Recent Progress

Champlain's "Abitation" at Quebec, 1608.

His Excellency the Earl of Bessborough, G.C.M.G.
Governor General of the Dominion of Canada

CANADA 1934

The Official Handbook
of Present Conditions and
Recent Progress

PUBLISHED BY AUTHORITY OF THE HON. H.H. STEVENS, M.P.
MINISTER OF TRADE AND COMMERCE

DOMINION BUREAU OF STATISTICS
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FOREWORD

THIS little book is designed to set forth in brief and readable form the recent progress and present condition of the Dominion of Canada. With the development of the Dominion and the growing complexity of its institutions, it is becoming increasingly difficult to deal in small compass with the whole range of its economic and social organization. The current reports of the Dominion Bureau of Statistics, deal in great detail with the subjects of population, production, external and internal trade, transportation, prices, finance, education, hospitals and charitable institutions, criminality, etc., but these detailed publications are intended mainly for those who are specially interested in these particular phases of our national life. Again, the Canada Year Book, which summarizes these and other official publications, is itself too detailed for the average citizen and too expensive for general distribution. The present publication presents the result of an effort to survey the Canadian situation as a whole within a reasonable space, in a popular and attractive format, and at a cost which makes possible a wide distribution.

This handbook is designed to serve two very necessary purposes. To those outside of Canada, it will give a well-rounded picture of the current Canadian situation from Atlantic to Pacific, with sufficient historic and descriptive information as the background of the treatment. In Canada itself, the handbook will be of assistance in the general discussion of the economic situation incidental to our New Year national stock-taking, and will help to provide a better basis of information for dealing with the business problems of 1934.

H. H. STEVENS,

Minister of Trade and Commerce.

OTTAWA, January 1, 1934.

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NOTE

This handbook has been prepared in the Dominion Bureau of Statistics from material which has, in the main, been obtained from the different Branches of the Bureau. In certain special fields information has been kindly contributed by other Branches of the Government Service.

R. H. COATS,
Dominion Statistician.

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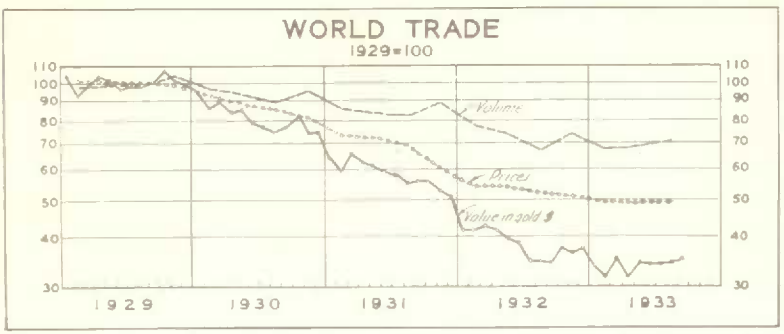
INTRODUCTION

The Economic Position of Canada at the close of 1933

Hon. H. H. Stevens, M.P., *Minister of Trade and Commerce.*

The World Situation as Affecting Canada.—Canada, as a leading trading nation, depending largely upon her export markets to dispose of her surplus food stuffs as well as her surplus forestry and mineral products, is particularly interested in the maintenance of both the volume and the value of world trade. That volume and value has, on the whole, been maintained in 1933 and the long decline that commenced in 1929 has been arrested. In spite of the chaos in the currency systems of the world and in spite of trade restrictions, quotas and limitations placed upon foreign exchange, both gold values and the physical quantity of world trade have in the most recent period been maintained, and have even increased in recent months as compared with the same period of last year, according to the statisticians of the League of Nations. Gold values, indeed, have lost some of their significance as a measure of the international exchange of commodities, owing to the abandonment of the gold standard by most of the leading trading countries, and it is now of greater significance to say that the current volume of world trade is estimated by the League of Nations to be approximately 70 p.c. of the high level of 1929. The following diagram illustrates these facts.

Again, employment has shown a distinct gain in most of the leading countries of the world, an evidence that industry is gradually adapting itself to the changed conditions under which it is now operating, though doubtless at a heavy sacrifice of money wages and of profits. Thus the



Reproduced from p. 43½ of the November, 1933, issue of the League of Nations' Monthly Bulletin of Statistics.

British Department of Labour estimates that 9,925,000 were actually employed in October, 1933, as against 9,388,000 in the same month of 1932, an increase of 537,000. In the United States the American Federation of Labour estimated the number of unemployed in October at 10,076,000 as compared with 10,875,000 in the same month of 1932 and 13,770,000 in March, 1933. In Germany the unemployed were estimated at 3,849,000 in September as compared with 5,103,000 in the same month of 1932, though the decline was partly due to the enrolment of unemployed persons in labour corps. In France and Italy also the figures were lower in September, 1933, than in September, 1932. Thus the actual pressure of unemployment, though still very great, is on the decline.

The greatest difficulties still in the way of world recovery are: first, the excessive economic nationalism evident in the policy of many nations and arising largely out of the disturbed international situation and the fear of war—which latter seems so strange to us on this peaceful North American continent; and, secondly, the enormous burden imposed on the producing class by the debts, both domestic and external, contracted in a period of far higher prices than those prevailing at the present time, when those debts and their interest are due to be paid. One of the most important qualities of any money is that it should be a satisfactory standard of deferred payments, doing substantial justice as between debtor and creditor. Gold, not because of any intrinsic defect, but because the existing supply has been mismanaged and largely sterilized, has, in recent years, failed to meet these conditions, with the result that most of the leading countries of the world have been forced off gold. Yet it is difficult to imagine a future in which gold will not be used in the discharge of international balances, and the British nations at least are resolved to adhere to a gold standard. Their representatives at the World Economic and Monetary Conference last summer declared that "the ultimate aim of monetary policy should be the restoration of a satisfactory international gold standard under which international co-operation would be secured and maintained with a view to avoiding, so far as may be found practicable, undue fluctuations in the purchasing power of gold".

Canada's Position *vis-à-vis* the United Kingdom and the United States.—In these circumstances, Canada's position is largely to be estimated in terms of her international connections, which are mainly with the Mother Country and the United States. As for the former, the Ottawa Agreements have given us a preferred place in the British markets, such that our exports of Canadian products to the United Kingdom in the first ten months of 1933 have exceeded those of the corresponding period of 1932 by over $19,500,000. A large Canadian loan of $75,000,000 was floated in London in August at 4 p.c., and the 4 p.c. loan of 1940-60 was quoted at 104 on Nov. 28, giving a yield of only 3·7 p.c. to the earliest date of redemption.

The British Board of Trade, speaking officially for the world's largest trader, states that although British imports in the first nine months of 1933 showed a decline of 6·2 p.c. in value, as compared with the same period of 1932, the falling off in *volume* was only 0·3 p.c. Similarly, while there was a decline of 1·0 p.c. in the *value* of exports of U.K. produce and manufactures in the first nine months of the present year—a decline which has been more than made up by higher figures for October—the *volume* of exports of British products increased by 0·9 p.c. in the first nine months of 1933 as compared with the corresponding period

of 1932. In each of the four months from July to October inclusive, the *value* as well as the *volume* of exports of United Kingdom products has shown an increase as compared with the corresponding month of 1932, and the last three months have each shown an increase of United Kingdom exports as compared with 1931. Again, the Board of Trade's index number of industrial production in the third quarter of 1933 was 96·7 p.c., on the 1924 base, as compared with 87·4 p.c. in the same quarter of 1932 —a gain of 9·3 points or 10·6 p.c. Increased British production and British exports has enabled the British to buy more Canadian goods.

As regards our relations with the United States, perhaps the most notable feature is that the heavy burden of exchange payments on account of both principal and interest which darkened our horizon a year ago has been removed by the departure of the United States' Government from the gold standard, so that both our current payments in the republic and our future repayments of capital have been scaled down accordingly. Further, it may be noted that our adverse balance of commodity trade with the United States has been reduced to very small proportions in the latest months, the total adverse balance for the twelve months ended October, 1933, being only $45,314,000, as compared with $92,927,000, $141,720,000 and $251,128,000 in the corresponding twelve-month periods ended October, 1932, 1931 and 1930, respectively. Up to the present, therefore, the great experiment under way in the United States has been productive of very considerable advantages to her Canadian debtors. If that extraordinarily complex proposition succeeds, it will doubtless bring improvement in both the U.S. and Canada's business situations.

External Trade.—The trade statistics of Canada in recent months show very considerable recovery in value of exports and a lesser recovery in value of imports. Exports of Canadian produce in each of the last seven recorded months from May to November have exceeded those in the corresponding months of 1932 and total imports in each of the months from July to November have been greater than in the corresponding months of 1932.

Exports.—During the twelve months ended November, 1933, exports of Canadian produce amounted to $523,161,119 as compared with $504,448,521 in the preceding twelve-month period ended November, 1932, an increase of $18,712,598 or 3·7 p.c. While the decline in exports of Canadian produce to countries outside the Empire fell from $287,245,242 to $271,978,881, our exports to Empire countries rose from $217,203,279 in the 1932 period to $251,182,238 in the 1933 period, an increase of $33,978,959 or 15·6 p.c. It is thus evident that Canadian exports are more and more "following the flag". Viewed on a percentage basis, the proportions of export trade with the United Kingdom and British Empire show a consistent and very remarkable increase, especially in recent months (see pp. 133-4).

Imports.—In the twelve months ended November, 1933, total imports were $394,847,970 as compared with $463,942,840 in the same period of 1932—a decrease of 14·9 p.c. Imports from non-British countries fell from $334,610,875 to $263,611,102, while imports from British countries actually increased from $129,331,965 to $131,236,868 or by 1·5 p.c. The increased proportion of our import trade carried on with the United Kingdom and the Empire is shown on p. 134.

Trade Balance.—In the twelve months ended November, 1933, there was a favourably visible trade balance of commodity trade (including foreign exports previously recorded as imports) amounting to $134,144,677 as compared with $49,005,908 in the corresponding period of 1932. This favourable balance arose almost wholly out of intra-Empire trade, and was exclusive of the large favourable balance arising out of the export of gold bullion refined in Canada.

Agriculture.—While the farmers' difficulties in 1932 were centered around extremely low prices and while their hopes lay in the bountiful crop production of the year, a different situation existed in 1933. Summer drought was widespread across Canada and prolonged in many sections. Even in Eastern Canada, which usually escapes such ravaging influences, the grain and forage crops were greatly reduced in yield and pastures were poor during the summer and autumn seasons. In the Prairie Provinces, the effects of drought were aggravated by the grasshopper scourge. Frost was damaging to the grain crops in southwestern Alberta, northern Saskatchewan, northern Alberta and the Peace River district. Wet harvest weather reduced the grade of wheat in northern sections. The increase in prices of farm commodities helped considerably to offset the lowered production.

An unsatisfactory growing season was accompanied by an advance in farm prices. According to preliminary estimates of the value of 1933 agricultural production, increased prices, as compared with 1932, were reported for all field crops with the exception of alfalfa and sugar beets. As a result of this rise in prices for field crops, the reduced volume of production in 1933 will have a total value not greatly under that of the bountiful crops of 1932.

After three years of practically continuous decline, the index of wholesale prices of Canadian farm products turned upward in January, 1933. The recovery was slow for some months but was rapid in the months of May and July. The August, September and October indexes showed successive declines but that of November was nearly 5 p.c. higher than in the previous year.

In general, the year 1933 brought a measure of hope to agricultural Canada as prices moved upward after declining steadily for nearly four years. Increased prices, especially when viewed along with decreased production, do not materially lighten the heavy burdens being carried by farmers at the present time, but provide reason for thinking that the tide has finally turned in favour of the primary producers of Canada.

Forestry.—Forestry production has suffered during the depression in common with other branches of primary production, yet forestry production in the twelve months ended October, 1933, as measured by exports, shows slight increases over 1932 in quantity and value in all branches except paper production. Total exports of unmanufactured wood were valued at $30,421,000 compared with $28,878,000; exports of manufactured wood were $24,067,000 compared with $22,090,000; exports of paper, however, were only $72,336,000 compared with $91,318,000. Newsprint paper exports, which constitute the bulk of paper exports, fell from $87,769,000 to $69,232,000, or by 21 p.c., though the quantity exported declined only from 1,819,187 tons to 1,780,738 tons or by slightly more than 2 p.c. Newsprint paper, however, is still a very good second to wheat among our exported commodities, with wood-pulp third, wheat flour fourth and sawn lumber fifth. Indeed, from the standpoint of sustained balances of trade,

forest products have been more reliable than agricultural products or any other comparable group of commodities. Since 1929, while values and volume of trade have decreased, the contribution of the trade in forest products toward a favourable national balance has exceeded that of any other group. Forest products contributed $108,632,456 in the twelve months ended October, 1933, to Canada's favourable trade balance of $125,782,208. Canada, with the largest forest reserves in the Empire, is naturally the Empire's largest producer and exporter of forest products.

The Mineral Industry.—A survey of the Canadian mining industry in 1933 reveals much more encouraging developments and results than those attained in the previous year. Statistics collected from the various divisions of the industry show pronounced advances in production of some of the more important economic minerals. This was especially emphasized in the outputs of base metals such as copper, nickel, lead and zinc.

Factors of an international nature created an all-time high price for gold, in Canadian currency, which resulted in the enlargement of existing ore reserves, stimulated the search for new gold deposits and contributed to the well-being of present producing camps and of the nation at large.

Among the non-metallic minerals, coal production marked a slight decrease from 1932. Asbestos output was higher, and production from the sodium sulphate deposits of Saskatchewan showed considerable improvement. Several other non-metallics showed an upward trend.

Production of structural materials continued to reflect the depressed conditions in the construction and building industries.

Manufactures.—Employment in manufacturing showed decided recovery during 1933 from the low level reached toward the close of 1932 and the beginning of 1933, when shutdowns over the holidays and for inventory purposes caused the usual pronounced curtailment in factory operations. From Jan. 1 to Sept. 1, the movement was uninterruptedly favourable, resulting in the addition of over 61,400 persons to the staffs of the co-operating manufacturers; this number would of course be considerably greater were monthly statistics available from all factories in the Dominion. The recorded increase represented the re-instatement of about twelve persons, on the average, on the payroll of each of the approximately 5,000 reporting manufacturers. During these eight months of steady improvement, the index of employment, based on the 1926 average as 100, advanced from 74·4 on Jan. 1 to 86·8 on Sept. 1, a gain of 12·4 points or 16·7 p.c. (see p. 111). While seasonal losses occurred on Oct. 1 and Nov. 1, these were much smaller than the average declines indicated at those dates in the years since 1920.

During 1933, the most outstanding gains, on the whole, were in textiles, in which steady improvement was indicated from Feb. 1 to Nov. 1. These increases in personnel brought the index on the latter date to 105·4, over seventeen points higher than on Jan. 1, and more than six points above the level of the same date in 1932. It was, indeed, higher than in any month since the early spring of 1930. The lumber, iron and steel, non-ferrous metal, food, leather, pulp and paper, rubber, chemical and mineral product industries also reported substantial gains during 1933.

Railway Operations.—For the first 48 weeks of 1933, ended December 2, total carloadings of revenue freight numbered 1,888,783 as compared with 2,044,293 and 2,406,189 in the corresponding periods of 1932 and 1931 respectively. The decline of 155,510 carloads in 1933 as compared with

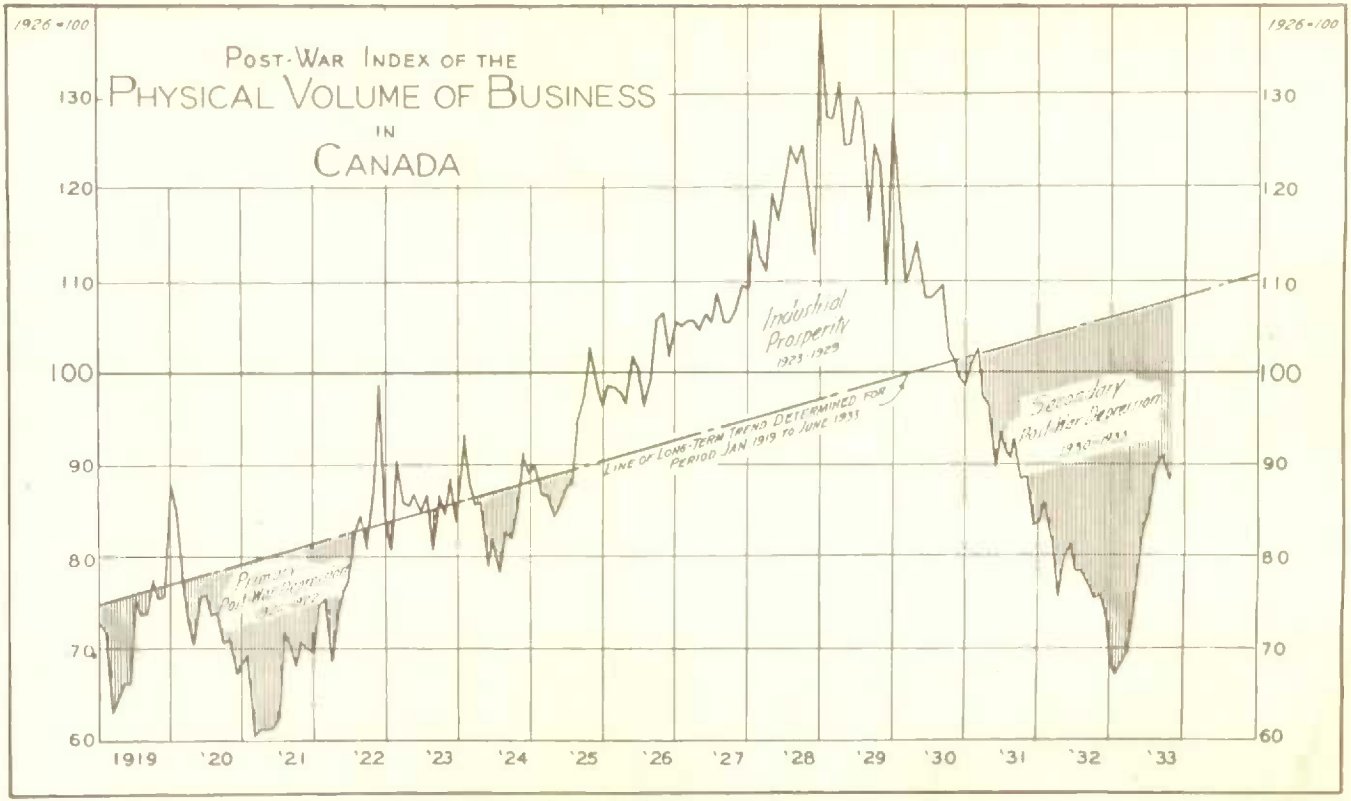
1932 is accounted for by a drop of 54,458 in grain and grain products, 67,379 in merchandise less than carload and 68,688 in miscellaneous. On the other hand, carloadings of live stock are up by 2,579, of coal by 7,545, of coke by 3,446, of lumber by 5,551, of pulp wood by 2,165, of pulp and paper by 5,119 and other forest products by 3,966 and of ore by 4,644 cars. In this connection it should be noted that in October and November the 1933 carloadings have been fairly steadily above those of 1932, while the gross earnings have closely approached those of 1932, the difference being due to proportionately more lower class freight.

For the first nine months of 1933, the gross operating revenues of the two great railway systems were $193,644,578 as compared with $216,560,577 in the same period of 1932, or a decline of $22,916,000. Operating expenses were also reduced from $195,706,962 to $174,967,304 or by about $20,740,000. The result was that net operating revenues for the first nine months of 1933 stood at $18,677,274 as compared with $20,853,615 in the same period of 1932. The smallness of the harvest has been one important factor in reducing railway earnings in the latter months of 1933, while co-operation between the two great railway systems has been a factor in keeping down the operating expenses.

Prices.—In March, 1933, wholesale prices began the first appreciable advance that has occurred since 1929. It came after an almost unbroken decline of 42 months during which time the Dominion Bureau of Statistics' general index number of wholesale prices fell by roughly 30 p.c. Prices in some commodity groups such as farm products had dropped more than double this amount, while manufactured goods showed decreases of less than 20 p.c. in many cases. Such an uneven recession in prices worked extreme hardships because it seriously disturbed the relative purchasing power of different economic groups in the country. Recent price advances have done something towards the restoration of more normal price relationships, although great disparities still exist. The general wholesale index has risen about 8 p.c. between February and November, while farm products mounted 25 p.c. in this period as compared with 7 p.c. for fully and chiefly manufactured materials.

Retail Trade.—Retail trade in 1933, as shown by the sales of 83 chain store systems, and 25 department stores, was maintained at a somewhat lower level than in 1932, particularly during the first quarter. An improvement, which was first apparent in April, gradually increased until September when the index showed a gain over the corresponding month of the previous year for the first time in the 5-year period covered by the index. A slightly less than seasonal advance occurred in October when the general index of retail sales was 88·1 as compared with 85·3 in September, 1933, and 91·8 in October, 1932 (January, 1929=100). Index changes for individual groups were more or less comparable with the changes in the general index.

Public Finance.—The latest returns of current revenue must be considered fairly satisfactory. The total current revenue for the month of November, 1933, was $27,768,538 as compared with $24,309,024 in the same month of 1932, being an increase of $3,459,514 for the month. This increase was mainly due to increased revenue from the excise war taxes particularly. While the total revenue for the first eight months of the current fiscal year was $216,902,284 as compared with $222,324,185 for the same months of the preceding year, or a reduction of $5,421,901, it is to



The marked recovery in business during 1933 is shown in the chart. The low point of the recent depression was reached in February; the index, which was 67 in February and 88·2 in October thus shows a net gain of 31·5 p.c. in the period. The level at October being only about 12 p.c. below the average for the base year 1926. Contrary to the general impression, business operations were not at so low a percentage of the 1926 level in the first quarter of the present year as in the primary post-war period of depression culminating in 1921. The index is computed from 45 significant factors comprising manufacturing, mining, construction, power and distribution data.

be expected that this reduction will be offset by the end of January and that the fiscal year as a whole will show a distinct increase in current revenue as compared with the preceding year.

As regards expenditure, the total current expenditure in the first eight months of the current fiscal year was $244,821,608 as compared with $248,787,587 in the same months of last year. The grand total expenditure including special and capital expenditure aggregates this year are $274,880,754 as compared with $287,513,962, a reduction of over $12,600,000. Further, loans and advances this year to Nov. 30, were $37,057,159 as compared with $58,495,969 in the same months of 1932.

Banking and Insurance.—"In a time of universal economic difficulty," say the Macmillan Commission, "the Canadian banks have stood firm and have continued to render to the people of the Dominion the same high quality and the same wide variety of services as in the past". This truth has certainly been brought home in 1933 by the contrast between our banking experience and that of the neighbouring Republic. At no time throughout the depression has any depositor of a Canadian bank been asked even to wait for his money, though most of it is in deposits that are legally payable only after notice. Again, although the savings deposits of the people have been drawn upon substantially for the new Dominion loan, the aggregate on Oct. 31 was approximately $1,350,000,000, about $26,550,000 lower than at the end of 1932.

As regards life insurance, the larger companies doing about 84 p.c. of the business in Canada report that in the first ten months of 1933 they have written $290,000,000 of new business, indicating an average rate at which new business is being written in Canada in 1933 of over $1,100,000 per day.

Summary.—In nearly all branches of the economic life of the Dominion, the latest records indicate substantial and increasing progress. Agriculture, it is true, is still heavily handicapped by the determination of various leading foreign countries to produce their own food stuffs at high costs rather than import our surplus at much lower prices. Even in agriculture, however, there are improving prices assisted to some extent by a preference to our wheat in the markets of the U.K. The prospects in forestry and in minerals are distinctly favourable, while the price of fish has shown some improvement. Manufactures are giving employment to larger numbers, and construction for the first time compares favourably with the same period of 1932. Exports and imports also are higher than in the same period of 1932, and railway traffic and railway earnings are showing distinct improvement. Employment generally is increasing and the production of hydro-electric power has attained a new high record. Our external trade is benefiting both by the evident recovery in the U.K. and by the increase of purchasing power in the U.S.A.

On the financial side, our banking system is as sound as any in the world. While our debts are heavy, they are largely due to our own people, and the burden of those which are due in the United States has been greatly lightened by the deliberate policy of the present United States Administration. The United Kingdom, again the chief centre of world finance, is lending us money at low rates of interest, and various reductions of interest on domestic loans will be effective in the coming year. On the whole, the present economic trend is distinctly upward, and there does not seem to be any *economic* reason for anticipating a reversal of this trend in 1934.

CHAPTER I

PHYSIOGRAPHY OF CANADA AND ITS INFLUENCE ON THE SETTLEMENT OF THE COUNTRY[1]

Introduction

The area of the Dominion of Canada is about 3,684,000 square miles, which is somewhat greater than that of the United States including Alaska, and rather less than that of Europe.

The central part of Canada is underlain by a great expanse of very ancient hard crystalline rock known to geologists as the Canadian Shield. This has an area of about 2,000,000 square miles, or more than half that of the whole Dominion. This central nucleus is surrounded or bordered by the Great Plain of Central Canada. Since the extreme southern point of the Canadian Shield crosses the International Boundary, the western portion of this great plain also passes into the United States and, sweeping around the southern margin of the Shield, returns to Canada, forming the plains of the provinces of Ontario and Quebec. This plain is flanked on each side by mountain ranges—on the west by that series of ranges known as the Cordilleran Mountain System, while on the east, in the province of Quebec, it is bounded by the Appalachian Mountain System. To the east of the latter mountain system, is another area of lower land forming the "Maritime Provinces" of Canada.

Canada therefore falls naturally into the following five physiographic divisions:—

1. **The Canadian (or Laurentian) Shield (or Protaxis).**—A great plateau presenting a somewhat undulating surface of rocky country, well wooded in the south.

2. **The Cordilleran Mountain System.**—The Rocky mountains are the most eastern range of this system of mountain ranges which, with intervening valleys and plateau land, bounds Canada on the west and embraces British Columbia and western Alberta. The Cordilleran system has the finest forests in the Dominion and is rich in minerals.

3. **The Great Plain of Central Canada.**—This lies around the Canadian Shield on its western and southern sides and stretches from the Rocky mountains on the west to the Appalachian mountains on the east. In Canada, however, it is interrupted on the south by the southern extension of the Canadian Shield into the United States in the region of Lake Superior and Lake Huron. This separates its larger western portion which embraces the provinces of Manitoba, Saskatchewan and eastern Alberta, and which

[1] This chapter material was written for a special edition of the handbook prepared for the Fifth Pacific Science Congress held in Vancouver and Victoria, British Columbia, during June, 1933. A more detailed treatment of the physiography of Canada appears in the Canada Year Book (Chapter I) obtainable from the King's Printer at $1.50 per copy.

is known as the "Western plain", from the eastern portion in southern Ontario and Quebec, which may be called the "Eastern plain". This Great Plain of Central Canada contains the largest area of grain-growing and farming land of the Dominion.

4. **The Appalachian Mountain System.**—This system is represented in Canada by the Notre Dame and Shickshock mountains and extends northward from the United States, crossing the boundary line from New Hampshire and running in a curving northeasterly course through the eastern portion of the province of Quebec to the extremity of the Gaspé peninsula.

5. **The "Maritime Provinces".**—This area lies to the east of the Appalachian Mountain System. It is a tract of country diversified in character, containing a considerable area of good farming land and important coal deposits.

The Canadian Shield

The Canadian Shield (or Laurentian Protaxis), to which reference has been made, is a great plateau underlain by rocks of Precambrian age and having an average elevation of about 1,500 feet above sea-level. On the eastern margin, along the Labrador Coast, however, it rises to much greater heights, reaching in places 6,000 and even 7,500 feet, as is also the case further north in Baffin Land.

An Inlet on the North Shore of Great Bear Lake, N.W.T.—This picture gives a good idea of the topography of the Northwestern part of the Canadian Shield.

Photo, courtesy Royal Canadian Air Force.

In its central part, however, the plateau sinks below sea-level, and is here occupied by Hudson bay. This broad sheet of water has a depth of less than 500 feet and is indeed very shallow all along its southern shore. There is a gradual deepening of the water toward Hudson strait. This basin is very ancient and existed before Ordovician times, and probably before the later Precambrian, since iron-bearing rocks of that age occur at many points along its shores, dipping inward toward the waters of the bay.

The plateau has the hummocky surface which characterizes a highly glaciated area of hard crystalline rocks. The shallow depressions are occupied by tens of thousands of lakes, great and small, ranging in size from mere ponds to bodies of water several hundred miles in length. In an area of 4,200 square miles on the surface of this plateau, in the Haliburton region of the province of Ontario, there are 525 lakes, which is equivalent to one lake to every eight square miles of surface. These innumerable lakes, of all sizes and shapes, with their connecting streams and rivers form a pattern etched out of the gneissic rocks which make the plateau. Such lakes and streams follow the windings resulting from the complicated folding of the country rock and are often displayed in a most striking manner in aerial photographs of tracts of this plateau country. Where, at its southern margin, the plateau is crossed by the river St. Lawrence the summits of the low hummocks on the surface of the plateau stand out above the water and give rise to the remarkable scenery of The Thousand Islands, which characterize the course of the river, where it flows out of lake Ontario east of the city of Kingston. A little further west where the protaxis passes beneath the waters of the Georgian bay, on the eastern side of lake Huron, the same scenic effect results from the presence of some 30,000 little islands scattered along the eastern shore of this bay. A similar maze of islands with a labyrinth of bays and inlets is again seen in the lake of the Woods, on the margin of the plateau east of Winnipeg.

The shapes of the lakes and the courses of the streams are often modified and frequently determined by the mantle of glacial drift which lies upon the surface of the plateau, in places thin or nearly absent but in other places so thick as to entirely cover the underlying rock over large areas. These lakes and streams constitute a system of waterways, with connecting "portages" here and there over which the *voyageur* may carry his canoe, by which it is possible for one who is an experienced bushman to traverse almost every part of the great plateau; this is in fact the only way in which it can be explored, unless by aeroplane. In recent years, indeed, the aeroplane has been used extensively, more especially for the purpose of carrying parties of explorers to remote points from which detailed exploration may then be carried out. In this connection it may be mentioned that the immense number of lakes, to be found everywhere throughout the area, make it very easy to employ aircraft since, if a seaplane is used, a good landing can always be secured in summer on some lake, while in winter, when the lakes are frozen over, a plane fitted with runners can make a safe and easy landing on the even snow-covered surface of the lake or on some level stretch of snow-clad land.

This plateau is one of the most renowned Precambrian areas in the world. Through studies carried out on it, the Precambrian succession in North America has been established. Its systematic study was begun by Logan at the inception of the Geological Survey of Canada and the names Laurentian, Huronian, Grenville, Keweenawan were given by him to subdivisions of this ancient complex. Others who followed him have extended, by field studies, our knowledge of the subdivisions and succession found in various portions of this ancient protaxis of the continent of North America.

The great batholiths of orthoclase gneiss with their associated granites which underlie a large part of the plateau, while of the highest scientific interest, have yielded but few deposits of valuable minerals; the belts of highly altered sediments with the accompanying volcanic and plutonic igneous rocks associated with these batholiths, on the other hand, have been found to contain an abundance of mineral deposits, among them some of the richest and most valuable hitherto discovered anywhere. Of these may be mentioned the nickel-copper deposits of the Sudbury district, some of which have also an important content of platinum; the silver-cobalt deposits of the Cobalt area; and the gold deposits of the Porcupine and adjacent areas in Ontario and Quebec. These latter during recent years have shown an ever increasing annual production which has now brought Canada into the second place among the gold-producing countries of the world. These rocks also contain large deposits of iron ore and other metallic minerals and show signs of "mineralization" in almost every part of the protaxis where they have been found. Among the most recent discoveries in these rocks are the large deposits of radium minerals and rich silver ores in the vicinity of Great Bear lake.

The southern portion of this protaxis is forest clad and from these forests the lumber trade, as well as the great pulpwood and paper industries of Eastern Canada, derive their supplies of wood. These forests also are the habitat of great numbers of fur-bearing animals, many kinds of which were hunted by the Indians before the dawn of recorded history on this continent.

The great expanse of this protaxis, however, contains relatively little good farming land. In the far north the climate is too cold and in the south, where the climate is milder, the broken and rocky character of the surface makes it generally unsuitable for agriculture. There are, however, in certain parts of Eastern Canada within its area, large tracts of flat and very fertile land known as the Clay Belts. These represent deposits laid down in great lakes which covered the districts in question at the close of the glacial age. Some of the most important of these are traversed by the Canadian National Railway in the provinces of Ontario and Quebec and are now being rapidly taken up for settlement.

The portion of the protaxis between the northern part of the western plain and the northern part of Hudson bay is known as the Northern Prairies. It presents a great expanse of nearly flat highly glaciated country, treeless, but everywhere covered with a dense growth of cariboo moss. It is a region which is very difficult to traverse, but which is the habitat of the cariboo and musk-ox.

The Cordilleran Mountain System with its Valleys and Plateau Lands

This great belt of mountainous country forming that part of Canada which lies between the Great Plains and the Pacific ocean consists of four great mountain ranges running parallel to one another with intervening valleys and plateau lands. These, in order from east to west, are as follows:—

1. The Rocky mountains bordering the Great Plains.
2. The Selkirk or Gold range. This comprises a number of subordinate ranges, among which are: the Purcell range in the southeast, the Selkirks in the north, the Columbia mountains still further west and north, and the Cariboo mountains in northern British Columbia. (The Interior Plateau.)
3. The Coast range.
4. The Vancouver range.

View of Mount Robson and Glaciers in the Canadian Rockies about Twenty-five Miles North-west of the Yellowhead Pass.—Atmospheric agents (wind and rain, frost and heat) are slowly but continually breaking into and crumbling the hard faces of these giant peaks which will ultimately be reduced to a rounded, weathered condition.

Photo, courtesy Department of the Interior.

These four mountain chains were elevated at different times and present different types of structure—all have peaks of Alpine character rising above the snow line and serving as the gathering grounds for glaciers.

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The boundary line separating the provinces of British Columbia and Alberta follows the watershed of the Rocky mountains so that, with the exception of the eastern slopes of this range, the whole system in southern Canada lies within the province of British Columbia, which has been described as a 'sea of mountains'. As measured along the somewhat tortuous route of the main line of the Canadian Pacific Railway, this belt of mountains from the eastern foot of the Rockies to the city of Victoria is 650 miles (1,050 kilometers) wide.

In southern Canada the Rocky mountains are the highest of these ranges. There are probably hundreds of peaks in this range which attain altitudes of 10,000 feet, though not more than half a dozen reach 12,000 feet. The highest summit in the Rocky mountains, so far as is known at present, is mount Robson, which is 12,972 feet high. The most striking peak south of the main line of the Canadian Pacific Railway is mount Assiniboine, 11,870 feet high, having a pyramidal form resembling that of the Matterhorn.

There are several great *névé* fields within the Rockies which are the source of a number of great glaciers. The largest of these *névés* is in the Yoho National Park about 60 miles northwest of Laggan, a station on the main line of the Canadian Pacific Railway. The great snow field which lies on both sides of the summit of the Rocky mountains in the Yoho and Banff National Parks is larger than all the snow fields of the Swiss Alps taken together. This most easterly range of the Cordilleras consists of folded and faulted series of Palæozoic slates—Lower Cambrian to Permian in age. Along the eastern flank, facing the Great Interior Plain, there are some Jurassic and Cretaceous rocks involved in the folding, the range being overthrust from the west upon the Mesozoic strata of the plains.

The mountains of the Selkirk range are somewhat lower than the Rockies. They have an enormous snow fall, often exceeding 40 feet per annum and their well-watered slopes are clad with a very luxuriant growth of timber, the cedar trees often attaining a diameter of from 15 to 20 feet. These ranges are composed of older strata than the Rocky mountains, being chiefly of Precambrian (Beltian) age; they also display a succession of folds. In the axis of the main syncline, which forms the summit of the Selkirk range where crossed by the line of the Canadian Pacific Railway at Rogers Pass, Lower Cambrian sediments are seen overlying the Precambrian succession. On the east these Precambrian rocks are brought up against the Ordovician, by a great fault on the western side of the valley of the Columbia river. The western portion of the Selkirk range is composed of Precambrian strata of the Shuswap series, which are older than the Beltian and form part of the Precambrian (or Archæan) protaxis of the Cordilleran ranges.

The Interior Plateau is a belt of high plateau country, comparatively low in relief but intersected by stream valleys, about 100 miles wide and lying between the Gold ranges and the Coast range. Along the boundary between Canada and the United States it has an elevation of

about 4,000 feet above sea-level, but sinks gradually to 3,000 feet on going north. The upper Yukon basin may be considered as an extension of this plateau.

In southern British Columbia both the annual and daily range of temperature on this plateau is great and, on account of its very slight rainfall, the region is commonly known as the "Dry Belt of British Columbia". It is usually covered with a growth of sage bush, cactus, scattered yellow pine and poplar. When irrigated the land is very productive and is especially adapted to the growth of fruits and vegetables. The grassy "park country" of the uplands affords good grazing for cattle.

There are several large lakes renowned for their scenic beauty situated in this Interior Plateau, of which Shuswap and Sicamous lakes, and Okanagan lake, in the valley bearing the same name, are especially worthy of mention.

In the eastern part of this plateau, the underlying rocks are chiefly of Shuswap age, while in the western portion they are succeeded by a series of Mesozoic and Tertiary sediments associated with acid and basic lava flows and great thicknesses of volcanic tufa.

The peaks of the Coast range seldom rise to a height above 9,000 feet but owing to their proximity to the Pacific ocean the precipitation is very heavy. An abundance of rain falls upon their slopes and on their higher levels there are many snow fields which give rise to many large glaciers.

This range has its origin in a long series of granitic batholiths intruded in a direction parallel to the sea coast and which forms their axis.

The ranges are about 100 miles in width and are continuous along almost the entire coast of British Columbia. Ores of gold, silver and copper have been found in many places along this range, being connected genetically with the batholithic intrusions.

One of the most striking features of the coast of British Columbia is the presence of many deep *fjords* running from the coast far inland to the heart of the mountain range, often branching out into several arms as they pass back from the Pacific—as instances of these Howe sound, Jervis inlet and Toba inlet may be mentioned. Owing to these *fjords* the scenery along the coast resembles that of the coast of Norway although on a grander scale. They have originated in faults crossing the mountain ranges, along whose courses rivers were developed in pre-glacial time and whose valleys during the glacial age were deepened and widened by the ice moving down toward the sea, taking at the same time the typical U-shaped form characteristic of glacial erosion. Remnants of the glaciers which gave to them their final form are still to be seen at the upper ends of some valleys. The coast range, as has been said, is composed largely of a composite series of plutonic rocks known as the Coast Range Batholith which has been thrust through and is flanked by Palæozoic and Mesozoic sediments, blocks of which have been engulfed and are enfolded in it.

The Vancouver range runs throughout the length of Vancouver island and the Queen Charlotte islands but is partly submerged beneath the waters of the Pacific. Vancouver island is a portion of this mountain range and is therefore very mountainous with summits rising to 8,000 and 9,000 feet and is clad with great forests of various evergreen trees. Like the coast of the mainland, the coast of Vancouver island is intersected by many *fjords* which, however, are not on such a magnificent scale as those seen on the mainland. One of these, Alberni inlet, is twenty miles long with a fine harbour at its head. Vancouver island is composed of volcanic and sedimentary rocks, highly deformed and metamorphosed, pierced by many irregularly shaped intrusions of granite rocks. On both coasts sedimentary rocks are exposed resting unconformably on the metamorphic rocks and granitic intrusions already mentioned. The metamorphic rocks are largely of Lower Mesozoic age.

Among the many rivers in the Cordillera several are especially worthy of mention. In the southeastern portion, the Columbia river is the most important. Taking its rise in the Columbia lakes it flows northward in the deep valley which bounds the Rocky mountains on the west and which is known as the Columbia valley, or sometimes as the "Rocky Mountain Trench", to a point known as Boat Encampment. Here it turns to the west and sweeping around the northern end of the Selkirk range flows south along the western flank of these mountains. On passing Revelstoke it widens out into the Upper and Lower Arrow lakes from whence it continues to flow directly south into the United States.

The Kootenay river, rising a short distance to the south of the main line of the Canadian Pacific Railway near Vermilion pass, runs parallel to the Columbia but in an opposite direction and, at the head of Columbia lake, is only a mile distant from the latter stream. It, however, continues to run south into the United States and, passing around the southern end of the Purcell mountains, turns north and flows back into Canada where it enters Kootenay lake; issuing again from the western side of this sheet of water it flows into the Columbia river about twenty miles from the International Boundary. These two streams thus have their sources close to one another but, one flowing to the north and the other to the south, they become separated by a distance of 300 miles. Each reversing the direction of its flow again, they finally join one another.

Another very large and important river is the Fraser. This in its sinuous course runs completely across British Columbia. It takes its rise very near the boundary line of the provinces of British Columbia and Alberta, in the vicinity of the Yellow Head pass and, flowing to the northwest, reaches a point north of Fort George where it swings around and runs south, receiving a number of tributaries on the way, to Quesnel and then on to Lytton on the western border of the Interior Plateau. Here it is joined by the Thompson river and then, continuing to run south through Yale and Hope, it turns to the west and empties into the Pacific at Port Moody, a short distance south of the city of Vancouver.

The Great Plain of Central Canada

This lies along the southern and western margin of the Canadian Shield and stretches from the Appalachian mountains on the east to the Rocky mountains on the west. In Canada, however, it is interrupted, as has been stated, in the region about lake Superior and lake Huron, by the southward prolongation of the Canadian Shield which here passes through Canada into the United States. The plain sweeping around this prolongation passes back into Canada again to the east of lake Huron. The Great Plain contains the greater part of the farming land of the Dominion.

The eastern portion of the plain, situated in the provinces of Ontario and Quebec, may be termed the Eastern plain, while that portion lying to the west of the Canadian Shield in the provinces of Manitoba, Saskatchewan and Alberta is known as the Western plain.

The Western Plain.—This is a great expanse of country, treeless on the south but gradually becoming forest-clad in the north, first by the appearance of clumps of poplar and then by the presence of areas of park land in the treeless prairie. It thus passes into a region of coniferous forest land. The edge of the true forest may be said to commence at about the Duck mountains in Manitoba, extend westwards to the forks of the Saskatchewan, and then on along the watershed north and west of Edmonton to the foothills and eastern slopes of the Rocky mountains. The whole area in Canada of the Western plain is about 376,700 square miles, that is to say, it is nearly as large as France and Spain. About one-half of it is prairie land.

From the International Boundary on the south this plain as a whole slopes gently to the north toward the Arctic sea, a fact which has a marked influence on the climate of the country, since, owing to this cause, the isothermal lines sweep far to the north in great curves, so that the mean annual temperature is much higher on the plain than in the same latitude in the Canadian Shield on the east or in the Cordilleran belt on the west. Two parallel lines of escarpment running northwest and southeast divide the plain into three belts known respectively as the first, second, and third prairie steppes. These are pronounced features in the southern part of the Great Plain but in the north can no longer be distinguished with certainty.

The first prairie steppe extends from the Canadian Shield on the east to a low escarpment on the west which presents the appearance of a series of hills when seen from the lower land of the steppe itself. This escarpment is made up of the Pembina, Riding and Duck mountains, and Pasquia hills successively as it passes from southeast to northwest. This lowest steppe is a flat alluvial plain. At the International Boundary it is about 800 feet above sea-level. It is the bed of what was an old glacial lake, known as lake Agassiz. This lake discharged to the south into the Mississippi drainage system and was bounded on the north by the high wall of the retreating continental ice sheet. As this latter receded to the north it laid bare a lower exit and the waters of lake Agassiz

then drained off in a northerly direction into Hudson bay, leaving, as surviving remnants of the glacial lake Agassiz, lakes Manitoba, Winnipeg and Winnipegosis and other smaller sheets of water which now lie on the surface of the plain. This lowest steppe lies for the most part in the province of Manitoba and the rich alluvial soil deposited from glacial lake Agassiz now constitutes one of the richest areas of agricultural land to be found anywhere in the world. The outcropping basset edges of a series of nearly horizontal Palæozoic strata form the escarpment which bounds the first prairie steppe on the west. This escarpment is nowhere more than 500 feet high.

Ascending it, the second prairie steppe is reached. This is a great tract of undulating prairie, which, at the International Boundary, has a width of 250 miles. It has an average elevation of 1,600 feet and is

Grain Land on the Second Prairie Steppe.
Photo, courtesy Department of the Interior.

bounded on the west by another escarpment running parallel to that already mentioned and which in different portions of its course is known as the Missouri, Coteau, Vermilion, Bear and Eagle hills. The second prairie steppe occupies chiefly the province of Saskatchewan and the western part of the province of Manitoba. A large part of it is composed of excellent farming land.

The third prairie steppe lies to the west of that just described and extends to the foothills of the Rocky mountains. It has an average elevation of 3,000 feet, but gradually rises, on going from east to west across it, from an elevation of 2,000 feet on its eastern margin to one of over 4,000 feet on its western border (Calgary, in the vicinity of the foothills, is 3,400 feet above sea-level). Its surface is more irregular than that of the other steppes, several detached plateaus rising to considerable heights above the surrounding portions of the plain. Of these the most important are Wood mountain and the Cypress hills. In its southwestern portion

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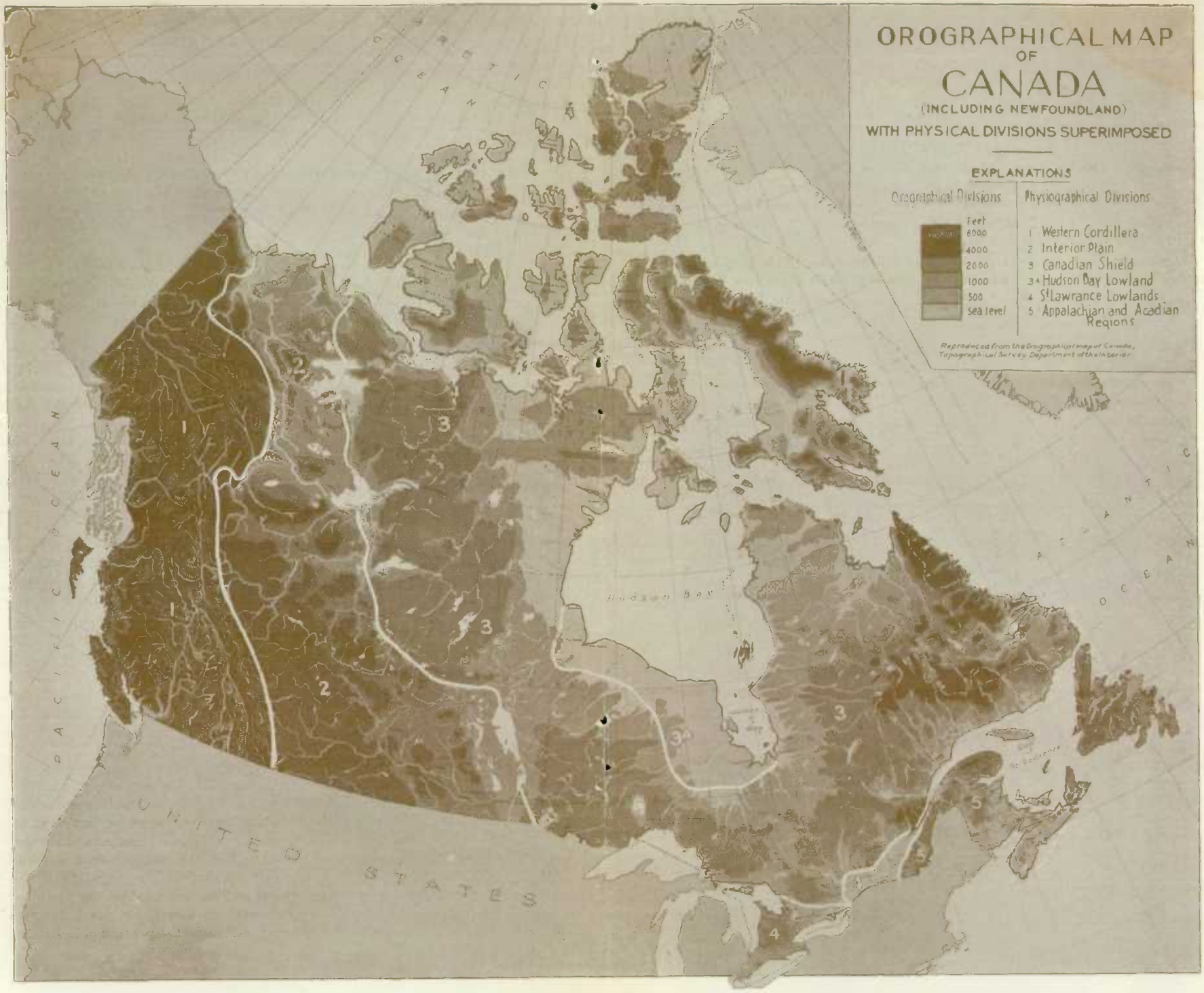
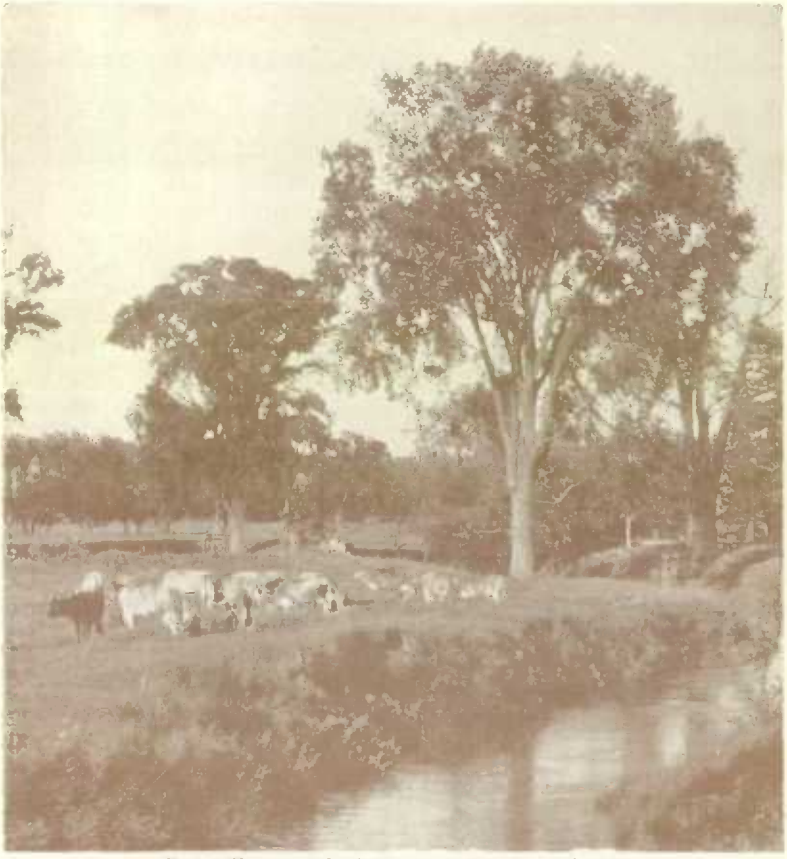

OROGRAPHICAL MAP
OF
CANADA
(INCLUDING NEWFOUNDLAND)
WITH PHYSICAL DIVISIONS SUPERIMPOSED
EXPLANATIONS
Orographical Divisions
Feet
6000
4000
2000
1000
500
sea level
Physiographical Divisions
1 Western Cordillera
2 Interior Plain
3 Canadian Shield
3a Hudson Bay Lowland
4 St Lawrance Lowlands
5 Appalachian and Acadian Regions
Reproduced from the Orographical map of Canada, Topographical Survey Department of the Interior
ARCTIC OCEAN
PACIFIC OCEAN
ATLANTIC OCEAN
UNITED STATES
Hudson Bay

the rainfall is deficient and large areas are irrigated by water brought from the Rocky mountains. This is known as the ranching country.

The second and third prairie steppes are for the most part underlain by rocks of Cretaceous and Lower Tertiary age. These contain thick beds of lignite passing into bituminous coal toward the Rocky mountains. Great supplies of gas and considerable amounts of oil are also obtained by borings in certain portions of this highest steppe.

In the far north the Great Plain is sometimes known as the Mackenzie Lowland. Here it has a gentle slope to the northwest and holds on its forested surface, as elsewhere, a great many lakes and muskegs drained by small streams meandering through shallow valleys, the monotony of the general level being relieved by a few hills or mountains rising to elevations of a few thousand feet, such as Franklin mountain and Horn mountain.



A Dairy Farm in the Fertile St. Lawrence Valley.
Photo, courtesy Department of the Interior.

A very striking topographical feature of the western country is the presence of a series of great lakes which appear in succession along the eastern margin of the Great Plain where they come against the Canadian Shield. These lakes lie along the actual contact of the two. They are, enumerating them from south to north, lake Winnipeg, lake Athabaska, Great Slave lake and Great Bear lake, after which the line of contact passes on to the shores of the Arctic ocean at Franklin bay.

The Eastern Plain.—This portion of the Great Plain of Central Canada is much smaller in extent than its western portion just described. It has an area of about 35,000 square miles and is often referred to as the Lowlands of the St. Lawrence Valley.

It is bounded on the southeast by the Appalachian Mountain System, on the northwest by the higher lands of the Canadian Shield and on the south, so far as Canada is concerned, by the International Boundary. It lies along the northern shores of lakes Erie and Ontario and extends to the northeast, forming the valley of the St. Lawrence river. It is underlain by nearly horizontal strata of Palæozoic age mantled by glacial drift. This Eastern plain lies in the provinces of Ontario and Quebec. On it are situated the two largest cities in the Dominion—Montreal and Toronto. The former owes its importance to the fact that it is at the head of navigation of the river St. Lawrence. In the vicinity of Montreal the uniform surface of the plain is broken by the Monteregian hills—a series of eight volcanos of late Palæozoic age, now deeply eroded. The city of Montreal encircles the most westerly of these hills which is known as Mount Royal, the others rising in succession from the plain to the east of this city.

While relatively small as compared with the western part of the Great Plain, it is that portion of the Dominion which was first settled and which still contains the greater part of the population of Canada. The soil is fertile and yields large crops to the farmer. Unlike much of the Western plain it is an area of mixed farming rather than a wheat-growing country. It furthermore has great waterfalls which produce enormous amounts of electric power forming the basis of very extensive and varied manufacturing industries.

The Appalachian Mountain System and the Maritime Provinces

The Appalachian Mountain System in Canada, as has been already mentioned, is a mountainous belt of country which extends for about 500 miles from the boundary of the State of Vermont to the extremity of the Gaspé peninsula on the south shore of the gulf of St. Lawrence. It is represented by the Notre Dame and Shickshock mountains and is composed of a series of highly folded strata of early Palæozoic age, with an axis of Precambrian rocks, which latter forms part of the eastern protaxis of North America. These are penetrated in many places by igneous intrusions with which are associated some important ore deposits. The range is not a lofty one, seldom attaining elevations of over 3,000 feet.

To the east of this Appalachian mountain belt lie what are known in Canada as the "Maritime Provinces", namely New Brunswick, Nova Scotia and Prince Edward Island. This portion of the Dominion is, in its geological character and relations, more closely allied to Great Britain and western Europe than it is to the rest of Canada on the other side of the Appalachian mountains. It is a beautiful country of diversified character with areas of good farming land, important coal deposits, and very valuable off-shore fisheries. It has a deeply indented coast line with an abundance of excellent harbours. Those of Halifax, the capital city of Nova Scotia, and Saint John, in the adjacent province of New Brunswick, form large and important ocean ports through which the sea-borne commerce of Eastern Canada is carried, especially in the winter season when the ports of Montreal and Quebec are closed. They have a large volume of trade with the West Indies throughout the year. Prince Edward Island is the smallest province in the Dominion of Canada and presents an expanse of excellent agricultural land, underlain by red sandstones and shales of Upper Carboniferous and Triassic age.

The Influence of the Topographical Features of the Dominion of Canada on its Early Settlement and Subsequent Development

When Christopher Columbus sailed westward from Europe on his four successive voyages, he did so with the object of reaching the "Golden East", that is to say India and far Cathay. That the continent of America which he discovered was at first supposed to be a portion of the long looked-for land is testified to by the fact that the islands where he made his first landing are still known as the West Indian islands and the original inhabitants of the continent as the American Indians. It came to be recognized later that this newly discovered land was not India but a new and hitherto unknown continent stretching north and south across the path to Asia. Then began a search for some passage across this land barrier to the eastern seas. In 1535-36 Jacques Cartier discovered what he hoped would prove to be such a passage when he sailed into the gulf of St. Lawrence and passed up the river of the same name for 1,000 miles into the interior of the continent as far as the site of the present city of Montreal, where rapids in the river checked his further advance. He had, however, passed nearly one-third of the way across the continent of North America. It was along this route that the first white men came from Europe to settle in Canada. This settlement was at Quebec but rapidly extended into other parts of the eastern portion of the Interior Plain as far west as Montreal. It was here along the shores of the gulf of St. Lawrence and in the valley of the St. Lawrence river that the French established themselves in Canada. The British settlers who, some years later, settled further south in what are now known as the New England States, were prevented for many years from extending into the interior of the continent owing to the barrier presented by the Appalachian mountains, but Jacques Cartier had sailed around the northern end of this barrier range and made his way far into

the Interior Plain. After the French *régime*, emigrants from the British Isles, joined by many hardy colonists (who had left the United States when the revolution took place and passed north into Canada in order that they might remain under the British flag), took up land to the west of the French settlements and made their homes in the upper part of the valleys of the St. Lawrence and Ottawa rivers and along the northern shores of lake Ontario and lake Erie.

A further extension of settlement to the west was, for many years to come, prevented by the wide tract of rocky and barren country which was then encountered, for here the southern extension of the Laurentian Plateau was thrust down as a great wedge from the north separating the eastern from the western portion of the Great Interior Plain. The fur traders, however, led the way to further settlement in the west for, between 1733 and 1738, the Winnipeg river, lake Winnipeg, and the Red river were explored by La Vérendrye and other trader-explorers. Part of what are now the Prairie Provinces of the Dominion was the field of a valuable fur business, later to be exploited by The Northwest Company established in 1783 and having its headquarters at Montreal. The canoe route followed by these traders, from Montreal to their posts on the Red river, in what is now the province of Manitoba, was about 1,800 miles in length. The canoes were put into the water and loaded at Lachine, nine miles from Montreal, and proceeded up the Ottawa river and by the Mattawa to lake Nipissing and thence down the French river into lake Huron. Skirting the north shore of this lake, the canoes entered lake Superior and following the northern shore of this great sheet of water reached the mouth of the Kaministikwia river, which they then ascended, passing into Rainy lake and lake of the Woods. Passing out of this latter by the Winnipeg river, the canoes reached lake Winnipeg and then continued up the Red river to the Company's posts. This journey, which entailed many portages *en route*, occupied about five weeks.

There was another route by which fur traders could gain access to the Western plain, namely by Hudson bay. This was used by "The Ancient and Honourable Company of Gentlemen Adventurers trading into Hudson Bay", founded in 1670 and commonly known as the Hudson's Bay Company, which had its headquarters in London, England. This route was open for only a few weeks each year but the Company dispatched from England each summer a ship laden with all the supplies and equipment required by the Company's trading posts for the coming season and, landing them at York Factory on the western shore of Hudson bay, distributed them by canoe route and pack train to all their trading posts in the interior of the country.

In 1812, the Earl of Selkirk sent out from Britain a party of settlers by this route and established on the banks of the Red river, to the south of lake Winnipeg, a settlement known as the Selkirk or Red River Colony. This colony, which was afterwards increased by the accession of a number of persons who had retired from the service of the Hudson's Bay Company, was the first band of settlers to take up their residence on the

Great Plain in the west. It was evident, however, that no large accession of population could find an entrance to this great stretch of country through either of these routes.

The early history of the settlement of British Columbia is a story of its own.

When Captain George Vancouver was sent to the coast of what is now British Columbia to confer with Captain Quadra concerning the withdrawal of Spain from this coast, he made extensive explorations and in 1793, while he was still there, Alexander Mackenzie of the Northwest Company crossed overland to the Pacific by the Peace and Fraser rivers.

The great fur-trading companies which had worked their posts westward by way of the waterways of Canada were reaching beyond the Rockies, and Simon Fraser, sent by the Northwest Company, established the first fur post at Lake McLeod in 1805, and later, after almost incredible difficulties, descended the Fraser river to its mouth, to be disappointed that he was not at the mouth of the Columbia. During the ensuing years other trading posts were established along the waterways of British Columbia and a western depot at the mouth of the Columbia river at Fort Vancouver in 1825.

In 1843, the Hudson's Bay Company established Fort Victoria on Vancouver island which, in 1849, replaced Fort Vancouver as their western depot. This marked the beginning of real settlement. Contemporaneously with the change of the depot, Vancouver island was created a Crown Colony, though it was leased to the fur company.

Up to this time, there were no settlements on the mainland except the trading posts of the Hudson's Bay Company but, following the finding of gold on the Fraser and other streams, a rush occurred to the Fraser river in 1858, when over 20,000 adventurers, some from England and Australia but mostly from California, poured into Victoria, which underwent quick transition from trading post to city. As the gold seekers reached the Fraser other cities sprang up—New Westminster, Hope, Yale —and James Douglas, Governor of Vancouver Island, looking to the interest of the Crown and of the fur company which enjoyed trading rights on the mainland, promptly extended his jurisdiction to cover the mainland and issued ordinances with the effect of law. In 1858, the mainland was created the Colony of British Columbia. From 1859 to 1861 further gold fields were opened, culminating in the rich Cariboo creeks which attracted more adventurers.

In 1866 the two colonies were united, and, following much controversy, Victoria was selected as the capital. The union was contemporaneous with the movement in Eastern Canada towards Confederation.

Unlike the rest of Canada the access of settlers to these western colonies, before they became part of the Dominion of Canada, was altogether by way of the United States on the south. This continued up to the time of Confederation.

In 1867, the separate colonies of Canada, Nova Scotia and New Brunswick went into confederation and became the Dominion of Canada.

Two years later, in 1869, the Hudson's Bay Company surrendered to the Crown the right and title to their territories for transfer to the Dominion of Canada and in 1870 these became part of the Dominion. In 1871 British Columbia, and in 1873 Prince Edward Island, entered the confederation, so that the Dominion of Canada came to embrace the whole stretch of country from the Atlantic to the Pacific oceans.

In order to make this union effective it was necessary to establish at once direct and easy communication between all parts of the new Dominion, and especially between Eastern Canada and the great expanse of rich agricultural land which became available for settlement in the prairie lands of the western portion of the Great Plain of Central Canada. The barrier presented by the Laurentian Protaxis, to which reference has just been made, was overcome by building the Canadian Pacific Railway from Montreal to Winnipeg and this railway was extended across the Great Plain.

The obstacle to free passage between the Maritime Provinces and Western Canada had been removed by the construction of the Intercolonial Railway from Halifax to Quebec. There still remained, however, the greatest hindrance of all, namely, the Cordilleran Mountain System separating British Columbia from the Great Plain and Eastern Canada. This was overcome in 1885, the last spike being driven on Nov. 7 of that year, and on June 28, 1886, the first through train started from Montreal to Burrard inlet on the Pacific Coast. The city of Vancouver came into existence within the next few years at the terminal point of the great transcontinental line on the Pacific side of the continent.

Later on other railways, now united in one great system known as the Canadian National Railways, afforded a second transcontinental system crossing Canada, which, running further north, secured an easier passage through the Laurentian Protaxis by passing over certain clay belts which had resulted from the deposition of silt upon its surface from the waters of great lakes in late glacial times. This line also by crossing the Great Plains further north than the Canadian Pacific Railway passed through a rather better farming country, in that it has a greater rainfall. It also secured a lower and easier pass—the Yellowhead pass—through the Rocky mountains to Prince George, from thence reaching the Pacific by two separate lines, one passing down the Fraser river to Vancouver and the other down the Skeena to Prince Rupert.

Free access was thus secured to all parts of the Dominion of Canada suitable for settlement from east to west. Access to the far north is now available, by ocean steamer, by inland water navigation and by aircraft.

By ocean transportation the shores of Hudson bay, Hudson strait and the eastern Arctic islands are served from Sydney, Halifax and other eastern ports, the western coast and islands being served through Bering sea and strait and Beaufort sea from Vancouver and other Pacific ports.

Inland water routes are extremely important, particularly to the western portion of the Northwest Territories where one of the finest

natural waterways of the world exists—the Mackenzie river with its tributaries and adjacent waterways. A regular transportation service is maintained during the open season to all posts on the Slave, Mackenzie, Peel and Liard rivers, and to points on Great Slave and Great Bear lakes.

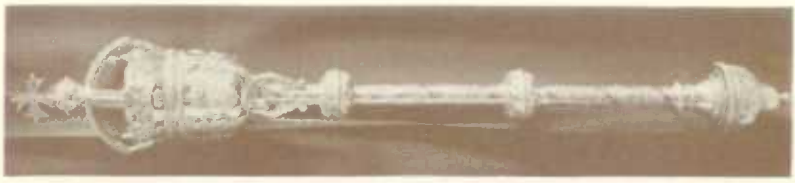
The introduction of the aircraft has marked a new chapter in the opening-up of the Northwest. This means of transportation was employed by the Imperial Oil Company in 1921 when developing the oil fields near Norman on the Mackenzie river. During 1929 four mineral exploration companies (distinct from those engaging in a transportation business) flew 529,900 miles over territory in, or adjacent to, the Northwest Territories, while between November, 1931, and July, 1932, inclusive, 29 tons of mail, 93 tons of freight and express, and 587 passengers were carried by air into the Northwest Territories. The freight carried was chiefly food, medical supplies, and prospectors' outfits, although it is worthy of note that bulky mining machinery such as diamond drills has also been transported.

Commercial aviation companies and aerial mineral exploration companies have flown, in a general way, over all the mainland of northern Canada east of the Mackenzie river, and in addition there have been flights to the west of the Mackenzie river. Consequently to-day the more used air routes are well known and many of them have been mapped.

The Royal Canadian Air Force has established refuelling bases at thirty-two points in the Northwest Territories. Photographs have been taken and information—such as length of season for summer and winter flying, good and poor landing areas, available supplies, nearest settlement and available labour, and nearest wireless station, in fact all information which tends to lessen the hazard of flying in the north—has been collected at most of these gasolene caches. The dangers of bad-weather flying have been greatly reduced by the establishment of wireless stations at key points throughout the Territories.

Very large areas have also been mapped topographically from the air by the mapping services of the Dominion Government.

Perhaps nowhere is the value of the modern aircraft, as a factor in the development of Northern Canada, more strikingly shown than in the new mining areas about Great Bear lake, where now fifteen or more cabin seaplanes may frequently be seen along what were a few years since almost unknown shores.



The Mace—Symbol of Authority of the House of Commons.

CHAPTER II[1]

SALIENT EVENTS OF CANADIAN HISTORY TO THE OUTBREAK OF THE GREAT WAR

The French Period.—Canadian recorded history commenced with the discovery of Cape Breton in 1497 by John Cabot, an Anglo-Italian navigator of Bristol, England, sailing under a commission of Henry VII. His discovery was not successfully followed up by the English and it was not until 1534-41 that systematic exploration of the St. Lawrence as far as Montreal was carried out by Jacques Cartier, a French explorer from the port of St. Malo in Brittany. Cartier made three voyages between 1534 and 1541 and took possession of the territory in the name of the King of France. More than fifty years was to pass, before definite plans were made to plant colonies in the territory.

Jacques Cartier

The real founder of Canada was Samuel de Champlain, who with de Monts established the first permanent colony at Port Royal in 1605. Three years later Champlain founded Quebec. Throughout his life, Champlain was associated with the different trading companies which, in return for the monopoly of the fur trade granted by the King of France, agreed to carry on colonization and missionary work among the Indians. At this time the trading companies, owing to the lack of centrally organized government, acted in a quasi-governmental capacity in their several areas. The two functions, of carrying on colonization and missionary work on the one hand and pursuing the trade in furs on the other, were essentially antagonistic. The charter stipulations were in fact "more honoured in the breach than in the observance".

The meagre results which had been accomplished in the way of the colonization of New France by the monopolistic companies compared with the progress under Royal Government, is shown by the population figures which are available. In 1641 the resident population of New France was 240 souls. In 1666, when Talon took the first official census for the Government, the white population of New France was 3,215 persons; in 1675 it was 7,832; and by 1698, the year Frontenac died, it had reached 15,355.

[1] Most of the illustrations in this chapter were supplied by courtesy of Dr. A. G. Doughty, Public Archives of Canada.

Champlain was associated with one or other of the monopolistic trading companies throughout his life, for the last eight years of which he had much to do with the activities of the Company of the Hundred Associates, whose charter covering New France and Acadia was granted in 1627. He stands out in strong relief to the majority of his contemporaries in devoting much serious effort to colonization and exploration. It was Champlain's appeal to Cardinal Richelieu which had brought about the creation of this strong Company and its absolute sovereignty over "all French possessions between Florida and the Arctic regions and from Newfoundland as far west as it could take possession".

"The Brides"

A strong impetus was given to permanent settlement under "Royal Government". Inducements were offered by Louis XIV of France to maidens of good character to marry his soldiers and settle in the colony. The illustration is a reproduction of canvasses, by the artist Jeffery, showing King Louis and his courtiers bidding adieu to a party of these young ladies in France and their reception by Frontenac in New France.

In its early years, the Company was sadly harassed by the attacks of David Kirke (sent out by Charles I of England in 1628 and 1629) resulting in the fall of Quebec and the taking of the colony. When peace was signed between England and France in 1632, Canada was given back to the French. Nevertheless the Company had been crippled by the loss of capital invested in the fleet captured by Kirke and, after struggling along for a time, was obliged to acknowledge insolvency in 1663 and surrender its rights and privileges to the King who, acting on the advice of his great Minister of Marine and Colonies, Colbert, proceeded to establish a still larger company—the West India Company. Colbert's prestige suffered in this attempt more quickly than Richelieu's

had in the case of the Hundred Associates, and the West India Company in turn lost its monopoly in 1669. The Company never had carried on governmental functions for since 1663 the country had been organized under the Sovereign Council of France, which, under the immediate control of the King, appointed his representatives in New France—the Governor, the Bishop and the Intendant.

Jean Talon

This system of Royal Government lasted until 1760, the end of the French period. In an outline such as this, it is not possible to sketch this romantic and picturesque *régime* or describe the succession of stirring incidents clustered about such names as Maisonneuve and La Mère de l'Incarnation, Dollard, D'Iberville and La Vérendrye, Marquette and La Salle—those who opened-up what is now the Dominion to the civilized world and whose memory persists to-day in some of our oldest institutions.

One immediate result of the period of Royal Government was the introduction of French Law into New France. Previously, the trading companies had administered justice, more or less effectively, in their own ways and, while certain influences of early French civil law had become a part of the practice of the country, it is nevertheless the case that the uniform introduction of French Law, as it then existed in France, dates from 1663. Its influence can be traced in the law of Quebec to-day.

Among the various Governors the name of Frontenac is outstanding, among the Bishops that of Laval, and among the Intendants, Talon. Frontenac, a veteran soldier, arrived in 1672. He was a man of strong individuality, most successful in making friends of the Iroquois who had been dangerous enemies of the colony, though wholly unsuccessful in his relations with other members of the Government. On account of his inability to work agreeably with the Intendant and the Bishop, he was recalled along with the Intendant by the French Government. After being succeeded by two mediocre Governors, he returned in 1689, when more trouble with the Indians had arisen. His strong hand was instrumental in once more bringing order to the colony by successfully attacking the English colonists and their Iroquois allies. Frontenac died in 1698.

Laval arrived in 1659. His duty was to preside over the Church in New France and to extend its influence among the Indians.

Jean Talon came out as the first Intendant, an office involving financial and judicial authority and a large measure of practical independence. Talon was the first really to perceive the industrial and commercial possibilities of the country. He returned to France shortly after the first arrival of Frontenac, but not until he had given an impulse which had lasting effects upon the economic life of Canada.

In 1688 France had declared war on England as a sequel to the English Revolution of the same year. Frontenac's presence in New France saved the colonies but a second war, 1702-13, was disastrous to France and, by the Treaty of Utrecht (1713), she surrendered to England the French settlements in Acadia and Newfoundland and also gave up her claims to the Hudson Bay watershed. Cape Breton (Ile Royale) and Prince

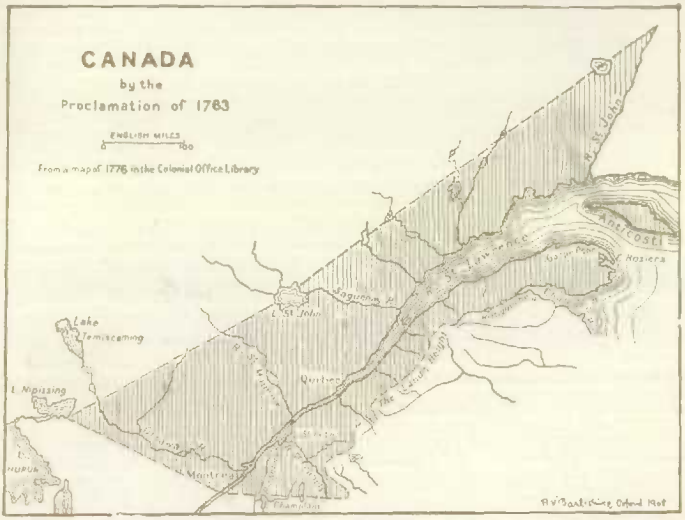
General Wolfe

General Montcalm

Edward Island (Ile St. Jean), however, remained French; the former was the cause of further strife between the two powers and, after being captured by the English in 1745, was restored to France by the peace of Aix la Chapelle in 1748 but, ten years later, during the Seven Year's War, passed into the permanent possession of the English after a siege in which General Wolfe distinguished himself. There followed the great struggle between Wolfe and Montcalm for possession of the St. Lawrence valley, a struggle which cost both leaders their lives at the capture of Quebec.

Wolfe's historic expedition against Quebec in 1759 was planned by the great William Pitt, Earl of Chatham, and has been regarded as one of the most decisive events of world history. The capitulation of Montreal a year later placed the whole country in British hands, although the Treaty of Paris, by which Canada was officially ceded to Great Britain, was not signed until February 10, 1763.

The British Period.—From 1759 for a period of fifteen years Canada was a British Crown Colony, the government being of a purely military character. In 1774 the Quebec Act established a Council with limited powers, sanctioned the use of French Law (introduced in the French *régime*) in civil matters, and granted full freedom for the exercise of the Roman Catholic



religion. By the Act, the boundaries of Canada were extended south to the Ohio and west to the Mississippi. Trouble between the Mother Country and the New England colonies provided the excuse for an attempt of the revolting colonies to capture Quebec in 1775. They were repulsed by Governor Carleton[1] but the Treaty of Versailles surrendered the territory south of the Great Lakes to the United States.

Sir Guy Carleton

Following the American Revolution and the establishment of the Republic, the United Empire Loyalists flocked to Canada and augmented considerably the English-speaking population. However, as time went on, government became increasingly difficult owing to racial antagonisms. Experiences with the New England colonies had, moreover, considerably tempered the attitude of the Home Government towards the wishes of her remaining overseas possessions in America. Finally, by the Constitutional Act of 1791

[1] Became Sir Guy Carleton in 1777 and later Lord Dorchester. As Col. Carleton he had fought with Wolfe at Quebec and was now at the zenith of his career.

the British Government divided the English-speaking province of Ontario or Upper Canada from the French-speaking province of Lower Canada or Quebec and gave to each Representative Government. This had existed in Nova Scotia as early as 1758, in Prince Edward Island since 1769 and in New Brunswick since 1784.

The war of 1812-15 with the United States, in which Sir Isaac Brock and Colonel de Salaberry so ably defended Canada against the invaders, was a serious crisis in the early history of Canada. The struggle was marked by alternate victory and defeat, but was finally brought to a close by the Treaty of Ghent. Upper Canada had suffered considerably, her capital, York (now Toronto), having been captured and burned, but the main result of the struggle was to strengthen the bonds between Canada and the Mother Country.

Lord Durham

The representative institutions granted in 1791 to the two provinces of Canada resulted in but a fair measure of content. Bitter dissensions between the Legislative Assemblies representing the people and the Governors representing the Crown became more and more frequent, until popular clamour for more responsible government became increasingly menacing and finally resulted in the rebellions of 1837 led in Lower Canada by Papineau and in Upper Canada by W. L. Mackenzie. The uprisings had very definite and far-reaching results. The constitution of Lower Canada was suspended and a Special Council created. Lord Durham was sent out by the Home Government to make an exhaustive report on conditions in all the North American provinces (1838). His recommendations met with much opposition at home. He was censured and later resigned. Wisdom ultimately prevailed, however: the union of Upper and Lower Canada and the goal of Responsible Government, as distinguished from Representative Government, was achieved under the Act of Union in 1840. To Lord Sydenham fell the difficult task of bringing about the proposed union, but it was not until the formation of the Lafontaine-Baldwin Government under Sir Charles Bagot that the new system, later consolidated under Lord Elgin, was established on a firm basis.

In the meantime, the three maritime provinces were quietly but surely working toward similar reforms, with the result that Responsible Government was granted to Nova Scotia and New Brunswick in 1848, and to Prince Edward Island in 1851.

The Union of the provinces and the introduction of Responsible Government, although attended by grave political difficulties, gave a new

stimulus to the material development of the country. The canal system already begun made rapid strides and river and lake navigation developed steadily. The first steam railway opened in 1837, and in the 'fifties railway expansion was rapid, the Grand Trunk Railway between Montreal and Toronto being completed in 1856.

Meanwhile, as a result of Sir Alexander Mackenzie's crossing of the continent in 1793, a new settlement was growing up on Vancouver island. The discovery of coal in 1849 hastened the development in this section, which was made a colony with Representative Government in 1856. A little later gold was discovered on the mainland, and British Columbia was given a separate provincial government in 1858. In 1866 the two provinces united and the first Legislative Council of the united province met.

The northern boundaries shown are as understood at Confederation.

Confederation.—The idea of uniting the British North American colonies was no sudden inspiration: it had in fact haunted the minds of far-seeing men for many years. William Lyon Mackenzie suggested it in 1825 and Lord Durham also seriously considered it but found transportation inadequate to make a real union possible. Sir Alexander Galt in 1858 induced the Cartier-Macdonald Government to send a mission to England to take up the matter with the Imperial authorities, but found the political situation in England unfavourable to decisive action at the time. It was the continued political disagreements between Upper and Lower Canada which did more than anything else to bring the question to a head. Leading men of both parties felt that a larger union was the only solution to the difficulties of administration. A coalition government—the Taché-J. A. Macdonald Administration—was formed in 1864, with George Brown leading the movement to amalgamate the British North American provinces. During Sep-

Sir John A. Macdonald

tember of the same year, representatives from the Maritime Provinces met at Charlottetown to consider a union of their three provinces under one Government, but they were persuaded by delegates from the legislatures of the Canadas to adjourn the convention to Quebec, in order to discuss the broader federal union of all five provinces and, if possible, the inclusion of Newfoundland. Representatives from Newfoundland were invited to attend this second conference which met at Quebec in October, 1864. There was at first a certain amount of local opposition to the scheme in the Maritime Provinces, which was successfully met in the case of Nova Scotia and New Brunswick, although Prince Edward Island did not enter Confederation until 1873. Nevertheless it was from the resolutions accepted at the Conference that the Dominion of Canada as it exists to-day was born. These resolutions, as amended by the London Conference of 1866, were incorporated in the British North America Act, which came into force July 1, 1867. The new Dominion consisted of the provinces of Upper and Lower Canada, Nova Scotia and New Brunswick, but provision was made for the inclusion of other portions of British North America deciding later in favour of union.

Sir John A. Macdonald, the first Prime Minister of the new Dominion, had many and varied problems presented to him for solution. In 1866 the "Fenians" from the United States had raided the Niagara frontier with considerable loss to life and property and it seemed reasonable that some compensation should be made by the United States Government, but this was emphatically refused. Feeling at this time ran high between the two countries, and the Reciprocity Treaty which had been arranged in 1854 was terminated (1866). Thus the Dominion was born under any but auspicious circumstances and it was largely the hard work and faith of those in authority at the time that made ultimate success possible. For a time there was temporary depression in Canada, new markets had to be sought and the strength of Confederation was tested. In addition to economic troubles, political difficulties arose. The abrogation of the Reciprocity Treaty brought to an end the United States fishing rights in British waters. Since that country was slow to accept the change, a number of U.S. vessels were confiscated which added to ill feeling. Other matters were outstanding, including the Alabama Claims and

the San Juan question. Finally it was agreed to refer all these matters to a joint commission consisting of five British and five United States members. Sir John A. Macdonald was appointed as a member on the British side. The questions in dispute were settled by the negotiation of the Treaty of Washington in 1871, but the feeling prevailed in Canada that her interests had been sacrificed.

The young Dominion was now beginning to feel her way and her eyes were turned to westward expansion. In 1869 the Hudson's Bay Company surrendered to the Crown, in return for money and other considerations, all territorial rights in the Northwest which it had held since the granting of its charter in 1670. Manitoba, the fifth province of Canada, was created out of a part of the ceded territory, but not before apprehensions of the half-breed population, led by Riel, that certain of their rights would not be protected, had resulted in the abortive outbreak of the Red River rebellion (1870).

In 1871 the province of British Columbia entered Confederation under an agreement for the construction of a transcontinental railway and two years later Prince Edward Island was admitted.

To the Government of Sir John A. Macdonald fell the task of carrying out the agreement with British Columbia stipulating that the new railway should be begun within two years from the date of union. In 1880 a contract was signed with the present Canadian Pacific Railway Company and the work went steadily on until its completion in 1885. The last spike was driven by Sir Donald A. Smith (later Lord Strathcona and Mount Royal) on November 7, completing a line which stretched across Canada from ocean to ocean.

Revelations made in 1873 as to the means by which election funds had been obtained by the Government (Pacific Scandal) brought on a Cabinet crisis. Sir John A. Macdonald resigned and Alexander Mackenzie formed a Government. In 1878, however, the conservatives rewon the confidence of the electorate on a policy of protection, the historic *National Policy*. The effect was to raise the customs duties on dutiable goods to an average of 26 p.c. on the goods imported in 1880.

On Sept. 1, 1880, all British possessions in North America and adjacent islands, except Newfoundland and its dependencies, were annexed to Canada by Imperial Order in Council, extending the Dominion to the Pole.

In 1885 another rebellion led by Riel broke out, this time in what is now Saskatchewan. Militia regiments were dispatched and order was restored. In 1884-5 Canadian *voyageurs* took part in the Nile expedition for the relief of General Gordon.

General elections were held in the years 1882, 1887 and 1891 and Sir John A. Macdonald's Government was sustained on each occasion. The strain of public life was beginning to tell on his health, however, and he died on June 6, 1891, at the age of 76. He had done more than any other man to shape the political history of Canada, and died honoured alike by political friends and foes.

In 1896, Sir Wilfrid Laurier, the great Liberal leader, became Prime Minister of Canada and held the reins of office during the greater part of

Sir Wilfrid Laurier

the period from then to the Great War. The British Preferential Tariff was introduced by Sir Wilfrid Laurier soon after his accession to office. This meant in 1898 a reduction of one-fourth of the customs duties charged upon articles, the growth, produce or manufacture of the United Kingdom or of certain specified British colonies. The proportion of the rebate was increased to one-third in 1900; while in 1904 this method of granting a preference was changed into a specially low rate of duty on almost all imported dutiable commodities.

Two important arbitrations in which Canada was interested have taken place since 1890, the first relating to the rights possessed by British subjects in the seal fisheries of Bering Sea and the second to the boundary between Alaska and Canada. In the first case, the claims advanced on behalf of Canada were fully upheld. In the second case there was some disappointment in Canada over the award, but it did not in any serious degree affect Canadian interests.

In 1899, when war was declared between the Transvaal and the British Government, Canada linked her fortunes with those of the Mother Country. Her troops distinguished themselves, particularly in the battle of Paardeberg in which the Boer General, Cronje, was forced to surrender.

The development of Canada during the early years of the twentieth century was very marked, especially in the west. Parts of the Northwest Territories, which had been organized into provisional districts in 1882, rapidly advanced towards provincial status and, in 1905, were organized as the two provinces of Saskatchewan and Alberta. The discovery of gold in the Yukon had already led to its establishment as a separate territory in 1898. Economically this period was one of extensive exploration and rapid expansion. Canada's vast resources came to be widely known and there followed a great influx of immigrant labour and of capital.

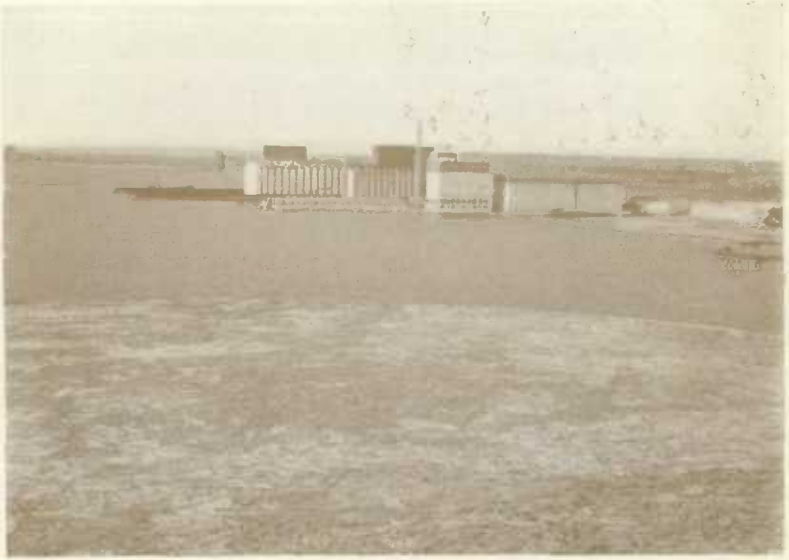
In 1911 Sir Wilfrid Laurier was defeated on the issue of freer trade relations with the United States and Sir Robert Borden, the conservative leader, succeeded him as Prime Minister. To this statesman fell the heavy task of directing the political fortunes of Canada and representing the Dominion in Imperial affairs during the trying years of the War.

CHAPTER III

WEALTH, PRODUCTION AND INCOME —CAPITAL INVESTMENTS

Wealth

"National Wealth" in this analysis is a concrete concept and includes all our farms, factories, equipment, merchandise in stock, real estate, roads, highways, developed resources and the thousand and one material things which we as a nation possess.



Terminal Grain Elevators at Port Arthur with log boom in foreground.

Some difficulty arises when we try to reduce all the things which go to make up this wealth (things which once created are not themselves subject to violent change) to a common denominator. Estimates of national wealth must always be expressed in terms of the national currency and thus normally in terms of gold dollars. Yet the purchasing power of the currency unit is always fluctuating and since 1929 has increased by more than 50 p.c. in terms of wholesale prices. Even in 1930, the average index number of wholesale prices was down by nearly 10 p.c. from 1929, while in December of that year the index was 19 p.c. lower than in December, 1929. The index continued to decline until February, 1933, and, even though there has been some improvement since then, in October, 1933, it was still nearly 30 p.c. below the same month in 1929.

The effect of such drastic reductions in prices is first felt by the commodities which are being currently produced and, through these commodities, diminishes the dollar value of production and consequently the national income of a country where most people are producers. Ultimately a persistent decline of this character affects the capital values of real estate, buildings, machinery, etc., and its influence is then felt in a reduction in the national wealth as stated in dollars. The capital value of our national wealth has not yet had time to be finally readjusted for the many fluctuations in prices which have characterized the past five years, and any attempt to estimate the wealth of Canada must be open to serious error until the necessary adjustment has been made. The 1929 estimate, which is considered to represent fairly well values in that year is, therefore, the latest which has been compiled by the Bureau of Statistics and the table below shows the national wealth on that basis.

Estimate of the National Wealth of Canada, 1929

Classification of Wealth	Aggregate Amount	Percentage of Total	Average Amount per head of Population
	$	p.c.	$
Farm Values (land, buildings, implements, machinery and livestock)	6,308,353,000	20·45	629.01
Agricultural Products in the possession of farmers and traders	1,631,124,000	5·29	162.64
Totals, Agricultural Wealth	7,939,477,000	25·74	791.65
Mines (capital employed)	867,021,000	2·81	86.45
Forests (estimated value of accessible raw materials, pulpwood and capital invested in woods operations)	1,877,000,000	6·09	187.16
Fisheries (capital invested in boats, gear, etc., in primary operations)	33,935,000	0·11	3.38
Central Electric Stations (capital invested in equipment, materials, etc.)	554,327,000	1·80	55.27
Manufactures (machinery and tools, and estimate for capital in rural lands and buildings, duplication excluded)	1,418,040,000	4·60	141.39
Manufactures (materials on hand and stocks in process, duplication excluded)	837,805,000	2·72	83.54
Construction, Custom and Repair (estimate of capital invested in machinery and tools and materials on hand)	137,685,000	0·45	13.73
Trading Establishments (estimate of the value of furniture and fixtures, delivery equipment and materials on hand)	1,136,291,000	3·68	113.31
Steam Railways (investment in road and equipment)	3,153,351,000	10·22	314.42
Electric Railways (investment in road and equipment)	240,111,000	0·78	23.94
Telephones (cost of property and equipment)	291,589,000	0·95	29.07
Urban Real Property (assessed valuations and exempted property and estimate for under valuation by assessors and for roads, sewers, etc.)	8,251,011,000	26·75	822.73
Canals (amount expended on construction to March 31, 1930)	241,946,000	0·79	24.12
Harbours (approximate amount expended to March 31, 1930)	367,488,000	1·19	36.64
Shipping (including aircraft)	149,306,000	0·48	14.89
Imported Merchandise in store (estimated at one-half imports during 1929)	649,477,000	2·11	64.76
Automobiles (estimate of the value of automobiles registered)	758,424,000	2·46	75.62
Highways, etc.	364,896,000	1·18	36.38
Household Furnishings, Clothing, etc. (value estimated from production and trade statistics)	1,370,000,000	4·44	136.61
Specie, Coin and other Currency held by the Government, chartered banks and the general public	201,030,000	0·65	20.04
Totals	30,840,210,000	100·00	3,075.10

The tangible wealth of Canada, apart from undeveloped natural resources, was estimated at about $31 billions in 1929. This represented an increase of about $9 billions since 1921. There is no earlier figure that is strictly comparable, but it is fairly certain that there was a growth of over four times between 1900 and 1929. Agricultural values made up about $8 billions of the 1929 total, urban real estate over $8 billions, and steam railways over $3 billions. Ontario owns about one-third, Quebec over one-quarter, and Saskatchewan just under one-tenth. British Columbia, Alberta and Manitoba follow closely in the order named. The following table gives the provincial distribution.

Provincial Distribution of the National Wealth of Canada, 1929

Province	Estimated Wealth	Percentage Distribution of Wealth	Estimated Population June 1, 1929	Percentage Distribution of Population	Wealth per capita
	$	p.c.	No.	p.c.	$
P.E.I.	164,000,000	0·53	88,000	0·88	1,864
Nova Scotia	911,000,000	2·95	515,000	5·14	1,769
New Brunswick	788,000,000	2·56	404,000	4·03	1,950
Quebec	8,265,000,000	26·80	2,772,000	27·64	2,982
Ontario	10,628,000,000	34·46	3,334,000	33·24	3,188
Manitoba	1,970,000,000	6·39	677,000	6·75	2,910
Saskatchewan	3,047,000,000	9·88	883,000	8·80	3,451
Alberta	2,406,000,000	7·80	684,000	6·82	3,518
British Columbia	2,644,000,000	8·57	659,000	6·57	4,012
Canada[1]	30,840,000,000	100·00	10,029,000	100·00	3,075

[1]Including Northwest Territories and Yukon.

Production

Under the term "production" are usually included the activities of agriculture, fishing, mining, forestry, power development, manufactures and construction. This does not imply that many other activities, such as transportation, merchandising, professional services, etc., are not also "productive" in a broad economic sense. It is usual, however, to regard the processes involved in the creation of materials or their making over into new forms as constituting "production" in a special sense. Of this a bird's-eye view is given in the table on p. 47, which shows the gross and net value of production in each of the divisions of industry above mentioned. In a second table a summary of the value of total production in Canada is given by provinces.

A distinction is made between "gross" and "net" production. By "net" production is meant the value left in the producer's hands after the elimination of the value of the materials consumed in the process of production. This net figure is a much better criterion for measuring the value of an industry than the gross.

For 1931, as was to be expected, production, both gross and net, showed a falling off from the 1930 level. All six groups of primary production, with the exception of electric power, and all three groups of

secondary production were affected. The total net value of primary production is, in fact, lower for 1931 than it was for each of the years since 1921 when the record was commenced.

Summary by Industries of the Value of Production in Canada, 1930 and 1931

Industry	1930		1931	
	Gross	Net[1]	Gross	Net[1]
	$	$	$	$
Agriculture	1,346,363,659[4]	758,791,743	880,053,884[4]	538,192,000
Forestry	440,352,351	303,145,169	288,674,002	220,650,269
Fisheries	63,743,353	47,804,216	39,654,811	30,517,306
Trapping	9,875,955	9,875,955	8,744,962	8,744,962
Mining	325,184,050	279,873,578	276,365,319	228,029,018
Electric Power	104,833,913	126,038,145	163,321,565	122,310,730
Totals, Primary Production	2,350,653,281	1,525,528,806	1,656,814,543	1,128,444,285
Construction	456,995,000	297,046,750	315,482,000	205,063,300
Custom and Repair[2]	123,000,000	85,200,000	97,000,000	71,000,000
Manufactures[3]	3,428,970,628	1,761,986,726	2,698,461,862	1,474,581,851
Totals, Secondary Production[3]	4,008,965,628	2,144,233,476	3,110,943,862	1,750,645,151
Grand Totals[3]	5,601,880,583	3,216,746,735	4,157,733,325	2,500,203,902

[1] Gross value minus value of materials consumed in the production process.
[2] Statistics of Custom and Repair were not collected after 1921 and the totals for 1930 and 1931 were estimated according to the percentage change in the data for manufacturing.
[3] The item "Manufactures" includes dairy factories, sawmills, pulpmills, fish canning and curing, electric power production, shipbuilding and certain mineral industries, which are also included in other headings above. This duplication, amounting in 1930 to a gross of $757,438,326 and a net of $453,015,547, and in 1931 to a gross of $610,025,080 and a net of $378,885,534, is eliminated from the grand totals.
[4] This figure includes the amount paid to patrons of dairy factories for milk and cream, and to that extent does not agree with the total gross agricultural production for this year shown on p. 68.

Summary, by Provinces, of the Value of Production in Canada, 1930 and 1931

Province	1930		1931	
	Gross	Net[1]	Gross	Net[1]
	$	$	$	$
Prince Edward Island	25,436,519	16,635,118	16,804,299	11,924,262
Nova Scotia	174,266,197	114,402,720	135,124,783	94,507,795
New Brunswick	127,022,481	78,772,589	99,117,055	64,307,571
Quebec	1,500,303,451	892,076,349	1,128,131,483	686,817,209
Ontario	2,450,173,078	1,380,458,865	1,800,785,836	1,083,600,274
Manitoba	273,174,256	142,170,105	195,065,005	113,396,393
Saskatchewan	296,156,731	134,134,319	168,974,502	82,691,410
Alberta	329,898,695	184,659,449	251,640,733	164,947,717
British Columbia	420,984,045	268,972,091	292,705,491	193,751,045
Yukon	4,465,130	4,465,130	4,260,226	4,260,226
Canada	5,601,880,583	3,216,746,735	4,092,609,441	2,500,203,902

[1] Gross value minus value of materials consumed in the production process.

It will be seen that manufactures now definitely takes precedence over agriculture in net value of production for the whole of Canada. This has in fact been the case since 1925, but owing to the rapid decline in agricultural prices in 1930 and 1931 the lead of manufactures over agriculture increased substantially. Agricultural production in 1931 represented 21·5

p.c. of the net output of all branches while the corresponding figure for manufactures was 59·0 p.c.. Forestry was in second place among the primary industries in 1931 and mining in third; construction, which ranked third in 1930, was in fourth place.

Manufactures, in 1931, ranked first among both primary and secondary industries in the value of net production. The picture to the right shows an interior view of a Canadian binder twine mill.

Fruit and Vegetable Canning—Delivery of tomatoes at a canning plant.

Photos, Canadian Government Motion Picture Bureau.

National Income

The national income of Canada is necessarily less than its national production, a partial total for which is given in the general survey of production above. But the industries there included engage only five-eighths of those gainfully occupied in Canada. As there is no reason to suppose that those not connected with production as there defined are less "productive" in the broad sense of the term than others, the total value of the net production of 1931 must have been not less than $4,000,000,000.

In order to arrive at the figure of national income, however, certain heavy deductions from the above amount must be made—deductions especially connected with the maintenance of the industrial equipment of the country—providing not only for depreciation but for obsolescence and replacement by new and improved apparatus of production. Altogether, the charges under this head may have been not less than $300,000,000. This would leave the 1931 income of the Canadian people at somewhere in the neighbourhood of $3,700,000,000.

Incomes Assessed for Income War Tax in Canada.—In those countries of the world where an income tax has been established for a considerable time the figures of the assessed income have been generally accepted as furnishing a guide both to the amount and to the distribution of the total

national income by classes. Estimates of the national income, based upon income tax statistics, have been published, for example, in the United Kingdom and in the United States.

In Canada the income tax is a newer thing than in either of the abovementioned countries; also, in a newer country than either, incomes are to a greater extent received in kind. Both of these considerations render it improbable that so large a percentage of the total national income of Canada is brought under the notice of the income tax authorities as in the United Kingdom or the United States. Nevertheless, the data collected by the Income Tax Branch of the Department of National Revenue, in the course of its administration of the income war tax, are significant both with regard to the total income assessed and with regard to the distribution of that income among various classes of the population, as well as to size of income groups.

In the fiscal year ended 1932, 133,621 individuals and 6,010 corporations paid Dominion income tax on incomes aggregating $992,606,220, so that for that year slightly less than one-third of the national income would appear to have been subject to income tax by Dominion authorities.

Outside Capital Invested in Canada

A young nation like Canada is usually dependent to a considerable degree on outside capital for the development of its resources. In the opening decades of the century the marked expansion through which Canada passed was largely based on capital imported from the United Kingdom (see table), at least $1½ billions being imported during 1900-12. During the War the latent capital resources of Canada itself were for the first time exploited on a large scale, nearly $2,000,000,000 being raised by the Dominion Government. Since the War the outstanding feature in the situation has been the considerable importation of capital from the United States; in 1914 U.S. capital investments were about $904,000,000; in 1931 they exceeded $4,000,000,000. British investments in Canada have in the meantime declined by nearly 19 p.c. (see accompanying table).

In spite of the large importation of capital from abroad, Canadian capital probably controls at least 60 p.c. of the securities of all enterprises located on Canadian soil. Outside capital investments in 1929 were less than 20 p.c. of the estimated national wealth in the same year (p. 45).

Capital Investments by Other Countries in Canada, 1914, 1919, 1929 and 1931

Country	1914[1]	1919[2]	1929[2]	1931[2]
	$	$	$	$
United States	904,455,000	1,800,435,000	3,608,521,000	4,107,803,000
The United Kingdom	2,711,841,000	2,606,848,000	2,128,489,000	2,204,858,000
Other countries	177,729,000	173,493,000	155,409,000	165,217,000
Totals	3,794,025,000	4,580,776,000	5,892,419,000	6,477,878,000

[1] Estimated by various authorities. [2] Estimated by Dominion Bureau of Statistics.

It must also be borne in mind that Canadians have invested large amounts of capital abroad. The Bureau estimates that Canadian investments in other countries amounted to $1,831,310,000 at the beginning of 1931, or 28 p.c. of the amount of outside investments in Canada. Of this $1,047,285,000 was placed in the United States, $84,826,000 in the United Kingdom and $699,198,000 in other countries.

CHAPTER IV

POPULATION—BIRTHS, DEATHS AND MARRIAGES—IMMIGRATION—ABORIGINAL RACES

Population

The population of the earth is estimated at approximately 2,000,000,000.[1] The British Empire which covers slightly less than one-quarter of the land area of the earth, has slightly less than one-quarter of the world's population, but Canada, which occupies over one-quarter of the area of the British Empire, or about one-sixteenth of the land area of the earth has only about one-forty-eighth of the population of the former or roughly one-two-hundredth that of the latter. While there is no absolute standard for population density, so much depending on extent of resources, the rate of increase in productivity of land as a result of invention, etc., a certain minimum density is desirable and even necessary to effective social and political life. As far as Canada is concerned such a minimum effective density is far from having been attained in the country as a whole.

Areas and Populations of the British Empire, and its Principal Component Parts for 1931, or latest year available, Compared with 1921

Country	Area in Square Miles	Population, Census of 1921	Population, Census of 1931
British Empire	13,355,426	449,583,000	494,082,000[1]
United Kingdom of Great Britain and N. Ireland	94,200	44,151,196	46,141,485
England	50,900	35,230,225	37,354,917
Wales	7,400	2,656,474	2,593,014
Scotland	30,500	4,882,497	4,842,554
Northern Ireland	5,400	4,354,000[2]	1,251,000[3]
Irish Free State	27,137		2,957,000[3]
Canada	3,692,864	8,787,949	10,376,786
Union of South Africa	471,917	6,928,580	8,192,000[4]
Australia	2,974,581	5,435,734	6,621,477[5]
New Zealand	104,751	1,218,913	1,513,416[5]
Newfoundland and Labrador	162,734	262,938	281,540[6]
India	1,805,332	318,942,480	352,837,778

[1] These Empire population figures are computed from the census figures for 1931, or the official estimates as at Dec. 31, 1931 (where census figures are not available), of the respective Dominions and Colonies published in the League of Nations Year Book, 1932-33. [2] Official estimate 1921. This covered the whole of Ireland. [3] Official estimate 1931. [4] Official estimate 1932. A census of European population only, taken May, 1931, gave 1,827,166 compared with 1,519,488 in 1921. [5] Preliminary count, census of June 30, 1933. The figures are exclusive of full-blooded Australian aborigines. The 1931 census was postponed. [6] Official estimate of mean population of 1931; census postponed. [7] Official estimate of Dec. 31, 1931, including 4,264 as the population of Labrador.

In addition to growth and racial composition an important consideration which should receive attention in any detailed study of population is the distribution of population as between the various age-classes, and the effects of immigration and emigration, birth rate and mortality on the

[1] The Statistical Year Book of the League of Nations, 1932-33, gives the population of the world as 2,024,500,000 not including estimates of certain populations, chiefly in the interiors of Asia and Africa, where censuses are incomplete or do not exist.

age-groups. Space, however, permits only of the broadest treatment of Canada's population as affording a measure of the general economic progress of the country.

Historical.—The credit of taking what was perhaps the first census of modern times belongs to Canada, the year being 1666 and the census that of the little colony of New France. A population of 3,215 souls was shown. By the date of the Conquest, nearly a hundred years later, this had increased to 70,000, what is now the Maritime Provinces having another 20,000. Later came the influx of the Loyalists and the gradual settlement of the country, and Canada began the nineteenth century with a population of probably 250,000 or 260,000. Fifty years later the total was about 2,400,000 for the territory now included in the Dominion of Canada. Rapid development now followed and the first census after Confederation (1871) saw the Dominion launched with a population of 3,689,257.

Statistics of Population in Canada, Census Years 1871 to 1931

Provinces	1871	1881	1891	1901	1911	1921	1931
Ont.	1,620,851	1,926,922	2,114,321	2,182,947	2,527,292	2,933,662	3,431,683
Que.	1,191,516	1,359,027	1,488,535	1,648,898	2,005,776	2,360,665[2]	2,874,255
N. B.	285,594	321,233	321,263	331,120	351,889	387,876	408,219
N. S.	387,800	440,572	450,396	459,574	492,338	523,837	512,846
B. C.	36,247	49,459	98,173	178,657	392,480	524,582	694,263
P. E. I.	94,021	108,891	109,078	103,259	93,728	88,615	88,038
Man.	25,228	62,260	152,506	255,211	461,394	610,118	700,139
Sask.	–	–	–	91,279	492,432	757,510	921,785
Alta.	–	–	–	73,022	374,295	588,454	731,605
Yukon	–	–	–	27,219	8,512	4,157	4,230
N. W. T.[1]	48,000	56,446	98,967	20,129	6,507	7,988	9,723
Totals	3,689,257	4,324,810	4,833,239	5,371,315	7,206,643	8,787,949[2]	10,376,786

[1] The decreases shown in the population of the Northwest Territories since 1891 are due to the separation therefrom of vast areas to form Alberta, Saskatchewan and Yukon and to extend the boundaries of Quebec, Ontario and Manitoba. [2] Revised in accordance with the Labrador award of the Privy Council, Mar. 1, 1927; total includes 485 members of the Royal Canadian Navy.

After 1873 and until the end of the century economic conditions within the Dominion were anything but buoyant. The censuses of 1881, 1891 and 1901 reflected this state of affairs. That of 1881 showed a gain of 635,553 or 17·23 p.c., but in neither of the next two decades was this record equalled, the gains in each being under 550,000 or 12 p.c. At the end of the century the population of Canada had reached but 5½ millions, though expectation had set a figure very much higher as the goal for 1900.

Analyses of Growth.—The general rate of population increase in Canada in the opening decade of the present century was 34 p.c., the greatest for that decade of any country in the world. In the second decade the rate was 22 p.c., again the greatest with the one exception of Australia, whose growth was greater by a fraction of 1 p.c. A century earlier the United States grew 35 p.c. decade by decade until 1860, but with this exception there has been no recorded example of more rapid national progress than that of Canada in the twentieth century. In 1871, only 2·96 p.c. of the population dwelt west of the lake of the Woods. In 1921 the proportion was 28·37 p.c. and in 1931, 29·50 p.c.—3,061,745 people compared with 110,000 at Confederation.

As between rural and urban distribution the change is perhaps more striking than in any other field. Though we are still largely agricultural, our town dwellers now, for the first time, exceed the numbers living upon the land (5,572,058 urban and 4,804,728 rural in 1931). Fifty years ago the towns and cities of Canada accounted for only 19·58 p.c. of the people (722,343 urban and 2,966,914 rural), and at the beginning of the present century the percentage was but 37. In 1871 the Dominion had 14 cities, 49 towns, and 134 villages; in 1921 there were 101 cities, 461 towns, and 881 incorporated villages; and in 1931, 112 cities, 478 towns and 1,016 incorporated villages. It is the larger cities that have grown the fastest.

Rural and Urban Population

For the purposes of the census, the population residing in cities, towns and incorporated villages has been defined as urban, and that outside of such localities as rural. On the basis of this classification, urban communities absorbed somewhat over two-thirds of the total increase in population between 1921 and 1931, with the result that the urban population of Canada in 1931 exceeded the rural by 767,330. Out of every 1,000 persons in the country, 463 were resident, on June 1, 1931, in rural and 537 in urban communities, as compared with 505 in rural and 495 in urban communities on June 1, 1921. Details of the population of all cities and towns having 15,000 inhabitants and over, are given by censuses from 1891 to 1931 in a second table.

All the larger cities have in their neighbourhoods growing "satellite" towns or other densely settled areas in close economic relationship with the central municipality. Computed on this basis of "metropolitan area", the total populations of the larger cities at the census of 1931 were as follows: "Greater Montreal", 1,000,157; "Greater Toronto", 808,864; "Greater Vancouver", 308,340; "Greater Winnipeg", 280,202; "Greater Ottawa" (including Hull), 175,988; "Greater Quebec", 166,435; and "Greater Hamilton", 163,710.

Rural and Urban Populations, by Provinces, 1921 and 1931

Province or Territory	1921		1931		Numerical Increase in Decade 1921-31	
	Rural	Urban	Rural	Urban	Rural	Urban
Prince Edward Island	69,522	19,093	67,653	20,385	−1,869	1,292
Nova Scotia	296,799	227,038	281,192	231,654	−15,607	4,616
New Brunswick	263,432	124,444	279,279	128,940	15,847	4,496
Quebec	1,038,096	1,322,569	1,060,649	1,813,606	22,553	491,037
Ontario	1,227,030	1,706,632	1,335,691	2,095,992	108,661	389,360
Manitoba	348,502	261,616	384,170	315,969	35,668	54,353
Saskatchewan	538,552	218,958	630,880	290,905	92,328	71,947
Alberta	365,550	222,904	453,097	278,508	87,547	55,604
British Columbia	277,020	247,562	299,524	394,739[1]	22,504	147,177
Yukon	2,851	1,306	2,870	1,360	19	54
Northwest Territories	7,988	–	9,723	–	1,735	–
Royal Canadian Navy	485	–	[2]	–	[2]	–
Canada	4,435,827	4,352,122	4,804,728	5,572,058	368,901	1,219,936

[1] This includes South Vancouver and Point Grey, with 1921 populations of 32,267 and 13,736 respectively, which were then classified as "rural".

[2] Members of the Royal Canadian Navy were counted at their homes in the census of 1931.

MAP OF THE DOMINION OF CANADA

EXCLUSIVE OF NORTHERN REGIONS

SHOWING

DISTRIBUTION OF POPULATION
CENSUS OF 1931

LEGEND

NOTE:

DOTS ARE OF TWO SIZES:
EACH SMALL DOT REPRESENTS 1000 PEOPLE LIVING IN RURAL COMMUNITIES
OR IN URBAN CENTRES OF LESS THAN 2000 PEOPLE;
THE LARGER DOTS REPRESENT LOCALITIES WITH POPULATIONS OF FROM 2000-5000 PEOPLE

SIZES OF CIRCLES SHOW THE PROPORTIONATE POPULATIONS
AS INDICATED BY SCALE OF TYPICAL CITIES SHOWN BELOW

DOMINION BUREAU OF STATISTICS

Populations of Cities and Towns having over 15,000 Inhabitants in 1931, Compared with 1891, 1901, 1911 and 1921

NOTE.—The cities and towns in which a Board of Trade exists are indicated by an asterisk (*) and those in which there is a Chamber of Commerce by a dagger (†). In all cases the populations for previous censuses have been rearranged as far as possible to compare with those of the same areas in 1931.

City or Town	Province	Populations				
		1891	1901	1911	1921	1931
*†Montreal	Quebec	256,723	328,172	490,504	618,506	818,577
*Toronto	Ontario	181,215	209,892	381,833	521,893	631,207
*Vancouver	British Columbia	13,709	29,432	120,847	163,220	246,593
*Winnipeg	Manitoba	25,639	42,340	136,035	179,087	218,785
†Hamilton	Ontario	48,959	52,634	81,969	114,151	155,547
*Quebec	Quebec	63,090	68,840	78,710	95,193	130,594
*Ottawa	Ontario	44,154	59,928	87,062	107,843	126,872
*Calgary	Alberta	3,876	4,392	43,704	63,305	83,761
*†Edmonton	Alberta	–	4,176	31,064	58,821	79,197
†London	Ontario	31,977	37,976	46,300	60,959	71,148
†Windsor	Ontario	10,322	12,153	17,829	38,591	63,108
†Verdun	Quebec	296	1,898	11,629	25,001	60,745
*Halifax	Nova Scotia	38,437	40,832	46,619	58,372	59,275
*Regina	Saskatchewan	–	2,249	30,213	34,432	53,209
*Saint John	New Brunswick	39,179	40,711	42,511	47,166	47,514
*Saskatoon	Saskatchewan	–	113	12,004	25,739	43,291
†Victoria	British Columbia	16,841	20,919	31,660	38,727	39,082
†Three Rivers	Quebec	8,334	9,981	13,691	22,367	35,450
*Kitchener	Ontario	7,425	9,747	15,196	21,763	30,793
*Brantford	Ontario	12,753	16,619	23,132	29,440	30,107
†Hull	Quebec	11,264	13,993	18,222	24,117	29,433
*Sherbrooke	Quebec	10,097	11,765	16,405	23,515	28,933
Outremont	Quebec	795	1,148	4,820	13,249	28,641
*Fort William	Ontario	2,176	3,633	16,499	20,541	26,277
†St. Catharines	Ontario	9,170	9,946	12,484	19,881	24,753
Westmount	Quebec	3,076	8,856	14,579	17,593	24,235
†Kingston	Ontario	19,263	17,961	18,874	21,753	23,439
†Oshawa	Ontario	4,066	4,394	7,436	11,940	23,439
*Sydney	Nova Scotia	2,427	9,909	17,723	22,545	23,089
†Sault Ste. Marie	Ontario	2,414	7,169	14,920	21,092	23,082
†Peterborough	Ontario	9,717	12,886	18,360	20,994	22,327
*Moose Jaw	Saskatchewan	–	1,558	13,823	19,285	21,299
†Guelph	Ontario	10,537	11,496	15,175	18,128	21,075
*Glace Bay	Nova Scotia	2,459	6,945	16,562	17,007	20,706
*Moncton	New Brunswick	8,762	9,026	11,345	17,488	20,689
†Port Arthur	Ontario	2,698	3,214	11,220	14,886	19,818
†Niagara Falls	Ontario	3,349	5,702	9,248	14,764	19,046
†Lachine	Quebec	4,819	6,365	11,688	15,404	18,630
*Sudbury	Ontario	–	2,027	4,150	8,621	18,518
†Sarnia	Ontario	6,692	8,176	9,947	14,877	18,191
*Stratford	Ontario	9,500	9,959	12,946	16,094	17,742
*New Westminster	British Columbia	6,678	6,499	13,199	14,495	17,524
*Brandon	Manitoba	3,778	5,620	13,839	15,397	17,082
*St. Boniface	Manitoba	1,553	2,019	7,483	12,821	16,305
*North Bay	Ontario	–	2,530	7,737	10,692	15,528
†St. Thomas	Ontario	10,366	11,485	14,054	16,026	15,430
†Shawinigan Falls	Quebec	–	–	4,265	10,625	15,345

Racial Origins

The object of securing information on racial origin at the census is to ascertain from what basic ethnic stocks the Canadian population, more particularly the recently immigrated population, is derived. The answer "Canadian" is not accepted under this heading, as the purpose of the question is to obtain, in so far as possible, a definition of "Canadian" in terms of racial derivation. It is clear that to accept the answer "Canadian" to the question on racial origin would confuse the data and defeat the purpose for which the question is asked.

Racial Distribution.—The total increase in population over the decade 1921-31 was 1,588,837. The population of English origin increased by only 196,061 compared with 722,208 in the previous decade; that of Scottish origin by 172,725 compared with 175,745; and that of Irish origin by 123,005 compared with 57,419. The population of British origin, taken together, increased from 4,868,738 to 5,381,071, or 512,333, between 1921 and 1931. This represented 32 p.c. of the total increase as compared with 61 p.c. of the total increase for the previous decade. On the other hand the population of French origin increased from 2,452,743 in 1921 to 2,927,990 in 1931, or by 475,247 (slightly under 30 p.c. of the total increase for the decade) and showed the greatest absolute increase for any decade since 1871. In regard to the minor racial groups which make up the population, comparison of the post-war numerical strength of certain ethnic stocks in Canada with pre-war returns cannot be made with any certainty owing to the new national and racial alignments in Central and South Eastern Europe following the Great War.

The racial origin of the population of Canada, by provinces and territories, is given below for the census years 1901 to 1931.

Origins of the People, Census Years 1901-31.

Origin	1901	1911	1921	1931
	No.	No.	No.	No.
British—				
English	1,260,899	1,823,150	2,545,358	2,741,419
Irish	988,721	1,050,384	1,107,803	1,230,808
Scottish	800,154	997,880	1,173,625	1,346,350
Other	13,421	25,571	41,952	62,494
Totals, British	*3,063,195*	*3,896,985*	*4,868,738*	*5,381,071*
French	1,649,371	2,054,890	2,452,743	2,927,990
Austrian	10,947	42,535	107,671	48,639
Belgian	2,994	9,593	20,234	27,585
Bulgarian and Roumanian	354	5,875	15,235	32,216
Chinese	17,312	27,774	39,587	46,519
Czech (Bohemian and Moravian)	–	–	8,840	30,401
Dutch	33,845	54,986	117,505	148,962
Finnish	2,502	15,497	21,494	43,885
German	310,501	393,320	294,635	473,544
Greek	291	3,594	5,740	9,444
Hebrew	16,131	75,681	126,196	156,726
Hungarian	1,549	11,605	13,181	40,582
Indian and Eskimo[1]	127,941	105,492	113,724	128,890
Italian	10,834	45,411	66,769	98,173
Japanese	4,738	9,021	15,868	23,342
Negro	17,437	16,877	18,291	19,456
Polish	6,285	33,365	53,403	145,503
Russian	19,825	43,142	100,064	88,148
Scandinavian[2]	31,042	107,535	167,359	228,049
Ukrainian	5,682	74,963	106,721	225,113
Yugoslavic	–	–	3,906	16,174
Various	7,000	31,157	28,796	27,476
Unspecified	31,539	147,345	21,249	8,898
Grand Totals	5,371,315	7,206,643	8,787,949	10,376,786

[1] Includes "half-breeds" in 1901.
[2] Includes Danish, Icelandic, Norwegian and Swedish; in 1921 they numbered respectively, 21,124, 15,876, 58,856, and 61,503; in 1931, 34,118, 19,382, 93,243 and 81,306.

Sex Distribution, by Provinces, Census Years 1901-31

Province	1901		1911		1921		1931	
	Males	Females	Males	Females	Males	Females	Males	Females
P.E.I.	51,959	51,300	47,069	46,659	44,887	43,728	45,392	42,640
N.S.	233,642	225,932	251,019	241,319	266,472	257,365	263,104	249,742
N.B.	168,639	162,481	179,867	172,022	197,351	190,525	208,620	199,592
Que.	824,454	824,444	1,012,815	992,961	1,179,726	1,180,939	1,447,124	1,427,133
Ont.	1,096,640	1,086,307	1,301,272	1,226,020	1,481,890	1,451,772	1,748,844	1,682,839
Man.	138,504	116,707	252,954	208,440	320,567	289,551	368,065	332,074
Sask.	49,431	41,848	291,730	200,702	413,700	343,810	499,935	421,850
Alta.	41,019	32,003	223,792	150,503	324,208	264,246	400,199	331,406
B.C.	114,160	64,497	251,619	140,861	293,409	231,173	385,219	309,044
Yukon	23,084	4,135	6,508	2,004	2,819	1,338	2,825	1,405
N.W.T.	10,176	9,953	3,350	3,157	4,129	3,859	5,214	4,509
Canada	2,751,708	2,619,607	3,821,995	3,384,648	4,529,643[1]	4,258,306	5,374,541	5,002,245

[1] Includes 485, Royal Canadian Navy. The 1921 totals are revised in accordance with the Labrador award of March 1, 1927.

Births, Deaths and Marriages

Canada has a national system of vital statistics, under the Bureau of Statistics and the Registrars-General of the several provinces, dating from 1920. The figures for 1931 and 1932 are compared, by provinces, with those of 1921 in the accompanying table.

Births, Deaths and Marriages in Canada, 1921, 1931 and 1932

Province	Births			Deaths			Marriages		
	1921	1931	1932[1]	1921	1931	1932[1]	1921	1931	1932[1]
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Canada[2]	257,728	240,473	235,143	101,155	104,517	104,190	69,732	66,591	62,513
P.E. Island	2,156	1,879	2,027	1,209	912	1,051	518	490	456
Nova Scotia	13,021	11,615	11,584	6,420	5,968	6,131	3,550	3,394	3,195
New Brunswick	11,465	10,801	10,810	5,410	4,644	4,554	3,173	2,544	2,389
Quebec	88,749	83,606	82,216	33,433	34,487	33,088	18,659	16,783	15,117
Ontario	74,152	69,209	66,773	34,551	35,705	36,462	24,871	23,771	22,224
Manitoba	18,478	14,376	14,124	5,388	5,319	5,341	5,310	4,888	4,729
Saskatchewan	22,493	21,331	20,769	5,596	6,066	6,036	5,101	5,700	5,772
Alberta	16,561	17,252	16,689	4,940	5,302	5,386	4,661	5,[illegible]2	5,043
Br. Columbia	10,653	10,404	10,151	4,208	6,114	6,141	3,889	3,879	3,598
	Rates per 1,000 population								
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Canada[2]	29·4	23·2	22·4	11·5	10·1	9·9	8·0	6·4	6·0
P.E. Island	24·3	21·4	23·0	13·6	10·4	11·9	5·8	5·6	5·2
Nova Scotia	24·9	22·6	22·6	12·3	11·6	12·0	6·8	6·6	6·2
New Brunswick	30·2	26·5	26·4	14·2	11·4	11·1	8·4	6·2	5·8
Quebec	37·6	29·1	28·3	14·2	12·0	11·4	7·9	5·8	5·2
Ontario	25·3	20·2	19·3	11·8	10·4	10·5	8·5	6·9	6·4
Manitoba	30·3	20·5	20·0	8·8	7·6	7·6	8·7	7·0	6·7
Saskatchewan	29·7	23·1	21·4	7·4	6·6	6·2	6·7	6·2	5·9
Alberta	28·1	23·6	22·6	8·4	7·2	7·3	7·9	7·0	6·8
Br. Columbia	20·3	15·0	14·4	8·0	8·8	8·7	7·4	5·6	5·1

[1] Preliminary figures. [2] Exclusive of Yukon and the Northwest Territories.

Religions

Of the total population in 1931 (10,376,786), 4,285,388 or 41·30 p.c. were members of the Roman Catholic faith (including 186,654 Greek Catholics).[1] The United Church of Canada, with 2,017,375 members, or 19·44 p.c. of the population, was second and the Anglicans, with 1,635,615 or 15·76 p.c., third. The Presbyterian was the next largest group with 870,728 members or 8·39 p.c. in 1931. According to the census returns, 0·15 p.c. did not state their religion and 0·20 p.c. were classed as of "no religion". Statistics of religions for the past four census years follow:—

Membership of the Eight Leading Religious Denominations in Canada, 1901, 1911, 1921 and 1931

Religion	1901	1911	1921[4]	1931
Roman Catholic	2,229,600	2,833,041	3,389,626	4,285,388[1]
United Church	–	–	–	2,017,375[2]
Anglican	681,494	1,043,017	1,407,780	1,635,615
Presbyterian	842,531	1,116,071	1,409,406	870,728[2]
Baptist[3]	318,005	382,720	421,730	451,241
Lutheran	92,524	229,864	286,458	394,194
Jewish	16,401	74,564	125,197	155,614
Greek Orthodox	–	–	–	102,389

[1] Including 186,654 Greek Catholics. In earlier censuses only small numbers were involved and Greek Catholics and Greek Orthodox were included under the general term "Greek Church". A rapid increase in membership of both Greek Catholics and Greek Orthodox has been shown for recent censuses and, since the former owe obedience to the Pope in matters of faith, they have been included with the Roman Catholics for 1931.

[2] Practically all Methodists and Congregationalists, and a large number of Presbyterians united to form the United Church of Canada in 1925. [3] Including Tunkers. [4] Figures adjusted according to the Labrador award of the Privy Council, Mar. 1, 1927.

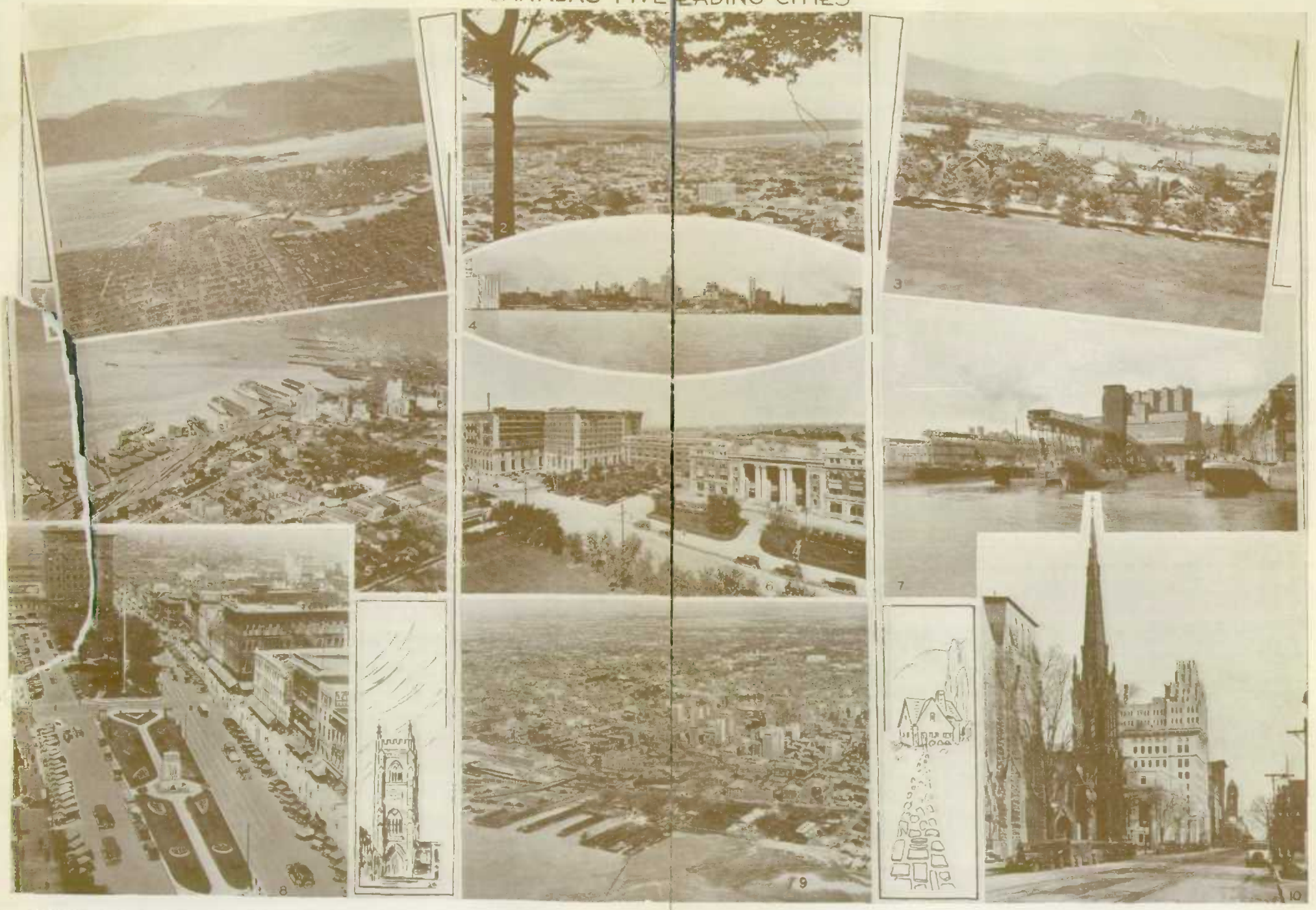
Membership of the Eight Leading Denominations, by Provinces and Territories, 1931

Province	Roman Catholic	United Church	Anglican	Presbyterian	Baptist	Lutheran	Jewish	Greek Orthodox
P.E.I.	39,105	21,979	5,074	14,813	5,066	76	19	6
N.S.	162,754	110,548	88,738	48,960	82,098	7,949	1,935	315
N.B.	188,098	61,176	48,931	16,260	83,853	969	1,257	75
Que.	2,463,160	88,253	149,843	59,532	10,970	8,261	59,736	8,992
Ont.	744,740	973,768	764,130	450,664	171,305	97,022	62,094	16,387
Man.	189,693	176,240	128,385	55,720	13,483	46,892	19,193	15,774
Sask.	233,979	243,399	126,837	67,954	22,613	113,676	5,047	31,126
Alta.	168,408	176,816	112,979	72,069	30,496	82,411	3,663	26,274
B.C.	90,852	164,750	205,047	84,183	23,395	36,635	2,666	3,398
Yukon	667	352	2,299	432	44	239	2	8
N.W.T.	3,932	94	3,352	141	18	64	2	5
Canada	4,285,388	2,017,375	1,635,615	870,728	443,341	394,194	155,614	102,389

Sex and Age Distribution

The population of Canada in 1931 was made up of 5,374,541 males and 5,002,245 females. Thus there were 518 males and 482 females per thousand. The masculinity of the population has increased in the eastern provinces and decreased in the western ones, where it was formerly greatest. A preponderance of males is common in all new countries where immigration has played an important part in building up the population. Tables giving the sex distribution and the masculinity by provinces for the census years 1901, 1911, 1921 and 1931 are given on p. 58.

CANADA'S FIVE LEADING CITIES



1. Aerial View of Vancouver, looking north. 2. Montreal, looking southeast from Mount Royal. 3. False Creek, Vancouver, looking towards the Main Business Section. 4. Skyline of Toronto from the Waterfront. 5. Vancouver Harbour looking east. 6. Winnipeg showing Royal Alexandra Hotel and Railway Station. 7. View of a portion of Montreal Harbour. 8. Gore Park and Cenotaph, Hamilton. 9. Aerial view of Toronto. 10. James St., Hamilton, looking north—The rapid, though orderly and substantial growth of Canadian cities is accounted for by the great increase in manufacturing and trade in the present century. The results of the 1931 census, show, for the first time, that the Dominion's urban population exceeds the rural.

Divorces granted in Canada have increased from 19 in 1901 to 51 in 1910, to 429 in 1920, to 785 in 1928, to 816 in 1929, to 875 in 1930, but decreased to 684 in 1931, owing to fewer divorces granted in Ontario as a result of the change in system and delay in dealing with applications during the transfer from Dominion to provincial jurisdiction. For the calendar year 1932 a new high total of 887 was recorded.

Immigration

Total immigrants into Canada during the fiscal year 1933 numbered 19,872 as compared with 25,752 in the fiscal year 1932 and 88,223 in 1931. The number arriving from the United Kingdom was 3,097 as compared with 7,088 and 27,584 in 1932 and 1931 respectively; immigrants from the United States totalled 13,196 in 1933 as compared with 14,297 and 24,280 respectively for the two previous years; from other countries the number was 3,589 as compared with 4,367 and 36,359 respectively.

The Aboriginal Races

Indians.—The Indians of Canada are wards of the Department of Indian Affairs and number, according to the 1931 census, 122,911 made up by provinces as follows: P.E.I., 233; N.S., 2,191; N.B., 1,685; Que., 12,312; Ont., 30,368; Man., 15,417; Sask., 15,268; Alta., 15,249; B.C., 24,599; Yukon, 1,543; N.W.T., 4,046. The total is made up of 62,943 males and 59,968 females. A small yearly increase is evident.

Indians are minors under the law and their affairs are administered by the Department under the authority of the Indian Act. The system of reserves, whereby particular areas of land have been set apart solely for the use of Indians, has been established in Canada from the earliest times. It was designed to protect the Indians from encroachment, and to provide a sort of sanctuary where they could develop unmolested until advancing civilization had made possible their absorption into the general body of the citizens. Reserves have been set aside for the various bands of Indians throughout the Dominion, and the Indians located thereon are under the supervision of the local agents of the Department. The activities of the Department, as guardian of the Indians, include the control of Indian education (See p. 176), health, etc., the development of agriculture and other pursuits among them, the administration of their funds and legal transactions and the general supervision of their welfare. The local administration of the Indian bands on the reserves scattered throughout the Dominion is conducted through the Department's agencies, of which there are, in all, 116.

The Indian Act provides for the enfranchisement of Indians. When an Indian is enfranchised he ceases to be an Indian under the law, and acquires the full status of citizenship. In the older provinces, where the Indians have been longer in contact with civilization, many are becoming enfranchised. Great discretion, however, is exercised by the Government in dealing with this problem. Indians who become enfranchised lose the special protection attached to their wardship, so that it is necessary to guard against premature enfranchisement.

Eskimos.—Unlike the Indian tribes which are scattered throughout Canada, the Eskimos are limited to the Northwest Territories, chiefly the northern fringe of the mainland and the Arctic Archipelago. The Eskimo is a nomad but lives for the most part along the Arctic littoral, not wandering far inland, since he depends for his subsistence largely on marine mammals and fish. The administration of this race was carried on along with that of the Indians prior to 1927, when the Government transferred the care of the Eskimos to the Department of the Interior. According to the 1931 census the Eskimos in Canada number 5,979 made up by provinces as follows: Que., 1,159; Man., 62; Alta., 3; Yukon, 85; N.W.T., 4,670. The total is made up of 3,116 males and 2,863 females. Each year the Government sends an expedition to the archipelago for the inspection of the various posts, the relief of personnel, and to promote the general welfare of the natives.

An Indian Family Group dressed for the Annual Indian Celebrations at Banff. Inset: A group of Baffin Island Eskimos.

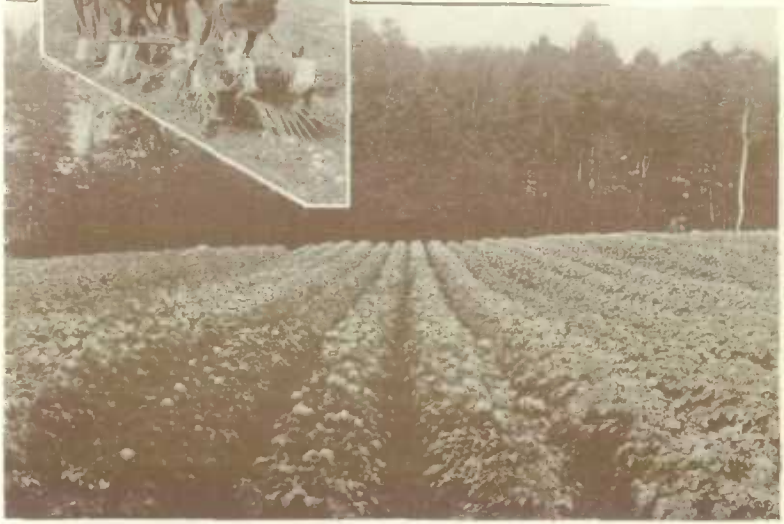
Photos, courtesy Department of the Interior.

CHAPTER V

AGRICULTURE

The climate, soil and acquired capital facilities of Canada are such as to produce a wide variety of farm and forest products common to the temperate zone. This outstanding feature will be evident from a brief consideration of the prevailing regional types of farming in the Dominion.

The Maritime Provinces show a considerable regional difference in crop production, although fruit and potatoes are the most important cash crops, with especially favoured conditions for their production. Hay and clover command the largest proportion of the field-crop area, while oats has the largest acreage among the grain crops, followed by mixed grains and buckwheat, with small areas sown to wheat.



A Potato Crop in Blossom, Dominion Experimental Farm, Charlottetown, P.E.I. Inset—A Potato Digger at Work. The Central Experimental Farm at Ottawa purchases specimens of the latest agricultural machinery and thoroughly tests them in order to be in a position to advise farmers on their usefulness and reliability.

Photos, courtesy Central Experimental Farm, Ottawa, and Canadian Government Motion Picture Bureau.

The province of Quebec is adapted essentially for mixed farming, with large regions specializing in dairying. The forage and coarse grains crops comprise over 90 p.c. of the total field-crop area, potatoes and buckwheat having the largest acreages among the strictly cash crops. The farming population lives 'off the farm' to the greatest possible extent, and revenues from such items as maple sugar, cordwood, and domestic work

are very important. The boundaries of the farming area are gradually being pushed further north and west.

The province of Ontario shows probably the greatest regional variation in types of farming, ranging from the highly specialized fruit farms of the Niagara peninsula to the pioneer farms on the wooded lands of northern Ontario. As in Quebec, the agriculture of the whole province shows a marked predominance of forage crops and coarse grains, but the acreages of cereals are much higher than in Quebec. In some counties, such as Kent, Simcoe, Essex and Middlesex, the wheat crop is relied upon to return a fair share of the cash income. Sugar beets cover considerable acreages in Kent, Essex and Lambton, while tobacco is important in Essex, Elgin and Norfolk. Dairy farming prevails in scattered districts over the province, providing large proportions of the incomes on farms along the Ottawa and St. Lawrence valleys and in the vicinity of Toronto.

Over two-thirds of the field-crop acreage of Canada is concentrated in the three prairie provinces, and most of this area is seeded to the grain crops, with wheat predominant. Roughly speaking, the specialized wheat areas cover the southern short-grass plains from the Red River valley of Manitoba to the foothills of Alberta and attain their greatest width in central Saskatchewan. In the park belt, lying mostly north of this region, mixed farming is practised, with large acreages of coarse grains and natural hay utilized for live-stock feeding.

British Columbian agriculture is relatively intensive, dependent mainly on tree and bush fruits, berries and vegetables. Poultry and dairy farms are numerous along the southwestern coast, while ranching is confined to the interior valleys.

Canada has about 350 million acres of land suitable for farming purposes and, of this total, 163½ million acres are in occupied farms, of which nearly 86 million acres are improved land. Even at the very low valuations existing in 1932, farm land was valued at $1,948,070,000. Buildings on farms represented a further investment of $1,342,924,000 at 1932 valuations.

Although Canada has a relatively small non-agricultural population for the absorption of surplus production, approximately 85 p.c. of our total agricultural production is consumed in Canada, with the remaining 15 p.c. finding markets abroad. Agriculture, however, provides roughly 40 p.c. of our total national export trade, the most important items being grain and grain products, cheese, live stock and live-stock products (principally meats and hides), potatoes and apples.

Again, our agriculture is so diversified that imports of agricultural products form a small proportion of our total imports. Imported agricultural commodities consist chiefly of tropical fruits and spices and processed products from other countries with temperate climates, particularly the United Kingdom. Over one-half of our agricultural imports are practically incapable of production in Canada, consisting of such items as tropical fruits, rubber, tea, vegetable oils, coffee, chicory and nuts. Among the processed products of agricultural origin, cotton and silk manufactures form the largest proportion.

Government Assistance to Agriculture

Agricultural progress in Canada is typified and measured not only by the expansion of crop acreages and production and by the increase in live stock, but by the improvement in methods of production, by the production of higher quality commodities, and by the careful super-

vision of grading to meet the standards and requirements of both domestic and export markets. In these important fields the Canadian farmer reaps many advantages from governmental and institutional assistance.

Outstanding among these activities is the work of the Dominion Experimental Farms and Stations, begun in 1896 with 5 farms of 3,472 acres and at the present time including 26 experimental farms and stations with a total area of 12,818 acres.

Chrysanthemums under Glass at the Central Experimental Farm, Ottawa. Inset—One of the Greenhouses of the Cereal Division. Plant-breeding work, nutritional tests and experiments in cultural practices, of great value to farmers and florists, are conducted at the Central Experimental Farm. The winter use of greenhouses has proved extremely useful in shortening the time required to reach the objective sought and providing ideal conditions for hybridization work.

Photos, Canadian Government Motion Picture Bureau and Central Experimental Farm, Ottawa.

The experimental farms and stations work in unity through central direction from Ottawa, but are engaged in experimental and practical work designed to improve agricultural methods in their respective districts. Their success in this main endeavour becomes more evident annually and their officers are widely recognized as authorities on agricultural matters. In addition, a chain of Dominion Illustration Stations has been organized throughout Canada for the general purpose of demon-

strating precisely and practically the effective and economical methods of husbandry which are suited to their districts. Railway and land companies have also been prominent in disseminating agricultural advice.

The work of the Dominion Departments of Trade and Commerce, and Agriculture, in the standardization and grading of the important agricultural products, has also been a significant factor in building up export markets.

Each of the nine provinces, under Section 95 of the B.N.A. Act, has its Department of Agriculture, and everywhere the provinces endeavour to assist their farmers by educational and extension work, and in most cases by the organization of co-operative marketing. Agricultural colleges maintained by the provinces are the Nova Scotia Agricultural College at Truro, the Ontario Agricultural and the Ontario Veterinary Colleges at Guelph, and the Manitoba Agricultural College at Winnipeg. Three agricultural colleges in Quebec are assisted by the Provincial Government, while faculties of agriculture are found in the provincial universities of Saskatchewan, Alberta and British Columbia.

The Cold Storage Warehouse, Montreal, operated by the Montreal Harbour Commission. This huge warehouse has 4,628,000 cu. ft. of refrigerator space.
Photo, Canadian Government Motion Picture Bureau.

The Canadian Grain Trade.—The natural disadvantages involved in the wide separation of the prairie grain fields from the markets of Europe have been considerably lessened by continued efforts to improve the marketing and transportation facilities. The Great Lakes and the St. Lawrence river have been used to good advantage, since the inception of the movement of grain to the eastern Canadian and United States seaboards. The westward route through Vancouver has been established for a number of years, but not until the crop year 1921-22 did the movements reach any appreciable volume, while grain shipments through the port of Churchill on Hudson bay, initiated in 1931, have increased in volume. The movement of grain at both interior and terminal points has been regulated by adequate elevator facilities. The volume of grain shipments has expanded greatly since the turn of the

century and the necessary handling facilities have kept pace. The operation of the licensed elevators of Canada is covered by the Canada Grain Act, which was extensively revised in 1930. The number of these elevators has grown from 523 with a capacity of 18,329,352 bushels at the end of the last century to 5,895 with a capacity of 418,520,460 bushels in 1933. They are divided into three principal groups: the Western Country, the Terminal and the Eastern elevators.

The Western Country elevators are those that handle grain direct from the farmer: in 1900-01 they numbered 518 with a total capacity of 12,759,352 bushels; in 1931-32 the number had increased to 5,750 with a capacity of 192,453,800 bushels. Some of these, however, have been closed during the recent period of light crops.

Terminal elevators (as defined by the Canada Grain Act) are located at Fort William, Port Arthur, Churchill, and Vancouver. In 1900-01 there were only five licensed elevators at the head of the lakes with a total capacity of 5,570,000 bushels; the number, by 1932, had increased to thirty-one with a total capacity of 92,782,210 bushels. Vancouver is a comparatively recent elevator centre; there were two licensed elevators there in 1906-07 (the first year reported) with a joint capacity of 200,000 bushels, four in 1915-16 with a capacity of 1,631,000 bushels and 12 in 1932-33 with a total capacity of 21,228,000 bushels.

The Eastern elevators are located along the Lower Lakes, the river St. Lawrence and the Canadian seaboard. They were eighteen in number in 1908-09 and had a total capacity of 14,826,000 bushels; in 1932-33 the number was twenty-eight with a total capacity of 75,587,000 bushels.

The strictest supervision of grading is maintained in order to establish the high quality of Canadian grain abroad. Cleaning and drying facilities are available at both interior and terminal elevators, and grading is superintended by the Board of Grain Commissioners, established in 1912 for the management and control of the grain trade of Canada.

The export trade in Canadian wheat has greatly increased in the past half-century, although the actual amounts exported in recent years vary widely with growing conditions in Canada and the state of markets abroad. Record levels of wheat and wheat flour exports were reached following the bumper crop of 1928, and in the crop year 1928-29, 407,564,187 bushels of wheat and wheat flour (expressed as wheat) were exported from Canada. Although Canada stands third to the United States and Russia among the wheat-producing countries of the world, she is normally first among the wheat-exporting nations. Even with the relatively short crops of the past few years, this position has been well maintained. During the past crop year 1932-33, the exports amounted to 264,304,326 bushels, while the production of wheat was 428,514,000 bushels.

The International Wheat Agreement

On Aug. 25, 1933, twenty-one countries signed the International Wheat Agreement in London. A few days later, the Argentine endorsed the treaty and now twenty-two importing and exporting countries are bound by the terms of the agreement. The Wheat Agreement marked a definite advance in international economic co-operation. The conflicting interests of importing and exporting countries were reconciled in an agreement designed to improve world wheat prices.

The Wheat Agreement is the result of many factors and conditions which have influenced the fortunes of the wheat industry during the past five years. From 1929 to the early part of 1933 importing countries and, to a lesser extent, exporting countries endeavoured to protect themselves from the immediate effects of low wheat prices and the persistence of a world surplus of wheat. It is important to note, however, that up to the early months of 1933, it cannot be said that actions taken by importing countries or by exporting countries implied a solution of the wheat problem itself. In fact, action taken by importing countries to restrict imports of wheat and to promote domestic production constituted a policy that could be of no direct assistance in solving the problem of a world wheat surplus. During these four years the hope of reducing the world surplus of wheat in exporting countries lay in increased consumption through feeding, in the possibility of decreased yields over a wide area, and in the possibility of a trade revival or the opening of new markets for wheat. In spite of reduced crops on several occasions in Canada, the United States, and the Danube area, and in spite of a larger market in the Orient during the past two years, year-end stocks of wheat in exporting countries were considerably larger in 1933 than in 1930.

Early in 1933 the viewpoint was advanced that if corrective action on the part of various countries interested in wheat was the hope of a solution, that action should be applied in such a manner as to make for a solution of the basic difficulties in the wheat situation. This viewpoint was crystallized during the World Economic Conference and was placed before a conference of countries interested in wheat which met in London late in August. The result was the International Wheat Agreement.

Under this agreement, importing countries have agreed to take no further steps to increase domestic production of wheat and to commence to reduce restrictions against imports when the international price of wheat has reached a stated level. Importing countries further agree to promote the consumption of wheat in their respective countries.

The obligations of exporting countries are several. They agree in the first instance to limit the total volume of exports during 1933-34 in keeping with estimated import requirements. In other words, exporting countries agree not to ship more wheat than importing countries will need.

The four large exporters, Canada, the United States, the Argentine and Australia, further agree that they will limit exports during 1934-35 to an amount equal to the average yield on the average acreage sown in the three years from 1931 to 1933, less 15 per cent, less normal domestic requirements.

In the essence, the Wheat Agreement provides the machinery and terms by which exporting and importing countries may work along constructive lines in removing the basic weaknesses in the existing wheat situation. It prescribes adjustment on the part of both importing and exporting countries with a view to restoring normal markets for wheat.

The Outlook for 1933-34.—During the summer of 1933, the wheat situation developed in such a manner as to cause anxiety as to the outlook for 1933-34. In spite of the fact that North America had experienced a major crop disaster, bountiful production in Europe created

an immediate problem which was recognized by the Wheat Conference when it assembled in London late in August. At that time it was apparent that Europe would harvest a record crop in 1933. The exporting areas of the Danube basin reported a wheat production of 128 million bushels higher than in 1932 and indicated an exportable surplus of about 50 million bushels. France harvested a crop estimated at 339 million bushels as compared with 334 million bushels in 1932. For the second year in succession wheat production in France exceeded domestic requirements. Germany's wheat crop was estimated at 203 million bushels compared with 184 million bushels harvested in 1932. Italy also harvested a large crop. Wheat production in the United Kingdom amounted to about 62 million bushels as compared with 44 million bushels harvested in 1932. Increased production was evident in the Netherlands, Greece, and Switzerland. It was apparent that six of the eight major European importing countries had harvested larger crops in 1933 than in 1932. The net results of these large crops in Europe was a sharp reduction in prospective import demand for the crop year 1933-34. Mr. Broomhall, prior to the Conference, had estimated world import requirements for 1933-34 at 562 million bushels as compared with actual shipments of 615 million bushels in 1932-33. From the standpoint of exporting countries, the reduced import demand constituted grounds for anxiety and it was evident that any attempt to enter into ruthless competition for a limited market would have a further adverse effect upon price levels. Also some European importing countries were experiencing difficulty in maintaining domestic price levels in the face of large crops. These important factors were considered by the London Conference.

The agreement provided that exporting countries should recognize the fact that world trade in wheat during 1933-34 would amount to 560 million bushels and that they would not press more wheat upon importing markets than could be absorbed under existing conditions. Export quotas were allocated to the chief exporting countries on the basis of estimated world demand for wheat during 1933-34.

Agricultural Wealth and Revenue

The preliminary estimate of the gross agricultural wealth of Canada, 1932, is $5,069,930,000 as compared with $5,696,972,000, the revised estimate for 1931. The gross value of the agricultural production was $711,898,000 in 1932, a reduction of $103,032,000 from 1931.

The tables on p. 68 give the agricultural wealth and production of Canada by provinces for 1932, and the agricultural revenue by items, 1927-32. Ontario had 27 p.c. of the total wealth, Saskatchewan 23 p.c., and Quebec about 18 p.c. in 1932.

An estimate of the net agricultural revenue of Canada is arrived at by a series of deductions from the gross field-crop revenue for such items as feed for farm animals and poultry, seed and unmerchantable grain and from the gross revenue from fruits and vegetables for vegetables produced on farms for home use. A preliminary estimate of the net agricultural revenue of Canada in 1932 is given as $428,829,000, compared with a revised estimate of $538,192,000 for 1931.

70800—5½

Estimated Gross Agricultural Wealth of Canada, by Provinces, 1932

("000" omitted)

Province	Lands	Buildings	Implements and Machinery	Live Stock	Poultry	Animals on Fur Farms	Agricultural Production	Total
	$	$	$	$	$	$	$	$
P.E. Island	17,148	19,687	8,116	4,289	528	797	10,078	60,643
Nova Scotia	35,947	43,896	10,554	10,780	818	334	21,238	123,561
New Brunswick	32,795	38,680	13,253	11,057	1,023	505	21,711	119,024
Quebec	328,025	257,918	97,270	73,949	5,980	1,413	129,656	894,211
Ontario	371,272	487,609	151,928	114,740	13,891	1,439	226,446	1,366,725
Manitoba	145,156	88,389	54,847	29,983	2,536	481	49,113	370,505
Saskatchewan	556,138	223,795	185,510	63,964	4,169	444	109,649	1,143,669
Alberta	377,797	137,332	116,301	52,966	3,052	709	114,976	803,133
British Columbia	83,792	46,224	12,885	13,994	2,141	392	29,031	188,459
Canada	1,948,070	1,342,924	650,634	375,722	34,138	6,514	711,898[1]	5,069,930

Gross Annual Agricultural Revenue of Canada, 1927-32

("000" omitted)

Item	1927	1928	1929	1930	1931	1932
	$	$	$	$	$	$
Field crops	1,173,133	1,125,003	948,981	662,041	432,199	416,587[1]
Farm animals	183,927	197,880	207,317	166,630	96,775	69,033
Wool	4,108	5,099	4,470	2,311	1,044	1,093
Dairy products	294,874	293,045	291,743	269,844	161,244	131,023
Fruits and vegetables	46,027	48,756	46,398	49,417	39,692	30,388
Poultry and eggs	97,937	106,653	107,664	95,227	65,178	48,824
Fur farming	4,798	6,106	6,791	4,925	3,557	2,732
Maple products	4,935	5,583	6,119	5,251	3,538	2,747
Tobacco	9,112	6,834	6,276	7,058	7,178	6,088
Flax fibre	321	509	393	371	179	170
Clover and grass seed	3,841	2,957	2,123	2,482	1,497	962
Honey	2,937	3,015	2,849	2,584	2,246	1,051
Totals	1,825,950	1,801,440	1,631,124	1,268,141	814,930	711,898

[1] See bottom of page for footnote.

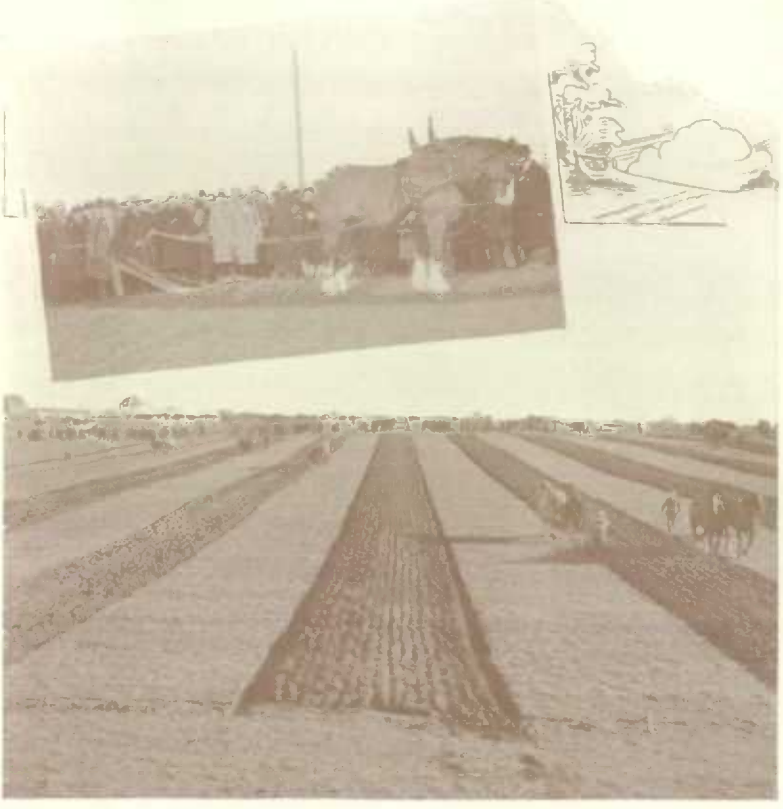
The preliminary estimate of the total value of field crops for 1933 is only slightly below that of 1932 (being $427,791,000 as compared with $444,894,900).[1] With few exceptions, the unit prices for 1933 crops are higher than those received last year, and this factor has counteracted in great degree the decline in crop values due to lower yields per acre. At this date, it is estimated that the farm revenue for 1933 will not differ greatly from that of 1932. Cattle, calves and hogs have been marketed in greater volume than in 1932 and there has been little change in the marketings of sheep and lambs. Prices of hogs and sheep have been averaging well above those of last year with cattle prices lower. Dairy farming has not been prosperous but the winter production season promises to be more profitable. Butter production for the year will be slightly in excess of 1932 while cheese production will be lower. Sales of eggs and poultry are well up to 1932 levels. Wool production decreased slightly but the values will be sharply higher. Fruit production was higher and the minor crops were about as productive as in 1932. High and inelastic fixed charges continue to be burdensome to the farm population.

[1] The values of field crops for 1932 have been partially revised but the changes have not been made in the above tables.

Field Crops

Acreages.—According to the census of 1891, the area of field crops in 1890 amounted to 15·6 million acres. This grew to about 58 million acres in 1931, an increase of 272 p.c. during the forty-one years. Two main factors were responsible for this extensive growth in sown acreage, firstly the opening of the Prairie Provinces, and secondly, the Great War, for between 1913-19 alone the area under field crops increased about 50 p.c.

Wheat.—**A remarkable growth in the production of wheat is indi**cated by the table on page 70 dating back to 1870. Prior to 1905 **the amount of wheat produced was less than 100 million bushels. For six years it remained steadily over this figure until 231 million bushels was reached in 1911. In only three of the next twenty years was wheat** production less than 200 million bushels, *viz.*, 1914, '18 and '19. At that time the abnormally high 1915 crop of 393 million bushels set a record



The International Plowing Match, Central Experimental Farm, Ottawa, 1932. Inset—The Governor General strikes the first furrow.

Photos, Canadian Government Motion Picture Bureau.

for a number of years until 1922, when nearly 400 million bushels were produced. New high records were attained in 1923 (474 million bushels); in 1927 (480 million bushels); and in 1928 (567 million bushels). The years 1929 to 1931 were marked by less propitious climatic conditions for wheat growth, but an average crop was reaped in 1932. The 1933 crop is the lowest since 1924, amounting to only 271,821,000 bushels according to the provisional estimate.

Production, Imports and Exports, of Wheat for Canada, 1870-1933

NOTE.—(1) In the table below, wheat flour has been converted into bushels of wheat at the uniform average rate of 4½ bushels to the barrel of 196 lb. of flour. (2) The exports and imports relate to the years ended June 30, 1871-1901, and July 31, 1911-33. They are not of course, yet available for the year ending July 31, 1934. (3) The asterisk (*) against the census years 1870 to 1920 indicates that the production figures for those years are from the reports of the decennial censuses.

Year	Production	Imports of Wheat and Flour	Exports of Wheat and Flour	Year	Production	Imports of Wheat and Flour	Exports of Wheat and Flour
	000 bush.	bush.	bush.		000 bush.	bush.	bush.
*1870.....	16,724	4,304,405	3,127,503	1925.....	395,475	379,194	324,592,024
*1880.....	32,350	965,767	4,502,449	1926.....	407,136	407,119	292,880,996
*1890.....	42,223	406,222	3,443,744	1927.....	479,665	473,308	332,963,283
*1900.....	55,572	314,653	14,773,908	1928.....	566,726	1,345,881	407,564,186
*1910.....	132,078	407,639	62,398,113	1929.....	304,520	1,374,726	186,267,210
*1920.....	226,508	454,749	166,315,443	1930.....	420,672	244,220	258,637,886
1921.....	300,858	372,942	185,769,683	1931.....	321,325	216,328	207,029,555
1922.....	399,786	397,519	279,364,981	1932.....	428,514[1]	173,014	264,304,327
1923.....	474,199	440,741	346,566,561	1933.....	271,821[2]	-	-
1924.....	262,097	619,404	192,721,772				

[1] Subject to upward revision.
[2] Provisional estimate.

Other Grains.—These grains consist of oats, barley, flaxseed, rye, buckwheat, peas, mixed grain and corn. The first three have assumed real importance among the field crops of Canada. The volume of oat production has attained considerable dimensions, reaching the record total of close upon 564 million bushels in 1923, although the average for the years 1927-31 was 385 million bushels; the area under crop has expanded from 3,961,356 acres in 1890 to 13,528,900 acres in 1933. Barley, with a production of 11,496,000 bushels in 1870, yielded a record total of 136,391,400 bushels in 1928, while the yield for 1933 is now estimated at 63,737,000 bushels. Rye production amounted to 1,064,358 bushels in 1870, increased to 32,373,400 bushels in 1922, and receded to 4,725,000 bushels according to the second estimate of 1933.

Values of Field Crops.—Prices of agricultural products were at an unusually high level during the War and until 1919, then slumped steeply, falling to a low level in 1923, but recovered considerably in later years. The value of the field crops of Canada, which in 1910 was $384,513,795, had increased by 1914 to $638,580,000. As the effects of the War came to be felt, the maximum was reached in 1919 with a total of $1,537,170,100. This value receded to $899,226,200 in 1923; but the recovery of prices combined with excellent harvests, brought the value up to $1,173,133,600 in 1927 and $1,125,003,000 in 1928. Since then it has declined to $948,981,000 in 1929, $662,040,900 in 1930, $432,199,400 in 1931, and $444,894,900 in 1932. The estimate for 1933 itemized on p. 71 shows a further reduction to a total value of $427,791,000. The preliminary figures for the 1933 crop

represent prices received up to the end of November. Naturally, revisions will be necessary in accordance with the trend of farm prices in the remainder of the marketing season. During the first weeks of December there have been seasonal increases in the prices of some minor products, but further sharp recessions in grain prices have much more than offset these improvements.

The Field Crops of Canada, 1933

(According to Provisional Estimates.)

Field Crop	Area	Total Yield	Total Value[1]
	acres	bush.	$
Wheat	25,991,100	271,821,000	123,525,000
Oats	13,528,900	311,312,000	76,320,000
Barley	3,658,000	63,737,000	16,544,000
Rye	583,100	4,725,000	1,599,000
Peas	84,600	1,405,000	1,398,000
Beans	59,100	892,400	878,000
Buckwheat	398,300	8,664,000	4,309,000
Mixed grains	1,167,300	33,204,000	12,794,000
Flaxseed	243,600	678,500	759,000
Corn for husking	136,600	4,658,000	2,562,000
		cwt.	
Potatoes	527,700	41,542,000	32,464,000
Turnips, mangolds, etc.	163,900	34,776,000	12,410,000
		tons	
Hay and clover	8,875,900	11,291,000	94,870,000
Alfalfa	721,600	1,649,200	13,576,000
Fodder corn	378,750	3,105,300	9,624,000
Grain hay	1,899,000	3,366,000	21,929,000
Sugar beets	42,100	419,000	2,230,000

[1] Preliminary estimates.

The Flour-Milling Industry.—This most important manufacture connected with the field crops dates back to the settlement made by the French at Port Royal (now Annapolis, N.S.) in 1605. Milling was, of course, an absolute necessity to the first settlers. The Napoleonic wars established the export business and for the next half-century the mills were closely associated with the commercial and banking history of the country. Large scale production in milling in Canada began with the competition between the two processes, stone and roller milling. By the '80's the roller process had secured a virtual monopoly and local mills gave way to large mills served by elevators at central points. The high quality of Canadian wheat became recognized throughout the world, and Canada's huge export trade in wheat and its products developed. The milling industry grew apace.

In 1931, according to the preliminary estimate, there were 1,265 mills including 1,000 country mills; the capital invested was $61,069,192; while the value of products was $95,728,540. The exports of wheat flour in the fiscal year 1868-69 were 375,219 barrels valued at $1,948,696. It was not until the fiscal year 1898 that Canada reached over the million mark, when 1,249,438 barrels were exported with a value of $5,425,760. This was increased to 12,021,424 barrels, valued at $61,896,251, during the crop year ended July 31, 1923-24, which was the peak year for the exports. The exports receded to 5,370,613 barrels in 1932-33, with a value of $17,100,260. Canada normally ranks second among the world exporters of wheat flour, surpassed only by the United States.

Flour produced from the crop of 1931 made a new record for the flour-milling industry in Canada, for during the crop year ended July 31, 1932, wheat ground in commercial flour mills totalled 65,431,599 bushels and

flour produced amounted to 14,631,504 barrels. Preliminary figures for the crop year ended July 31, 1933, were 66,265,288 bushels of wheat and 14,896,059 barrels of flour.

The total daily capacity of flour mills in 1932 was nearly 112,000 barrels. Canada has to-day the largest flour mill in the British Empire, with a daily capacity of 14,000 barrels, while her largest milling company controls a daily capacity of 24,500 barrels.

Special Crops

"Dauntless Derreen," the first generation White Leghorn pullet, bred by M. H. Ruttledge, Sardis, B.C., which, by laying 357 eggs in 365 days, has recently equalled the world record held by another British Columbia bird. Derreen's eggs averaged 24 ounces to the dozen, and her record is a tribute to many years of careful selection and breeding. Her breeding traces back to a hen that Mr. Ruttledge entered in the first Victoria Provincial Contest, 1911.

Photo, courtesy Superintendent Dominion Experimental Farm, Agassiz, B.C.

A feature of Canadian agriculture is the number of crops which are grown in localities specially suited for their production. Some of the more important of these are tobacco, sugar beets, maple syrup and sugar, and flax and hemp for fibre.

The various types of tobacco are grown in different regions of Quebec and Ontario and in increasing amounts, having practically tripled since 1900. The production for 1932 was 54,094,000 pounds from 54,138 acres. About 49,000,000 pounds will be harvested in 1933. Prices remain very low.

The production of maple syrup and sugar in 1933 was valued at $2,059,341, about two-thirds of which came from Quebec.

Sugar beets are grown in the neighbourhood of sugar beet factories at Chatham and Wallaceburg in Ontario and Raymond in Alberta, and there are other areas sown to this crop in Quebec and Manitoba. The production has made its most significant increase since the early war years. In 1931, the latest year for which factory statistics are available, the output of refined beetroot sugar amounted to 132,016,859 pounds valued at $5,949,736. The production in 1933 is again high.

Flax for fibre and fibre-seed production expanded greatly during the War, but has since declined.

Hops occupy a relatively small acreage in British Columbia, the yield in 1932 being 791,159 pounds.

Commercial gardening is an important occupation in many favoured regions throughout Canada, principally in suburban areas.

Specialized poultry farming has increased in popularity in the past ten years, particularly in Ontario and British Columbia, and there has also been a large expansion in farm flocks. The effects of selective breeding are notable in improving quality of eggs and dressed poultry. Grading of marketed products is also receiving more attention.

The total estimated production of honey in Canada in 1932 was 20,628,934 pounds as compared with 29,666,097 pounds in 1931. The 1932 production was valued at $1,651,175.

The production of clover, alsike, alfalfa and sweet clover seed amounted to 11,015,000 pounds valued at $687,000 in 1932. The production of timothy seed in 1932 amounted to 4,100,000 pounds valued at $225,000.

A Flock of Young Pekin Ducks, Central Experimental Farm, Ottawa.
Photo, Canadian Government Motion Picture Bureau.

The Live-Stock Industry

Although somewhat overshadowed by the grain-growing industry the raising of live stock has made very substantial progress not perhaps so much in point of numbers as in the improvement of foundation stock. Fortunately, virulent animal diseases, which affect the farm live stock of Europe, have never obtained a footing in Canada. Cattle which numbered 8,824,632 in 1929 had decreased to 7,991,000 by 1931 but in 1933 were 8,876,000. Swine after showing an increase of from 4,000,000 in 1930 to 4,716,720 in 1931, which was fairly well maintained in 1932, decreased to 3,800,700 in 1933. The number of sheep, which was 3,696,000 in 1930, decreased to 3,608,000 in 1931, increased to 3,644,500 in 1932 and decreased to 3,385,800 in 1933. The wool clip shows a substantial increase from

17,959,896 lb. in 1926 to 20,518,000 lb. in 1932, but owing to a marked falling-off in the average price of wool the value of the clip fell from $4,140,000 in 1926 to $1,093,800 in 1932. Poultry in Canada decreased from 65,468,000 in 1931 to 59,324,400 in 1933.

Slaughtering and Meat Packing.—Since 1900 the separation between the farm and the manufacture and marketing of animal products has become more and more pronounced, leading to the development of an important slaughtering and meat-packing industry. Returns for 1932 show 141 establishments engaged in slaughtering and meat packing as compared with 147 in 1931, and the capital invested declined from $62,481,905 in 1931 to $53,227,929 in 1932. The number of employees decreased from 9,294 to 9,101, and salaries and wages from $11,626,678 to $10,349,315

A Cattle Ranch in Alberta. Inset: Finished Western Cattle for Export.
Photos, Publicity Division Department of Trade and Commerce and Canadian Government Motion Picture Bureau.

over the same period. The cost of materials used in 1932 was $65,575,957, and the value of the products $91,246,523. (See also p. 109.)

Exports of cattle during the first nine months of 1933 numbered 43,179 head valued at $2,665,450, of which 36,415 head valued at $2,343,979 went

to the United Kingdom and 3,734 head valued at $228,465 to the United States; during the same period in 1932 exports of cattle numbered 29,589 head valued at $1,941,432, of which 15,905 head went to the United Kingdom and 11,048 head to the United States. Exports of sheep during this period totalled 1,168 head as compared with 1,300 for the nine months of 1932, and exports of swine 5,128 head as compared with 4,708 in 1932.

Exports of bacon and hams showed a very encouraging increase for the nine-month period. In 1932 total shipments to all countries amounted to 291,896 cwt. and in 1933 to 529,274 cwt. with respective values of $3,082,935 and $5,793,211. In each case the greater portion was sent to the United Kingdom, the amount for 1933 being 515,277 cwt. valued at $5,523,631. The total export value of all meats was $7,508,437 for the nine months of 1933 as compared with $5,119,308 in 1932.

Total exports of animals and animal products increased from $42,130,156 in 1932 to $16,548,945 in 1933. Of the latter amount goods to the value of $26,282,917 went to the United Kingdom and $12,926,585 to the United States.

Dairying

Dairying has long held an important place among Canadian industries. Cattle were introduced by the first settlers and there naturally followed the making of home-made butter and cheese, at first purely for home consumption, but later for export. The export market grew; during the fiscal year ended Mar. 31, 1926, Canada exported 1,483,000 cwt. of cheese valued at nearly $34,000,000 and 233,000 cwt. of butter valued at nearly $9,000,000. Since 1926 exports of these commodities have shown a falling-off, especially butter exports, which dropped from about 99,000 cwt. valued at $3,352,000 in the fiscal year 1927 to 11,629 cwt. valued at $389,149 for the fiscal year 1931; for the fiscal year ended 1932 exports of butter increased to 109,173 cwt. valued at $2,362,888 and dropped again to 32,060 cwt. valued at $589,537 for the fiscal year 1933. During the first nine months of 1933 exports of butter were 20,621 cwt. valued at $381,995 as compared with 31,948 cwt. valued at $586,519 for the first nine months of 1932. Cheese exports for the fiscal year ended 1932 were 854,247 cwt. valued at $10,593,967 and, for 1933, 857,116 cwt. valued at $8,758,415. For the first nine months of 1933 exports were 384,746 cwt. ($4,210,939) compared with 556,560 cwt. ($5,709,263) for the same months of 1932.

An analysis of production figures since 1916 indicates a general tendency toward increase in the manufacture of creamery butter. In 1916 the output was 82,563,130 pounds valued at $26,966,355 which in 1924 had increased to 178,893,937 pounds valued at $60,494,826. During the next five years the production was fairly steady, but in 1931 a new high record of 225,955,246 pounds was established; this fell in 1932 to 214,002,127 pounds. Low average prices prevailing in both years produced low total values of $50,198,878 and $40,475,479 respectively. During the first nine months of 1933 the production totalled 177,412,467 pounds, which, compared with 170,905,768 pounds for the same period in 1932, shows a percentage increase of 3·8.

Factory cheese reached its peak of production in 1917 when 194,904,336 pounds valued at $41,180,623 were manufactured. In 1919 the total quantity produced was 166,421,871 pounds with a total value of $44,586,168 which was the peak in values. During the next five years the production

fluctuated between 136 and 162 million pounds, and again in 1925 a high production of 177,139,113 pounds valued at $36,571,556 was reached. In 1926 the production was 171,731,631 pounds valued at $28,807,841, but since that time and particularly during 1929, 1930, 1931 and 1932 there has been a very marked falling-off in production with low valuations. Quantities and values for the four years respectively are as follows: 118,746,286 pounds and $21,471,330; 119,105,203 pounds and $18,089,870; 113,956,639 pounds and $12,824,695; 120,524,243 pounds and $11,379,922.

Value of the Dairy Production of Canada, by Provinces, 1931, with Dominion Totals for 1925-30

Province	Dairy Butter	Creamery Butter	Home-made Cheese	Factory Cheese	Miscellaneous Factory Products	Milk Consumed Fresh or otherwise Used	All Products
	$	$	$	$	$	$	$
Prince Ed. Island	468,000	489,189	50	59,103	58,370	858,000	1,932,712
Nova Scotia	1,263,000	1,510,560	5,250	-	1,006,155	3,149,000	6,933,965
New Brunswick	2,458,000	614,463	800	62,355	341,029	2,856,000	6,332,647
Quebec	3,312,000	14,970,698	29,000	2,905,855	2,511,183	15,433,000	39,161,736
Ontario	7,500,000	18,023,230	15,000	9,471,427	10,018,429	11,491,000	56,519,086
Manitoba	1,275,000	4,370,195	22,000	61,324	427,721	5,983,000	12,139,240
Saskatchewan	3,180,000	4,025,100	16,000	39,200	490,771	6,760,000	14,511,071
Alberta	1,785,000	4,711,231	17,000	118,390	459,991	9,481,000	16,572,612
British Columbia	482,000	1,581,212	3,400	107,041	1,768,858	3,205,000	7,140,511
Canada—							
1931	21,723,000	50,198,878	108,500	12,824,695	17,082,507	59,306,000	161,243,580
1930	23,844,000	56,670,504	112,040	18,089,870	21,305,045	149,823,000	269,844,459
1929	28,929,000	65,929,782	82,800	21,471,330	22,091,945	153,238,000	291,742,857
1928	29,103,000	64,702,538	82,000	30,494,403	20,581,490	152,661,856	297,625,347
1927	30,435,121	65,709,986	70,654	25,522,148	18,879,335	154,257,346	294,874,590
1926	28,252,777	61,753,390	80,240	28,807,841	17,767,271	140,643,460	277,304,979
1925	32,128,799	63,008,097	95,073	36,571,556	16,882,747	136,177,373	284,863,645

Fundamental changes have been going on in the industry and some of the milk that formerly went into cheese appears now to find its way into miscellaneous factory products. It will be observed from the above table that the total value of all products of the industry shows a fairly satisfactory trend over the six years 1925-30; the unusually low prices for all dairy produce prevailing during 1931 and 1932, have materially reduced the values for those years. This condition has extended into 1933.

The Fruit-Growing Industry

In certain sections of Canada, the climate and soil are eminently adapted to fruit growing, and the Annapolis valley, the Niagara peninsula and the Okanagan district of British Columbia are world famous centres of fruit production. Experimental shipments of apples from the Annapolis valley were first made in 1861. Up to 1890 the annual production of apples by Nova Scotia rarely exceeded 100,000 barrels; but after that date there was a pronounced increase in acreage and in production, which latter reached 1,000,000 barrels in 1909, and 1,900,000 barrels in 1911. Further high records were made in 1919 with over 2,000,000 barrels, and in 1922, when 1,891,850 barrels were packed and sold from the Annapolis valley and adjacent districts. In Ontario, where the commercial production of all varieties of fruit has reached its highest

development, apples have been grown from the middle of the eighteenth century, but commercial orcharding has developed only during the past 50 or 60 years, and was only possible when the building of the railways permitted trees and fruit to be rapidly transported. In British Columbia commercial fruit growing is of comparatively recent origin, growth in production having been particularly rapid since 1910. The first apple trees were planted about 1850, but not until after completion of the C.P.R. in 1886 were many trees planted for commercial purposes. In 1932 British Columbia produced over 4,000,000 boxes of apples.

In 1932 the total value of Canadian commercial fruits was $10,222,707, including: apples, $5,518,519; pears, $339,135; plums and prunes, $189,425; peaches, $834,500; cherries, $432,848; strawberries, $1,427,767; raspberries, $690,017; apricots, $119,196; and grapes, $671,300.

Grading and Packing Peaches in the Niagara Peninsula, Ontario. Inset: Peaches boxed for export. (A) An incorrect pack. (B) Correctly packed.
Photos, Canadian Government Motion Picture Bureau.

The 1933 apple crop developed under generally favourable conditions throughout Canada. A mid-season drought in Eastern Canada caused some anxiety but generous rains relieved the situation. N.S., N.B., Que. and Ont. all harvested larger apple crops than in 1932. Late season storms in the Maritimes and Ontario caused some damage to late varieties of apples. The season was generally favourable in British Columbia but the 1933 crop was slightly smaller than the crop of the previous year. Quality was well maintained in 1933 production.

CHAPTER VI

THE FOREST WEALTH OF CANADA—LUMBERING—PULP AND PAPER

The forests of Canada rank second only to agriculture, among the primary industries, in their contribution to the national production. It is estimated that forest products make up about 20 p.c. of all the freight hauled on Canadian railways. The large excess of exports over imports which the group "wood, wood products and paper" provides, amounting to $100,397,554 for the fiscal year ended March, 1933, constitutes an influential factor in Canada's international trade.

Of the total forested area of 1,153,005 square miles, about 32·8 p.c. carries merchantable timber, and 35·8 p.c. carries young growth. The remaining 31·4 p.c. is non-productive under present conditions.

The total volume of standing timber has been estimated at 267,733 million cubic feet capable of being converted into 448,255 million board feet of lumber and 1,528,767,000 cords of pulpwood, ties, poles and similar forest products. The eastern provinces are estimated to contain about 56·2 p.c., the Prairie Provinces about 15 p.c., and British Columbia about 29 p.c. of this total volume. The total annual drain on the forests including loss by fire, etc., is estimated at 4,102 million cubic feet, but it does not follow that our capital will be exhausted in the sixty-five years which a simple calculation might imply. The rate of utilization will no doubt be reduced as the supply diminishes and losses due to fires, wasteful utilization and other preventable causes are curtailed. An annual increment of 10 cubic feet per acre, which is quite possible under forest management, would provide in perpetuity for the needs of a population of over seventeen millions at our present annual rate of use, which amounts to about 416 cubic feet per capita.

Represented in the three great forest divisions of Canada are approximately 160 different species of plants reaching tree size. Only 31 of these species are coniferous, but the wood of these forms 80 p.c. of our standing timber, and 95 p.c. of our sawn lumber.

Operations in the Woods

The value of forest production resulting from operations in the woods of Canada is, according to latest figures, $141,000,000 annually, being made up of logs and bolts for sawmills valued at $33,000,000; pulpwood for domestic use and export valued at $44,000,000; firewood valued at $44,000,000; hewn railway ties valued at $4,000,000; poles valued at $3,000,000; and other primary forest products, such as square timber, fence posts and rails, and wood for distillation. It has been estimated that this rate of total primary forest production involves the cutting of over 2,306,000,000 cubic feet of standing timber annually. In connection with operations in the woods, the forests not only provide the raw material for the sawmills, pulp-mills, wood distillation, charcoal, excelsior and other plants, but also logs, pulpwood and bolts for export in the unmanufactured state and fuel, poles, railway ties, posts and fence rails, mining timber, piling and other primary products which are finished in the woods ready

for use or exportation. There are also a number of minor forest products, such as maple sugar and syrup, balsam gum, resin, cascara, moss and tan-bark, which all go to swell the total.

The following table gives the total values of the products of woods operations in Canada for the years 1927 to 1931 inclusive.

Value of the Products of Woods Operations, by Products, 1927-31

Product	1927	1928	1929	1930	1931
	$	$	$	$	$
Logs and bolts	74,270,067	76,431,481	79,278,543	75,563,041	32,889,204
Pulpwood	70,284,895	74,848,077	76,120,063	67,529,612	51,973,243
Firewood	40,582,774	41,164,270	41,764,507	43,786,064	44,237,948
Hewn railway ties	6,242,865	5,871,724	5,730,423	5,038,899	4,144,169
Square timber	2,865,906	3,772,137	4,179,077	2,945,748	151,114
Poles	3,948,723	4,934,371	6,677,559	6,733,259	3,057,546
Round mining timber	965,185	998,146	1,028,126	885,343	958,681
Fence posts	1,281,633	1,506,050	1,674,489	1,585,985	1,388,074
Wood for distillation	482,277	476,726	455,957	335,330	266,080
Fence rails	431,057	463,469	477,569	624,968	454,205
Miscellaneous products	3,584,368	2,484,348	2,183,816	1,825,245	1,603,666
Totals	204,939,750	212,950,799	219,570,129	206,853,494	141,123,930

Car load of Douglas Fir Timbers used in the construction of the Welland Canal.

Stand of Giant Douglas Fir, Chilliwack Valley, B.C.

Photos, Canadian Government Motion Picture Bureau and Department of the Interior.

The Lumber Industry

Except in Nova Scotia, 90 p.c. of the forest land is still the property of the Crown—the lumbermen having been granted cutting rights only—and is administered by the various provincial departments.

Canada's sawmills produced, in 1931, 2,497,553 M feet board measure of sawn lumber, valued at $45,977,843. The greater part of this lumber is coniferous softwood, as the supply of the more valuable hardwoods such as hickory, oak and walnut (once plentiful in southern Ontario and Quebec) has been almost exhausted. The mills also produced 1,453,277 thousand shingles, valued at $3,331,229; 228,050 thousand lath, valued at $576,080; as well as numerous other products to the value of $12,884,101, bringing the total value of the products of the industry up to $62,769,253.

Markets for Canadian lumber now include practically all the more important countries of the world, having extended even into the Orient. There is also a considerable trade between British Columbia and the Atlantic Coast States and provinces *via* the Panama Canal.

Log-jam on the Montreal River, Ontario.
Photo, courtesy Department of the Interior.

The following table gives the production of lumber and other sawmill products by provinces. British Columbia produced over 42 p.c. of the total value, Quebec 24 p.c., Ontario 20 p.c., followed by New Brunswick, Nova Scotia, Alberta, Manitoba, Saskatchewan and Prince Edward Island in the order named.

Production of Lumber and other Sawmill Products in Canada, by Provinces, 1931

Province	Lumber Production		Other Sawmill Products	Total All Products
	Quantity	Value	Value	Value
	M ft. b.m.	$	$	$
Prince Edward Island	4,552	101,177	14,287	115,464
Nova Scotia	103,816	1,645,244	815,509	2,460,753
New Brunswick	130,412	2,445,087	1,089,355	3,534,442
Quebec	399,581	8,778,618	6,554,576	15,333,194
Ontario	417,959	10,853,605	1,934,079	12,789,684
Manitoba	29,654	511,703	35,884	547,587
Saskatchewan	18,416	320,953	14,058	335,011
Alberta	50,999	756,810	64,818	821,628
British Columbia	1,342,164	20,562,046	6,268,844	26,831,490
Totals	2,497,553	45,977,843	16,791,410	62,769,253

The Pulp and Paper Industry

The pulp and paper industry ranks first among Canadian manufacturing industries in gross and net value of products, as well as in total number of employees and wages and salaries paid. Its development has taken place for the most part during the present century, and is due chiefly to the existence in Canada of abundant water powers adjacent to extensive resources of the various pulpwood species.

A Diagrammatic View of a Magazine Pulp Grinder.

The gross output of the industry increased rapidly and steadily until the boom years following the Great War when it jumped to a peak of over $232 millions in 1920. This was followed in 1921 by a drop which was general throughout the industrial field. From that year on there was a steady recovery resulting in a total for 1929 of $243,970,761 followed by decreases to $135,634,983 in 1932.

The following table gives the gross and net values of production for the industry as a whole for the six years 1927 to 1932.

	Gross Production	Net Production
1927	$219,329,753	$134,516,673
1928	233,077,236	144,586,815
1929	243,970,761	147,096,012
1930	215,674,246	133,681,991
1931	174,733,954	110,786,276
1932	135,634,983	86,673,512

The net value of production, which represents the difference between the values of raw materials and the finished products, is the best indication of the relative importance of a manufacturing industry. Regarded from this viewpoint the pulp and paper industry has headed the lists of manufacturing industries since 1920, when it replaced the sawmills. The industry has also headed the lists in wages' and salaries' distribution since 1922, when it replaced the sawmills in this respect, and it has been first in gross value of products since 1925, exceeding the gross value of flour-mill production.

There are three classes of mills in the industry. These, in 1932, comprised 28 mills making pulp only, 44 combined pulp and paper mills, and 26 mills making paper only.

Production of Wood Pulp in the Two Principal Provinces, and in Canada, 1925-32

Year	Quebec		Ontario		Canada	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	$	tons	$	tons	$
1925	1,370,303	50,490,231	976,717	33,559,038	2,772,507	100,216,383
1926	1,672,339	59,218,576	1,095,987	38,008,752	3,229,791	115,154,199
1927	1,749,965	60,884,169	1,007,118	35,034,468	3,278,978	114,442,550
1928	2,018,566	67,467,328	1,050,335	35,708,079	3,608,045	121,184,214
1929	2,174,805	69,286,498	1,255,010	39,963,767	4,021,229	129,033,154
1930	1,833,000	58,703,067	1,043,559	31,463,873	3,619,345	112,355,872
1931	1,513,058	41,884,387	958,100	22,944,943	3,167,960	84,780,819
1932	1,240,442	31,124,954	785,405	18,735,105	2,663,248	64,412,453

In 1932 the 72 mills making pulp produced 2,663,248 tons valued at $64,412,453, representing a decrease of 16 p.c. in quantity and 24 p.c. in value from 1931, and of this about 79 p.c. by quantity was made in combined mills and used by them in paper-making. About 4 p.c. was made for sale in Canada and 17 p.c. was made for export.

Of the total pulp production in Canada in 1932, 63·7 p.c. was ground wood, 19·3 p.c. unbleached sulphite, 9·6 p.c. bleached sulphite, 5·4 p.c. sulphate and soda and the remaining 2 p.c., screenings.

The total production of paper in 1932 was 2,290,790 tons, which, with certain unspecified products, was valued at $114,101,824. Newsprint and similar paper made up 1,919,205 tons, or 83·8 p.c. of the total, valued at

$85,539,852; paper boards made up 7 p.c., wrapping paper 3 p.c., book and writing paper less than 3 p.c., and miscellaneous papers the remainder. The Canadian production of paper increased three and three-quarter times in the period from 1917 to 1929, owing chiefly to the increase in the production of newsprint, although practically all the different kinds of paper that are used in Canada at the present time can be produced in Canadian mills.

Canada's newsprint production in the year 1932 was 89·5 p.c. greater than that of the United States, a few years ago the world's chief producer. In 1913 the production across the border was over three times as much as in Canada, but during the following 13 years, while production still increased in both countries, the gain in Canada was over 437 p.c. as compared to less than 30 p.c. in the United States. Since 1926 there has been an actual, as well as a relative, decrease in the United States production.

The latest monthly figures of Canadian newsprint production are:—

1933—	tons	1933—	tons	1933—	tons
January	140,539	May	171,776	September	179,416
February	125,610	June	171,419	October	191,452
March	137,073	July	180,387	November	193,718
April	147,759	August	194,262	December	-

Trade.—A striking reflection of the increased production of newsprint between 1910 and 1931 is seen in the trade figures. The export trade in paper did not develop until the beginning of the present century. By 1910, however, the exports of newsprint paper were valued at over $2,000,000; in 1920 they were valued at over $53,000,000, whilst during the subnormal fiscal year 1932-33 Canada exported 1,662,985 tons of newsprint valued at $74,136,863. This single item of export thus ranks at present second only to wheat. Canadian newsprint is exported to over thirty countries and our total exports are greater than those of the rest of the world combined.

During the earlier stages of industrial development the exports of the wood group were made up largely of unmanufactured products such as square timber and logs. At the time of Confederation these raw materials made up over 41 p.c. of the total export trade. To-day, while the wood and paper group forms a smaller part of the total (about 25 p.c. for the fiscal year 1932-33), its character has changed. Of the exports of products of forest origin, fully or chiefly manufactured goods now form 80 p.c. and unmanufactured or partly manufactured, 20 p.c. Raw materials form only about 8 p.c. of the total.

Industries Founded on Wood and Paper.—According to the latest available statistics there were, in 1931, 4,102 establishments, consisting of 1,954 depending on sawmills, and 2,148 depending on the paper-mills for their materials. They employed 72,642 workers who were paid over $89,000,000 and their products were valued at more than $155,000,000. The development of the paper-using industries in Canada has been greatly accelerated within recent years by the production of cheap paper and paper-board made of wood-pulp, composition roofing, fibre wallboard and many other products which have found a definite place in modern building construction.

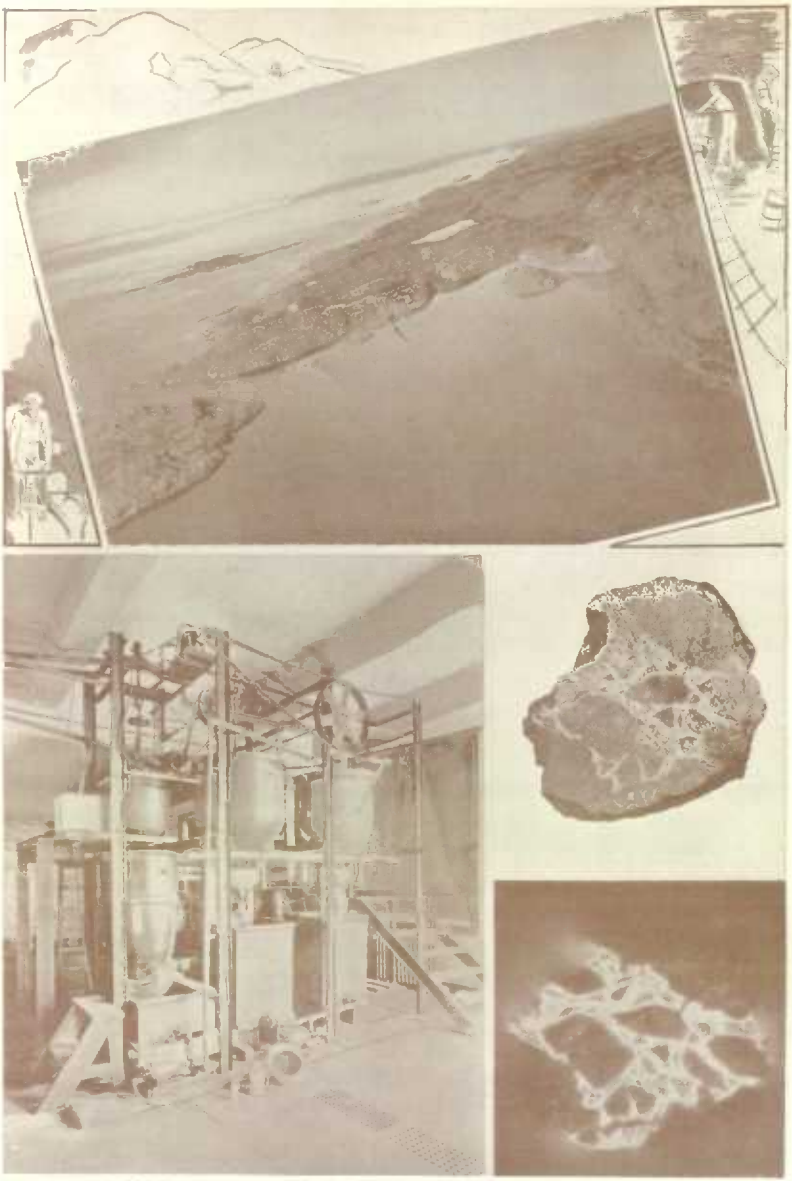
CHAPTER VII

MINES AND MINERALS

Canada's mineral industry, second in importance in net value of production among the primary industries of the Dominion in 1931, being surpassed in output value only by the great basic industry of agriculture, brings to the nation a prestige beyond the monetary measure of the mineral output. First in nickel, first in asbestos, second in cobalt, gold and zinc, third in silver and copper, and fourth in lead among the world's producers, Canada enjoys an enviable position in the mining world with every prospect of future expansion. About one-third of the freight tonnages moved in Canada consist of ores or other mineral products.

Historical.—Though isolated discoveries had been frequent, systematic prospecting began only in the middle of the nineteenth century with the setting up of the Geological Survey of Canada under Sir William Logan, when the herculean task of exploring, mapping and geologically surveying Eastern Canada was begun. In 1863 a comprehensive "Geology of Canada" was issued. Thus, between 1843 and 1863, may be said to have occurred the real inauguration of the mining industry in Eastern Canada. Meanwhile the Fraser River and Cariboo gold rushes of the 'fifties had founded the colony of British Columbia.

The completion of the C.P.R. in 1885 opened a second chapter of even greater significance. Vast new territories where the prospector showed the way to other enterprise were rendered accessible. The most important immediate find was made near Sudbury, Ont., in 1883, when in blasting a cutting for the railway a body of nickel-copper ore was uncovered which has since made the district world-famous. Other discoveries occurred later on in British Columbia, where during the 'nineties a remarkable succession of ore-bodies, especially auriferous copper and argentiferous lead-zinc deposits, was located in the southeastern section of the province. The famous Klondyke rush of 1898 must not be omitted in this cursory enumeration. As transportation facilities were extended, other ore deposits in different regions were found, the silver of the Cobalt district, discovered in 1903 during the construction of the Temiskaming and Northern Ontario Railway, and the extraordinarily rich gold finds at Porcupine (1909) and Kirkland Lake (1912) being notable examples. More recently, copper-gold and auriferous quartz discoveries in the Rouyn section of western Quebec led to the development of numerous mines and the construction of the Horne Copper Corporation's smelter at Noranda, Quebec, where blister copper containing gold was first poured in December, 1927. Gold mines have since been opened up in the Red Lake, Matachewan and Michipicoten areas of Ontario, and gold, copper, zinc and other metal-bearing deposits of commercial value have been found in Manitoba, where large concentrating and smelting plants have been erected and brought into operation. Since 1930, refineries for the production of electrolytic copper have been constructed and brought into operation at Copper Cliff, Ontario, and Montreal East, Quebec. In 1930, deposits of high grade silver-radium ores were discovered at Echo Bay, Great Bear Lake, N.W.T.



The upper picture is a view of the location of the original discovery of radium ore at Labine Point, N.W.T. The picture at the lower left shows the pilot plant set up in the Mines Branch laboratories for the investigation of the treatment of Great Bear Lake pitchblende ores. After extensive experimentation, alternative methods for the commercial treatment of Canadian ores were formulated for the mining industry; these have been of the utmost importance in establishing radium production on a commercial scale in Canada. The two illustrations to the lower right are: (1) A photograph of native ore with light streaks of pitchblende; (2) A radiograph of the radio activity of the pitchblende.

Photos. courtesy Department of Mines and Department of National Defence.

The Modern Industry.—Since 1886, when comprehensive data were first collected for the mining industry as a whole, the advance has been truly remarkable. Valued at $10,221,255 in 1886, or $2.23 per capita, ten years later production had more than doubled. In another ten years, the aggregate had grown three and one-half times. This total again more than doubled by 1916. In 1932 Canada's mineral production was computed to be worth $182,681,915. This represented a decrease of 20 p.c. below the value of the 1931 production and reflects only slightly the acute economic depression felt throughout the world since 1929.

In order of total values, the leading mineral products of Canada in 1932 were: gold, coal, copper, natural gas, nickel, cement, silver, lead, stone, sand and gravel, zinc, clay products, asbestos, petroleum, lime, salt, platinum and gypsum. This list of eighteen products includes all that reach an output value of $1,000,000 or over; together they make up about 98 p.c. of the total recorded value of mineral production. In addition to these main products, some thirty other minerals were recovered in commercial quantities during the year. Canada's known mineral resources comprise almost every variety of mineral, many of the deposits being sufficiently extensive or rich to be of world importance. Canada produces about 90 p.c. of the world's output of nickel, 60 p.c. of its asbestos, nearly 35 p.c. of its cobalt, 13 p.c. of its gold, 10 p.c. of its lead, 11 p.c. of its silver, 16 p.c. of its zinc, and 10 p.c. of its copper. The 1932 output valuation of metallics revealed a decline from the high record established in 1929. Metals as a group, however, still retain the premier position in Canadian mineral production; this is due largely to important and increasing productions of gold, copper, lead and zinc.

The value of production of non-metallics increased from $93,239,852 in 1928 to $97,861,356 in 1929 but decreased to $83,402,349 in 1930, $65,346,284 in 1931 and $56,788,179 in 1932. The sub-group fuels (mainly coal) showed a production valued at $49,047,342 in 1932, about 86 p.c. of the group total. In 1928 the production of crude petroleum was 624,184 barrels valued at $2,035,300; in 1932 it had risen to 1,044,412 barrels valued at $3,022,592. The increase is almost entirely due to the greater production from Western Canada, especially the Turner valley and other areas in the outer foothills.

Clay products and other structural materials, including cement, stone, sand and gravel, and lime, showed an increase from $49,737,181 in 1928 to $58,534,834 in 1929; this was followed by a recession to $53,727,465 in 1930, $44,158,295 in 1931 and $22,398,283 in 1932.

In 1929, for the first time in Canada's history, the mineral production rose above the three hundred million dollar mark and showed an increase of 13 p.c. over that of 1928—the former record year. The figures of values for 1932 established new records for gold and salt.

The mineral production of Canada for 1931 and 1932 is given, classified by groups and by provinces, in the following tables. From the second table it will be noticed that in 1932 Ontario produced 43 p.c. of the total, British Columbia was second with 15 p.c. and Quebec was third with 13 p.c. In 1931 British Columbia ranked third, being surpassed by the province of Quebec.

Mineral Production, Calendar Year 1932, and Official Estimate for Calendar Year 1933

Item		1932		1933[1]	
		Quantity	Value	Quantity	Value
			$		$
METALLICS					
Gold	fine oz.	3,044,387	62,933,063	2,945,070	60,879,998
Silver	fine oz.	18,347,907	5,811,081	15,360,764	5,773,712
Nickel	lb.	30,327,968	7,179,862	84,586,300	20,735,534
Copper	lb.	247,679,070	15,294,058	300,978,523	21,645,751
Lead	lb.	255,947,378	5,409,704	269,040,791	6,450,414
Zinc	lb.	172,283,558	4,144,454	199,591,600	6,412,180
Other metals		-	2,723,231	-	2,484,084
Totals		-	103,495,453	-	124,381,673
NON-METALLICS					
Fuels					
Coal	ton	11,738,913	37,117,695	11,735,327	35,511,772
Natural gas	M cu.ft.	23,420,174	8,899,462	22,918,600	8,731,180
Petroleum, crude	brl.	1,044,412	3,022,592	1,126,100	3,070,000
Peat	ton	3,248	7,593	830	2,040
Totals		-	49,047,342	-	47,314,992
Other Non-Metallics					
Asbestos	ton	122,977	3,039,721	148,752	4,976,611
Feldspar	ton	7,047	81,982	8,214	96,399
Gypsum	ton	438,629	1,080,379	415,839	1,002,374
Mica	ton	309	6,828	304	40,641
Quartz	ton	189,132	276,147	162,872	232,559
Salt	ton	263,543	1,947,551	281,760	2,026,857
Sodium sulphate	ton	-	271,736	-	374,288
Sulphur[2]	ton	53,172	470,014	56,091	500,239
Talc and soapstone		-	159,038	-	190,375
Other non-metallics		-	407,441	-	458,154
Totals		-	7,740,837	-	9,898,497
CLAY PRODUCTS AND OTHER STRUCTURAL MATERIALS					
Clay products (brick, tile, sewer pipe, pottery, etc.)		-	3,650,218	-	2,236,000
Cement	brl.	4,498,721	6,930,721	2,982,722	4,552,345
Lime	ton	320,650	2,394,537	342,621	2,569,659
Stone, sand and gravel	ton	-	9,422,807	-	7,300,000
Totals		-	22,398,283	-	16,658,004
Grand Totals		-	182,681,915	-	198,253,166
Estimated exchange on gold produced		-	8,546,310	-	23,378,455

[1]Preliminary figures. [2]In sulphuric acid made and in pyrites shipped.

Mineral Production of Canada, by Provinces 1930, 1931 and 1932

Province	1930		1931		1932	
	$	p.c. of total	$	p.c. of total	$	p.c. of total
Nova Scotia	27,019,367	9·65	21,080,746	9·24	16,198,573	8·9
New Brunswick	2,191,425	0·76	2,176,910	0·96	2,223,505	1·2
Quebec	41,215,220	14·73	35,696,563	15·65	24,512,470	13·4
Ontario	113,530,976	40·57	96,113,235	42·15	79,509,239	43·5
Manitoba	5,453,182	1·95	9,965,854	4·37	8,714,459	4·8
Saskatchewan	2,368,612	0·85	1,931,880	0·85	1,681,697	0·9
Alberta	30,619,888	10·95	23,580,727	10·34	21,183,079	11·6
British Columbia	54,953,320	19·64	35,337,756	15·50	26,767,522	14·7
Yukon	2,521,588	0·90	2,145,347	0·94	1,891,371	1·0
Totals	279,873,578	100·00	228,029,018	100·00	182,681,915	100·0

Review of Conditions in 1933

Conditions in the mining industry generally, in 1933, were much more encouraging than in the previous year. Even the base metals, copper, lead and zinc, which encounter severe competition in world markets have shown substantial increases in production, and although clay products and other structural materials continue to reflect the continuing diminution of construction undertaken, the mining industry as a whole has made an excellent showing. There was unmistakeable evidence during the first half of 1933 that an upward trend in the demand for certain mine products had commenced. This was particularly emphasized in nickel sales, which recorded a steady gain in quantity during the year. Owing largely to efficient mining and milling methods, higher base metal prices and the relatively high gold content of some ores, copper production showed a considerable increase over the previous year.

Moderate increases in the production values for feldspar, mica and sodium sulphate during the early part of the year were significant in that they probably portend stimulated production in the ceramic, electrical and metallurgical industries.

The value of current production of new gold places Canadian gold mining in a position of premier importance in the mining industry of the Dominion. The severe and rapid decline in commodity prices during the past three years has not only benefited the established gold producer but has stimulated investigation as to the possibility of profitably operating on lower grade ores. The suspension of specie payments by Great Britain in September, 1931, and the United States in April, 1933, continued to react to the benefit of the Canadian gold miner. Exports of gold from Canada have been permitted only under licence since October, 1931, the Canadian Government purchasing the gold output of practically all mines. During the early part of 1933, shipments of gold were made principally to New York but, with the abandonment of the gold standard by the United States, London became the only recognized international market for gold and since that time exports of Canadian gold have been mainly to London.

In the province of Quebec the outstanding mining and metallurgical operations in 1933 were those conducted by Noranda Mines Ltd., at Rouyn. The company announced early in the year that the approximate monthly average production for 1933 would be 2,500 tons of copper and $500,000 gold (basis of $20.67 per ounce); no difficulties were being experienced in making copper sales. Both the mine and metallurgical plants of the company have been in continuous operation throughout the year. At Eustis, in the same province, the Consolidated Copper and Sulphur Company conducted mining operations and exported copper and sulphur-bearing concentrates to the United States. Prospecting and development of gold-bearing claims in northwestern Quebec were widespread. Some of the more prominent properties under exploration included Arntfield Gold Mines, Ltd., Canadian Pandora Gold Mines, Ltd., Lamaque Gold Mines Ltd., Sullivan Consolidated Gold Mines Ltd., and McWatters Gold Mines Ltd. Granada Gold Mines milled large bulk samples from different sections of the mine during the summer of 1933. Siscoe Gold Mines were in continuous operation throughout the year and a new vein was intersected at the sixth level, while in Cadillac township

the O'Brien-Cadillac was a consistent producer. One of the most noteworthy mining events in Quebec during 1933 was the completion and operation of a mill on the property of Beattie Gold Mines Ltd., in Duparquet township; gold-bearing concentrates from this mine are shipped for recovery of precious metals by smelter treatment. A new 100-ton gold mill was also completed and placed in operation during 1933 on the Green-Stabell mine in Dubisson township. Bussieres Mining Company was an active gold producer in Louvicourt township.

Due to an increase in demand for nickel, production of the International Nickel Company of Canada was stepped up to 40 p.c. of capacity during the first half of the year. The company's announced policy is to maintain adequate stocks of nickel and so far as is practicable to keep production on a par with consumption. Falconbridge Nickel Mines reported a successful year; in April the new concentrator and sintering plant of this company were connected up. Mines in both of Canada's largest gold camps, Porcupine and Kirkland Lake, worked at almost maximum capacity throughout the year, and the results of this activity were reflected in the well-being of the communities surrounding these properties.

Of the more recent mining developments in the newer fields of the province, probably those in the Swayze area are the most outstanding. Early in January shaft sinking was started on the Kenty gold mine located in Swayze township; extensive underground work was completed and the property systematically explored. In the Matachewan area the Ashley mine was in steady production, and in the same general area the interesting and extensive exploration of large low grade gold deposits was witnessed. In the Red Lake district, Howey Gold Mines brought its new milling unit into operation and it was reported that 1,400 tons of ore per day were to be hoisted. In October, 1933, construction was completed on a new 200-ton mill at the Macassa mine in the Kirkland Lake camp. Near Bourkes Station in Maisonville township the Lakeland Gold Mines installed a 150-ton mill and in addition conducted extensive underground development. During the summer of 1933 construction of a gold mill was commenced at the property of Central Patricia mines in the district of Patricia; it is expected this will be in operation early in 1934.

Mining and smelting operations of the Hudson Bay Mining and Smelting Company, Ltd., at Flin Flon, Manitoba, were continuous during 1933. These are amongst the largest of their kind in Canada and constitute a distinct asset in the industrial life of the Dominion. San Antonio and Central Manitoba gold mines conducted mining and milling operations in eastern Manitoba throughout 1933. In this same district a new mill was placed in operation in September at the Oro-Grande gold mine. In the northeastern part of the province important and encouraging results were reported to have been obtained on gold-bearing properties located at God's and Island lakes. It was announced in May, 1933, that the McLeod River Mining Co. had resumed gold dredging in northern Alberta.

One of the more important events in the British Columbia mining industry during 1933 was the resumption of operations at the Monarch mine, Field, by the Base Metals Corp. Ltd. Lead and zinc concentrates were shipped by this company to Europe *via* Vancouver; in June, 1933, it was reported that the Bralorne gold mill in the Bridge River area had been stepped up to 130 tons. Pioneer Mines, also operating in the same

area was in continuous production during 1933. In the Cariboo mining division, the new mill of the Cariboo Gold Quartz Mining Company was operated successfully; ore was reported to average $18.30 per ton in the early part of the year. Reno Gold Mines Ltd., operating a property near Salmo, conducted important development work and produced bullion in the reconstructed Motherlode mill. At Kimberley, the Consolidated Mining and Smelting Co. Ltd. operated the famous Sullivan mine throughout the year; concentrates produced from ores mined in this mine were treated in the metallurgical plants of the company at Tadanac. Mining and smelting of copper ores were conducted at Anyox by the Granby Consolidated Mining and Smelting Co. Ltd.; blister copper produced by this company was exported to the United States. At the annual meeting of the Premier Gold Mining Company it was announced that the monthly rate of about 13,000 tons was to be maintained and that the mine's life was limited to from 1½ to 2 years. Copper, sulphur and zinc concentrates were produced by the Britannia Mining and Smelting Company Ltd., at Britannia Beach; these were largely exported. Prospecting in British Columbia was widespread in 1933 and considerable placer gold was recovered.

At Great Bear lake, Northwest Territories, exploration and development of the uranium-radium-silver deposits in the Echo Bay area were continued on a more extensive scale than in 1932. Eldorado Gold Mines Ltd., operating in this section, erected a concentrator at the mine and it was reported in July that this company was now making shipments of refined uranium and radium products from its refinery at Port Hope, Ontario; silver-radium ores continued to be shipped out of the Great Bear Lake area during 1933.

Mining operations in Yukon were principally confined to the dredging of auriferous gravels and the mining of silver-lead ores by the Treadwell Yukon Company. No production has been reported by this company since March.

An analysis of the statistics comprising the estimate of the mineral production of Canada for 1933 reveals an increase of 8·5 p.c. in the total value of mineral products over that for 1932. The figures also reflect much more encouraging conditions in the Canadian mining industry than those experienced throughout the previous year. Metals as a group showed an increase of 20 p.c. in value; increases in both quantities and values were recorded for nickel, copper, lead and zinc, and, while the quantities of gold and silver were somewhat less than for the preceding year, the value of the gold output, estimated in Canadian funds at over $84,000,000, was the highest in the history of the Canadian gold-mining industry. Of the major non-metallic sub-divisions, slightly downward trends were indicated for fuels and structural materials. Among fuels, coal and natural gas outputs were somewhat off from 1932 but there was, however, an increase of 8 p.c. in the production of crude petroleum. Smaller tonnages of clay products, cement, stone, and sand and gravel are in line with the low level of the construction industries. An increased output of lime appears to be the result of expansion in the chemical industries, while increases recorded for asbestos, feldspar, mica, salt, sodium sulphate, and various other non-metallic minerals indicate the widening scope of general industrial recovery.

CHAPTER VIII

THE WATER POWERS OF CANADA

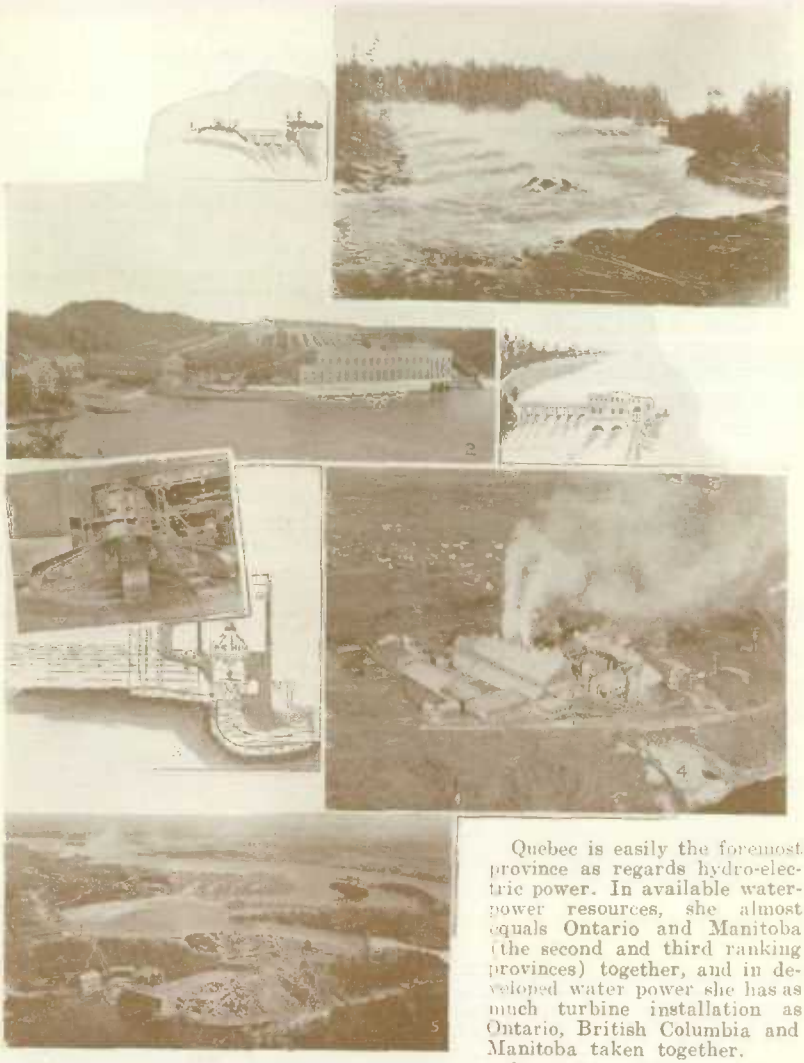
Water power is one of Canada's greatest natural resources and, unlike other resources, is not depleted with use. On Jan. 1, 1934, there was a total installation of hydraulic turbines and water wheels of 7,332,070 h.p. compared with a total installation of 7,045,260 h.p. on Jan. 1, 1933. Fortunately, the greater part of both the potential and developed power is located in the central provinces of Quebec and Ontario which are largely industrial and without coal resources. The Jan. 1, 1933, figure of 7,045,260 h.p. was exceeded only by one other country, *viz.*, the United States with 15,818,000 h.p. for 1932, but on a per capita basis Canada had an average of 0·69 h.p. as against 0·127 h.p. in the United States. Norway, with about the same average installation per capita as Canada has a smaller total development.

The table below shows the hydraulic turbine installation as at Jan. 1, 1934, and also the estimated potential power by provinces. These estimates include only rivers where the flows and heads have been measured; they are based on continuous power available twenty-four hours each day at 80 p.c. efficiency, *i.e.*, 80 p.c. of the theoretical power. The two estimates shown are: first, power available throughout the year based on the minimum flow or flow during the dry periods; and second, the maximum available for six months. Because power is seldom required continuously 24 hours each day to the full capacity of the generating equipment, water can generally be stored during the hours of light demand and used during the hours of heavy demand. Consequently, whenever feasible, power plants are equipped with generating machinery having a capacity much greater than the theoretical continuous power of the waterfall.

Available and Developed Water Power in Canada, by Provinces, January 1, 1934

Province	Available 24-hour Power at 80 p.c. Efficiency		Turbine Installation
	At Ordinary Minimum Flow	At Ordinary Six Months' Flow	
	h.p.	h.p.	h.p.
Prince Edward Island	3,000	5,300	2,439
Nova Scotia	20,800	128,300	112,167
New Brunswick	68,600	169,100	133,681
Quebec	8,459,000	13,064,000	3,493,320
Ontario	5,330,000	6,940,000	2,355,105
Manitoba	3,300,000	5,344,500	390,925
Saskatchewan	542,000	1,082,000	42,035
Alberta	390,000	1,049,500	71,597
British Columbia	1,931,000	5,103,500	717,602
Yukon and Northwest Territories	294,000	731,000	13,199
Totals	20,347,400	33,617,200	7,332,070

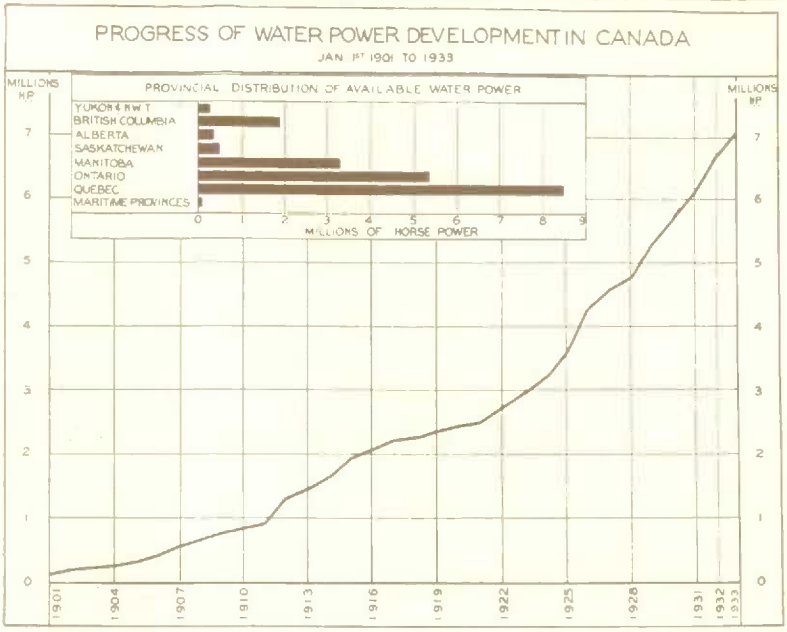
HYDRO-ELECTRIC DEVELOPMENT AT SHAWINIGAN FALLS



Quebec is easily the foremost province as regards hydro-electric power. In available water-power resources, she almost equals Ontario and Manitoba (the second and third ranking provinces) together, and in developed water power she has as much turbine installation as Ontario, British Columbia and Manitoba taken together.

Shawinigan Falls is an ideal example of a progressive urban community centred entirely about the hydro-electric industry. Its position, in close proximity to the forest lands of Quebec, has made it the power centre of industries associated with wood and paper established in the neighbourhood; a huge chemical industry has also been developed; the latest addition to the industrial structure of the city has been the establishment of a plant for the manufacture of "cellophane"—a transparent wrapping material manufactured from wood cellulose, which is rapidly increasing in popularity.

The St. Maurice river is outstanding among the water courses of Quebec in regard to hydro-electric power developments. Including the 160,000 h.p. now being pushed to completion at Upper Isle Blanc, half of which is scheduled to



It has been estimated that under ordinary conditions there is sufficient potential power in the rivers of Canada (including a half of the international waters) to drive hydraulic turbines totalling 43,700,000 h.p. Although the most favourably located sites have been developed, there are still great quantities of undeveloped power within feasible transmission distances from industrial centres. The very magnitude of some of these, as on the St. Lawrence river, has delayed their utilization, but after negotiations extending over nearly a year, the Governments of the United States and Canada, in August, 1932, consummated an agreement directed to the development of the St. Lawrence Seaway, apportioning costs as between the different authorities concerned, and defining a plan of construction to be followed out. (See p. 120.)

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be ready in April and half in August, there is a total installation of 855,285 h.p. on the river—nearly one quarter of the total installation of Quebec province. In addition, the upper reaches of the river provide a vast reserve of power, which may be developed as required. There is one greater hydro-electric plant in Quebec than any on the St. Maurice, *viz.*, the Ile Maligne plant on the Saguenay which boasts an installation of 495,000 h.p., but as yet even the great Saguenay, or that part of the greater St. Lawrence which flows through Quebec, have not the aggregate installations of the St. Maurice, including the Rapide Blanc project.

The illustration shows: (1) View of the lower part of Shawinigan falls, on the St. Maurice river, from a painting made in the '90's before the waters were harnessed and put to work. (2) Power houses at Shawinigan Falls. (3) A 43,000 h.p. unit and a diagram of the relationship between the generator and the turbine. (4) The Carbide Division of the large chemical industry which has been firmly established at Shawinigan Falls. This is a branch of industrial chemistry which requires an abundance of cheap electric power. (5) An aeroplane view of the present city of Shawinigan Falls.

Photos, courtesy the Shawinigan Water and Power Company, Montreal.

Growth of the Fisheries by Provinces, 1900, 1914 and 1932

Province	Value of Production			Per cent from each Province		
	1900	1914	1932	1900	1914	1932
	$	$	$	p.c.	p.c.	p.c.
Prince Edward Island	1,059,193	1,261,666	988,919	4·9	4·1	3·8
Nova Scotia	7,809,152	7,730,191	6,557,943	36·2	24·7	25·3
New Brunswick	3,769,742	4,940,083	2,972,682	17·5	15·8	11·5
Quebec	1,989,279	1,924,430	1,815,544	9·2	6·2	6·9
Ontario	1,333,294	2,755,291	2,147,990	6·2	8·8	8·3
Manitoba	455,749	849,422	1,204,892	2·1	2·7	4·6
Saskatchewan	262,410	132,017	186,174	1·2	0·4	0·7
Alberta		86,720	153,789		0·3	0·6
British Columbia	4,878,820	11,515,086	9,909,116	22·7	36·8	38·2
Yukon	not known	69,725	20,060	–	0·2	0·1
Totals	21,557,639	31,264,631	25,957,109	100·0	100·0	100·0

Fisheries Production by Principal Kinds, 1931 and 1932

(Each over $1,000,000 in value and arranged by value in 1932)

Kind	1931		1932	
	Quantity Caught	Value Marketed	Quantity Caught	Value Marketed
	cwt.	$	cwt.	$
Salmon	1,343,701	7,972,017	1,331,054	8,037,904
Lobsters	435,490	5,037,028	483,488	4,745,311
Cod	1,463,626	2,827,350	1,428,941	2,193,621
Herring	2,462,751	2,330,044	1,862,372	1,473,288
Halibut	210,926	1,780,044	193,845	1,227,680
Whitefish	156,215	1,425,311	138,478	1,193,634
Haddock	363,850	1,362,876	360,155	1,114,802

Trade.—Although the domestic consumption of fish in Canada is increasing, the trade still depends largely upon foreign markets. Perhaps 60 p.c. of the annual catch is an average export. In the calendar year 1932, total exports amounted to $18,752,107, of which $8,650,853 went to the United States and $4,220,655 to the United Kingdom. The most important single export is canned salmon (to the United Kingdom and European markets), followed closely by cod, dry-salted (to the West Indies, South America, etc.). For fresh fish, especially whitefish and lobsters, the United States is the chief market. In brief, Canada's export trade in fish falls below that of the United Kingdom and Norway alone. Canadian imports of fish and fish products including fish oils, etc., in 1932 amounted to $1,862,337, of which about 30 p.c. came from the United States; 36 p.c. of the imports were canned fish, chiefly sardines.

The expansion described above was featured by numerous changes in conditions. In early days the cod and haddock of the Atlantic were the most important items of the catch; to-day British Columbia, with her enormous salmon and halibut fisheries, takes the lead among the provinces (a leadership that in earlier times belonged to Nova Scotia), accounting for nearly half of the catch. The lobster fishery of Eastern Canada has

also become vastly more important, until it is now the largest fishery of the kind in the world. But the greatest element of change has been contributed by improvements in the methods of catching and preparing the fish, and especially by the development of the fish-canning industry. In

THE ATLANTIC COAST FISHERIES

Salmon Drifting on the Miramichi River, N.B.

Tuna Trapping, N.S.—Hauling in Spiller Net.

Stacking and Drying Cod Fish, Digby, N.S.

Photos, Canadian Government Motion Picture Bureau.

1870 there were but three lobster canneries on the Atlantic coast of Canada; in 1932 these canneries numbered 357, employing nearly 7,000 people; 30,000,000 lobsters is a normal catch. The salmon canneries of the Pacific are all large ones and numbered 44 in 1932. The salmon pack of the

province in that year amounted to 1,081,011 cases of 48 lb. each, an output nearly double that of the previous year, but still a little below the average yearly production.

Materials Used and Values of Products of Fish-Canning and -Curing Establishments, 1930-32

Material and Product	1930	1931	1932
	$	$	$
Material used—			
Fish	15,939,137	9,137,505	7,708,713
Salt	348,201	351,781	170,385
Containers	4,569,026	2,220,770	2,190,935
Other	225,125	210,778	193,598
Totals	21,081,489	11,920,834	10,263,631
Product—			
Fish marketed for consumption, fresh	7,639,557	5,168,401	4,243,614
Fish canned, cured or otherwise prepared	25,333,751	13,658,492	12,440,511
Totals	32,973,308	18,826,893	16,684,125

Game Fish.—The foregoing is a purely industrial and commercial survey. Fishing for sport, however, has its economic side in a country of such famous game fish as the salmon of the Restigouche and other rivers of the Maritime Provinces; the black bass and speckled trout of the Quebec and Ontario highlands, the red trout of the Nipigon and the salmon and rainbow trout of British Columbia. A considerable public revenue is derived from the leasing of waters in sparsely settled districts to clubs and individuals for sporting purposes. Several hundreds of guides find employment in this field during the summer months.

The Government and the Fisheries.—The Dominion Department of Fisheries (first established on a separate basis in 1930) controls the tidal waters of the Maritime Provinces and British Columbia, and the fisheries of the Magdalen islands in Quebec province. The non-tidal fisheries of the Maritime Provinces, Ontario and the Prairie Provinces, and both the tidal and non-tidal fisheries of Quebec (except the Magdalen islands) are controlled by the respective provinces, but the right of fisheries legislation for all provinces rests with the Dominion Parliament. A large staff of inspectors, officers and guardians is employed to enforce the fishery laws, and a fleet of vessels patrols the coastal and inland waters to prevent poaching and to assist in the carrying out of the regulations. The main object of legislation has been the prevention of depletion, the enforcement of close seasons, the forbidding of pollutions and obstructions, and the regulation of nets, gear, and of fishing operations generally. The Government has also taken steps from time to time in the field of direct assistance to the industry, including fish collection services on the Atlantic coast; the broadcasting by radio of reports of weather probabilities, bait and ice supplies, ice conditions along the coast, and prevailing local market prices; the payment of bounties (under the Washington Treaty); and instruction in improved methods of curing fish. In addition an extensive system of fish culture has been organized, the Dominion operating, in 1932, 23 main hatcheries, 10 subsidiary hatcheries, and 8 salmon retaining ponds, while stations for the conduct of biological research into the numerous complex problems furnished by the fisheries are estab-

lished at Halifax, N.S., St. Andrews, N.B., and Nanaimo and Prince Rupert, B.C. The expenditure of the Dominion on the fisheries in the fiscal year ended 1932 was $1,786,912.

HALIBUT FISHING ON THE PACIFIC COAST

Putting out the "Dories".

Arriving with "Catch".

"Heading" the Cargo.

Photos, Canadian Government Motion Picture Bureau.

The fisheries of Canada have more than held their relative place among the industries in recent years, and there is now a wider realization than ever before of the value of the fisheries resources in our national economy. The convention held in Quebec in September, 1932, by the Canadian Fisheries Association showed the close organization of the different branches of the industry, the solid basis attained, and the Dominion-wide spirit displayed by the various interests representing the industry from coast to coast.

CHAPTER X

THE FUR TRADE

The Modern Industry.—Although the rapid advance of settlement has greatly restricted the reservoir of fur-bearing animal life cradled in the vast expanses of Northern Canada, yet, after nearly three and a half centuries of exploitation, Canada still holds a foremost place in the ranks of the world's fur-producing countries.

Raw furs are at present the only economic return from hundreds of thousands of square miles of the area of the Dominion and are a resource in which all the provinces and territories have a share.

Commencing with the year 1881, records of the value of raw fur production were obtained in the decennial censuses, but from 1920 the Dominion Bureau of Statistics has issued annual reports, prepared from statements furnished by the Provincial Game Departments, which are based on returns of licensed fur traders. In 1881 the value of pelts taken was $987,555; by 1910 it had become $1,927,550; the figures for the seasons ended June 30, 1921-32 are given below. The values given are the market values of the pelts taken by trappers and those sold from fur farms. The proportion of the latter has risen from about 3·5 p.c. of the total value for earlier years of the decade to 13 p.c. in 1928-29, 19 p.c. in 1929-30, 26 p.c. in 1930-31, and 30 p.c. in 1931-32, thus indicating the growing importance of fur farming (see pp. 102-3).

Numbers and Values of Pelts Taken, Seasons 1920-21 to 1931-32

Season	Number of Pelts Taken	Total Value	Season	Number of Pelts Taken	Total Value
		$			$
1920-21	2,936,407	10,151,594	1926-27	4,289,233	18,864,126
1921-22	4,366,790	17,438,867	1927-28	3,601,153	18,758,177
1922-23	4,963,996	16,761,567	1928-29	5,150,328	18,745,473
1923-24	4,207,593	15,643,817	1929-30	3,798,444	12,158,376
1924-25	3,820,326	15,441,564	1930-31	4,060,356	11,803,217
1925-26	3,686,148	15,072,244	1931-32	4,449,289	10,189,481

In order of value in 1931-32, silver fox with $3,089,818, or 30 p.c. of the total, took first place, supplanting muskrat, which has been Canada's chief fur producer during the last decade, although beaver was supreme in earlier days. Muskrat pelts, valued at $1,403,993 compared with $2,143,148 last year, ranged second, white fox being third with a production valued at $1,373,809. Mink, beaver, ermine (weasel), red fox and patch or cross fox were next in the order given.

If all fox pelts (silver, patch, white, blue and red) are grouped together, the combined value reached $5,225,652, 51 p.c. of the total for all furs. All furs were sold at lower average prices than for several years; silver fox, for example, dropped from $46.48 per pelt in 1931 to $28.74 in 1932, white fox from $23.23 to $20.38, mink from $9.32 to $7.47 and beaver from $14.77 to $11.56. Although values were less than in 1930-31, the numbers

SOME OF CANADA'S FUR-BEARING ANIMALS

Raw furs are still the only economic return from vast areas of the Dominion. Every province and territory shares substantially in the valuable annual catch. (1) Muskrat; (2) Badger; (3) Lynx; (4) Marten; (5) Coyote; (6) Black Bear; (7) Raccoon; (8) Beaver; (9) Squirrel; (10) Mountain Lion; (11) Bob Cat; (12) Gopher.

Photos, courtesy National Parks of Canada, Dept. of the Interior.

of most of the principal kinds show increases. All of the different kinds of fox pelts, excepting white, increased in number, and larger numbers are also recorded for beaver, ermine, lynx, mink, raccoon and skunk.

Canadian manufactures of fur goods, including the dressing and dyeing of raw furs, have shown a rapid growth in recent years, the gross production having increased from about $5,000,000 in 1920 to $15,818,733 in 1931, the latest year for which statistics of manufactures are available. In the latter year there were 279 establishments employed in the industry and wages and salaries paid out amounted to $4,260,161. The cost of raw materials, largely raw furs, amounted to $8,856,762 and thus the net value of $6,961,971 was added in the process of manufacture.

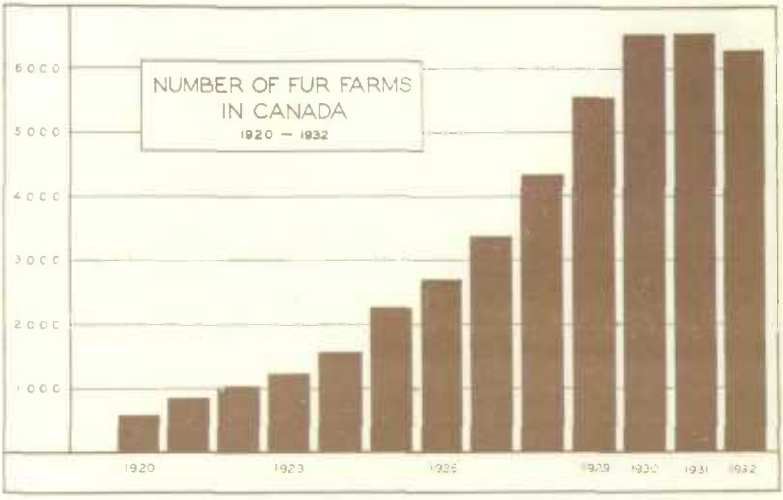
Accompanying the growth of manufactures has been a stimulation of the import trade in raw furs, including the pelts of many animals not taken in Canada, but also including Canadian varieties which have found their way to the main world markets through the auction sales. For the 12 months ended June 30, 1924, imports of raw furs were $7,505,328, and by 1929 they had risen to $13,289,043. The imports for the 12 months ended June, 1930 ($7,518,885), June, 1931 ($5,455,483) and June, 1932, ($2,709,285) reflected the conditions existing after Oct., 1929, to an abnormal degree—not entirely an unexpected circumstance in the case of a commodity so characteristically in the luxury class.

Export Trade.—Prior to the War, London and Leipzig held the positions of outstanding fur markets of the world, but during 1914-18 St. Louis captured the supremacy for the United States although, since the War, London has regained her former prestige. A result of the changed situation thus brought about has been that Montreal, Winnipeg and, to a lesser extent, Edmonton have become important fur marts for buyers from the larger world centres. Montreal held the first fur auction sale to take place in Canada in 1920. Auctions are now held quarterly at Montreal, and regular sales are also held at Winnipeg and Edmonton.

A century ago the value of furs exported exceeded that of any other Canadian product; the total output is not seriously declining, but exports for the year 1932 were only about 2·1 p.c. of our total exports of Canadian merchandise, owing to the rapid growth of other branches of our external trade. The trend of export values over the past ten years was definitely upward until 1929, although the trend of prices generally was downward. Since 1929 exports have fallen from a value of $24,565,000 to $12,218,000 in 1932 without materially changing the percentage to total exports. Of the total export values of furs in 1932, 53·4 p.c. went to the United Kingdom and 35·7 p.c. to the United States.

Fur Farming.—In the early days of the fur trade it was the practice for trappers to keep foxes caught in warm weather alive until the fur was prime; from this has arisen the modern industry of fur farming. The industry is devoted chiefly to the raising of the silver fox, a colour phase of the common red fox established through experience in breeding. But although the fox is of chief importance, other kinds of fur-bearers are being successfully raised in captivity among which are mink, raccoon, skunk, marten, fisher, coyote and badger. Again, within the past few years extensive areas of marsh land have been profitably utilized for the raising of muskrats, and this branch of the industry is expanding rapidly. The

number of fur farms in Canada in 1931 was 6,541, compared with 6,524 in 1930 and 5,513 in 1929. During the five-year period 1927-31 the number increased by 94 p.c. Fox, mink and raccoon farms are the chief kinds numbering 5,201, 795 and 294 respectively.



The total number of fur-bearing animals born on fur farms in 1931, exclusive of muskrat and beaver, was 165,378, compared with 138,808 in 1930, and the number which died from various causes was 32,256, compared with 24,040 the previous year. For muskrat and beaver no exact data can be supplied. The numbers of pelts sold were 133,248, valued at $3,071,460 in 1931, and 77,656 valued at $3,096,270 in 1930. The total number of all kinds of animals sold from farms in 1931 was 9,623, valued at $492,000, and for 1930, 24,500 valued at $1,828,545. Silver fox in 1931 contributed 73 p.c. of the total and the highest price received during the year for a silver fox was $800, the same figure as in the previous year.

Advance statistics for the year 1932 indicate an increase in the number of fox farms to 5,221, but a decrease in the number of miscellaneous fur-bearing animal farms to 1,075. A reduction, to 7,216 valued at $243,193, is noted in the number of live fur-bearing animals sold, but an increase, to 135,718 valued at $3,046,627, in the number of pelts disposed of by the fur farms. Average prices were slightly lower in 1932 than in 1931 for all kinds of live animals and for pelts. The total number of fur-bearing animals on the farms at the end of the year 1932 was 256,205, valued at $6,754,762, an increase in number compared with the preceding year of 2 p.c., but a decrease in value of 21 p.c.

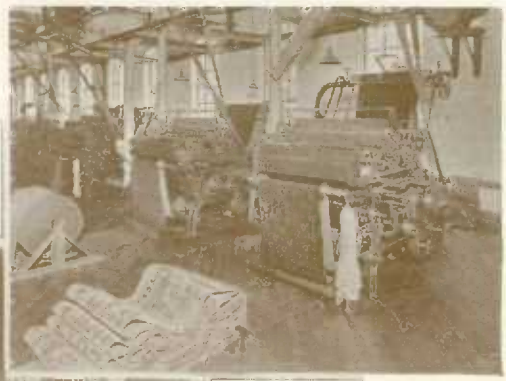
In spite of the rapid growth of the industry there are no signs that fur farming is overdone. Canada is regarded abroad as the best source of silver foxes for breeding and large numbers have been exported at good prices to the United States and Europe. The quality of the pelt does not appear to have suffered in captivity and there are many breeders who maintain that finer skins are derivable from farms than were ever secured from the open spaces.

CHAPTER XI

THE MANUFACTURES OF CANADA

The present century has witnessed the chief forward movement in Canadian manufactures, mainly as the result of two great influences: firstly, the "boom" accompanying the opening up of the West, which greatly increased the demand for manufactured goods of all kinds and especially construction materials; and secondly, the War, which not only created enormous new demands but left a permanent imprint upon the variety and efficiency of Canadian plants. In 1910, when the first of these influences was but partly felt, the gross value of Canadian manufacturing production had risen to $1,166,000,000, the capital invested to $1,248,000,000, and the number of employees to 515,000; but by 1920, the gross value of Canadian manufactured products was no less than $3,772,000,000, the capital invested $3,372,000,000, and the number of employees 609,586. Hundreds of millions of capital had been attracted from outside (see p. 49) in achieving this striking result. After 1920 the figures declined, but subsequent gains brought them back for 1929 to even higher levels than 1920, as the accompanying table shows. As expected, the 1931 figures when compared with those for 1929 indicate a reduced gross production of 33 p.c., although the net production, due to the proportionately greater reduction in the cost of materials, was down only 26 p.c.

INDUSTRIAL TEXTILES



Section of a Carpet Manufacturing Plant in Toronto, Ont.

Printed Calico coming from a Dryer—Magog, Que.

Photos, Canadian Government Motion Picture Bureau.

Historical Summary of Statistics of Manufactures, 1870–1931

Year	Establishments	Capital	Employees	Salaries and Wages	Cost of Materials	Net Value of Products[3]	Gross Value of Products
	No.	$	No.	$	$	$	$
1870	41,259	77,964,020	187,942	40,851,009	124,907,846	96,709,927	221,617,773
1880	49,722	165,302,623	254,935	59,429,002	179,918,593	129,757,475	309,676,068
1890	75,964	353,213,000	369,595	100,415,350	250,759,292	219,088,594	469,847,886
1900[1]	14,650	446,916,487	339,173	113,249,350	266,527,858	214,525,517	481,053,375
1910[1]	19,218	1,247,583,609	515,203	241,008,416	601,509,018	564,466,621	1,165,975,639
1920[2]	23,351	3,371,940,653	609,586	732,120,585	2,085,271,649	1,686,978,408	3,772,250,057
1929[2]	23,597	5,083,014,754	694,434	813,049,842	2,032,020,975	1,997,350,365	4,029,371,340
1930[2]	24,020	5,203,316,760	644,439	736,092,766	1,666,983,902	1,761,986,726	3,428,970,628
1931[2]	24,501	4,961,312,408	557,426	624,545,561	1,223,880,011	1,474,581,851	2,698,461,862

[1] Includes all establishments employing five hands or over.
[2] Includes all establishments irrespective of the number of employees but excludes Construction, and Custom and Repair Work.
[3] Gross value less cost of materials.

According to the latest census available, Canada possessed, in 1931, 24,501 manufacturing establishments with capital investment in lands, buildings, equipment, etc., amounting to $4,961,312,408, employing 557,426 persons with salaries and wages amounting to $624,545,561. They consumed $1,223,880,011 worth of raw materials (not including fuel) and produced goods to the value of $2,698,461,862. Owing to the prevailing conditions, it is estimated that the value of production in 1932 will be about 20 p.c. lower than in the previous year.

Census of Manufactures, by Provinces and Industrial Groups, 1931

Province or Group	Establishments	Capital	Employees	Salaries and Wages	Cost of Materials	Net Value of Products[1]	Gross Value of Products
Province	No.	$	No.	$	$	$	$
P.E.I.	290	4,019,288	1,170	809,122	2,349,367	1,787,209	4,136,576
N.S.	1,449	129,824,727	16,175	14,881,673	33,288,250	37,391,253	70,679,503
N.B.	872	128,859,472	13,107	12,706,897	25,631,856	29,577,962	55,209,818
Quebec	7,505	1,662,811,076	180,808	187,362,564	369,044,132	480,110,221	849,154,353
Ontario	10,140	2,285,361,451	269,739	313,676,300	597,879,792	714,521,036	1,312,400,828
Manitoba	955	191,935,311	24,193	30,706,209	55,149,392	63,391,473	118,540,865
Sask.	768	68,547,866	6,061	7,546,703	22,540,618	21,724,533	44,265,151
Alberta	886	107,427,603	11,798	14,213,733	36,090,169	32,277,242	68,367,411
B.C. and Yukon	1,636	382,525,614	34,375	42,642,340	81,906,435	93,800,922	175,707,357
Canada	24,501	4,961,312,408	557,426	624,545,561	1,223,880,011	1,474,581,851	2,698,461,862
Industrial Group							
Vegetable	5,283	545,387,574	77,706	79,022,515	260,604,562	274,474,901	535,079,463
Animal	4,430	217,441,415	51,297	51,270,503	214,743,508	106,059,948	320,803,456
Textiles	1,955	352,344,073	105,473	92,504,088	153,191,375	163,967,295	317,158,670
Wood and paper	7,767	1,053,064,435	121,672	140,349,106	192,379,915	291,858,015	484,237,930
Iron, etc.	1,243	676,270,362	96,927	120,759,931	170,754,686	203,970,382	374,725,068
Non-ferrous metals	455	318,395,983	34,414	46,111,373	95,342,788	116,519,624	211,862,412
Non-metallics	1,272	328,873,782	24,895	32,219,282	78,945,766	102,486,140	181,431,906
Chemicals	621	163,863,072	15,207	20,867,948	40,756,550	64,745,355	105,501,905
Miscellaneous	464	75,682,761	12,821	15,133,859	17,160,861	28,189,461	45,350,322
Central electric stations	1,011	1,229,988,951	17,014	26,306,956	–	122,310,730	122,310,730

[1] Gross value less cost of materials.

The great development in Canadian manufactures since the War has been stimulated by the fact that foreign firms have realized the splendid field which Canada furnishes for the establishment of branch factories and have invested large amounts of capital in varied enterprises which have provided employment for Canadian labour. There is every reason to think that this movement will be further encouraged as a result of the Imperial Conference of 1930.

The classification of industries followed in the latter part of the table on page 105 indicates the important position of the Animal Products group in Canadian industry. Space does not permit of the treatment of all these groups, but this and iron and its products are selected for treatment this year.

The Meat-Packing Industry.—Dressing hogs in a Toronto meat-packing plant.

Animal Products.—Production in this group is determined, in large measure, by the demand at home and abroad for Canadian butter, cheese, canned fish, fresh or frozen meats, bacon and hams, condensed and evaporated milk, etc.

The leading industry of the group is that of slaughtering and meat packing, with a value of production in 1931 of $117,596,697. Next comes butter and cheese, with a value of $95,728,398. These two industries produced about two-thirds of the production of the entire group.

The butter and cheese industry, which manufactures a product of farm animals, has been for many years of leading importance in Canada. Originating in the agricultural districts of the Maritime Provinces, the Eastern Townships of Quebec, and the southern counties of Ontario, it is now developing rapidly in the Prairie Provinces and in the more northern

settlements of Quebec and Ontario. For an industry so large in the aggregate, it is unique in having shown very little tendency toward consolidation in large units, the gross production of $95,728,398 coming from no fewer than 2,676 plants, mostly small and scattered at convenient points throughout the farming communities.

Canadian Creamery Butter Prepared for the British Market.

Canadian Cheese being Warehoused for Export.

Photos, Canadian Government Motion Picture Bureau.

The leather industries have long been established on a considerable scale, mainly, of course, because the large number of cattle raised and slaughtered provides a ready supply of hides. There are large tanneries in the eastern provinces, and no fewer than 184 boot and shoe factories were in operation in 1931, chiefly in Quebec and Ontario, representing a total capital of nearly $26,000,000 with an annual output of nearly $37,000,000 and employing 14,150 men and women. The canning and preserving of fish also calls for reference. Concentrated naturally upon the Pacific and Atlantic coasts, 662 establishments were engaged in 1931 in canning, curing and packing of various kinds of fish that were valued at nearly $19,000,000.

The industries of this group manufacturing food products have shown decreased production during the years since 1926 and the group as a whole has not kept pace with the other groups in the volume of production. This has been more especially true of the slaughtering and meat-packing, butter and cheese and fish-curing and packing industries. On the other hand, the industries where the manufacturing process plays a greater part, such as those making wearing apparel and boots and shoes, have recorded substantial increases since 1926, although along with all industries they have, generally speaking, felt the effects of the present depression.

Iron and Its Products.—The manufacture of iron and steel and their products is also one of Canada's basic industries. Iron ore is not now produced in Canada, as the known deposits, though extensive, are not of sufficiently high grade to permit economic recovery under present conditions. Yet there has been built up a primary steel industry of considerable importance, and the secondary or fabricating industries have been expanding steadily to meet the country's increasing requirements.

There are now four concerns which make pig iron in Canada, one being in Nova Scotia and three in Ontario. The former uses Nova Scotia coal and iron ore from the great Wabana deposits which it controls, on Bell island, Newfoundland, while the Ontario works are dependent on foreign ore and coal, which are brought from the United States. These companies have blast furnaces with a rated capacity of 1,500,000 tons of pig iron per annum, but the highest tonnage yet attained was 1,080,160 long tons in 1929. Open hearth steel furnaces and rolling-mills are also operated by these companies, which produce steel ingots, blooms and billets, bars, rods, rails, structural shapes, plates, sheets, rail fastenings, etc.

Among the secondary industries, the production and maintenance of railway cars, locomotives and parts is of first importance. In 1931 there were 38 plants for this purpose, and 21,773 workers were employed. The value of products was $67,865,070, which was $37,000,000 lower than in 1930.

Automobile manufacturing is one of Canada's largest industries with 9,545 employees, products valued at $59,674,345 and a capital investment of $59,638,057 in 1931. This was not a representative year and the figures are hardly indicative of the real importance of the industry. In 1929, for instance, 16,435 people were employed in 17 plants then in operation and cars and parts worth $177,315,593 were produced for the home and export markets.

The export trade in automobiles and parts reached its peak in 1929, when cars and parts worth $47,005,671 were shipped to other countries. For 1931 this market had declined to $6,621,510.

There are also numerous works for the manufacture of machinery, agricultural implements, sheet metal products, foundry products and similar articles of iron and steel, and the variety of products made in these establishments is increasing yearly.

The important place which the wood and paper group of industries occupies is dealt with in Chapter VI.

Leading Individual Industries, 1931.—Compared with 1930, there have been a few marked changes in the order of the ten leading industries when arranged according to the gross value of production; this in addition to the fact that there has been an appreciable decrease in the value of production in every case. In 1931 pulp and paper was again in the lead, followed by central electric stations, slaughtering and meat-packing, non-ferrous metal smelting, flour and feed mills, etc. Some of the more important changes in the ranking of the leading industries were as follows: non-ferrous metal smelting advanced from tenth to fourth place, central electric stations from fourth to second place and petroleum products from eleventh to eighth place, while railway rolling stock dropped from seventh to tenth place, flour and feed mills from third to fifth

Leading Manufacturing Cities of Canada, 1931

City or Town	Establishments	Capital	Employees	Salaries and Wages	Cost of Materials	Gross Value of Products
	No.	$	No.	$	$	$
Montreal	1,992	469,455,443	91,327	102,368,420	194,793,389	438,237,287
Toronto	2,443	518,626,003	91,105	115,043,020	195,476,790	426,583,692
Hamilton	450	209,615,031	26,539	31,657,029	50,201,527	125,164,616
Winnipeg	543	129,849,693	17,698	22,292,946	32,005,602	73,723,211
Vancouver	681	126,641,532	14,209	17,094,786	33,270,166	72,999,316
London	239	43,893,929	8,648	9,941,698	14,515,455	39,126,557
Kitchener	141	36,370,676	7,875	7,913,904	13,997,210	34,901,982
Quebec	257	65,216,126	9,511	8,729,876	13,056,535	33,848,800
Oshawa	46	24,743,493	4,987	5,823,135	15,464,622	29,133,469
Ottawa	207	55,561,883	7,793	9,459,420	11,106,087	28,702,838
Three Rivers	58	71,185,671	5,275	5,148,878	11,468,677	28,427,631
Calgary	155	35,831,172	4,502	5,643,894	15,807,725	28,000,169
Walkerville	60	33,811,763	4,083	5,509,596	15,666,045	27,301,278
Sarnia	49	24,282,649	2,591	3,440,168	15,601,343	24,870,447
Peterboro	89	23,948,733	4,589	4,763,385	11,274,261	23,530,247
Montreal East	7	40,308,766	1,547	2,238,051	9,427,476	22,678,061
Shawinigan Falls	25	128,912,906	3,138	4,216,660	3,895,379	20,144,185
Edmonton	159	23,212,331	4,084	5,127,350	10,348,760	20,128,405
Brantford	99	48,358,378	5,513	5,585,738	8,524,579	19,422,441
East Windsor	12	21,830,739	3,584	5,460,924	10,136,097	19,388,865
Regina	90	34,589,756	2,328	3,176,911	8,141,098	18,060,908

Trade in Manufactures.—Canada is the second most important manufacturing country in the British Empire. The capacity of Canadian industries and the variety of products marketed are such that many classes of goods, formerly imported, are now being manufactured in the Dominion in sufficient volume not only to meet the requirements of the home market but also for export. To-day Canada sends manufactured goods to almost every country in the world. For the fiscal year ended Mar. 31, 1932, these exports reached $350,000,000 in value, whereas in 1900 they were below the $100,000,000 mark and fourteen years later were but $159,000,000.

Among the industrial groups, the vegetable products group occupies an important position in trade. Wheat flour, rubber tires, canvas shoes with rubber soles, prepared cereal foods, sugar and alcoholic beverages are some of the more important articles which enter into the export trade of Canada.

The exports of socks and stockings has been steadily increasing in both the volume and value, and reached a new high level in 1930 when 84,833 dozen pairs, valued at $907,761 were exported. This, however, dropped to 76,075 dozen pairs, valued at $695,041 in 1931. New Zealand and British South Africa are our best customers, importing, in 1931, 37,698 dozen pairs, valued at $318,044 and 19,732 dozen pairs, valued at $204,450 respectively.

Conditions During the Years 1929-33.—Perhaps the best all-round barometer of conditions is afforded by the indexes of employment maintained from month to month in the Dominion Bureau of Statistics, and based on returns received from establishments having 15 hands and over. These reporting establishments normally employ about 600,000 work-people.

The severity of the depression which set in toward the end of 1929 is strikingly illustrated by the monthly employment indexes shown below. From a high of 121·6 attained in August, 1929, employment kept steadily

place and slaughtering and meat-packing from second to third place. Butter and cheese did not change at all, remaining in sixth place in both years.

Principal Statistics of Twenty-five Leading Industries, 1931

Industry	Establishments	Capital	Employees	Salaries and Wages	Cost of Materials	Gross Value of Products[1]
	No.	$	No.	$	$	$
Pulp and paper	103	630,176,540	26,669	34,792,013	63,947,678	174,733,954
Central electric stations	1,011	1,229,988,951	17,014	26,306,956	-	122,310,730
Slaughtering and meat-packing	147	62,481,905	9,294	11,626,678	91,276,842	117,596,697
Non-ferrous metal smelting	14	175,669,195	7,860	13,245,327	48,336,301	98,565,755
Flour and feed mills	1,265	61,069,192	5,671	6,032,189	71,771,797	95,728,540
Butter and cheese	2,676	52,381,144	11,965	12,259,926	64,661,837	95,728,398
Electrical apparatus and supplies	163	100,057,945	18,207	22,474,319	32,385,342	81,578,595
Petroleum products	32	68,136,281	4,122	6,214,745	50,617,742	76,158,644
Tobacco, cigars and cigarettes	105	50,194,202	9,091	8,096,769	21,448,879	74,926,154
Railway rolling stock	38	97,484,985	21,773	28,111,765	35,335,573	67,865,070
Printing and publishing	764	65,573,014	16,918	26,375,663	14,029,548	65,700,122
Bread and other bakery products	2,912	54,267,110	18,337	18,862,604	28,619,776	64,818,227
Sawmills	3,562	121,336,176	22,361	16,409,674	37,379,034	62,769,253
Automobiles	26	59,638,057	9,545	13,113,192	36,476,355	59,674,345
Clothing, factory, women's	471	21,430,983	15,648	15,018,195	30,955,973	54,140,770
Rubber goods, including footwear	48	67,446,955	12,158	11,708,387	17,630,081	52,691,230
Castings and forgings	333	95,377,318	17,049	19,203,234	18,598,048	51,455,296
Biscuits, confectionery, chocolate, etc	282	51,530,443	12,145	10,892,636	20,207,678	49,285,042
Breweries	80	63,140,211	4,679	6,601,528	13,289,689	49,055,739
Hosiery and knitted goods	161	57,173,774	17,698	13,948,570	22,052,418	47,757,703
Sugar refineries	8	37,691,433	2,265	3,307,730	29,106,494	43,962,061
Cotton yarn and cloth	34	74,023,179	15,802	12,362,032	22,231,449	43,136,423
Sheet metal products	157	52,352,956	7,988	9,265,806	20,230,852	39,039,005
Primary iron and steel	53	104,512,104	8,026	11,072,054	15,291,414	36,911,245
Boots and shoes	184	25,844,168	14,150	12,340,283	17,949,804	36,625,565
Totals, Twenty-five Leading Industries	14,629	3,478,978,221	326,435	369,642,275	823,920,604	1,762,214,563
Grand Totals, All Industries	24,501	4,961,312,408	557,426	624,545,561	1,223,880,011	2,698,461,862
Percentages of Twenty-five Leading Industries to All Industries	59·71	70·12	58·55	59·19	67·33	65·30

[1] Net value of production can be obtained by deducting cost of materials from these figures.

On the basis of net value, or value added by manufacture, the order of importance of the industries in 1931 was very different from that based on gross value. The central electric stations industry was foremost in this respect and was followed in the order named by pulp and paper, tobacco, cigars and cigarettes, printing and publishing, non-ferrous metal smelting, electrical apparatus and supplies. In salaries and wages paid, the pulp and paper industry also ranked first and was followed in the order given by railway rolling stock, printing and publishing, central electric stations, electrical apparatus and supplies.

The leading centres of manufactures are Montreal and Toronto with totals of $438,000,000 and $427,000,000 in 1931, respectively. After these come Hamilton with $125,000,000, Winnipeg with $74,000,000 and Vancouver with $73,000,000. There are eight other places having manufactures with a gross production of $25,000,000 and over in 1931.

CHAPTER XII

CONSTRUCTION

The construction industry, as here understood, embraces construction in transportation and public utilities as well as the more widespread municipal and private building operations with their almost complete dependence on local demand and with their progress more sensitive to the state of the money market and the cyclical fluctuations of general business conditions.

Transportation and Public Utilities.—Railway expenditures for maintenance of way and structures were substantially reduced in 1932, amounting to about $50,000,000 for steam railways and $2,800,000 for electric railways. Capital investments in new lines were $3,546,357, less a credit of $269,730 for additions and betterments for steam railways in 1932, making a total of $3,276,627 as compared with $65,154,351 for 1931, and $102,000,000 for 1930. For electric railways the expenditures on road and equipment during 1932 amounted to only $332,027 exclusive of credits for railways which ceased operation during the year.

The good roads program of the Dominion and Provincial Governments, undertaken largely since the War, has been another large item of expenditure. The increased use of motor vehicles for passenger and freight movement has been the primary cause of the greatly increased expenditures in recent years. During 1932 the expenditures on provincial highways and on local roads receiving subsidies from Provincial Governments amounted to $66,250,000 for construction and $22,287,000 for maintenance, or a total of $88,537,000 compared with a total of $88,000,000 in 1931. (See p. 121.)

Construction Contracts Awarded in Canada, eleven months, 1932 and 1933

(MacLean Building Reports, Ltd.)

Type of Construction	1932		1933	
	No.	Value	No.	Value
		$		$
Apartments	109	1,507,500	116	896,100
Residences	8,339	26,192,700	8,005	21,895,400
Totals, Residential	*8,447*	*27,700,200*	*8,121*	*22,791,500*
Churches	150	2,726,800	148	2,024,700
Public Garages	371	2,863,800	395	1,798,800
Hospitals	63	3,979,400	49	1,838,600
Hotels and Clubs	126	1,388,600	152	1,223,300
Office Buildings	119	3,190,600	164	1,007,800
Public Buildings	314	8,023,300	285	2,601,000
Schools	193	6,735,900	187	5,360,600
Stores	881	4,644,900	935	3,411,300
Theatres	36	643,100	49	442,400
Warehouses	213	4,448,500	263	5,607,000
Totals, Business	*2,466*	*36,644,900*	*2,627*	*25,315,500*
Totals, Industrial	*544*	*7,710,900*	*424*	*8,749,900*
Bridges	232	7,329,600	161	6,247,000
Dams and Wharves	117	2,176,600	56	561,500
Sewers and Watermains	547	10,516,200	315	4,512,900
Roads and Streets	1,246	19,419,200	599	13,690,800
General Engineering	438	15,184,700	314	7,214,000
Totals, Engineering	*2,600*	*54,626,300*	*1,445*	*32,226,200*
Grand Totals	*13,857*	*128,682,300*	*12,617*	*89,082,200*

decreasing until January, 1933, when the index stood at 74·4. In February of the same year, however, employment took an upward swing and each month to September recorded a higher figure of employment than the preceding month. By then, the index had climbed to 86·8, an increase in employment of 16·7 p.c. in a short period of only seven months. Since September the recession has been very slight.

Rubber Goods Manufacturing—Processing inner tubes in a Canadian auto-tire factory.
Photo, courtesy Department of the Interior.

Practically all industries classified in the manufacturing group were affected by the general inactivity of business; in the important lumber, and iron and steel divisions, the losses were especially severe, while employment in food, textile, tobacco and beverage, electric current and electrical apparatus factories was maintained at a level generally above the average for the manufacturing group.

Indexes of Employment in Manufactures
(1926=100)

Month	1929	1930	1931	1932	1933	Month	1929	1930	1931	1932	1933
Jan. 1	107·8	106·5	93·7	83·9	74·4	July 1	120·3	111·3	97·2	85·4	83·0
Feb. 1	112·8	110·2	98·1	85·9	75·0	Aug. 1	121·6	110·2	94·7	82·6	85·2
Mar. 1	115·7	110·9	97·6	87·0	75·8	Sept. 1	119·8	108·2	94·7	83·1	86·8
April 1	116·5	111·3	99·7	87·3	76·0	Oct. 1	120·2	107·8	91·8	84·1	86·7
May 1	119·8	112·4	100·7	85·8	76·8	Nov. 1	117·2	104·6	88·8	81·7	86·5
June 1	121·2	113·6	99·4	86·0	80·0	Dec. 1	112·8	100·6	89·6	80·3	—

ROAD CONSTRUCTION

An unimproved stretch of road.

Surfacing with Stone.

A first-class highway surfaced with Macadam.

Road construction and repairing has been one means of easing the unemployment situation during recent years. A large proportion of the money so spent goes for labour costs and has been of direct benefit to many who otherwise would have been unemployed.

Photos, Canadian Government Motion Picture Bureau.

Building Operations.—The foregoing transportation and public utility expenditures have helped to make a better showing for the industry as a whole, and still more have road work and other Government programs which tend to increase as other construction work decreases. The greater part of the expenditures on construction are for building operations proper, *i.e.*, for houses, factories, business premises, etc. In view of the widespread nature of the undertakings, comprehensive figures are not easy to obtain, but the totals of construction contracts awarded, as compiled by MacLean Building Reports, Ltd., for the latest four complete years, are as follows: 1929, $576,651,800; 1930, $456,999,600; 1931, $315,482,000; 1932,

$132,872,400. The table on page 112 shows the values of such contracts for the first eleven months of the latest two years, by types of construction.

The Dominion Bureau of Statistics compiles an estimate of the value of construction in 61 cities of Canada as indicated by their building permits. In 1932 the value of buildings thus authorized was $42,319,397, as compared with $112,222,845 in 1931 and $166,379,325 in 1930. For the first eleven months of 1933 the unrevised total is $19,653,928. The following table shows the value of the building authorized for the first eleven months of 1933 as compared with those in the same period of 1932 by the 61 cities whose returns are tabulated monthly.

Building Permits, by Cities, eleven months, 1932 and 1933

City	1932	1933[2]	City	1932	1933[2]
	$	$		$	$
Charlottetown, P.E.I..	[1]	189,400	Sarnia, Ont.....	61,518	61,332
Halifax, N.S.....	884,994	589,969	Sault Ste. Marie, Ont.	140,249	89,737
New Glasgow, N.S....	35,195	21,420	Toronto, Ont.....	6,114,198	3,595,284
Sydney, N.S.....	140,344	30,925	York and East York Townships, Ont....	1,588,983	626,706
Fredericton, N.B.....	18,500	30,115	Welland, Ont.....	65,925	46,236
Moncton, N.B.....	155,630	117,494	Windsor, Ont.....	846,102	58,946
Saint John, N.B.....	423,056	164,646	East Windsor, Ont...	43,949	1,807
Montreal-Maisonneuve, Que	10,345,833	5,101,647	Riverside, Ont.....	2,525	1,000
Quebec.....	1,167,430	468,018	Sandwich, Ont.....	12,050	550
Shawinigan Falls, Que.	24,910	52,050	Walkerville, Ont.....	18,000	3,000
Sherbrooke, Que.....	227,100	181,400	Woodstock, Ont.....	84,720	69,539
Three Rivers, Que.....	107,575	27,988	Brandon, Man.....	31,274	44,346
Westmount, Que.....	254,970	334,841	St. Boniface, Man....	118,845	62,310
Belleville, Ont.....	98,055	34,075	Winnipeg, Man.....	2,116,400	723,400
Brantford, Ont.....	168,689	139,856	Moose Jaw, Sask.....	357,105	44,845
Chatham, Ont.....	53,415	75,795	Regina, Sask.....	276,439	378,217
Fort William, Ont.....	293,950	213,300	Saskatoon, Sask.....	528,255	106,135
Galt, Ont.....	88,363	101,136	Calgary, Alta.....	904,860	441,865
Guelph, Ont.....	161,445	83,015	Edmonton, Alta.....	1,087,085	421,030
Hamilton, Ont.....	1,412,700	478,700	Lethbridge, Alta.....	190,693	53,541
Kingston, Ont.....	340,789	178,717	Medicine Hat, Alta..	40,655	14,325
Kitchener, Ont.....	355,488	140,009	Kamloops, B.C.....	48,815	50,000
London, Ont.....	545,695	448,760	Nanaimo, B.C.....	56,083	25,856
Niagara Falls, Ont....	167,906	40,480	New Westminster, B.C.....	135,062	114,080
Oshawa, Ont.....	40,939	49,035	Prince Rupert, B.C..	52,500	29,117
Ottawa, Ont.....	1,495,490	914,615	Vancouver, B.C.....	2,800,546	1,542,966
Owen Sound, Ont.....	22,415	38,875	North Vancouver, B.C.....	76,595	25,721
Peterborough, Ont.....	192,364	133,400	Victoria, B.C.....	307,447	278,646
Port Arthur, Ont.....	279,503	113,275			
Stratford, Ont.....	48,533	70,242			
St. Catharines, Ont....	219,466	110,781			
St. Thomas, Ont.....	44,955	64,513	Totals—61 cities...	37,922,575	19,653,928

[1] No building permits reported. [2] Unrevised figures.

These 61 cities had, in 1931, about 36 p.c. of the population of Canada, while in 1932, the latest complete year, their building permits also had a value equal to about 36 p.c. of the total contracts awarded according to MacLean Building Reports, Ltd. Official summary figures, since 1923, of building permits and of the closely related subjects of prices of building materials, of employment and wages in the building industry, are given on the next page.

The index numbers of wages and prices of materials show the fluctuations in building costs over the period. During 1933, the wages' index declined by 20·7 p.c. as compared with 1932, and there was a slight increase of 0·9 p.c. in the index of wholesale costs of building materials. The

reduction in the wages' index in building trades has probably been much more than is indicated by these figures. Index numbers of wages in these trades are based chiefly on union rates in cities, and the types of construction which have been stimulated have been those where the higher paid trades have not been in great demand. The reduction in common labour costs has been proportionately greater than in the trades.

Building Permits, 1923-33

Year	Value of Building Permits Issued	Index Numbers of Value of Permits Issued (1926=100)	Average Index Numbers of Wholesale Prices of Building Materials (1926=100)	Index Numbers of Wages in the Building Trades (1913=100)	Index Numbers of Employment as Reported by Employers in the Construction Industries (average, calendar year 1926=100)
	$				
1923	133,521,621	85·4	111·9	166·4	80·9
1924	126,583,148	80·9	106·6	169·1	80·3
1925	125,029,367	79·9	102·9	170·4	84·9
1926	156,386,607	100·0	100·0	172·1	100·0
1927	184,613,742	118·0	96·1	179·3	109·0
1928	219,105,715	140·1	97·4	185·6	118·8
1929	234,944,549	150·2	99·0	197·5	129·7
1930	166,379,325	106·4	90·8	203·2	129·8
1931	112,222,845	71·8	81·9	195·7	131·4
1932	42,319,397	26·7	77·2	178·2	86·0
1933[1]	19,653,928	13·6	78·1	157·5[2]	74·6

[1] The 1933 figures are for the eleven months to November 30, those for the other years are complete. The building permits are revised figures, except in the case of 1933, those for earlier years are final. [2] Preliminary figure.

The Dressing Plant at a Canadian Granite Quarry.—Canada possesses valuable limestone, granite and sandstone resources which are being developed to an increasing extent during recent years, not only for the production of crushed stone but for building, ornamental and monumental purposes.

Photo, courtesy Department of Mines.

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CHAPTER XIII

TRANSPORTATION AND COMMUNICATIONS

Railways.—The distance across Canada from the Atlantic to the Pacific oceans is approximately 3,500 miles and three transcontinental railways stretch from coast to coast. These, with numerous branch lines, give Canada a railway mileage per capita second only to Australia among the nations of the world.

In 1922 the Government amalgamated the Intercolonial, Transcontinental, and other roads with the Canadian Northern, the Grand Trunk and the Grand Trunk Pacific which it had been obliged to take over, due to failure under private operation, and placed the whole under one Board. In 1932 this great system controlled 23,771 miles of railway, being the largest single system in North America. Side by side is the Canadian Pacific with its 17,045 miles of road (exclusive of 70 miles in Canada and 5,156 miles in the United States which it controls) and its subsidiary steamship lines on the Atlantic and the Pacific. The Canadian Pacific, operating in a northern latitude, forms, with its auxiliary steamship services, a comparatively short way from Europe to the Far East.

Canada has elaborate machinery for the government control of transportation in the Board of Railway Commissioners, first organized in 1904, which took over the functions of the Railway Committee of the Privy Council as a rate-controlling body. The Commission has jurisdiction also in matters relating to the location, construction and general operation of railways.

Due to changing conditions and the increasing complexities in the transportation field, the Government in November, 1931, appointed a Royal Commission to inquire into the whole problem of transportation in Canada, particularly in relation to railways, and shipping and communication facilities, having regard to present conditions and the probable future development of the country. The Commission was under the chairmanship of The Rt. Hon. Lyman P. Duff, Judge of the Supreme Court of Canada.

The Commission's report was submitted on September 13, 1932, and its main findings were that, due to intense competition between the Canadian National and the Canadian Pacific railways, extravagant expenditures had been incurred and this duplication of services and effort, with increased competition from motor vehicles and decreased business due to the industrial depression, were proving disastrous to the railways. It recommended that:—

(1) The identity of the two railway systems should be maintained.

(2) The management of the Canadian National Railways should be emancipated from political interference and community pressure.

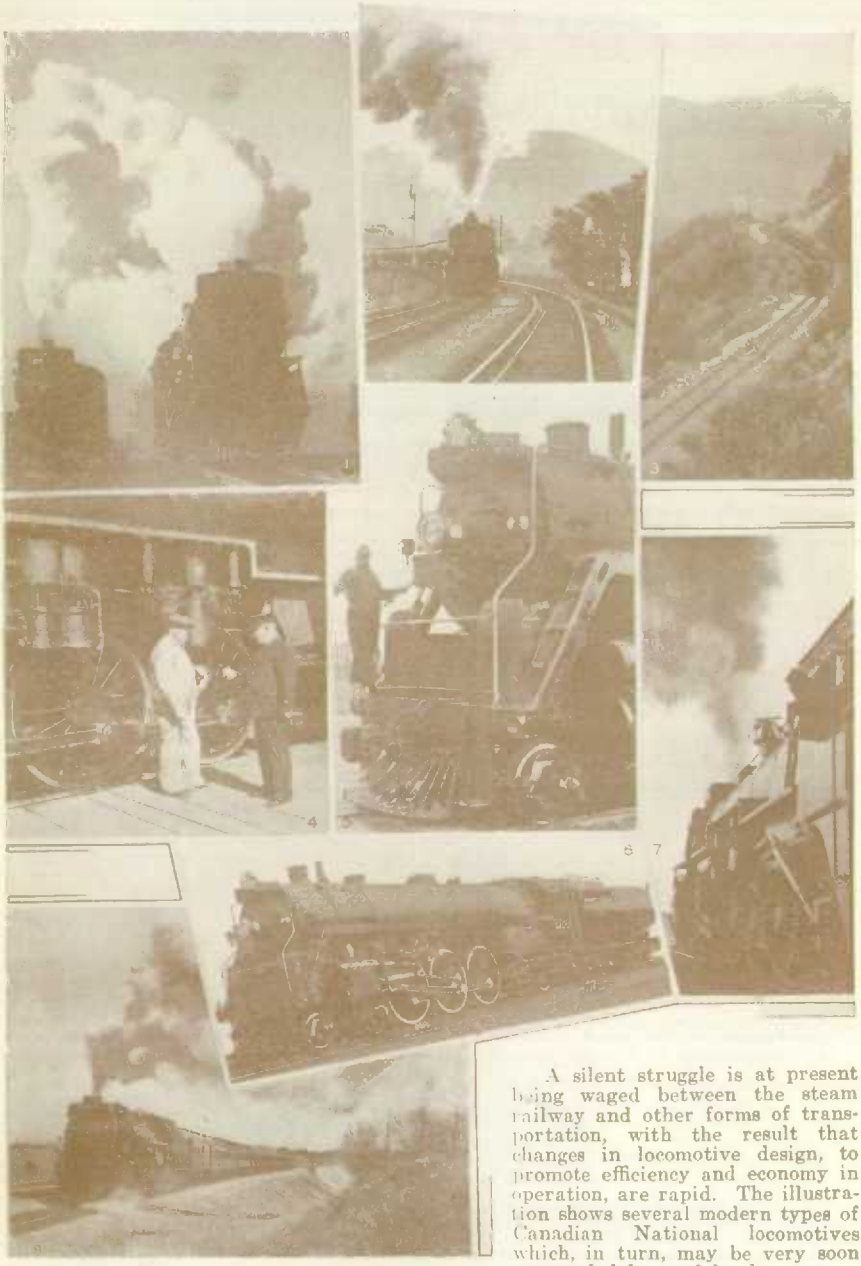
(3) Machinery should be provided for co-operation between the two systems for the elimination of duplicate services and facilities and the avoidance of extravagance.

(4) A scale of economies should be effected to bring the burdens of the National system within reasonable dimensions and effectively check extravagant and costly operation.

(5) Provision should be made for reasonable protection for the privately-owned undertaking against arbitrary action by the publicly-owned undertaking which might unfairly prejudice the interests of the privately-owned undertaking.

To accomplish this the present Board of seventeen Directors of the Canadian National Railways should be replaced by three Trustees. The annual deficits of the Canadian National Railways should be paid by the Dominion Government and not by railway debentures. A continuous audit should be made by independent auditors. A statutory duty should be imposed upon the Trustees of the Canadian National Railways and upon the Board of Directors of the Canadian Pacific Railway to adopt as soon as possible such co-operative measures, plans and arrangements as shall, consistent with the proper handling of traffic, be best adapted to the removal of unnecessary or wasteful services and practices, to the avoidance of unwarranted duplication in services of facilities and to the joint use and operation of all such properties as may conveniently and without undue detriment to either party be so used. A tribunal of three members, the Chief of the Board of Railway Commissioners as Chairman, and a representative from each company, should be appointed to settle all disputes arising out of the co-operative arrangements requested by one or both of the railways and the decision of the majority of the tribunal, which must include the Chairman, should be binding on both railways, appeals being allowed only as to questions of law if a question of jurisdiction is involved. The Commission also recommended that an interprovincial conference be held to promulgate regulations for control of motor vehicle traffic and competition with railways. An Act embodying the recommendations in respect to the railways was passed by Parliament at the session of 1932-33.

Conditions in 1932 and 1933.—Canada's railway situation in 1932 may be summed up as follows: a population of 10,506,000 was served with a total of 42,437 miles of single track, and an additional 14,624 miles of second and third main track, industrial track, yard and sidings. The single track mileage in Ontario was 10,908, Saskatchewan had 8,438 miles, Alberta 5,678, Quebec 4,879, Manitoba 4,420 and British Columbia 4,085. The investment in Canadian railways was approximately $3,468,642,000 and the gross earnings were $293,390,415. The number of employees was 132,678 and the wages bill $181,113,588. The Canadian railways carried 21,000,000 passengers and 68,000,000 tons of freight during the year and used about 26 p.c. of all the coal consumed in Canada. The railways are supplemented by efficient and adequate marine services, modern hotels in the chief cities from coast to coast, and no less than 42,101 miles of telegraphs which are under their control and operated directly by them. In common with the majority of industries, railway business has declined more or less steadily during the past three years. The decline in freight traffic started in August, 1929, and by the end of the year the total was below the 1928 record by 16 p.c. The total for 1930 was less than for 1929 by 15 p.c., the 1931 total was less than for 1930 by 10 p.c., the 1932 total was down 21 p.c., and the total for the first half of 1933 was 16 p.c. less than for 1932. The slump in passenger traffic also started in August, 1929, and continued in an unbroken series of declines to June, 1933, when an increase over June, 1932, traffic of 9 p.c., as measured in passenger miles, was recorded. The total for the first six months of 1933, however, was 10 p.c. below the total for the first half of 1932.



A silent struggle is at present being waged between the steam railway and other forms of transportation, with the result that changes in locomotive design, to promote efficiency and economy in operation, are rapid. The illustration shows several modern types of Canadian National locomotives which, in turn, may be very soon superseded by models almost revolutionary in design, if experiments now being conducted almost universally by railways prove successful. The picture shows: (1) Two greyhounds of the iron road in the Montreal yards "straining at the leash"; (2) The *Ocean Limited*, at Belœil, Que.;

The railway gross operating revenues and revenue car loadings, by months for 1931, 1932 and to November of 1933 are shown below.

Railway Statistics, by Months, 1931, 1932 and Jan. to Nov., 1933

Month	Railway Gross Operating Revenues			Total Revenue Car Loadings		
	1931	1932	1933	1931	1932	1933
	$000	$000	$000	No. 000	No. 000	No. 000
January	28,075	22,120	17,643	204	166	134
February	26,572	22,294	16,788	190	174	133
March	30,365	25,027	20,612	211	186	157
April	30,604	23,851	19,530	214	180	138
May	30,667	23,400	21,447	216	183	161
June	30,268	24,813	24,310	222	185	176
July	29,194	22,970	23,713	207	157	163
August	28,072	23,100	23,730	205	176	186
September	30,158	28,988	25,872	227	216	202
October	32,611	28,190	-	265	212	222
November	31,688	24,276	-	231	193	201
December	27,732	21,902	-	185	153	-

Canals.—Canals were the earliest large transportation works in Canada. One of the first locks was a small one constructed by the Hudson's Bay Co. at Sault Ste. Marie and it was destroyed by United States troops in 1814. Another was built at the Lachine Rapids in the St. Lawrence above Montreal in 1825, followed by the Welland Canal in 1829 to overcome the obstacle of Niagara falls. The Rideau Canal (military in primary purpose), the St. Lawrence System and the Chambly Canal followed. To-day there are seven canal systems under the Dominion Government, namely: (1) between Fort William and Montreal, (2) from Montreal to the International Boundary near lake Champlain, (3) from Montreal to Ottawa, (4) from Ottawa to Kingston, (5) from Trenton to lake Huron, (6) from the Atlantic ocean to Bras d'Or lakes in Cape Breton, and (7) from Winnipeg to lake Winnipeg on the Red river. The total length of the waterways comprised in these systems is about 1,594 statute miles. Among projected canals the most important are those connected with the deepening of the St. Lawrence waterway.

(3) The *Continental Limited*, going through the Yellowhead Pass; (4) An Engineer and a Conductor on the trans-Canada route checking time. Note the powerful driving wheels behind the men. It is in them that speed lies. Those of the monster 5700 are 80 inches in diameter; (5) and (6) Front and side views of Locomotive 5700; (7) On the lookout from the locomotive cab; (8) The *International Limited* on the run between Montreal and Toronto.

The fastest steam-driven giant on wheels in service in Canada, the Hudson locomotive 5700, now hauls the world's fastest train, the International Limited pool train of the C.N.R. and the C.P.R. systems from Montreal to Chicago, Ill. The International Limited, the swiftest train in the world for its distance, covers the 334 miles between Montreal and Toronto in six hours, a fraction less than a mile a minute, and reaches Chicago 17 hours and 30 minutes after leaving Montreal. To keep to schedule, 5700 sometimes has to travel at the rate of 80 miles an hour but this does not overtax the resources of this giant. From end to end, the Hudson is 92 feet 5¾ inches long and weighs, engine and tender, more than 331 tons. The water and coal capacity of the tender is greater than that of any other locomotive on the system. Twenty tons of coal can be carried and 14,000 imperial gallons of water. The boiler pressure is 275 pounds; the maximum tractive power, without the booster, 43,300 pounds; with the booster, another 10,000 may be added. Besides Locomotive 5700, her equally wonderful sisters, 5701, 5702, 5703 and 5704, are all workers in every-day life.

Photos, courtesy Canadian National Railways.

The Welland Ship Canal.—With the opening of the Welland Ship Canal, the traffic through that waterway has increased from 6,100,000 tons for 1930, to 7,300,000 tons for 1931 and to 8,500,000 tons in 1932. Although opened for traffic in April, 1930, the allowable draught was only 18 feet. This, however, was increased to 20 feet in April, 1932, and the official ceremony of opening the canal was held on August 6, 1932. The canal has 30 feet of water in the locks and 25 feet in the stretches between locks which may be readily increased to 30 feet by dredging. The time of transit for the 27·7 miles has been reduced from about 16 hours for the old canal to about 7½ hours and the number of locks reduced from 26 to 8. The locks are 80 feet wide and 859 feet between inner gates and the minimum width of the canal at the bottom is 200 feet. The lift of seven locks ranges from 43 feet 8 inches to 47 feet 10¾ inches while that of the guard lock varies with the lake levels, the total difference in elevation of lake Erie and lake Ontario being 327 feet.

The St. Lawrence Waterway.—On July 18, 1932, Canada and the United States signed a Treaty providing, primarily, for the construction of canals and channels of 27 ft. depth so that ocean-going ships and heavy draught lake-freighters may carry cargoes up and down the Great Lakes-St. Lawrence waterway without breaking cargo. The dams necessary to the development of a navigation system in the international section of the St. Lawrence river would incidently make available about 2,000,000 horse-power in this section of the river.

On July 11, 1932, the Dominion of Canada and the province of Ontario entered into an agreement relating to the construction of and payment for the necessary navigation and power works in the International Rapids section of the St. Lawrence river.

The St. Lawrence Waterway Treaty must still be approved by the United States Senate and the Parliament of Canada before going into effect.

The Canada-Ontario Agreement is made subject to its approval by the Parliament of Canada and by the Legislature of the province of Ontario and, unless the Treaty is ratified within three years of the date of the agreement, the agreement can be cancelled by either party.

Electric Railways.—There were horse-car systems in Montreal and Toronto as early as 1861, but the first electric street railway (at St. Catharines, Ont.), dates only from 1887, followed by the Ottawa Electric Railway in 1891, and the electrification of the Montreal and Toronto systems in 1892. They are to-day, of course, common to practically all the cities of Canada. Great advances have also been made in the construction and use of suburban or inter-urban electric lines.

The automobile in recent years has seriously reduced the street and inter-urban electric railway traffic. In 1932, there were 41 systems operating 1,873 miles of track with a total investment of $225,747,251. During the year 642,831,002 passengers were carried which was a decrease of 77,637,359, or 10·8 p.c. from the 1931 traffic. Gross revenues amounted to $43,339,381 and the total pay roll amounted to $21,534,419.

Express Companies.—Express service has been defined as "an expedited freight service on passenger trains". There are now four systems in operation with a capital somewhat over $6,700,000, operating on 63,046 miles of steam and electric railways, boat lines and stage routes, and

with gross receipts of $16,870,806. Money orders and travellers' cheques to the amount of $45,511,024 were issued during 1932.

Roads and Highways.—Quite as fundamental as railways and waterways, especially in these days of extensive motor traffic, is a good roads system and in this regard Canada has not been backward. A rapidly increasing tourist traffic which brought into the trade channels of the nation an estimated sum of around $212,448,000 in 1932 has naturally stimulated first class road construction and Dominion and provincial engineers are devoting a great deal of thought and attention to the construction, maintenance and care of highways. (See also p. 112.) In 1932, Dominion, provincial, and municipal* expenditures on the improvement and maintenance of roads amounted to $80,645,228, and another $7,892,154 was spent on bridges and ferries.

Mileage Open for Traffic, Jan. 1, 1933, and Expenditures on Highways, 1932

Class of Highway	Mileage	Expenditure[1]	$
Unimproved earth	131,327	For construction	66,250,229
Improved earth	175,682		
Gravel	81,233	For maintenance	22,287,153
Waterbound macadam	4,913		
Bituminous macadam	2,145		
Bituminous concrete	284		
Cement concrete	2,017		
Other	119		
Total	398,320	Total	88,537,382

[1]Including bridges and ferries.

Motor Vehicles.—The motor vehicle has been the *raison d'être* of the highway development and has increased in numbers at a very rapid rate. Both private and public passenger and freight motor vehicles have taken an increasing amount of passenger and freight traffic from the railways. Several of the smaller electric railways have had to cease operations entirely and others have abandoned certain lines where the traffic had declined until operation was unprofitable. The passenger traffic on the steam railways has shown no increase during the past ten years despite increases in population, and, in the present depression, has decreased at an alarming rate. In the past few years motor trucks have been carrying enormous quantities of freight, including lumber, hay, and similar commodities, which five years ago were considered safe from the encroachment of the motor truck.

Registrations of motor vehicles have increased from 89,944 in 1915 to 728,005 in 1925 and to 1,114,503 in 1932. The latter figure gives an average of one motor vehicle to every 9·4 persons. The United States New Zealand and Hawaii were the only countries with a greater number per capita, and the United States, France and the United Kingdom were the only countries having a greater number of motor vehicles registered. The greatest density in Canada was in Ontario, where there was one motor vehicle to every 6·5 persons. The western provinces averaged 8·5 to 10·6, the Maritime Provinces, 12·6 to 14·6 and Quebec had one motor vehicle to each 17·5 persons.

*This does not include municipal expenditures on other than provincially subsidised roads.

Number of Motor Vehicles Registered in Canada, by Provinces, Calendar Years 1920, 1925 and 1929-32

NOTE.—The numbers of motor vehicles in the Yukon are included in the totals for Canada.

Year	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada
1920.....	1,419	12,450	11,196	41,562	177,561	36,455	60,325	38,015	28,000	407,064
1925.....	2,955	22,853	19,022	97,657	344,112	51,241	79,078	54,357	56,618	728,005
1929.....	6,116	39,972	31,736	169,105	541,912	77,259	128,426	98,720	95,468	1,188,929
1930.....	7,376	43,029	34,099	178,548	562,658	78,850	127,193	101,119	98,784	1,232,486
1931.....	7,744	43,758	33,627	177,485	562,220	75,210	107,981	94,727	97,932	1,200,907
1932.....	6,982	41,153	28,044	165,730	531,597	71,570	91,275	86,878	91,042	1,114,503

Unfortunately, the increased use of motor vehicles has increased the number of fatalities due to motor vehicle accidents, not only in the cities and towns but also on the highways. In 1926, 606 persons were killed in motor vehicle accidents and in 1929 the number had more than doubled, being 1,300. In 1930 there was a reduction to 1,290, in 1931 the number was 1,316, and in 1932 it was reduced to 1,116.

The annual revenue to the provinces from registration of motor vehicles was $21,126,271 in 1932, which was an increase of $1,441,363 over 1931, but $1,385,202 under the year 1929. From gasolene taxes, the revenue amounted to $27,083,316. All the provinces except Alberta raised the tax during 1932 and 1931; New Brunswick, Manitoba and British Columbia raised it to 7 cents, and the other provinces to 6 cents.

Air Navigation.—A more recent invention is the aeroplane, already of economic importance in the transportation of passengers and supplies to new and remote mining areas, etc. The mileage flown by aircraft increased from 185,000 in 1922 to 4,569,131 in 1932, when 76,800 passengers, 3,129,974 pounds of freight or express, and 413,687 pounds of mail were carried.

The aeroplane has proved a boon to Canada in developing her mining, forest, fishery, water-power and other resources. By shortening the immense distances which characterize the country and by facilitating the rapid exploration of northern areas, the heavier-than-air machine has found a permanent place in the administrative field. Aerial forest fire patrols are now carried on over large parts of almost every province; fishery patrols by aeroplane protect territorial waters and enforce fishing regulations; and by the use of aeroplanes equipped with special cameras, preliminary surveys, which would have taken years by the older methods are now rapidly made over large tracts of intricate country. For details regarding the air mail service see p. 126.

Shipping.—The tonnage of sea-going vessels entered and cleared at Canadian ports showed an almost continuous increase up to 1914; and again during the fiscal years ended 1920 to 1929. The effects of the depression, however, are evident here also and, for 1933, the total tonnage of 76,272,485 was 19 p.c. less than the peak reached in 1929. The tonnage of coasting vessels has also grown, increasing from 10 million tons in 1876 (the first data compiled) to 83,000,000 tons in the fiscal year ended March 31, 1933.

The vessels on the Canadian Shipping Registry in 1902 numbered 6,836 of 652,613 tons. From then there was a fairly steady increase in the

number of vessels to 8,573 in 1919, followed by a decrease to 7,482 in 1921; since when there has been an increase to 8,905 representing 1,427,648 tons in 1931.

In the '70's shipbuilding was an important industry in Canada especially in the Maritime Provinces; the vessels built were mostly wooden sailing vessels. The invention of the iron steamboat greatly affected the industry in Canada, and there was a more or less steady decline in the number of vessels built and registered each year from 1885 to 1914. The War stimulated shiphuilding and there was a temporary activity assisted by the marine program of the Dominion Government. During 1931, the latest year for which complete statistics are available, 9 steel vessels of 7,853 gross tonnage, and 38 wooden vessels of 2,400 gross tonnage were built. Of the $11,113,099 representing the total value of production in 1931, however, only $3,424,031 was for vessels built or under construction, while $4,960,923 was for repairs and custom work, $2,728,145 for other products, including aeroplanes, boilers, engines, structural steel, etc.

Telegraphs.—Canada's first telegraph line was erected in 1846-47 between Toronto, Hamilton, St. Catharines and Niagara. In 1847 also the Montreal Telegraph Co. was organized and a line built from Quebec to Toronto. Other lines rapidly followed, to be brought eventually under the single control of the Great Northwestern Telegraph Co., which remained alone in the field until the building of the Canadian Pacific Railway and the Canadian Government telegraph lines. In 1932, there were 366,142 miles of telegraph wire in Canada, handling 12,025,826 messages, and the gross revenue was $9,381,075. In addition, six transoceanic cables have terminii in Canada, five on the Atlantic and one on the Pacific, and handle 6 million cablegrams annually. There are also 32 coast stations, open for commercial traffic, mostly government owned but operated in part by the Marconi Wireless Telegraph Co., in addition to stations operated in connection with shipping or private commercial stations operated by canneries, logging companies, etc. The number of wireless messages handled is now about 300,000.

Telephones.—The telephone was invented in Canada, and the first talk was conducted by Alexander Graham Bell between Brantford and Paris, a distance of eight miles, on Aug. 10, 1876. Telephone development in Canada, however, dates only from 1880. In 1883 there were only 4,400 rental-earning telephones, 44 exchanges, and 40 agencies, with 600 miles of long-distance wire. In 1932 the number of telephones was over 1,260,000 with a 5,000,000 wire-mileage, the investment being over $333,000,000. In the three Prairie Provinces there are well-organized government systems. Next to the railways, the telephone companies are probably the largest annual investors in new plant and construction in the Dominion. Canada has more telephones per capita than any other country except the United States.

Radio.—Under the Radiotelegraph Act, the administration of radio within the Dominion was vested in the Department of Marine. The matter of Dominion jurisdiction was questioned by certain of the provinces from time to time, but on Feb. 9, 1932, the Judicial Committee of the Imperial Privy Council ruled that the control and regulation of radio communication was within the jurisdiction of the Dominion Parliament. This decision was followed by the nationalization of radio broadcasting in Canada. Previous to the decision of the Privy Council regarding

Dominion control of radio, an investigation into the radio broadcasting situation in Canada had been undertaken by a Royal Commission, in 1929. This Commission, of which Sir John Aird was chairman, not only examined the Canadian situation but also surveyed the radio broadcasting systems obtaining in the United States, Great Britain, and certain European countries, and the report, though not acted upon at the time, was an important influence in shaping later Canadian policy. One of the principal

Radio Communication.—The rapid development of radio communication within the last decade and the importance which this means of communication has assumed because of its special characteristics, *viz.*, its instantaneous appeal to the mass of the people within reception distance and the fact that much of the personality of the speaker is transmitted with the voice, have made it necessary that the most up-to-date facilities should be installed in the key stations at the larger cities to promote reception under all circumstances.

The antenna system for CRCM is a quarter wave vertical radiator suspended between two 300-foot self-supporting steel towers. The ground system consists of copper buses radiating from a centre at the base of vertical antennæ and connected to buried copper plates.

Inset in the main picture is a view of the 5 k.w. transmitter unit for CRCM. The broadcasting lines which link the transmitter to the studios are equalized to well within the range of the speech input equipment so that the transmitter is capable of reproducing faithfully (with 100 p.c. modulation on program peaks) the transmission from the studios in Montreal or from the Canadian Radio Broadcasting Commission networks.

considerations guiding the Commission's report was the desirability of providing a broadcasting service for Canada adapted to the special requirements of the country and free from external influence; to this end the Commission had advocated Dominion control.

Following the Imperial Privy Council ruling referred to, an unanimous report of a Special Committee of the House of Commons, which advocated a national system, was adopted without opposition in the House of Commons in 1932 and a bill based upon it was introduced by the Prime Minister at the same session of Parliament. The Canadian Radio Broadcasting Act, 1932, was passed without opposition, and provided for the appointment of a Commission as proposed by the Committee and vested certain powers in the Commission.

The personnel of the Commission was: Chairman, Hector Willoughby Charlesworth, Toronto; Commissioners, Thomas Maher, Quebec, and Lt.-Col. William Arthur Steel, M.C., Ottawa.

The Commission came into official existence on January 18, 1933. For the first few months thereafter, it was mainly engaged in making plans, forming the nucleus of an organization, and acquiring facilities for conducting a broadcasting service. By about the end of May, it had taken over the radio broadcasting establishment of the Canadian National Railways, consisting chiefly of three broadcasting stations, at Moncton, Ottawa, and Vancouver; had leased a station in Toronto to provide an outlet for the Commission for its broadcasting service there; had arranged for the use of transcontinental transmission wires for carrying its programs; and had also made arrangements with broadcasting stations in the principal centres from coast to coast for broadcasting its programs. With these facilities, it began to provide a broadcasting service on regular schedule, the service covering about four hours a day, seven days of the week. Late in the summer, this service was extended to the West. An arrangement was effected between the Commission and the large broadcasting companies in the United States for the exchange of programs. Under this arrangement, the Commission's service of Canadian programs is supplemented by several programs a week from United States sources, while a half dozen outstanding Canadian programs are broadcast over networks covering the United States. It is hoped to make similar arrangements with Great Britain and other countries when technical difficulties can be overcome. The Commission also broadcasts Canadian events of special interest, some of which are supplied to the American broadcasting companies, similar broadcasts being obtained from the United States in exchange. In co-operation with *Canadian Press*, it supplies a news bulletin service three times a day.

The Commission's broadcasting service has not replaced any service available to Canadians before the Commission came into existence. It covers large populated areas which previously had suffered from inadequacy of radio service, not having the advantages of the large central urban cities in this connection.

By the provisions of the Radio Broadcasting Act, the national service has to be self-sustaining, supported by the revenues from the licence fee for operators of receiving-sets and from sponsored programs. For the first year of its operation, however, only about half the revenue from the former source became available to it, while it had practically no revenue from the latter source.

The Post Office.—The Post Office is under the direction of a special Department, the Dominion being divided into fifteen districts which in their entirety embrace a territory more extensive than that served by any other system in the world except those of the United States and Russia. Rural mail delivery dates from 1908. The number of post offices in operation was 12,074 in 1933, the postal revenue being approximately $37,000,000. The auxiliary money order branch issued orders payable in Canada to the amount of $102,000,000 in 1933, and in other countries to the value of about $8,000,000. In addition, postal notes to the value of $11,000,000 were issued in 1933. During the War, the domestic letter rate was increased to 3 cents per ounce but was reduced to 2 cents as from July 1, 1926. Similarly, the 2 cents per half-ounce (Imperial penny postage) rate, to Great Britain and other parts of the Empire, established at the time of the Diamond Jubilee of Queen Victoria, instead of the older 5-cent rate, was advanced to 3 cents and then to 4 cents in the War period, but was reduced to 2 cents as from Dec. 25, 1928. In May, 1929, the 2-cent letter rate was applied to France and on Christmas Day, 1929, to correspondence for the countries of South America. On July 1, 1930, the rate of letter postage for all other countries was reduced to 5 cents for the first ounce and 3 cents for each additional ounce. On July 1, 1931, the letter rate of postage for Canada, Great Britain, the British Empire, France, the United States, and all other places in North and South America, was increased to 3 cents for the first ounce and 2 cents for each additional ounce.

In its per capita use of the mails Canada takes a high place. In 1868, the year following Confederation, the average postal expenditure for each member of the population was less than 27 cents, whereas during 1932 each person in Canada expended approximately $3.56. This is remarkable when it is considered that rates of postage have decreased during this period.

The air mail service was inaugurated about Christmas, 1927. In the first year of operation, 1927-28, the mileage flown was 9,538 and the weight of mail carried, 38,484 lb.; during 1930-31, 1,747,950 miles were flown and 506,881 lb. of mail carried, during 1931-32 1,229,021 miles were flown and 443,501 lb. of mail carried, and during 1932-33 432,378 miles were flown and 454,303 lb. of mail carried.

In December, 1929, the air mail route between Fort McMurray, Alta., and Aklavik, N.W.T., was inaugurated. This route extends for 1,676 miles down the Athabaska, Slave and Mackenzie rivers to a point nearly 300 miles within the Arctic Circle. Remarkable regularity and despatch have characterized the service. New mining camps of northern Ontario and Quebec were also linked up by air mail in December, 1929.

The principal development of 1930 was the organization of a daily air mail service between Winnipeg and Calgary *via* Moose Jaw, Regina, and Medicine Hat, with a northern link to Saskatoon, North Battleford and Edmonton. On August 16, 1931, this service was rearranged to link up Edmonton with Calgary on the main route from Winnipeg and service to Saskatoon and North Battleford was discontinued. Lethbridge was added as a point of call on January 15, 1931.

On March 31, 1932, this trans-prairie service was suspended while the Toronto-Detroit service was discontinued on April 30, 1932, following a reduction in the appropriation for air mail transportation in Canada during the fiscal year 1932-33.

CHAPTER XIV

EXTERNAL TRADE OF CANADA—NON-COMMODITY EXCHANGES

External Trade

Total Trade

Canada's foreign trade during the year ended Mar. 31, 1933, in common with that of most other countries, continued the decline which had its inception in 1929. The value of Canada's imports in 1933 was lower than for any year since 1910, and exports than at any time since 1915. From 1932 to 1933 the decrease in the Dominion's foreign trade was: based on declared value—imports 29·8 p.c., exports 18·2 p.c.; based on volume—imports 25·7 p.c., exports 8·3 p.c. During the year many adverse factors tended to reduce the export trade of all nations. The chief factors were: increases in tariffs, extension of exchange controls, and depreciated currencies, as well as quotas and other restrictions. A further decline in commodity prices, which was world-wide, also kept the purchasing power of British and foreign countries, as well as that of Canada, at a low level. The foreign trade of Canada suffered materially under these unprecedented handicaps. Even with the material decrease in import and export trade, analysed in the following pages, Canada has maintained her relatively high place among the trading nations of the world.

Canada Abroad—Canada House, the High Commissioner's Offices in London, England, is shown to the right. View from Charing Cross corner of Trafalgar Square.

Photos, Canadian Government Motion Picture Bureau.

Canada's total trade for the fiscal year 1933 amounted to $887,097,541, a reduction of 23·9 p.c. compared with 1932 and 48·5 p.c. compared with 1931. In spite of the large decrease in the past three years total trade is now nearly 8 times that at Confederation.

The following table shows the trend of total Canadian trade (*i.e.*, excluding the small percentages of foreign merchandise exported) for typical years from 1906 to 1929 and annually thereafter.

Total Canadian Trade[1] with British Empire and Foreign Countries

Fiscal Year	Canadian Trade with—				Total Canadian Trade
	United Kingdom	Other British Empire	United States	Other Foreign Countries	
	$	$	$	$	$
1906	196,640,380	25,570,276	252,802,758	44,210,822	519,224,236
1914	347,324,375	45,844,988	559,674,963	97,938,111	1,050,782,437
1922	416,497,018	78,447,645	808,546,839	184,553,510	1,488,045,012
1929	623,771,866	169,635,632	1,367,624,374	468,386,891	2,629,388,763
1930	470,925,703	161,320,037	1,362,491,800	373,794,344	2,368,531,884
1931	368,743,891	129,018,931	934,067,581	274,524,959	1,706,355,362
1932	280,415,504	85,352,876	586,873,449	201,206,377	1,154,848,206
1933	270,827,074	71,676,177	375,708,455	161,971,993	880,183,699

[1]These figures do not include exports of foreign merchandise.

The Dominion's total trade with the United Kingdom in 1933 was $271,599,252, showing a decrease compared with 1932 of 3·5 p.c. and with 1931 of 26·6 p.c. Total trade with the United States in 1933 was $381,077,886, a decrease of 36·1 p.c. compared with 1932 and of 59·8 p.c. compared with 1931. The above figures of total trade include exports of foreign produce from Canada as well as domestic exports. Total exports of such foreign merchandise amounted to $11,221,215 in 1932, and $6,913,842 in 1933, which is a very small proportion (about 1 p.c.) of total trade for those years.

In 1933 the percentage of total Canadian trade carried on with the United Kingdom was 30·8, with other British countries 8·1, with the United States 42·7, and with other foreign countries 18·4, whereas in 1932 total Canadian trade with these same countries was in the following proportions: 24·3 with the United Kingdom, 7·5 with other British countries, 50·8 with the United States, and 17·4 with other foreign countries.

As regards total Canadian trade, therefore, the relative trend in 1933 was upwards with the United Kingdom, with other British countries, and with other foreign countries, but downwards with the United States.

The following résumé of total trade for the years 1921-33 shows that for only three of the thirteen years did imports exceed exports. The year of highest per capita trade was 1921 with 1929 a close second; the year of lowest per capita trade in the period was 1933.

Ratio of Exports to Imports and Value per capita of Exports, Imports and Total Trade, fiscal years 1921-33

Fiscal Year	Excess of Imports Entered for Consumption over Total Exports	Excess of Total Exports over Imports Entered for Consumption	Percentage Rate of Total Exports to Imports Entered for Consumption	Estimated Population	Values per capita of—		
					Exports Canadian Produce	Total Imports	Total Trade[1]
	$	$	p.c.	No.	$	$	$
1921	29,730,763	–	97·60	8,787,949	135·32	141·20	276·52
1922	–	6,122,677	100·82	8,919,000	83·00	83·84	166·84
1923	–	142,716,593	117·78	9,010,000	103·39	89·09	192·48
1924	–	165,396,430	118·51	9,143,000	114·35	97·72	212·07
1925	–	282,429,106	135·69	9,294,000	115·04	85·76	200·80
1926	–	401,371,405	143·28	9,491,000	139·19	98·13	237·32
1927	–	236,683,637	122·92	9,636,000	129·96	106·99	236·95
1928	–	141,641,568	112·76	9,735,000	124·92	112·78	237·70
1929	–	123,216,984	109·72	10,029,000	136·00	126·23	262·23
1930	103,335,512	–	91·72	10,208,000	117·83	122·31	240·14
1931	89,584,647	–	90·12	10,376,786	77·09	87·39	164·48
1932	–	9,061,613	101·57	10,506,000	54·86	55·06	109·92
1933	–	74,330,653	113·29	10,660,000	44·45	38·12	82·57

[1]Not including exports of foreign produce.

Imports

For the fiscal year ended March 31, 1933, imports were less by $172,120,160, or 29·8 p.c., than for the year 1932. Of the total imports of $406,383,744 for 1933, 57·2 p.c. came from the United States; 21·4 p.c., from the United Kingdom; 8·3 p.c., from other British countries; and 13·1 p.c., from other foreign countries. In 1932 the proportions were 60·8 p.c., 18·4 p.c., 7·2 p.c., and 13·7 p.c. respectively.

The percentage of imports from the United States and other foreign countries to total imports has therefore shown a decline for the fiscal year 1933 but those from the United Kingdom and other British countries show increases.

The table below gives the import figures for British and foreign countries for the years 1906, 1914, 1922, 1929, 1930, 1931, 1932 and 1933.

Imports from British and Foreign Countries

Fiscal Year	Canadian Imports from—				Total Imports
	United Kingdom	Other British Empire	United States	Other Foreign Countries	
	$	$	$	$	$
1906	69,183,915	14,605,519	169,256,452	30,694,394	283,740,280
1914	132,070,406	22,456,440	396,302,138	68,365,014	619,193,998
1922	117,135,343	31,973,910	515,958,196	82,736,883	747,804,332
1929	194,041,381	63,346,829	868,012,229	140,278,652	1,265,679,091
1930	189,179,738	63,494,864	847,442,037	148,156,943	1,248,273,582
1931	149,497,392	55,401,034	584,407,018	117,307,251	906,612,695
1932	106,371,779	41,440,214	351,686,775	79,005,136	578,503,904
1933	86,466,055	33,918,269	232,548,055	53,451,365	406,383,744

The table on p. 130 shows the positions of the twenty chief commodities in import trade for the past two fiscal years.

Twenty Chief Commodities Imported, 1932 and 1933

Rank		Commodity (In order of value, 1933)	Imports, fiscal year ended March, 1933		Increase (+) or Decrease (−) 1933 Compared with 1932	
1932	1933		Quantity	Value	Quantity	Value
				$		$
1	1	Coal.....ton	11,045,180	28,989,650	− 2,072,110	− 6,511,712
4	2	Crude petroleum.....gal.	897,580,215	26,878,125	−178,696,896	+ 2,684,041
5	3	Sugar for refining.....lb.	878,434,800	14,068,983	− 72,748,100	− 5,230,652
3	4	Machinery.....	−	14,040,252	−	− 10,387,337
2	5	Spirits and wines.....gal.	1,402,130	13,415,734	− 896,675	− 12,125,827
6	6	Green fruits.....	−	11,316,598	−	− 4,098,410
8	7	Automobile parts.....	−	10,022,832	−	− 3,429,993
9	8	Plates and sheets (iron)...cwt.	3,404,313	9,354,335	− 1,634,164	− 4,095,684
10	9	Books and printed matter.....	−	9,168,487	−	− 3,440,838
11	10	Gasolene.....gal.	93,864,758	7,983,845	− 21,958,199	− 4,767,861
14	11	Raw cotton.....lb.	94,705,651	7,448,536	+ 1,670,635	− 353,508
13	12	Settlers' effects.....	−	6,716,111	−	− 1,546,334
12	13	Paper.....	−	6,179,897	−	− 2,645,244
7	14	Electric apparatus.....	−	6,048,542	−	− 8,623,881
16	15	Engines and boilers.....	−	5,297,109	−	− 1,913,140
17	16	Clay and its products.....	−	5,072,380	−	− 2,123,077
23	17	Dried fruits.....lb.	81,314,844	4,913,221	+ 3,281,975	− 17,152
15	18	Vegetable oils.....gal.	9,873,392	4,832,494	− 4,428,641	− 2,981,523
19	19	Raw silk.....lb.	2,572,149	4,783,327	+ 33,816	− 1,715,827
18	20	Tea.....lb.	38,417,276	4,720,435	− 4,348,427	− 2,404,879

It is an interesting study to note the changing relations over a number of years between the commodities listed by rank. Coal, now in first place, has been among the first three commodities since 1890 but machinery, which is now in fourth place, headed the list in 1930, with imports valued at $69,000,000 and was in sixth place twelve years ago when its imports were valued at $37,000,000, being then outranked by: sugar and products, coal, cotton goods, woollen goods, and rolling-mill products. Crude petroleum has risen to prominence rapidly since 1920 when it was in eleventh place.

Commodities are classified by the Bureau of Statistics into nine main groups as follows: agricultural and vegetable products; animals and animal products; fibres, textiles, and textile products; wood, wood products and paper; iron and its products; non-ferrous metals and their products; non-metallic minerals and their products; chemicals and allied products; and miscellaneous commodities. Imports for all groups showed heavy decreases for 1933. The greatest absolute decreases were experienced by agricultural and vegetable products, iron and its products, and fibres, textiles and textile products in the order given, but the greatest percentage decreases were shown by non-ferrous metals and their products (48·4 p.c.), iron and its products (44·4 p.c.), and animals and animal products (37·1 p.c.).

The most important group from the standpoint of imports was agricultural and vegetable products under which classification imports reached $88,221,000, by far the most important items being alcoholic beverages, sugar and fresh fruits. This group showed a decrease of 31·4 p.c. from the 1932 figures. The other chief groups in order of value of imports were: non-metallic minerals and their products ($87,658,000—chiefly coal and petroleum); fibres, textiles and textile products ($61,215,000—chiefly raw cotton and cotton products); and iron and its products ($59,337,000—chiefly machinery, automobile parts, plates and sheets, etc.).

Trade between Canada and the United Kingdom has shown definite improvement during 1933, especially in recent months (see p. 133). The illustration shows: (1) Part of a large shipment of Western cattle which left Montreal on Oct. 6, 1933, inaugurating a new phase in Canada's live-cattle trade with Great Britain; heretofore only finished or short-keep cattle have been so exported. The cattle in this shipment were feeder stock for finishing in England. (2) Canadian cattle on arrival at Cardiff, Wales. (3) Discharging a cargo of Canadian grain in the United Kingdom by means of three floating elevators. (4) Canadian apples in one of the many spacious United Kingdom warehouses. (5) The return cargoes brought back to Canada comprise Welsh coal, iron and steel in both primary and finished forms, machinery, textiles, chemicals, etc. The picture shows "black sheets" being loaded at Cardiff for shipment to Canada. (6) The *Canadian Victor* discharging a cargo of general Canadian merchandise consigned to the United Kingdom.

Photos, Publicity Division, Department of Trade and Commerce.

Exports

The Dominion leads the world in exports of wheat, printing paper, nickel and asbestos; occupies third place in exports of wheat flour; fourth place in the exports of automobiles and wood pulp; and sixth place as regards rubber tires. The exports of these staple products from Canada make up about 50 p.c. of the Dominion's total domestic exports. Canada also ranks high in the world's exports of many other staple products such as lumber and timber, fish, copper, barley, cheese, raw furs, etc.

Total exports for the fiscal year ended March, 1933, were $480,713,797, of which $6,913,842 were exports of foreign produce. The domestic exports were, therefore, $473,799,955 and showed a reduction of 17·8 p.c. compared with 1932. Of these domestic exports 38·9 p.c. went to the United Kingdom, 30·2 p.c. to the United States, 8·0 p.c. to other British countries and 22·9 p.c. to other foreign countries. The United States and the United Kingdom have always been Canada's two best customers, but the export records for 1932 and 1933 show that, as compared with 1931, the percentages of our exports to the United Kingdom are increasing, while those to the United States show a decrease.

Canadian Exports to British and Foreign Countries

Fiscal Year	Canadian Exports to—				Total Domestic Exports
	United Kingdom	Other British Empire	United States	Other Foreign Countries	
	$	$	$	$	$
1906	127,456,465	10,964,757	83,546,306	13,516,428	235,483,956
1914	215,253,969	23,388,548	163,372,825	29,573,097	431,588,439
1922	299,361,675	46,473,735	292,588,643	101,816,627	740,240,680
1929	429,730,485	106,258,803	499,612,145	328,108,239	1,363,709,672
1930	281,745,965	97,825,173	515,049,763	225,637,401	1,120,258,302
1931	219,246,499	72,617,897	349,660,563	157,217,708	799,742,667
1932	174,043,725	44,912,662	235,186,674	122,201,241	576,344,302
1933	184,361,019	37,757,908	143,160,400	108,520,628	473,799,955

Twenty Chief Commodities Exported, 1932 and 1933

Rank		Commodity (In order of value, 1933)	Total Exports, fiscal year ended March, 1933		Increase (+) or Decrease (−) 1933 Compared with 1932	
1932	1933		Quantity	Value	Quantity	Value
				$		$
1	1	Wheat.....bush.	239,373,255	130,546,365	+ 48,057,322	+ 14,806,982
2	2	Newsprint paper.....cwt.	33,259,697	74,136,863	− 6,682,452	− 28,866,489
3	3	Wood pulp.....cwt.	8,786,823	17,786,135	− 2,975,740	− 9,898,647
5	4	Wheat flour.....brl.	5,268,371	16,987,110	− 145,369	− 1,910,433
4	5	Fish.....cwt.	2,401,048	16,658,723	− 1,178,160	− 6,981,303
6	6	Planks and boards.....M ft.	619,675	11,098,960	− 286,004	− 7,667,492
9	7	Raw furs.....	−	10,633,750	−	− 1,476,407
8	8	Copper bars, rods, etc.....cwt.	1,785,253	10,118,191	+ 196,460	− 2,939,542
11	9	Whiskey.....pf. gal.	1,992,059	9,920,907	− 520,548	− 1,701,349
12	10	Cheese.....cwt.	857,116	8,758,415	+ 2,869	− 1,835,552
10	11	Nickel.....cwt.	325,607	7,464,500	− 218,184	− 4,644,900
15	12	Apples, fresh.....brl.	1,789,026	7,352,912	+ 121,144	+ 815,328
20	13	Meats.....	−	6,683,140	−	+ 1,722,324
28	14	Automobiles.....No.	13,368	5,795,531	+ 4,529	+ 2,178,240
18	15	Silver ore and bullion.....oz.	15,585,632	4,416,571	− 2,167,999	− 743,957
21	16	Oats.....bush.	13,824,449	4,300,592	− 16,851	− 361,743
13	17	Barley.....bush.	9,863,654	4,293,341	− 14,474,624	− 5,709,570
14	18	Pulpwood.....cord	476,748	4,287,425	− 356,176	− 3,908,719
44	19	Rye.....bush.	8,211,332	4,030,240	+ 3,851,519	+ 2,005,041
26	20	Machinery.....	−	3,938,433	−	+ 262,810

Of the nine main classification groups in the fiscal year ended 1933, the exports for the agricultural and vegetable products group were first and reached $203,000,000, with wheat by far the chief item, accounting for 64·2 p.c. of the total. The wood, wood products and paper group was second in exports ($121,000,000). Newsprint paper accounted for about 61 p.c. of these exports. Animals and animal products was third with exports of $54,000,000 followed by the non-ferrous metals and their products group with $43,000,000. The chief items in the former group were raw furs, cheese and fish (fresh and canned), and in the latter, copper bars and rods, aluminium, nickel and raw gold.

Wheat has been the leading export for more than twenty years and even though exports of wheat in 1930 showed a decrease of $212,770,851 and the figures for 1931 and 1932 showed further decreases of $38,333,706, and $61,680,386 respectively this commodity still holds first place, and the 1933 export figures show an increase of $15,000,000 over those of the previous year. But there have been many changes within this period in the order of all the other commodities listed. So recently as 1920 wheat was followed by meats (now thirteenth), wheat flour, planks and boards, and printing paper (now second), in the order named.

Review of Trade by Months in Latest Years

The monthly trade figures as available when going to press as compared with 1930, 1931 and 1932 were as follows ($000 omitted):—

Imports and Exports, by Months, January 1930 to November 1933

Month	Imports				Exports of Canadian Produce			
	1930	1931	1932	1933	1930	1931	1932	1933
	$ 000	$ 000	$ 000	$ 000	$ 000	$ 000	$ 000	$ 000
January	84,662	50,414	34,115	24,441	73,507	44,683	38,367	31,562
February	80,922	50,994	35,586	23,514	66,960	43,873	36,431	26,398
March	113,026	75,381	57,448	32,851	89,595	55,048	39,749	36,579
April	71,402	51,189	29,794	20,457	50,744	33,935	26,976	20,012
May	101,545	73,457	44,361	32,927	77,261	59,833	40,594	45,576
June	91,544	52,509	40,743	33,019	78,703	54,348	40,945	45,968
July	84,551	48,379	35,711	35,738	76,408	49,645	42,321	51,345
August	77,906	47,308	36,527	38,747	69,290	48,764	41,314	44,723
September	87,900	45,379	34,514	38,698	81,046	48,991	42,187	57,785
October	78,358	45,933	37,095	41,070	82,781	55,538	56,626	60,214
November	76,325	46,911	37,769	43,712	73,061	57,487	45,945	60,385
December	60,338	40,290	28,961	–	66,820	53,255	42,616	–

At this time, the trade figures for the twelve months ended October, 1933, indicate that while total exports reached $514,687,666 compared with $524,757,105 for the year ended October, 1932, showing a reduction of 1·9 p.c., and imports were reduced from $473,084,805 to $388,905,458, or by 17·8 p.c., exports to the United Kingdom actually increased in the same period from $180,499,966 to $198,329,743, or by 11·0 p.c. and imports from the United Kingdom also increased from $93,806,802 to $95,157,552, or 1·4 p.c.

Our trade with the United States has suffered much more severely, imports having fallen from $278,463,855 to $210,858,072, or by 24·3 p.c., and exports from $185,537,075 to $165,544,488, or 10·7 p.c. in the same period.

The changes in direction of Canadian trade are brought out more clearly by a consideration of the *proportion* of total trade carried on with these countries. For the year ended October, 1932, 58·9 p.c. of our imports came from the United States, but the proportion for the year ended October, 1933, was only 54·2 p.c. On the other hand, the United Kingdom, which supplied 19·8 p.c. of our imports in the former period, increased that proportion to 24·5 p.c. in the latter period. As regards exports, 34·6 p.c. in the former year compared with 31·6 p.c. in the latter for the United States, and 34·8 p.c. with 38·9 p.c. for the United Kingdom.

For the latest months of August, Sept., Oct. and Nov. the improvement of trade with the United Kingdom, and the British Empire generally, was particularly well marked, the percentages of imports being: U.K.—Aug., 25·9; Sept., 24·5; Oct., 25·6; Nov., 25·9; British Empire—Aug., 35·3; Sept., 33·8; Oct., 34·3; Nov., 35·2; U.S.A.—Aug., 51·8; Sept., 51·0; Oct., 49·8; Nov., 49·76. The percentages of exports for the same months were: U.K.—Aug., 32·3; Sept., 38·3; Oct., 40·4; Nov., 47·8; British Empire—Aug., 41·5; Sept., 46·4; Oct., 48·8; Nov., 55·8; U.S.A.—Aug., 39·7; Sept., 32·0; Oct., 30·3; Nov., 25·0.

It will be seen from the above that for November, 1933, almost 56 p.c. of our exports of domestic produce went to the British Empire.

The Canadian Trade Balance

From Confederation to 1933, exports of all produce from Canada to all countries exceeded imports in twenty-eight years, while imports exceeded exports in thirty-eight years. The largest excess of exports in a single fiscal year was in 1918, a "war year", when it amounted to $622,637,000; while the largest excess of imports, amounting to $294,139,000 occurred in 1913. The "unfavourable" balances occurred chiefly in 1903-13, years of heavy capital imports.

Canada's balance of trade with the United Kingdom has been favourable since 1889. With the United States it is usually unfavourable.

Trade Balances of the Principal Countries of the World, calendar years 1931 and 1932

Credit balances marked (+) Debit balances marked (−)

Rank		Countries	1931		1932	
1931	1932		Amount	Per Capita	Amount	Per Capita
			Million $	$ c.	Million $	$ c.
2	1	United States	+ 348·4	+ 2 84	+ 328·9	+ 2 61
1	2	Germany	+ 612·0	+ 9 41	+ 289·3	+ 4 42
8	3	Union of South Africa	+ 34·6	+ 4 32	+ 187·4	+ 22 72
4	4	Argentina	+ 119·7	+ 19 46	+ 131·9	+ 11 32
3	5	Australia	+ 226·4	+ 134 89	+ 92·6	+ 14 14
5	6	Brazil	+ 113·7	+ 2 82	+ 83·3	+ 2 07
9	**7**	**Canada**	− **10·9**	− **1 05**	+ **49·2**	+ **4 68**
7	8	New Zealand	+ 44·9	+ 29 76	+ 33·5	+ 21 98
6	9	British India	+ 103·2	+ 0 29	+ 7·9	+ 0 02
12	10	Denmark	− 35·1	− 9 88	− 2·0	− 0 57
16	11	Norway	− 101·3	− 36 25	− 4·5	− 1 59
13	12	Japan	− 45·3	− 0 70	− 6·9	− 0 11
11	13	Spain	− 21·4	− 0 94	− 21·6	− 0 92
14	14	Sweden	− 81·7	− 13 30	− 42·6	− 6 93
10	15	Belgium	− 17·9	− 2 21	− 45·5	− 5 57
15	16	Italy	− 86·0	− 2 09	− 84·2	− 2 02
18	17	Netherlands	− 213·9	− 30 80	− 207·5	− 25 99
17	18	Switzerland	− 182·8	− 44 95	− 211··	− 51 91
19	19	France	− 481·4	− 11 50	− 450·9	− 10 77
20	20	United Kingdom	− 1,916·6	− 39 09	− 1,142·3	− 24 65

Non-Commodity Items of Foreign Exchange

A nation's commodity trade alone cannot be taken as a complete index of its prosperity, for there are many other exchanges besides those of goods, all of which must be taken into account in order to find out the basic state of affairs in regard to total international transactions. Among such more or less "invisible" exchanges may be mentioned interest and freight payments, financial services, insurance premiums, advertising payments, royalties, cash contributions to various objects, the financing of tourist expenditures, the money movement which accompanies immigration and emigration, etc. If all the visible and invisible items which make up a country's dealings were set down and totalled, the debit or credit balance would be a final invisible item representing an export or import of capital. Just as in the case of an individual an excess of expenditures over receipts must be made up by borrowing or reduction of capital or an excess of receipts over expenditures results in a capital asset, so it is in the case of a nation. The accompanying table, which includes the latest estimates of the Bureau of Statistics, shows debit and credit items of Canada's business relations and exchanges with other countries as a whole for 1931 and 1932.

Estimated Balance of Canada's International Payments, 1931 and 1932

("000" omitted)

Item	1931		1932	
	Exports Visible and Invisible	Imports Visible and Invisible	Exports Visible and Invisible	Imports Visible and Invisible
	$ 000	$ 000	$ 000	$ 000
1. *Commodity Trade.*—Recorded merchandise exports and imports	617,243	628,098	502,801	452,614
Unrecorded imports of ships	–	500	–	–
	617,243	628,598	502,801	452,614
Deductions for settlers' effects and other non-commercial imports	−9,328	−16,751	−6,526	−14,048
	607,915	611,847	496,275	438,566
Deduction for overvaluation	–	5,000	–	22,000
Corrected total of commodity trade	607,915	606,847	496,275	416,566
2. Exports and imports of gold coin and bullion	70,062	2,038	60,825	2,175
3. Correction for gold movement to convert to Canadian currency	–	–	7,919	–
4. Freight payments and receipts, n.o.p.	49,670	76,528	38,864	58,864
5. Tourist expenditures	250,776	76,452	212,448	57,403
6. Interest payments and receipts	70,722	252,076	56,000	248,000
7. Immigrant remittances	10,051	13,110	6,080	7,127
8. Government expenditures and receipts	11,750	10,960	8,850	10,379
9. Government receipts, reparations	1,295	–	–	–
10. Charitable and missionary contributions	900	1,800	500	1,000
11. Insurance transactions	27,000	20,000	24,000	17,000
12. Advertising transactions	3,000	5,000	2,000	3,500
13. Motion picture earnings	–	3,750	–	3,250
14. Capital of immigrants and emigrants	5,173	3,820	4,416	3,775
15. Earnings of Canadian residents employed in U.S.A. (net figure)	1,857	–	750	–
16. Exports and imports of electrical energy[1]	–	–	–	–
17. Exchange London and New York on interest and maturity payments and receipts	–	5,000	10,000	23,750
18. Known omissions, such as direct magazine subscriptions, artists' and entertainers' receipts, radio programs, etc.	–	5,000	–	4,000
19. Difference between all exports and imports[2]	–	27,790	–	72,138
Totals	1,110,171	1,110,171	928,927	928,927

[1] Included in Commodity Trade since 1928.
[2] This item represents net capital movements and errors and omissions.

Canada's scenic attractions are not limited to any one locality, although each province ha of the Rockies. The above plate shows: Ontario—(1) Campers at Point Pelee Natio erly park areas. Quebec—(1) The new Gaspé Belt Highway at Grande Vallee; (2 of the St. Lawrence—the National Highway near Baie St. Paul. Maritimes—(1) Salu Island; (3) Evangeline's Well, renowned in song and story, Grand Pre, Nova Scotia Manitoba; (2) Sunset over Waskesiu lake, Prince Albert National Park, Saskatchewa and Maligne lake, Jasper National Park; (2) Lake Louise, Banff National Park.

Photos, courtesy National Parks of C

own characteristic types as, for instance, the old-world charm of Quebec or the grandeur ark; (2) Flower Pot Island, Georgian Bay; (3) A scene in one of Ontario's more north- nother view of the Gaspé Highway at Cap Gros-Morne; (3) A scene along the north shore shing on the Restigouche river, New Brunswick; (2) A rural scene in Prince Edward airies—(1) Pony-riding along the beach of Clear lake, Riding Mountain National Park, 3) Sanctuary lake, Prince Albert National Park, Saskatchewan. Rockies—(1) Mount Unwin

Service, Ottawa, Department of the Interior, Ottawa, and Department of Roads, Province of Quebec.

The Tourist Trade.—An item in the above which deserves special mention is the tourist trade. Since 1926 various methods have been adopted by the Dominion Bureau of Statistics for obtaining a general idea of the amount and value of this trade. The following figures of tourist expenditures 1926-32 are in accordance with the latest revision. For the year 1932 the tourist trade was calculated to have brought $212,000,000 (Canadian funds) into the country, and after the deduction of $57,000,000 spent by Canadian tourists abroad, the favourable balance was estimated at $155,000,000. By far the most important factor is the automobile traffic between Canada and the United States, it being estimated that such United States tourists spent $159,838,000 (Canadian funds) in Canada in 1932, while Canadian automobile tourists spent about $27,247,000 in the United States. Tourist expenditures are, in part, the return which Canada derives from her picturesque scenery, her fish and game, her winter sports and other advantages, and represent an "invisible" export which is increasing steadily in importance.

Tourist Expenditures, 1926-32

Year	Expenditures of Outside Tourists in Canada (1)	Expenditures of Canadian Tourists in Other Countries (2)	Excess of (1) over (2)
	$	$	$
1926	201,167,000	98,747,000	102,420,000
1927	238,477,000	108,750,000	129,727,000
1928	275,230,000	107,522,000	167,708,000
1929	309,379,000	121,645,000	187,734,000
1930	279,238,000	100,389,000	178,849,000
1931	250,776,000	76,452,000	174,324,000
1932	212,448,000[1]	57,403,000	155,045,000

[1] Canadian funds.

Canada-United States tourist traffic is greater than that between any other two countries in the world. The high per capita wealth in both countries promotes travel and the close interlocking of business interests necessitates many business trips across the frontier. There is, in the United States, one automobile to every 5·1 persons and in Canada, one to every 9·4. For the United States family of moderate income the relative cheapness of an automobile holiday in Canada is attractive. Railway and steamship lines add substantially to the number of holiday seekers.

The benefits of the tourist business are not altogether one-sided, however. Canadians are attracted by the larger United States' cities and the more "settled" type of scenery, while large numbers of wealthy Canadians visit the United States' winter playgrounds in the south. The estimated annual expenditure of Canadian tourists in the United States is only about one-third that of United States' tourists in Canada, but in comparing these the relative populations of the two countries should be considered. If United States' tourists to Canada were in the same proportion to their population as Canadian tourists to the United States are to ours, the income accruing to Canada from this source—assuming expenditures to be on the present basis—would be more than $680,000,000; but Canadian car owners, who bulk large in this movement, are wealthier on the average and the number of passengers per car is greater, hence the higher average expenditure.

CHAPTER XV

INTERNAL TRADE—WHOLESALE AND RETAIL TRADE —FREIGHT MOVEMENTS—STOCK MARKETS COMMODITY PRICES—COST OF LIVING

Internal trade in Canada is of primary importance among economic activities. The home consumption of goods and services by a population of 10,000,000 requires a greater expenditure of economic activity than that required for the prosecution of external trade. Internal trade includes the transportation and distribution of goods within the country through the medium of railways, steamships, warehouses, wholesale and retail stores, and other agencies. It includes all professional services such as those carried on by doctors, theatres, hospitals, schools, banks, insurance companies, and innumerable others. All such activities, even if not productive of material goods, add substantially to the national income.

Historically, Canadian internal trade developed as a result of the fur-trade, fur being the first great staple sought in Canada by Europeans in exchange for their products. This trade spread until it covered the whole area of the Dominion, forming the framework into which the economic activities of the nation were gradually built. Lumber, fisheries, agricultural, mineral and other resources were gradually exploited. As population grew local manufacturing industries supplanted certain imports. Diverse resources in various parts of the country led to a vast exchange of products, and growing wealth to increasing abundance of services.

Unfortunately, owing to the many ramifications of internal trade, its statistical measurement presents great difficulties. Nevertheless some idea of its extent may be gathered from the fact that in 1931 the grand total value of the activities of those occupied in production of all kinds as estimated under the heading National Income on p. 48 was $4,000,000,000, while the money value of export trade was $617,200,000.

The sections which follow deal with those features of internal trade which have not received treatment elsewhere in this handbook.

Wholesale and Retail Trade

The distribution of goods and services, to meet the demands of consumers, requires many types of establishments which employ hundreds of thousands of persons and use many millions of dollars of capital. A census of merchandising and service establishments, taken in 1931, showed that there were more than 120,000 retail stores in Canada with sales amounting to $2,805,075,800. Including proprietors receiving a fixed salary, there were more than 300,000 persons on the pay-rolls of these stores and more than $300,000,000 paid out to them in salaries and wages during the year.

Retail Services.—More than 40,000 establishments are engaged in supplying services of various kinds to the Canadian public. The provision of amusements and domestic and personal services forms the chief business of the service groups. In all, $236,000,000 were spent by consumers in such establishments and 68,000 persons employed in these undertakings.

Wholesale Trade.—The supplying of goods for the retail trade requires a complex organization, made up of many types of wholesale establishments. The census of wholesale business showed that there were more than 5,000 wholesale houses in Canada with sales amounting to slightly more than one billion dollars and 8,000 other types of wholesalers handling sales and orders to the value of two billion dollars. Ninety-five thousand persons found employment in wholesale establishments and their earnings totalled almost $150,000,000.

Chain Stores.—In recent years, great changes have taken place in the distribution of goods. The chain store is now doing a large and growing proportion of the work of retailing merchandise. A survey of chain stores, made in connection with the Census of Merchandising, showed that chain stores do more than 20 p.c. of the total retail business of the Dominion. In food products, the most developed section of the chain-store movement, chain stores probably account for about 25 to 30 p.c. of the business. The total sales made by chain store organizations were $548,000,000 in 1930 and those by food stores alone were $137,000,000.

Internal Freight Movements

An important indicator of the volume of internal trade is found in the reports of revenue freight carried by the railways. In 1932 this revenue freight totalled 60,468,093 tons. The returns by provinces throw light on interprovincial trade in Canada. For example, the four western provinces show a net export to the eastern provinces of 6,358,234 tons of freight made up largely of agricultural and animal products. The eastbound movement of wheat alone amounted to 5,693,018 tons and other grains and agricultural products brought the total net eastern movement up to 6,529,803 tons. The movement of animal products going eastward was 164,323 tons. There were cross movements of mine products, the net movement westward of 75,902 tons consisting mostly of coal. Forest products moved eastward to the extent of 106,910 tons and manufactures and miscellaneous freight showed a westward movement amounting to 505,279 tons, fish, cement, lime and plaster and fertilizers being the only commodities listed with a net movement eastward.

Freight Originated and Freight Terminated for Seven Months ended July 31, 1933

Province	Originated at Stations in Canada	Received from Foreign Connections	Total Originated	Terminated at Stations in Canada	Delivered to Foreign Connections	Total Terminated
	000 tons	000 tons	000 tons	000 tons	000 tons	000 tons
Prince Ed. Island...	87	–	87	88	2	90
Nova Scotia.....	2,174	63	2,237	1,841	214	2,055
New Brunswick.....	759	227	986	692	552	1,244
Quebec.....	2,990	1,205	4,195	2,869	1,657	4,526
Ontario.....	5,010	7,120	12,130	8,635	5,521	14,156
Manitoba.....	1,510	66	1,576	1,490	64	1,554
Saskatchewan.....	2,756	154	2,910	1,424	98	1,522
Alberta.....	3,594	62	3,656	956	1	957
British Columbia...	1,581	95	1,676	1,144	1,789	2,933
Totals, Seven Months, 1933.....	20,461	8,992	29,453	19,139	9,898	29,037
Totals, Seven Months, 1932.....	23,533	10,021	33,554	22,734	10,053	32,787

Stock Markets

A subject often classified under the head of finance but akin to internal trade, inasmuch as it concerns a great trading market closely linked with the business organization of the country, is that of stock markets. The principal stock exchanges in Canada are located at Montreal and Toronto, though those at other centres such as Winnipeg, Calgary and Vancouver are increasing in importance. In recent years there has been a huge increase in the volume of business transacted on the stock exchanges, due to the widespread participation of the general public in the "bull" market which extended from 1924 to 1929. Since 1929, however, trading has fallen away considerably, due to heavy losses, business depression and caution on the part of the investing public. July, August and September, 1932, sales figures showed an advance which, however, proved but temporary. A more substantial increase both in trading and in prices occurred in the early summer months of 1933.

The Montreal Stock Exchange—After a busy day.
Courtesy, Montreal Stock Exchange.

The extent of public participation in the stock market is illustrated by the table below showing the volume of sales on the Montreal Exchange.

Numbers of Shares Traded on the Montreal Stock Exchange, by Months, January 1930 to November 1933

Month	1930	1931	1932	1933	Month	1930	1931	1932	1933
Jan.	988,789	377,241	125,989	201,133	July	308,399	245,845	283,953	1,852,002
Feb.	830,534	706,607	136,387	281,197	Aug.	558,387	169,400	544,528	414,965
March	1,133,969	805,696	180,070	207,529	Sept.	817,409	437,503	506,926	433,747
April	1,601,764	477,053	187,313	486,726	Oct.	1,350,604	308,888	206,902	399,622
May	1,088,587	851,426	204,522	1,083,485	Nov.	466,867	431,758	193,093	370,325
June	1,389,170	528,093	176,041	1,570,805	Dec.	532,593	125,308	149,733	–

Security Prices, 1931 and 1932.—The Bureau of Statistics publishes several series of index numbers designed to measure the movement of security prices in general and of important groups of stocks in particular, which constitute an important barometer of business conditions. The table below shows the course of the investors' index number for representative months in the years 1930, 1931, 1932 and 1933. A table of the index numbers of mining stocks by months during the same years is also given.

Investors' Monthly Index Numbers of Common Stocks, 1930-33

(1926=100)

Year and Month	Banks	Utilities	Industrials	Total
1930 (representative months)—				
January	120·3	133·3	209·1	155·7
April	118·6	143·7	220·9	166·5
August	113·3	116·0	153·1	125·0
December	108·2	104·7	120·3	103·1
1931 (representative months)—				
January	109·1	107·3	124·7	106·9
March	111·6	116·1	127·8	110·8
June	97·1	80·4	91·1	80·1
September	94·3	65·4	79·3	68·6
December	92·9	59·3	74·3	64·8
1932 (representative months)—				
January	90·3	59·1	73·7	64·8
March	86·0	59·8	71·5	64·1
June	60·5	34·9	48·8	43·2
September	76·1	56·9	73·8	63·0
December	67·5	45·1	58·4	51·3
1933 (representative months)—				
January	67·5	44·6	59·6	51·6
March	62·3	38·2	57·3	47·3
June	72·7	53·8	103·6	74·7
July	79·6	58·5	118·3	83·3
October	70·9	45·9	100·1	70·4

Taking the prices of stocks in 1926 as equal to 100, the monthly index number of industrials reached its peak in September 1929, when it was 315·8, that is to say, industrials were on the average over three times the price prevailing in the base year 1926. In the same month the index for public utility stocks had risen to 163·1 and that for all common stocks to 217·1. November 1929 saw the index for industrials at 209·4, utilities at 130·9, and all stocks at 154·7. Throughout 1930 the trend was more gradually to lower levels with minor upward movements in April and September. This downward tendency was interrupted in the first two months of 1931, but in April the indexes for these groups fell below the 1926 figures and continued to fall until June, 1932. At that time, utilities touched 34·9, industrials 48·8, and all stocks 43·2. A temporary recovery in the next three months was followed by another setback. A more substantial advance occurred in the spring and summer of 1933, as indicated by July group indexes of 58·5 for utilities, 118·3 for industrials and 83·3 for all stocks, although the latest months have registered a recession from these levels.

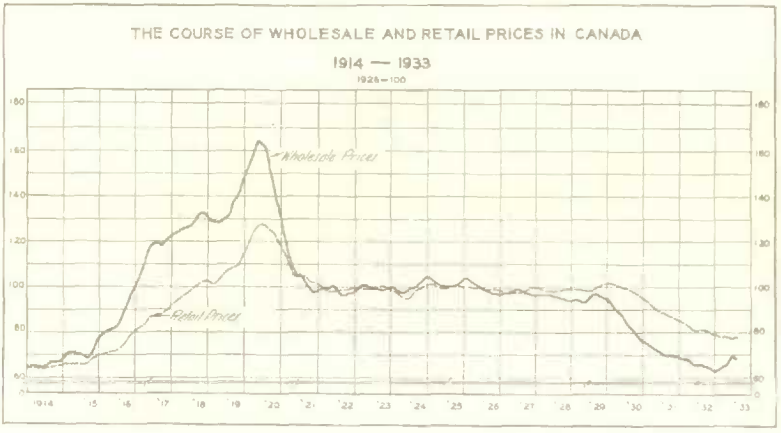
In mining stocks the peak of the bull market was reached in October, 1927, when the index was 143·8 (prices in 1926=100). From that date it has sagged, with temporary rallies, until it reached the figure of 59·2 in December, 1930. In 1931 this index rose gradually to 82·3 in April, but dropped back to 59·0 in December, and by June, 1932, had fallen to 48·3. Subsequent recovery caused it to advance almost without interruption to 113·4 in September, 1933.

Index Numbers of Twenty Mining Stocks, by Months, 1930-33

Month	1930	1931	1932	1933	Month	1930	1931	1932	1933
Jan.	78·9	68·5	59·7	67·1	July	68·7	68·6	55·6	106·9
Feb.	86·1	73·3	57·3	75·3	Aug.	68·0	67·8	59·7	107·4
Mar.	85·2	77·1	57·8	68·4	Sept.	68·7	63·1	60·9	113·4
April	83·3	82·3	52·4	74·5	Oct.	61·3	59·5	57·5	112·2
May	76·3	75·9	48·4	89·6	Nov.	60·5	64·6	60·9	109·4
June	73·1	69·1	48·3	104·1	Dec.	59·2	59·0	63·1	-

Prices of Commodities

Trade of all kinds is inseparably linked with price movements. Index numbers measuring the rise and fall of commodity prices are also an important indicator of business and of monetary conditions. The Dominion came into being at a time of falling prices but after 1870 prices rose. From 1872 to 1897, however, there was an unprecedented fall, Canada experiencing a drop of 44·3 p.c., attributable to monetary factors, the great increase in production, and improved transportation facilities. From this point until 1913 prices again tended upward. It was a period of rapid and unprecedented prosperity almost the world over, and with the rising tide of trade, prices rose steeply. On the basis of 1913, the general price



level in 1896 was 76·0; by 1912 it had risen to 99·5, a gain of over 23 points. In 1913 and 1914 a short slump preceded the Great War which resulted in a stupendous rise in commodity prices. With the end of the War came a momentary lull, but in 1919 and the early part of 1920 the post-war boom carried the level higher than ever. In May, 1920, the index number was 256·7. The reaction from the optimism which had hoped too much from an impoverished world, drove prices precipitately downward until in December, 1921, the index was 150·6. For the three years, 1922-24, it remained comparatively stable, but rose to 160·3 in 1925, falling to 156·2 in 1926.

Wholesale prices in 1926 were taken as the base of a new index number which in subsequent years fell to an average of 97·7 in 1927, 96·4 in 1928 and 95·6 in 1929. Thereafter in more rapid decline the index number receded to an average of 86·6 in 1930 and fell to 70·4 in December, 1931. The decline continued almost steadily until February, 1933, when the index was below 1913 levels at 63·6. In the next five months it rose to 70·5, but had dropped back to 68·7 in November.

New Index Numbers of Wholesale Prices, 1913-32[1] and, by Months, 1933

(1926=100)

1913	64·0	1923	98·0	1933[2]—	
1914	65·5	1924	99·4	January	63·9
1915	70·4	1925	102·6	February	63·6
1916	84·3	1926	100·0	March	64·4
1917	114·3	1927	97·7	April	65·4
1918	127·4	1928	96·4	May	66·9
1919	134·0	1929	95·6	June	6 ·6
1920	155·9	1930	86·6	July	70·5
1921	110·0	1931	72·1	August	69·4
1922	97·3	1932	66·7	September	68·9
				October	67·9
				November	68·7
				December	–

[1] 236 commodities to 1926, thereafter 502. [2] Preliminary figures.

Cost of Living

Statistics of cost of living constitute a very important phase of price statistics. Index numbers of retail prices, rents, and costs of services issued by the Bureau of Statistics are constructed from a general point of view, having for their object the measurement of the general movement of such prices and costs in the Dominion as a whole, and being so calculated as to make comparisons possible with other general index numbers constructed on similar principles, as, for example, the index of wholesale prices. Calculated as they are on the aggregative principle, *i.e.*, the total consumption of each commodity, the Bureau's index numbers afford an excellent measurement of changes in the average cost of living in the Dominion as distinguished from that of any particular class or section.

The Bureau's index numbers of the cost of living are designed to show changes relating to average conditions. On the basis of 1926=100, the total index was 65·4 for the year 1913, 124·2 in 1920, 98·9 in 1928 and 99·9 in 1929. The latter part of 1929 was marked by a slight increase over the average for the year, a tendency which was still further apparent in the first month of 1930, when the total index reached 102·1 compared with 99·2 for the year 1930. From that time it has declined steadily and in July, 1931, registered 88·6. In August there was a slight upturn but thereafter the decline continued into 1933. Food prices turned firmer in the spring months of 1933, and advances were sufficient to offset further decreases in the group indexes for fuel, clothing, rents and sundries. Weakness in rentals was quite pronounced in the leasing period centring around Oct. 1, but shelter costs are still relatively higher than other budget groups.

Index Numbers of Retail Prices, Rents and Costs of Services, 1927-32, and by Months, 1933

(Average prices in 1926=100)

Year	Total Index	Food Index	Fuel Index	Rent Index	Clothing Index	Sundries Index
1927	98·4	98·1	97·9	98·8	97·5	99·1
1928	98·9	98·6	96·9	101·2	97·4	98·8
1929	99·9	101·0	96·4	103·3	98·9	99·0
1930	99·2	98·6	95·7	105·9	93·9	99·4
1931	89·6	77·3	94·2	103·0	82·2	97·4
1932	81·4	64·3	91·4	94·7	72·8	94·6
1933[1]—						
January	79·1	62·8	89·2	90·0	69·2	94·1
February	78·4	60·6	89·1	90·0	69·2	93·9
March	77·8	60·4	88·7	90·0	66·5	93·7
April	78·0	61·3	88·6	90·0	66·5	93·7
May	77·0	61·9	88·3	84·0	66·5	93·7
June	77·0	62·2	87·6	84·0	66·1	93·7
July	77·2	63·2	86·0	84·0	66·1	93·7
August	78·6	67·8	86·3	84·0	66·1	93·7
September	78·8	65·9	86·3	84·0	69·9	94·0
October	77·9	65·4	87·0	80·4	69·9	94·0
November	78·1	65·8	87·2	80·4	69·9	94·0
December	–	–	–	–	–	–

[1] Preliminary figures.

Toronto Harbour.—The illustration gives a good idea of the extensive facilities required in internal freight movements at a terminal point where lake and rail transportation meet.

Photo, Canadian Government Motion Picture Bureau.

CHAPTER XVI

PUBLIC FINANCE

Dominion Finance

Among the powers conferred on the Dominion Government by the British North America Act were: the right to deal with the public debt and property; the right to raise money by any system of taxation (the provinces were limited to direct taxation); and the borrowing of money on the credit of the Dominion. The Department of Finance was established in 1869 to have "supervision, control and direction of all matters relating to financial affairs, public accounts, and revenue and expenditure of the Dominion".

At Confederation the revenues, notably the customs and excise duties which had previously accrued to the treasuries of the provinces, were transferred to the Dominion and combined into a consolidated revenue fund against which certain specific charges such as cost of collection, interest on public debt, and salary of the Governor General were made. The remainder of the fund was appropriated by Parliament. The public works, cash assets and other property of the provinces, except lands, mines, minerals and royalties, also became Dominion property. In its turn the Dominion became responsible for the debts of the provinces.

Since the main source of the revenues of the provinces was now taken over the Dominion undertook to pay annual subsidies to the provinces for the support of their governments and legislatures. With the growth of the Dominion, the principle of subsidy payments has been extended to the western provinces and from time to time adjustments have been made in the moneys so paid.

At the time of the formation of the Dominion, the revenue collections were comparatively small but obligations shouldered by the central government provided for completion of the Intercolonial Railway and, with the entry of British Columbia, for the construction of the Canadian Pacific Railway; early in the present century the National Transcontinental was undertaken. Indeed the single item of railways and canals accounted for almost the entire increase in the net national debt of from $76,000,000 in 1868 to $336,000,000 in 1914. To a very great extent therefore, the national debt down to the Great War represented expenditures for productive purposes and tangible assets were acquired by the Dominion therefor. Moreover this debt was largely held outside Canada. The following decade witnessed the tremendous increase in the debt from $336,000,000 to a maximum of $2,453,777,000 in 1923—an increase of over two billions of dollars not represented, in the main, by corresponding assets and upon which interest charges were relatively high. One redeeming feature was that the major portion of this debt was now held within the country, for the abnormal prosperity induced by the War provided Canadians with the funds to invest in Government issues and the added desire of the Government to tap the rapidly accumulating resources of the masses was instrumental in instructing the man-in-the-street how to invest his money in bonds. Following 1923 there was a steady fall in the net debt to $2,177,-

763,959 in 1930, but the depression with accompanying railway deficits and large necessary expenditures for unemployment relief have established a new high level of indebtedness of $2,596,480,826 as at Mar. 31, 1933. This equivalent of $243.80 net debt per capita was exceeded by the per capita figures between 1920 and 1927. The maximum of per capita debt, *viz.*, $272.31, was reached in 1923.

The growth of the Dominion revenue, the Dominion expenditure, and the net public debt is briefly outlined in the following table:—

Dominion Finances, 1868-1933

Fiscal Year	Revenue Receipts	Per capita Receipts[2]	Total Expenditure	Per capita Expenditure[2]	Net Debt at end of Year	Net Debt per capita[2]
	$	$	$	$	$	$
1868	13,687,928	4·05	14,071,689	4·17	75,757,135	22·47
1871	19,335,561	5·55	19,293,478	5·53	77,706,518	22·09
1881	29,635,298	6·85	33,796,643	7·82	155,395,780	35·82
1891	38,579,311	7·98	40,793,208	8·44	237,809,031	49·09
1901	52,514,701	9·78	57,982,866	10·79	268,480,004	49·69
1911	117,780,409	16·34	122,861,250	17·04	340,042,052	47·18
1921	436,292,185	49·64	528,283,199[1]	60·11	2,340,878,984	266·36
1926	382,893,009	40·51	355,186,423[1]	37·58	2,389,731,099	252·88
1927	400,452,480	41·55	358,555,751[1]	37·21	2,347,834,370	243·68
1928	429,642,577	43·68	378,658,440[1]	38·50	2,296,850,233	233·59
1929	460,151,481	45·88	388,805,953[1]	38·77	2,225,504,705	221·95
1930	445,916,992	43·68	398,176,246[1]	39·01	2,177,763,959	213·38
1931	356,160,876	34·33	440,008,854[1]	42·41	2,261,611,937	218·00
1932	336,721,305	32·05	450,965,540[1]	42·93	2,375,846,172	226·14
1933	311,126,329	29·21	531,760,983[1]	49·93	2,596,480,826	243·80

[1]Includes advances to railways or transfers from active to non-active assets.
[2]Per capita figures for census years are based upon census populations and for intervening years on revised official estimates.

Fiscal Year 1932-33.—The Minister of Finance, the Hon. E. N. Rhodes, in his Budget Speech of Mar. 21, 1933, outlined the financial position of Canada and estimated the 1934 income and expenditure of the Government. Provision was made, by the taxation changes detailed in the Budget, for funds to cover estimated expenditures for the year ended 1934.

The increased gold production made available for export, without weakening monetary gold reserves, and the conversion of an unfavourable balance of trade to a favourable one during the preceding two years were cited as significant influences which had enabled Canada to meet the burden of interest and principal payable abroad. The financial and monetary policies followed by the Government were also given as contributing factors to the efficient working of our internal credit structure. New long-term financing to the extent of $267,000,000 excluding refunding loans was successfully negotiated. This, the Minister described as a splendid tribute to the efficiency of our financial institutions, the thrift of the Canadian people, and the underlying strength of the economic position.

The Public Accounts.—In the Public Accounts receipts are classified under two headings— receipts from taxation, and non-tax revenue resulting from public services maintained by the Government. Expenditures are classified under four headings: (1) Ordinary expenditures, which include the costs of government, pensions, subsidies to the provinces, etc.; (2)

Capital expenditures on account of railways, canals and public works, for which corresponding assets are acquired; (3) Special expenditures including unemployment relief, etc.; and (4) Non-active loans and advances which are not interest-producing but are required in part to meet deficits of services for which the Government accepts responsibility.

The continuance of the declines in business activity and in commodity prices was reflected in a further fall in public revenues. This was particularly marked in that portion of the revenue derived from taxation, which constitutes over 80 p.c. of total receipts.

Total receipts from taxation for the year 1932-33 amounted to $254,320,000 as compared with $275,054,000 in the previous year, $296,276,000 in 1930-31 and $378,551,000 for 1929-30. Summary figures of these receipts and expenditures follow:—

Summary of Total Receipts, fiscal years 1930-33

Item	1929-30	1930-31	1931-32	1932-33
	$000	$000	$000	$000
Customs	179,430	131,209	104,133	70,073
Excise	65,036	57,747	48,655	37,834
War Tax Revenue—				
Banks	1,408	1,429	1,390	1,328
Trust and Loan Co's	–	–	–	–
Insurance Co's	74	74	12	826
Business Profits	173	34	3	–
Income Tax	69,021	71,048	61,254	62,067
Sales Tax	44,144	20,153	42,393	57,978
Tax on cheques, transportation tax, etc.	19,295	14,582	17,213	24,214
Totals, Receipts from Taxation	378,551	296,276	275,054	254,320
Non-tax Revenues	62,861	53,311	54,624	52,317
Total Consolidated Fund Receipts	441,412	349,587	329,709	306,637
Special Receipts	4,505	6,574	7,012	4,489
Grand Totals	**445,917**	**356,161**	**336,721**	**311,126**

Summary of Total Expenditures, fiscal years 1930-33

Item	1929-30	1930-31	1931-32	1932-33
	$000	$000	$000	$000
Ordinary Expenditure	357,780	389,558	375,403	358,528
Capital Expenditure	22,561	28,222	16,980	8,548
Special Expenditure	9,804	16,741	55,460[2]	96,784[1]
Loans and Advances (Non-active)	8,031	5,488	3,113	67,901
Grand Totals	**398,176**	**440,009**	**450,956**	**531,761**

[1]Includes $53,423,000 income deficit of the Canadian National Railways incurred in the calendar year 1932, and $36,721,000 for unemployment relief.
[2]Includes $38,296,000 for unemployment relief.

It will be seen from the above tables that, for the fiscal year ended 1933, total receipts of $311,126,000 compare with total expenditures of $531,761,000 (including an income deficit of $53,423,000 of the Canadian National Railways and transfers of $62,938,239 from assets previously

regarded as active to non-active assets). Thus the deficit for that year was $220,635,000, which compares with a deficit of $114,235,000 for the fiscal year ended 1932, a deficit of $83,848,000 for the year ended 1931 and a surplus of $47,741,000 for 1930. However, of the 1933 deficit only $104,273,753 represented increase of debt due to Government operations relating to the fiscal year.

Recent Changes in Dominion Taxation.—The Budget of April, 1932, raised the income tax to 11 p.c., on corporations and joint stock companies. The deduction of 20 p.c. from the tax payable under the established schedule of rates for personal incomes was repealed; a surcharge of 5 p.c. was made on net incomes of over $5,000 and the exemptions were reduced from $3,000 to $2,400, and from $1,500 for single persons to $1,200. These changes applied to 1931 incomes.

The sales tax was increased by 2 p.c. to 6 p.c., and the special excise tax on goods imported into Canada was raised from 1 p.c. to 3 p.c. The stamp tax on cheques, promissory notes, money orders, etc., was increased from 2 cents for each instrument over $5, to 3 cents on amounts between $5 and $100, and 6 cents over $100. Sleeping car tickets were taxed 10 p.c. (minimum 25 cents) and parlour car tickets 10 cents flat; there were also changes in the tax rates of cable and telegraphic messages and in the stock and bond transfer tax. No important tariff changes were made pending the meeting of the Imperial Economic Conference in July, 1932.

In the Budget of March, 1933, the tax on incomes of joint stock companies was raised to 12½ p.c. and the $2,000 exemption which had previously existed was removed. Where a consolidated statement of a company and its subsidiaries was compiled, the tax rate was set at 13½ p.c.

On personal incomes the exemption was reduced from $2,400 to $2,000 or from $1,200 to $1,000 as the case might be, and the exemption for dependent children was lowered from $500 to $400. The rate of taxation was increased according to a new schedule, the tax on the first $1,000 of taxable income being 3 p.c.

In certain cases, new taxes of 5 p.c. were imposed at the source on interest or dividends paid by Canadian debtors to non-residents (Dominion Government bonds were exempt from this tax), or to residents where such interest or dividend is paid in funds which are at a premium in relation to Canadian exchange.

The sales tax was not changed, remaining at 6 p.c., though with a view to additional revenue an adjustment of the exempt and the partly exempt lists was made.

Special excise taxes were levied as follows: 10 p.c. on cosmetics and toilet preparations; 5 p.c. on automobile tires and tubes; 2 cents per pound on refined sugar; 25 cents per gallon on unfermented wort; and 50 cents per pound on malt syrup and malt products. The provisions of the Special War Revenue Act exempting from the stamp tax cheques, receipts to banks, money orders, travellers cheques, etc., not exceeding $5 in value was repealed (except as regards creamery tickets or cheques). The stamp tax on postal notes was raised from 1 to 3 cents. Cigarette papers and tubes were taxed 2 cents per hundred leaves and 5 cents for 50 tubes, respectively.

The excise duty on distilled spirits used in the manufacture of proprietary medicines, extracts, perfumes, etc., was made $2.50 per proof gallon and an excise duty of $1 per proof gallon was imposed on spirits

distilled from juices of native fruits used by wine manufacturers in fortifying native wines.

In view of the tariff changes made following the Imperial Economic Conference and the subsequent establishment of the Tariff Board to hold hearings and report to Parliament on tariff adjustments, no important changes were made in the tariff schedules.

Provincial and Municipal Finance

Provincial Finance

Provincial Governments in Canada are in the position, under section 118 of the British North America Act, 1867 (30 and 31 Vict., c. 3), and the British North America Act, 1907 (7 Edw. VII, c. 11), of having a considerable assured income in subsidies from the Dominion Treasury. In addition, through the ownership of their lands, minerals and other natural resources, the provinces are in a position to raise considerable revenues through land sales, sales of timber, mining royalties, leases of water-powers, etc. Further, under section 92 of the British North America Act, Provincial Legislatures are given authority to impose direct taxation within the province for provincial purposes and to borrow money on the sole credit of the province.

Among the chief methods of taxation to be employed has been the taxation of corporations and estates. Prominent among the objects of increased expenditure are education, public buildings, public works (especially roads and highways), labour protection, charities, hospitals and places of correction.

The Growth of Provincial Taxation.—Whereas in earlier years the Dominion subsidies, together with the revenues arising out of the natural resources of the provinces and from fees for specific services rendered to the citizens, nearly sufficed to cover the whole expense of government and rendered a resort to taxation for provincial purposes practically unnecessary in most of the provinces, the great increase in the functions of government since the commencement of the present century has put an end to this state of affairs. Provincial taxation has increased from $15,003,526 in 1916 to $109,165,948 in 1929, $126,147,195 in 1930 and $124,679,131 in 1931.

The increase in the use of automobiles, both for commercial purposes and pleasure, is clearly demonstrated by the growing revenues from licences and permits issued by the Provincial Governments. In 1921 the total revenue of all provinces from automobile licensing amounted to $7,857,751. It had increased to $13,020,607 by 1925 and in 1931 reached $19,952,575. The growth of revenue from the gasolene tax still further demonstrates the increasing use of motor vehicles. In 1923 Manitoba and Alberta were the only provinces showing a gasolene-tax revenue, the total being $280,404. In 1926 all provinces, except Saskatchewan, collected gasolene taxes which amounted to $6,104,716. In 1931 all provinces collected $23,859,067.

The provincial revenues from the liquor traffic have increased considerably of late years. The adoption of government control of the sale of liquor in all but one of the provinces, has resulted in trading profits, licensing revenues, and permit fees, all of which have swelled the provincial revenues. Prior to the adoption of government control such revenues were not available to the provinces. In 1925 the total revenue

collected by all provinces from the liquor traffic was $8,964,824. By 1928 it amounted to $22,755,212, in 1929 to $27,599,687, 1930 to $33,248,056 and 1931 to $32,128,693.

Bonded Indebtedness of the Provinces.—The bonded indebtedness of the provinces amounts to about four-fifths of their total direct liabilities. In recent years, the aggregate bonded indebtedness of the provinces has steadily increased. The total for the nine provinces was $708,900,342 in 1925, $715,489,427 in 1926, $757,168,785 in 1927, $779,155,374 in 1928, $819,517,036 in 1929, $919,142,905 in 1930, $1,016,647,165 in 1931 and $1,148,323,084 in 1932. This bonded indebtedness for 1932 was divided by provinces as follows: P.E.I., $3,504,000; N.S., $61,740,747; N.B., $58,739,663; Que., $91,987,692; Ont., $499,986,011; Man., $89,630,906; Sask., $101,831,236; Alta., $128,970,593; B.C., $111,932,236. The development of the principle of public ownership is largely responsible for the high bonded indebtedness in certain provinces, particularly in Ontario where the hydro-electric system and the provincially-owned Temiskaming and Northern Ontario Railway largely account for the bonded indebtedness of the province. The larger of these public utilities, the hydro-electric system is, however, meeting from its revenues the interest on the indebtedness incurred in its construction.

The expansion in the ordinary revenues and expenditures and the increases in direct liabilities of all Provincial Governments are shown for the years 1873-1932 and by individual provinces for 1932 below:—

Aggregate Provincial Revenues and Expenditures, 1873-1932, and by Provinces, 1932

Fiscal Year Ended—	Ordinary Revenue	Ordinary Expenditure	Direct Liabilities
	$	$	$
1873	6,960,922	6,868,884	–
1881	7,858,698	8,119,701	–
1891	10,693,815	11,628,353	–
1901	14,074,991	14,146,059	–
1911	40,706,948	38,144,511	128,302,848[1]
1921	102,030,458	102,569,515	565,470,552
1926	146,450,904	144,183,178	893,499,812
1928	168,109,505	165,538,910	963,169,888
1929	183,598,024	177,542,192	1,034,071,264
1930	188,154,910	184,804,203	1,140,953,696
1931	179,143,480	190,754,202	1,276,629,288
1932	168,227,898	183,067,116	1,420,227,023
Prince Edward Island	1,206,026	1,277,401	4,280,981
Nova Scotia	8,100,988	7,858,239	68,078,555
New Brunswick	5,795,630	6,360,894	70,626,126
Quebec	36,941,020	37,525,729	108,188,710[2]
Ontario	54,175,233	52,173,087	578,962,459
Manitoba	14,631,341	14,631,341	124,558,810
Saskatchewan	11,902,647	17,722,936	140,902,935
Alberta	13,492,430	18,945,481	162,222,980
British Columbia	21,982,583	27,472,008	162,405,467

[1]Statistics for the Province of Saskatchewan are for 1913.
[2]Figures wired from Quebec. No statement in Public accounts.

Municipal Finance

Under the provisions of the British North America Act, the municipalities are the creations of the Provincial Governments. Their organization and their powers differ in different provinces, but almost everywhere they have very considerable powers of local self-government. If

we include the local government districts of Saskatchewan and Alberta, there are over 4,200 municipal governments in Canada. These 4,200 municipal governments have together probably 20,000 members described as mayors, reeves, controllers, councillors, etc., the experience training them for the wider duties of public life in the Dominion and in the provinces. Certain of the larger municipalities, indeed, are larger spenders of public money than are some of the provinces.

The cost of municipal government, like the cost of provincial and Dominion government, has greatly increased since the pre-war period, principally due to the increased services demanded from municipal bodies. Among such public services which play a large part in municipal expenditures may be mentioned education, roads and highways, sanitation, fire and police protection, and charities and social relief. Thus the aggregate taxes imposed by the municipalities of Ontario increased from $34,231,214 in 1913 to $128,657,684 in 1931. In Quebec the aggregate ordinary expenditures of the municipalities increased from $19,478,740 in 1914 to $46,400,700 in 1931. In Manitoba, again, municipal taxation has increased from $9,449,000 in 1914 to $19,082,974 in 1931, in Saskatchewan from $13,359,000 in 1914 to $26,670,972 in 1931, in Alberta from $8,794,000 in 1915 to $15,379,975 in 1931, and in British Columbia the tax receipts amounted to $8,698,820 in 1914, while the tax levy amounted to $20,397,195 in 1931. The tax receipts of the municipalities of Nova Scotia were $6,445,645 in 1931 as compared with $3,390,000 as recently as 1919.

Municipal System of Taxation.—Throughout the Dominion, the chief basis of municipal tax revenue is the real estate within the limits of the municipalities; though in certain provinces personal property, income, and business carried on are also taxed. General taxes are normally assessed at the rate of so many mills on the dollar of the assessed valuations. In the Prairie Provinces the values of improvements made to real property are often rated at a very low figure, *e.g.*, in Saskatchewan, where the taxable valuations of buildings are about 12 p.c. of the taxable valuations of lands, and in Alberta, where they are about 27 p.c. of the taxable valuations of lands. Land valuations in the West, which in earlier years were somewhat inflated, have of late been assessed on a sounder basis, and in some provinces the Equalization Boards have placed a more equitable valuation on lands as among the various rural municipalities.

Bonded Indebtedness of Municipalities.—Like other Canadian governing bodies, the municipalities of the greater part of Canada borrowed rather too freely during the years between 1917 and 1930. The bonded indebtedness of Ontario municipalities rose from $153,568,409 in 1913 to $499,002,074 in 1931, while that of Quebec municipalities increased from $132,078,584 in 1914 to $428,018,439 in 1931, and a proportionate increase took place in other provinces. There was an increase for 1931 over 1930 for the municipalities in each of the provinces. Total bonded indebtedness for all municipalities throughout Canada equalled $1,341,199,091 for 1931 as compared with $1,282,327,692 in 1930. British Columbia ranks third after Ontario and Quebec with $129,913,890, and these three provinces have about 79 p.c. of the municipal bonded debt of Canada.

CHAPTER XVII

CURRENCY AND BANKING—INSURANCE—LOAN AND TRUST COMPANIES—MISCELLANEOUS

Currency and Banking

Early trade in Canada was carried on by barter. Beads, blankets, beaver and other furs, tobacco and wheat have been at various times used as substitutes for currency. Further, under the French *régime* playing cards stamped with a value and redeemable yearly on the receipt of bills

A FEW OF CANADA'S FINANCIAL INSTITUTIONS

Head Office of the Bank of Montreal, Montreal, Royal Trust Building to right.

Bank of Nova Scotia, Toronto. The General Manager's Offices are located here.

First Unit of Canada Life Assurance Company's Head Office Building, Toronto. Osgoode Hall shown to right.

The Canadian Bank of Commerce Head Office Building, Toronto.

of exchange on Paris, came into circulation. In the early years of the British period, the Spanish dollar and the English shilling were the chief mediums of exchange, together with such paper money as the army bills issued by the Government for supplies during the war of 1812. In 1853 a measure was passed providing for the adoption of decimal currency with a dollar equivalent to the American dollar, and from January 1, 1858, the accounts of the province of Canada were kept in terms of dollars. The use of the dollar as a monetary unit was extended throughout the Dominion by the Uniform Currency Act of 1871.

The Canadian gold dollar weighs 25·8 grains, nine-tenths fine gold, and thus contains 23·22 grains of gold. Five-dollar and ten-dollar Canadian gold pieces have been coined at the Royal Canadian Mint,[1] at Ottawa, to a limited extent but, in the main, the currency of Canada is in the form of silver, nickel and bronze token currency for fractional parts of a dollar and Dominion notes and bank notes for multiples of a dollar.

Dominion Notes.—Under the Dominion Notes Act, 1914, the Dominion Government is authorized to issue notes up to $50,000,000 against a gold reserve of $12,500,000. In 1915 the Government was authorized to issue notes up to $26,000,000 against $16,000,000 of specified securities guaranteed by the Government but without any gold reserve. Notes may be issued to any amount above this total of $76,000,000, but ordinarily an amount of gold equal to the excess must be held. Canadian gold reserves consist of a combination of bullion, Canadian, United Kingdom and United States coin. The issue of Dominion notes in one-dollar, two-dollar, four-dollar, five-dollar and fractional units, also in larger notes of from fifty to five thousand dollars (and in late years fifty thousand dollars) increased very rapidly during the war period, reaching a maximum in June, 1919, when notes to the value of $300,750,000 were in circulation. There has since been a considerable decline corresponding to the reduction in prices, and the notes in circulation at Oct. 31, 1933, were $174,945,973. About 66 p.c. of these Dominion notes were in the hands of the banks as reserves. Dominion notes are legal tender everywhere in Canada except at the offices

[1]The administration of the Mint, formerly known as the Canadian Branch of the Royal Mint, was taken over by the Canadian Government, as from Dec. 1, 1931.

which the Government maintains for their redemption. During the war period this redemption was suspended but gold payment was resumed on July 1, 1926.

After the sympathetic decline of the Canadian dollar on the gold exchanges, following the suspension of gold payment by the United Kingdom on Sept. 21, 1931, the Government permitted the export of gold only under licences issued by the Department of Finance, thus conserving the gold resources of the nation for meeting external obligations. The effect of this was to cause Canadian mines to dispose of their gold through the Royal Canadian Mint and conditions of purchase of such raw gold had to be laid down. At present these conditions of purchase are: Such deposits of newly mined gold containing not less than 50 ounces fine are paid for, on completion of assay, at the London price of gold on the day of deposit (or the latest London price of gold) converted into the Canadian equivalent at the rate of exchange reported to the Department of Finance at 11.00 a.m. on the day of deposit. A deduction of $1 per ounce fine is made as the assay charge. Provision is also made for receiving deposits of less than 50 ounces fine under a deferred settlement plan authorized on April 27, 1933.

Bank Notes.—Canadians early became accustomed to the free circulation of paper money, and practically all Canadian banks at their beginning have made the issue of bank notes their chief means of earning profits.

Under the Bank Act the banks may issue notes of the denominations of $5 and multiples thereof to the amount of their paid-up capital, but during the period of crop movement an "excess" circulation is permitted to the extent of 15 p.c. of their combined capital and reserve fund, provided the banks pay 5 p.c. interest on such excess circulation. In case of insolvency, bank notes are a first lien on assets and for over forty years no note holder has lost a dollar. In normal times they are not legal tender. The circulation of bank notes has proceeded on somewhat parallel lines with that of Dominion notes, as is shown by the following table:—

Note Circulation 1870–1933

Year	Dominion Note Circulation (averages for the year)	Bank Note Circulation (averages for the year)	Year	Dominion Note Circulation (averages for the year)	Bank Note Circulation (averages for the year)
	$	$		$	$
1870	7,294,103[1]	15,149,031	1927	184,898,003	172,100,763
1880	13,403,958[1]	22,529,623	1928	201,171,816	176,716,979
1890	15,501,360	32,834,511	1929	204,381,409	178,291,030
1900	26,550,465	46,574,780	1930	174,616,019	159,341,085
1910	89,628,569	82,120,303	1931	153,079,362	141,969,350
1915	159,080,607	105,137,092	1932	165,878,510	132,165,942
1920	305,806,288	288,800,379	1933[2]	147,933,691	103,675,133

[1] Circulation on June 30. [2] Averages for ten months.

Banking.—The Canadian Banking System, which may be described as "a decentralized system of relatively large joint stock, commercial and industrial banks, privately owned and managed, but working under a uniform law and subject to the supervision of the Dominion Government,

One of the most important and closely guarded processes in connection with the making of bank notes and Dominion currency is the careful engraving of the steel plates by hand. The illustration shows a master craftsman at work. *Photo, courtesy Canadian Bank Note Company, Ottawa.*

with the banks kept in competition with each other by the power to organize branches freely", is quite unlike that existing in England and most European countries, where a strong central bank stands in close relation to the Government Treasury, and unlike that of the United States where a system of regional centralization prevails. The Canadian Banking System is a product of evolution, having grown up gradually with changes made from time to time as experience directed. Its most distinctive feature, the branch bank system, is well adapted to the needs of a country of wide area and small population, especially to the requirements of the grain and cattle trade of the west, since it forms within itself a ready method of shifting funds from one part of the country to another and from one industry to another as the occasion may demand and ensures fairly uniform rates over wide areas. The number of chartered banks which was 36 in 1881, and 34 in 1901, decreased to 25 in 1913, and is now only 10. This lessening of the number of banks has been accompanied by a great increase in the number of branches. In 1868 there were only 123 branch banks in Canada. In 1902 the number had grown to 747, in 1916 to 3,198, and at the beginning of 1933 to 3,319. From 1867 to October, 1933, the total assets have grown from $78,000,000 to $2,868,665,918.

In recent years the banks of Canada have extended their business outside of the country itself and at the beginning of 1933 had among them 161 branches in foreign countries, mainly in Newfoundland, the British and foreign West Indies, Central and South America, and in the great centres of international finance, London, Paris and New York.

The number of branches, assets, liabilities, loans and deposits of the Canadian chartered banks as at Oct. 31, 1933, by banks, together with totals (yearly averages) for 1900, 1910, 1920, 1930, 1931, 1932 and 1933, are shown in the table below:—

Statistics of Individual Chartered Banks as at Oct. 31, 1933, with totals 1900-33

Bank	Branches in Canada and Abroad	Total Assets	Liabilities to Shareholders	Liabilities to the Public	Total Liabilities	Loans and Discounts	Deposits by the Public
	No.	$ 000,000	$ 000,000	$ 000,000	$ 000,000	$ 000,000	$ 000,000
Bank of Montreal	573	769	74	693	767	296	635
Bank of Nova Scotia	322	269	36	232	268	130	207
Bank of Toronto	180	120	15	104	119	54	93
Banque Provinciale du Canada	138	46	5	40	46	20	35
Canadian Bank of Commerce	682	566	60	501	561	292	445
Royal Bank of Canada	829	709	70	636	705	401	566
Dominion Bank	135	120	16	103	119	68	86
Banque Canadienne Nationale	250	126	14	111	125	66	98
Imperial Bank of Canada	208	135	15	119	134	75	105
Barclay's Bank (Canada)[1]	2	9	1	8	9	2	4
Totals, Jan. to Oct. 1933[2]	–	2,869	306	2,547	2,853	1,404	2,274
Totals, 1932[2]	3,319	2,869	307	2,546	2,853	1,583	2,257
Totals, 1931[2]	3,506	3,066	307	2,742	3,048	1,764	2,423
Totals, 1930[2]	3,598	3,237	305	2,910	3,215	2,065	2,517
Totals, 1920[2]	4,876	3,064	252	2,784	3,036	1,935	2,438
Totals, 1910[2]	2,621[3]	1,211	179	1,019	1,198	870	910
Totals, 1900[2]	641	460	98	356	454	279	305

[1]Barclay's Bank commenced operations in Canada in September, 1929.
[2]1911. [3]Totals are averages from the respective monthly statements, except in the case of the numbers of branches in Canada and abroad which are as at Dec. 31.

Through the operation of the clearing houses, a record of inter-bank transactions has been maintained since 1889, which forms a valuable indication of the trend of business. The clearings at Montreal, the commercial metropolis of Canada, were $454 millions in 1889, reached $1,098 millions in 1902, $2,088 millions in 1910, $7,109 millions in 1920, $8,279 millions in 1929 but dropped to $5,773 millions for 1931 and $3,972 millions for 1932. This, however, does not tell the whole story, since numerous transactions between persons who carry their accounts in the same bank are not recorded in bank clearings; also, every amalgamation of banks lessens, in so far, the volume of clearings. Accordingly, a record of cheques debited to accounts at all branches at clearing-house centres was instituted in 1924; between that date and 1929 Montreal bank debits increased from $7,502 millions to $15,558 millions, and the grand total of bank debits for Canada from $27,157 millions to $46,670 millions. Since 1929 there has been a steady decline to the 1932 levels of $7,136 millions for Montreal and $25,844 millions for Canada.

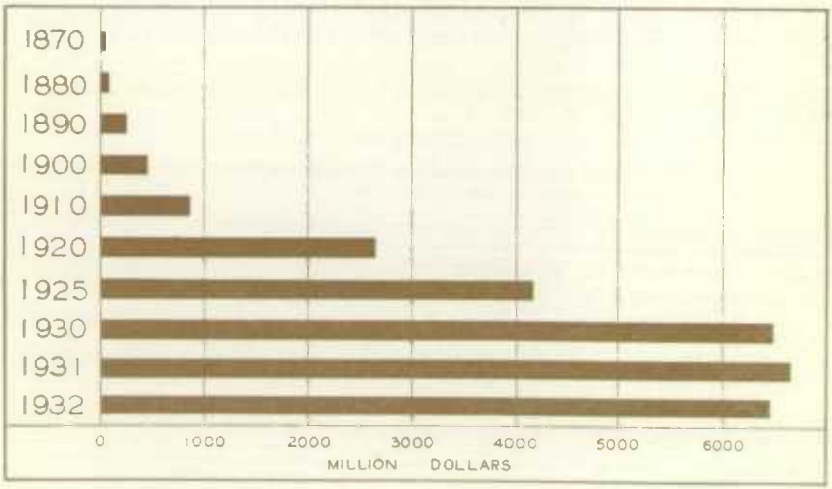
Bank Clearings and Bank Debits, 1924-32 and, by Months, October 1932 to October 1933

Year	Exchanges of the Clearing Houses of Chartered Banks in Canada	Bank Debits to Individual Accounts	Year	Exchanges of the Clearing Houses of Chartered Banks in Canada	Bank Debits to Individual Accounts
	$000,000	$000,000		$000,000	$000,000
1924	17,008	27,157	1933—		
1925	16,762	28,126	January	978	1,969
1926	17,715	30,358	February	882	1,830
1927	20,568	36,094	March	946	1,887
1928	24,555	43,477	April	950	1,877
1929	25,105	46,670	May	1,293	2,650
1930	20,092	37,491	June	1,430	2,982
1931	16,828	31,586	July	1,792	3,528
1932	12,914	25,844	August	1,365	2,649
			September	1,232	2,457
October	1,176	2,367	October	1,331	2,823
November	1,130	2,466	November	1,345	2,837
December	1,063	2,085	December	-	-

Insurance

Life Insurance.—The life insurance business was introduced into Canada by companies from the British Isles and the United States about the middle of the nineteenth century. By 1875 there were at least 26 companies and possibly several more, competing for the available business in Canada, as against 43 active companies registered by the Dominion and a few provincial companies in 1932. Of the 43 companies registered by the Dominion 28 were Canadian, 6 British and 9 foreign.

LIFE INSURANCE IN FORCE IN CANADA
1870 – 1932
DOMINION COMPANIES



The development of life insurance in Canada, as in other English-speaking countries at least, has been marked by an increased service to the individual policyholder. The benefits which may now be obtained under a life insurance policy are calculated to meet the needs of the policyholder and of his dependants, whether in event of old age or in event of death or of disability. In 1919 there was introduced what is known as "group insurance", a plan whereby a group of persons, usually employees, are insured by their employer, for a uniform amount or a varying amount determined by a formula, under one policy, generally on the term plan, the employer paying the premium or a substantial part thereof. Each employee usually has the right to obtain an individual policy at ordinary normal rates, without medical examination, on termination of employment.

The table below shows the growth of life insurance month by month in recent years. The statistics are not complete but represent approximately 85 p.c. of the total business transacted in Canada.

Sales of Life Insurance in Canada by Months, 1931–33

NOTE.—The figures in this table are those published by the Hartford Research Bureau except that the totals for Newfoundland, included therein, have been deducted.

Month	1931	1932	1933	Month	1931	1932	1933
	$000	$000	$000		$000	$000	$000
January	40,816	37,082	29,177	July	39,603	34,226	29,998
February	39,925	38,857	26,089	August	35,438	28,124	27,082
March	40,694	37,206	29,601	September	29,833	25,023	25,142
April	45,345	33,425	29,624	October	35,722	29,657	31,253
May	40,983	30,779	30,215	November	38,615	33,739	33,896
June	45,830	40,744	32,154	December	46,951	33,249	-

As a result of the adaptation of life insurance policies to the needs of the public, and of the growing wealth of the community, the increase in the amount of life insurance in force has been remarkable. In 1869 the total life insurance in force in Canada by Dominion companies was only $35,680,000 as compared with $6,472,000,000 approximately at the end of 1932. This latter figure was equal to $616 per head of population. In addition there was $176,000,000 of fraternal insurance transacted by Dominion licensees and $178,120,314 of insurance transacted by provincial licensees. Thus the total life insurance in force in the Dominion at the end of 1932 was $6,826,000,000 approximately. The increase in the premium income from Canadian business of all Dominion registered companies (not including fraternal benefit societies) was from $90,000,000 in 1920 to $221,000,000 in 1930 but decreased to $216,000,000 in 1932.

Fire Insurance.—Fire insurance in Canada began with the establishment by British fire insurance companies of agencies, usually situated in the sea ports and operated by local merchants. The oldest existing agency of a British company is that of the Phœnix Fire Office of London, now the Phœnix Assurance Co., Ltd., which commenced business in Montreal in 1804.

The Halifax Fire Insurance Co. is the first purely Canadian company of which any record is obtainable. Founded in 1809 as the Nova Scotia Fire Association, it was chartered in 1819 and operated in the province of Nova Scotia until 1919, when it was granted a Dominion licence.

The report of the Superintendent of Insurance for the year ended Dec. 31, 1932, shows that at that date there were 240 fire insurance companies doing business in Canada under Dominion licences, of which 50 were Canadian, 66 were British and 124 were foreign companies, whereas in 1875, the first year for which authentic records were collected by the Insurance Department, 27 companies operated in Canada—11 Canadian, 13 British and 3 United States. The proportionate increase in the number of British and foreign companies from 59 to 79 p.c. of the total number is a very marked point of difference between the fire and life insurance businesses in Canada, the latter being carried on very largely by Canadian companies.

The enormous increase since 1869 (the earliest year for which statistics are available) in the fire insurance in force, is no doubt partly due to the growth of the practice of insurance, but it is also important as an indication of the growth of the value of insurable property in the country, and thus throws light upon the expansion of the national wealth of Canada. By 1880 companies with Dominion licences had fire insurance in force totalling $411,563,271; by 1900 the one billion dollar mark had about been reached and by 1930 the total stood at $9,672,997,000. At the end of 1932, besides $9,301,748,000 of fire insurance in force in companies with Dominion licences, there were also $1,284,061,000 in force in companies with provincial licences, or about $10,586,000,000 in force with companies, associations, or underwriters licensed to transact business in Canada.

Miscellaneous Insurance.—Miscellaneous insurance now includes among other classes in Canada: accident, sickness, automobile, burglary, explosion, forgery, credit, guarantee, hail, inland transportation, employers' liability aviation, plate glass, sprinkler-leakage, steam boiler, title, tornado and live-stock insurance, etc. Whereas in 1880, 18 companies were licensed for business of this kind, such insurance was sold in 1932 by 247 companies, of which 49 were Canadian, 60 British and 138 foreign.

The total net premium income for 1932 was $28,893,000 and the most important class of miscellaneous insurance, according to the amount of premiums received, was automobile insurance, which has greatly increased during the past twenty years, although a decrease has been shown in recent years. As recently as 1910, the premium income of companies doing an automobile insurance business was only $80,446; in 1915 it was $636,085, and in 1932 $14,466,618. The premium income of personal accident insurance came second with $2,918,000. Combined accident and sickness insurance was third in 1932 with a premium income of $1,636,395. The premium income of all accident and sickness insurance combined totalled $7,820,000 in 1932.

Loan and Trust Companies

The principal function of loan companies is the lending of funds on first mortgage security, the money thus made available for development purposes being secured mainly by the sale of debentures to the investing public and by savings department deposits. Of the loan companies operating under provincial charters, the majority conduct loan, savings and mortgage business, generally in the more prosperous farming communities.

The number of loan and savings societies in operation and making returns to the Government at Confederation was 19, with an aggregate

paid-up capital of $2,110,403 and deposits of $577,299. Rapid increases in the number of companies and total volume of business resulted from subsequent legislation. In 1899, 102 companies made returns, showing capital stock paid up of $47,337,544, reserve funds of $9,923,728 and deposits of $19,466,676; total liabilities had increased from $3,233,985 to $148,143,496 between 1867 and 1899. After slight decreases in the number of loan companies in operation through amalgamations and absorptions, shortly after the turn of the century, further growth was recorded. As a result of the revision of the laws relating to loan and trust companies in 1914, statistics of provincially incorporated loan and trust companies ceased to be collected, but of late years these have made voluntary returns so that all-Canadian totals are again available.

The paid-up capital stock of all loan companies at the end of 1932 was $51,255,922 (Dominion companies, $19,506,063, and provincial companies, $31,749,859); reserve funds, $45,506,026 (Dominion companies, $14,739,177, and provincial companies, $30,766,849); liabilities to the public $163,966,053 (Dominion companies, $107,757,261, and provincial companies, $56,208,792); and liabilities to shareholders, $101,884,634 (Dominion companies, $35,803,526, and provincial companies, $66,081,108).

Trust companies act as executors, trustees and administrators under wills or by appointment, as trustees under marriage or other settlements, as agents or attorneys in the management of the estates of the living, as guardians of minors or incapable persons, as financial agents for municipalities and companies and, where so appointed, as authorized trustees in bankruptcy. Some companies receive deposits but the lending of actual trust funds is restricted by law.

Trust companies are principally provincial institutions, since their original main functions were connected with probate, which lies within the sole jurisdiction of the provinces.

The aggregate total assets of the trust companies of Canada at the end of 1932 were $2,506,260,979 as compared with $805,000,000 in 1922 (the earliest year for which figures are available). The bulk of these assets ($2,281,001,620 in 1932) was represented by estates, trusts and agency funds. The assets of Dominion companies in 1932 amounted to $259,565,095 and of provincial companies to $2,246,695,884.

Miscellaneous

Interest Rates.—There does not exist in Canada as yet a market for money in the same sense as in great financial centres such as London and New York. Nevertheless the trend of money rates in the Dominion can be measured. Since about the beginning of the century the province of Ontario, the wealthiest and most populous of the provinces of the Dominion, has done its financing largely in Canada, hence the fluctuation in the rate of yield of Province of Ontario bonds is an excellent long-term indicator of net interest rates in the Dominion. Fluctuations in the yield of Ontario bonds for the past seven years are shown as follows:—

Yield of Province of Ontario Bonds by Months, 1927-33

Month	1927	1928	1929	1930	1931	1932	1933
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
January	4·65	4·30	4·65	4·90	4·55	5·74	4·75
February	4·65	4·20	4·70	4·90	4·55	5·55	4·73
March	4·60	4·25	4·85	4·85	4·45	5·30	4·79
April	4·56	4·25	4·95	4·85	4·45	5·33	4·85
May	4·55	4·35	5·00	4·85	4·40	5·42	4·70
June	4·55	4·40	4·95	4·83	4·40	5·48	4·65
July	4·55	4·50	4·95	4·80	4·45	5·30	4·63
August	4·55	4·60	4·90	4·60	4·40	4·95	4·55
September	4·55	4·60	5·00	4·45	4·65	4·88	4·59
October	4·50	4·55	4·95	4·50	4·95	4·70	4·53
November	4·47	4·55	4·95	4·50	5·05	4·90	4·66
December	4·35	4·60	4·90	4·50	5·20	4·92	–

Sales of Canadian Bonds.—Sales of Canadian bonds of all classes, but more especially railway and corporation bonds because of the falling-off in production and the uncertainties of the industrial outlook, showed a decided decline from 1931. The influence of Dominion Government financing operations by conversion loans is seen in the 1931 figure for government and municipal bonds which reached an abnormally high level. With this exception, the sales of government and municipal bonds were higher for 1932 than for any year covered in the table following.

The great increase in wealth during and immediately following the War enabled a much greater proportion of public and industrial financing to be done at home. Whereas before the War much of the capital required for Canadian development was drawn from the United Kingdom and the United States, since 1914 more than 60 p.c. of the total issues of Canadian bonds have been sold within Canada; the percentage so sold in 1932 was about 80. The proportion sold in the United Kingdom has increased substantially for 1932. The following table shows the total bond sales, the distribution of sales and the classes of bonds in Canada for the seven-year period 1926-32.

Sales of Canadian Bonds, 1926-32

Year	Class of Bonds		Distribution of Sales			Total
	Government and Municipal	Railway and Corporation	Sold in Canada	Sold in United States	Sold in the United Kingdom	
	$	$	$	$	$	$
1926	246,653,461	285,419,200	263,862,718	259,209,943	9,000,000	532,072,661
1927	232,537,614	369,680,067	373,637,014	223,714,000	4,866,667	602,217,681
1928	120,113,088	333,479,000	278,080,088	159,512,000	16,000,000	453,592,088
1929	218,628,309	442,530,600	378,395,909	263,654,000	19,109,000	661,158,909
1930	409,652,063	357,573,000	368,868,063	393,632,000	4,745,000	767,245,063
1931	1,069,638,571	181,182,000	1,090,800,571	155,920,000	4,100,000	1,250,820,571
1932	450,067,632	23,050,000	377,752,632	81,015,000	14,350,000	473,117,632

Commercial Failures.—The total of commercial failures in Canada for 1933 (ten months) as reported to the Dominion Bureau of Statistics under the provisions of the Bankruptcy and Winding-up Acts was 1,729 as compared with 2,420 for the entire twelve months in 1932, 2,216 in 1931, 2,402 in 1930, and 2,167 in 1929.

The following tables give, for the above five years, the distribution of failures, by provinces and by industrial and commercial groups:—

Number of Commercial Failures, by Provinces, 1929-33

Year	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
1933[1]	7	47	35	774	635	58	47	76	50	1,729
1932	9	62	80	968	889	86	91	131	104	2,420
1931	7	51	74	795	793	109	152	131	104	2,216
1930	3	61	45	1,011	776	113	146	152	95	2,402
1929	1	71	61	927	762	91	84	101	69	2,167

[1] Ten months January to October inclusive.

Number of Commercial Failures, by Groups, 1929-33

Year	Trade	Manufactures	Agriculture	Logging, Fishing	Mining	Construction	Transportation and Public Utilities	Finance	Service	Not Classified	Total
1933[1]	920	312	74	4	5	49	21	8	203	133	1,729
1932	1,171	468	190	9	6	83	43	7	290	153	2,420
1931	1,107	464	125	5	7	61	42	21	255	134	2,216
1930	1,204	488	115	12	9	55	48	29	283	159	2,402
1929	1,100	443	125	4	11	61	21	5	239	158	2,167

[1] Ten months January to October inclusive.

The chief branches of business to be affected by failure are trade, manufacturing, and service and for the first ten months of 1933 these three groups accounted for 82·9 p.c. of all failures. In that period the estimated grand total of assets of all the concerns which failed was $23,755,399 against estimated liabilities of $28,669,253. For the same months of the previous year estimated assets were $32,081,964 and estimated liabilities $34,506,706.

It will be seen, therefore, that the average margin between liabilities and assets of commercial failures during the first ten months of 1932 and 1933 has widened, the average liabilities of each failure having decreased from $17,297 to $16,581, though the average assets have dropped from $16,582 to $13,739.

The decidedly hopeful sign indicated by the figures is that total commercial failures for the first ten months of 1933 have shown a decrease of 266 or about 13 p.c. compared with the same months of 1932 and were at a lower level in 1933 than they have been for the same ten months in any year since 1928.

CHAPTER XVIII

LABOUR

Dominion Department of Labour.—Accompanying the steady progress of labour organization, Canada has provided on an increasing scale for governmental consideration of labour problems. The Dominion Department of Labour was established in 1900. Its duties are to aid in the prevention and settlement of labour disputes, to collect and disseminate information relative to labour conditions, to administer the Government's fair-wages policy and in general to deal with problems involving the interests of workers. Under the first mentioned of these functions, the Industrial Disputes Investigation Act, originated in 1907 for the settlement of trade disputes, has attracted favourable comment throughout the world; up to March 31, 1932, 772 threatened disputes have been referred under it and in all but some 38 cases an open break has been averted. A monthly *Labour Gazette* has, since 1900, provided a comprehensive survey of labour conditions in Canada, and is supplemented by various special publications dealing with wages, labour organizations, labour laws, etc. The Department more recently has established also the "Employment Service of Canada" which is concerned particularly with problems relating to employment; it also administers the Technical Education Act, the Government Annuities Act, the Old Age Pensions Act and the Combines Investigation Act—the latter being a measure aimed at combinations in restraint of trade. In addition, the Department acts generally as the representative in Canada of the International Labour Office of the League of Nations, Canada as one of the eight states of "chief industrial importance" having a place on the Governing Body of that Office.

Provincial Departments and Bureaus of Labour.—In several of the provinces likewise, namely, in Quebec, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia, Departments or Bureaus of Labour have been set up. Under these are administered an increasing body of legislation of various kinds ("civil rights" pertaining to the provinces under the B.N.A. Act) in the form of factories, shops and mines Acts, workmen's compensation Acts (most of the provinces having special boards for the administration of the latter legislation), laws for the protection of women and children in industry, mechanics' lien Acts and other legislation for the fixing and safe-guarding of wages. The growth of this body of legislation is one of the most outstanding features of the social progress of Canada in the present century.

The Labour Movement

In Canada, trade unionism has been an outgrowth of the last half century, resulting from the increase in urban population and the development of a diversified industrial life. The majority of our local trade unions are branches of international craft organizations which usually have their headquarters in the United States, but in recent years there has been in evidence a movement for the establishment of national unions; prominent among these are the Canadian Central Labour Organizations and the National Catholic Unions.

During 1932, there were in existence in Canada 1,868 international locals having 176,087 members, and 857 non-international unions with a membership of 107,489. The total number of organized workers reported to the Department of Labour was therefore 283,576, compared with 310,544 in 1931. Of the latter number, 188,219 unionists belonged to international craft organizations, while 122,325 were members of the national unions. The oldest federated labour organization in the Dominion is the Trades and Labour Congress, established in 1873, which is the recognized head of the internationally organized workers in Canada and their representative in dealing with legislative matters. The All-Canadian Congress of Labour came into existence at a meeting of national union representatives held in Montreal in 1927. The object of the Congress is to promote the interests of its affiliated organizations and to strive to improve the economic and social conditions of the workers. The Catholic union movement in Canada dates from 1901, when it had its inception in Quebec city. Subsequently, other national unions were formed in the province of Quebec.

With the growth of the Catholic union movement in Canada, which has been steady, there developed the desire for a central organization to direct and co-ordinate the activities of the various units, which resulted, during 1921, in the formation of the Federation of Catholic Workers of Canada. The plan of organization adopted is similar to the non-sectarian trade unions. Although this movement was originally designed exclusively for Roman Catholics, provision has been made for the admission of non-Catholics as associate members who may vote, but cannot hold office.

Industrial Disputes.—During 1931, the loss to industry and to workers through industrial disputes was greater than in 1930 or 1929, although the number of workers involved was smaller than in any other year since 1901 except 1914. There were 88 disputes, involving 10,738 workers and a time loss of 204,238 working days, compared with 67 disputes involving 13,768 workers and 91,797 working days in 1930. This was the minimum loss in working days since the record was commenced, while the maximum time loss was 3,400,942 in 1919, when 148,915 workers were involved. During the twelve months of 1932, there were 92 disputes involving 19,811 workers and 300,687 working days (preliminary figures).

Labour in Politics.—The proposal that labour take independent political action to secure direct representation in the legislatures of the country was first proposed in 1887, when the Trades and Labour Congress of Canada, at a meeting in Hamilton, Ontario, adopted a resolution to this effect. Labour members were occasionally elected to the provincial and the Dominion Parliaments, but in spite of much discussion on the matter, no definite policy was followed by labour for some years. The executive council of the Trades and Labour Congress therefore suggested at the 1917 convention that a labour party should be organized along the lines of the British party. This proposal was adopted, and in 1921 the Canadian Labour Party was formed in Winnipeg. For a few years, the party endeavoured to co-ordinate the various labour political parties, but since 1927 the main organization has ceased to function, although two sections, those in Quebec and Alberta, are still in existence. British Columbia, Manitoba and Ontario have Independent Labour Parties, while in some of the other provinces, there are labour political organizations operating under different names.

In 1929, delegates representing labour political parties of the four western provinces met in Regina and formed an organization under the name of "The Western Conference of Labour Political Parties" with a view to unifying the political policy of labour west of the Great Lakes. Annual meetings have since been held.

In the Dominion elections held in July, 1930, 12 straight labour candidates appeared; there were also ten Communist nominees and two Farmer-Labour candidates. Three nominees of labour political parties were elected, two in Winnipeg and one in Vancouver, while at a by-election held in August, 1931, to fill a vacancy in East Hamilton, Ont., the labour candidate was elected to Parliament.

The present Minister of Labour is the Hon. Wesley A. Gordon, under whose administration the 1932 unemployment relief measures of the Government are being carried out. (See p. 171.)

Co-operative Associations

Co-operative Associations in Canada numbered 1,132 in 1931, with a total membership of 756,420. In 1930, there were 1,095 of these organizations which reported 690,685 members. This type of organization includes productive, marketing, credit and savings, community hall, and miscellaneous societies; in some cases, production and marketing are jointly carried on. Important among the Co-operative Associations are the Grain Growers of the Prairies, which are the largest co-operative organizations in Canada. It is interesting to note that the Association Opposing Compulsory Pool was formed in 1931 as a co-operative society to combat the 100 p.c. Wheat Pool in Saskatchewan, and had a reported membership of 150,000; the functions of this organization are partly educational. Numerically the strongest co-operative associations are those engaged primarily in marketing, there being, in 1931, 333 of such societies with a total membership of 344,884.

In the province of Quebec, great success has been achieved by the organization of "People's Banks" for the providing of short-term credit for small farmers and industrial workers; 174 such banks were in operation in 1931, their membership numbering 43,207, and their loans amounting to $2,998,046, on which the profits realized amounted to $594,235.

In Ontario, there are three Co-operative Credit Societies, one of which was formed in Toronto, in 1931, by the Amalgamated Clothing Workers of that city. In the category of credit and savings organizations, there is also the Alberta Provincial Association of Credit Societies, a body with 41 local societies operating under the provisions of the Co-operative Credit Act of the province. One of the functions of this organization is to act as intermediary between the members of affiliated societies and the department in charge of the Act.

Employment, 1932 and 1933

The importance of current statistics on employment has for some years been recognized in Canada, and a monthly record of the number on the payrolls of firms having 15 or more employees has been maintained since 1920. The inquiry includes all industries except agriculture, fishing, hunting, professional and highly specialized business undertakings such as banking, insurance, etc. The chart on p. 168 shows the trend of employment during the last seven years.

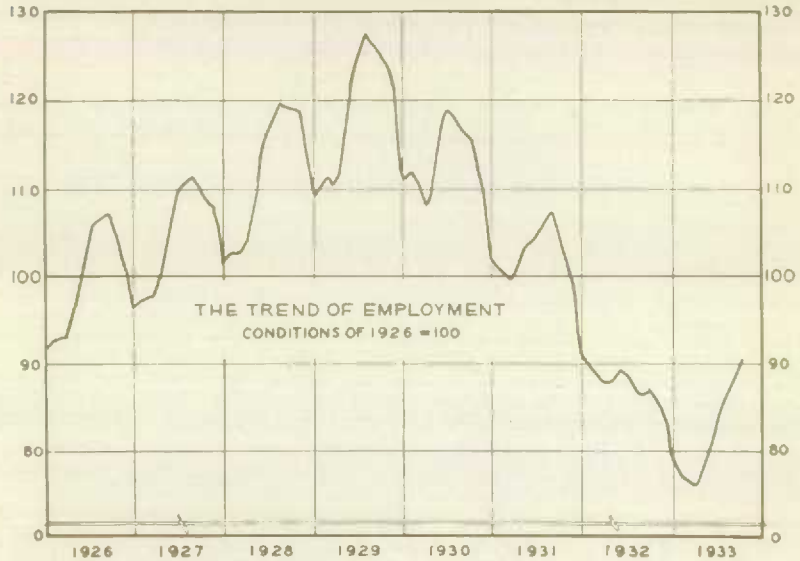
During the twelve months of 1933, some 8,100 employers reported to the Dominion Bureau of Statistics an average working force of 768,628 persons. Monthly index numbers, based on the 1926 average as 100, are calculated from these returns from employers; in the twelve months of 1933, the general index averaged 83·4, compared with 87·5, 102·5, 113·4 and 119·0 in the same months of 1932, 1931, 1930 and 1929 respectively. Employment on the average was therefore less than in the preceding year, but there was a very important difference in the situation, *viz.*, that with only two interruptions the trend in 1932 was downward, while in 1933 the movement since April 1 has been consistently upward. Thus, the 1932 index declined from 91·6 on Jan. 1 to 83·2 on Dec. 1, or by 9·2 p.c.; on the contrary, the 1933 index, after falling from 78·5 on Jan. 1 to 76·0 on April 1, then rose steadily to 91·8 at the beginning of December. This was an increase of 16·9 p.c., while as compared with the same month in the preceding year, the index on Dec. 1, 1933, was also higher by 10·3 p.c. A feature of the situation in the last few years has been the considerable amount of employment afforded by public authorities in combating the agricultural and industrial depression; the activities carried on under the Unemployment Relief Acts passed since 1930 are briefly analysed at pages 171-2.

Index Numbers of Employment as Reported by Employers, by Economic Areas, as at the first of each month, November, 1932, to December, 1933, with Yearly Averages since 1921.

NOTE.—These indexes are calculated upon the average for the calendar year 1926 as 100. The relative weight shows the proportion of employees reported in the indicated economic area to the total reported by all employers making returns in Canada on December 1, 1933.

Year and Month	Maritime Provinces	Quebec	Ontario	Prairie Provinces	British Columbia	Canada
1921—Averages	102·4	82·2	90·6	94·0	81·1	88·8
1922—Averages	97·3	81·4	92·8	92·6	82·8	89·0
1923—Averages	105·7	90·7	99·5	94·8	87·4	95·8
1924—Averages	96·6	91·3	95·5	92·1	89·4	93·4
1925—Averages	97·0	91·7	95·8	92·0	93·7	93·6
1926—Averages[1]	99·4	99·4	99·6	99·5	100·2	99·6
1927—Averages	103·7	104·0	105·6	105·3	101·1	104·6
1928—Averages	106·6	108·3	113·5	117·9	106·4	111·6
1929—Averages	114·8	113·4	123·1	126·3	111·5	119·0
1930—Averages	118·3	110·3	114·6	117·1	107·9	113·4
1931—Averages	108·1	100·9	101·2	111·5	95·5	102·5
1932—						
Nov. 1	86·8	83·6	84·2	91·6	77·8	84·7
Dec. 1	83·8	82·9	84·1	86·7	73·8	83·2
Averages, 12 months	92·2	85·5	88·7	90·0	80·5	87·5
1933—						
Jan. 1	80·1	77·8	78·8	84·4	69·7	78·5
Feb. 1	76·5	75·7	78·9	80·4	68·0	77·0
Mar. 1	76·8	74·1	79·8	80·0	67·7	76·9
April 1	78·3	73·1	78·3	78·3	68·8	76·0
May 1	80·3	75·4	79·5	79·2	72·2	77·6
June 1	82·8	79·3	81·6	82·7	76·2	80·7
July 1	89·9	83·0	85·0	85·0	81·8	84·5
Aug. 1	93·0	84·8	86·6	90·5	87·3	87·1
Sept. 1	91·5	87·0	88·1	90·7	89·2	88·5
Oct. 1	90·9	89·1	89·6	98·7	85·6	90·4
Nov. 1	90·2	92·2	91·4	94·6	84·0	91·3
Dec. 1	93·4	92·4	93·3	89·3	85·4	91·8
Averages, 12 months	85·3	82·0	84·2	86·2	76·0	83·4
Relative Weight by Economic Areas as at Dec. 1, 1933	7·7	29·4	41·5	13·2	8·2	100·0

[1]The average for the calendar year 1926, including figures up to Dec. 31, 1926, being the base used in computing these indexes, the average index here given for the 12 months Jan. 1-Dec. 1, 1926, generally shows a slight variation from 100.



Employment by Economic Areas.—The accompanying table shows the recent trend of employment in each of the five economic areas of Canada. British Columbia, though still relatively low, has experienced the greatest improvement during the past year.

Employment in Leading Cities.—Monthly statements are compiled for eight of the leading industrial centres in the Dominion, namely, Mont-

A Canadian Textile Plant.—The efficiency of Canadian manufacturing plants is due in no small measure to the conditions under which employees work.

Photo, courtesy Department of the Interior.

real, Quebec city, Toronto, Ottawa, Hamilton, Windsor and the adjacent Border Cities, Winnipeg and Vancouver. Employment in all these centres was higher at the end than at the beginning of 1933, while in Toronto, Ottawa, Hamilton, Windsor and the adjacent Border Cities and Winnipeg, the indexes at the close of the year were higher than on Dec. 1, 1932. On the average, however, activity in the eight leading cities was less than in the preceding year. During the last few years, certain works undertaken for the relief of unemployment have been important factors in the employment situation in the municipalities.

Employment by Industries.—An analysis of the data by industries shows that in 1933, as in 1932, there was a higher level of employment in trade and services than in the other groups included in the survey. The indexes in all divisions except logging averaged lower than in 1932, but in the latter part of 1933 the situation in practically all divisions was generally better than in either the first few months of the same year, or the same months of the preceding year. Logging was decidedly more active, the index averaging 66·5 in 1933, compared with 42·6 in 1932 and 60·1 in 1931. In manufactures, the index, at 84·4 on Dec. 1, 1933, was

Index Numbers of Employment as Reported by Employers, by Industries, as at the first of each month, November, 1932, to December 1933, with Yearly Averages since 1921.

Year and Month	Manufacturing	Logging	Mining	Communications	Transportation	Construction and Maintenance	Service	Trade	All Industries
1921—Averages...	87·7	103·0	98·0	90·2	94·1	71·1	83·6	92·7	88·8
1922—Averages...	88·3	85·1	99·5	86·4	97·8	76·7	81·9	90·8	89·0
1923—Averages...	96·6	114·2	108·2	87·6	100·3	80·9	87·9	92·1	95·8
1924—Averages...	92·4	116·7	105·3	93·7	99·1	80·3	93·8	92·5	93·4
1925—Averages...	93·0	105·4	99·8	95·5	96·6	84·9	95·4	95·1	93·6
1926—Averages[1]...	99·6	99·5	99·7	99·6	99·7	99·2	99·5	99·2	99·6
1927—Averages...	103·4	109·3	107·0	103·8	102·5	109·0	106·2	107·4	104·6
1928—Averages...	110·1	114·5	114·4	108·2	105·9	118·8	118·1	116·1	111·6
1929—Averages..	117·1	125·8	120·1	120·6	109·7	129·7	130·3	126·2	119·0
1930—Averages...	108·9	108·0	117·8	119·8	104·6	129·8	131·6	127·7	113·4
1931—Averages...	95·3	60·1	107·7	104·7	95·8	131·4	124·7	123·6	102·5
1932—									
Nov. 1.....	81·7	37·9	101·2	89·6	84·5	77·9	106·5	115·4	84·7
Dec. 1.....	80·3	56·2	99·9	89·3	83·9	67·6	103·7	117·8	83·2
Averages—									
12 months.....	84·4	42·6	99·2	93·5	84·7	86·0	113·6	116·1	87·5
1933—									
Jan. 1.....	74·4	74·5	96·9	87·5	78·3	58·5	102·2	119·6	78·5
Feb. 1.....	75·0	67·3	94·0	85·7	75·0	56·2	104·2	109·4	77·0
Mar. 1.....	75·8	57·1	94·6	85·6	74·1	58·5	102·9	107·3	76·9
April 1.....	76·0	35·6	91·4	84·5	74·2	54·7	102·5	107·6	76·0
May 1.....	76·8	35·1	89·9	83·7	78·9	60·8	99·9	108·6	77·6
June 1.....	80·0	40·7	91·4	83·2	79·0	67·8	106·2	109·1	80·7
July 1.....	83·0	49·5	93·1	84·0	80·5	78·2	111·5	111·8	84·5
Aug. 1.....	85·2	48·9	97·4	83·6	81·2	88·4	111·8	110·5	87·1
Sept. 1.....	86·8	48·3	100·4	83·8	82·5	88·4	113·8	111·8	88·5
Oct. 1.....	86·7	64·7	105·8	82·5	82·7	97·0	108·1	115·0	90·4
Nov. 1.....	85·5	110·3	109·7	81·1	81·4	94·6	107·9	115·6	91·3
Dec. 1.....	84·4	166·5	105·5	81·0	79·8	94·6	108·8	119·1	91·8
Averages—									
12 months.....	80·9	66·5	97·5	83·9	79·0	74·6	106·7	112·1	83·4
Relative Weight by Industries as at Dec. 1, 1933..	49·4	2·4	5·7	2·5	11·0	13·0	2·7	10·3	100·0

[1]See footnote to table on p. 167; also headnote.

13·4 p.c. higher than on Jan. 1, a recovery that represented an increase of over 50,000 employees in the staffs of the approximately 5,000 co-operating establishments. Mining, construction and maintenance and services showed considerable improvement during the year. In trade, employment was maintained in fair volume. Transportation was slightly more active at the end than at the beginning of 1933, while communication companies showed reductions in personnel.

Unemployment in Trade Unions.—A picture of the industrial situation from the viewpoint of organized labour is presented in the monthly reports on unemployment tabulated by the Dominion Department of Labour from leading trade unions throughout Canada. During the first ten months of 1933, 1,733 of these unions reported an average membership of 151,051, of whom 34,116 were, on the average, unemployed. This was a percentage of 22·6, as compared with 21·6 recorded in 1932. From June, 1933, onward, however, the general percentage of unemployment was lower than in the same months of 1932. The accompanying table contains percentages of unemployment among trade union members in the different provinces from October, 1932, to October, 1933, with yearly averages since 1925.

Percentages of Unemployment in Trade Unions, by Provinces, 1925-32, and by months, October, 1932, to December, 1933

Year and Month	N.S. and P.E.I.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada
1925—Averages...	5·0	3·6	10·9	5·5	5·1	3·3	8·4	5·7	7·0
1926—Averages...	7·8	2·1	6·8	4·2	3·6	3·0	4·9	5·5	5·1
1927—Averages...	3·7	1·9	6·8	4·1	4·4	3·2	4·1	5·5	4·9
1928—Averages...	4·0	1·2	6·1	3·5	4·2	3·0	4·2	5·1	4·5
1929—Averages...	4·0	1·6	7·7	4·3	7·1	5·3	6·4	5·9	5·7
1930—Averages...	5·4	3·7	14·0	10·4	9·6	10·6	13·3	11·6	11·1
1931—Averages...	8·5	9·2	19·3	17·2	15·7	15·6	19·4	17·6	16·8
1932—									
Oct.	11·5	16·7	27·6	22·7	21·4	13·4	21·7	21·1	22·0
Nov.	7·9	13·6	27·6	25·2	20·6	17·3	19·8	24·4	22·8
Dec.	8·4	16·5	30·9	28·5	20·9	20·8	22·8	26·0	25·5
Averages—									
12 months.	9·6	14·4	26·4	23·7	20·0	15·8	22·6	21·6	22·0
1933—									
Jan.	22·7	15·6	26·9	28·7	23·6	22·7	22·7	21·6	25·5
Feb.	9·2	17·1	27·5	28·8	22·0	21·8	19·8	21·9	24·3
Mar.	22·7	16·4	27·3	26·8	20·3	20·5	25·3	23·8	25·1
April.	21·3	15·1	25·7	26·5	20·9	17·5	28·1	22·6	24·5
May.	26·6	14·2	25·0	24·9	21·0	17·9	25·9	19·5	23·8
June.	13·8	13·0	26·2	23·3	19·4	14·9	24·5	18·6	21·8
July.	12·2	11·0	26·0	22·9	19·0	15·4	23·1	17·5	21·2
Aug.	12·6	11·1	22·6	21·7	17·9	14·3	22·0	19·4	19·9
Sept.	11·0	10·4	24·1	20·9	19·1	13·5	19·7	21·3	19·8
Oct.	12·5	9·8	25·1	20·3	19·4	13·3	16·5	21·7	19·8
Averages—									
10 months.	16·5	13·4	25·6	24·5	20·3	17·2	22·8	20·9	22·6

Applications, Vacancies and Placements of the Employment Service of Canada.—In co-operation with the provinces, the Dominion Department of Labour maintains local employment offices in some centres throughout the Dominion. The volume of business transacted in these bureaus is to

some extent indicative of current labour conditions. Up to Nov. 30, 1933, 612,028 applications for work and 330,002 vacancies were registered, while the placements effected numbered 314,290; in the same period of 1932, the applicants numbered 602,692, the positions notified as vacant 335,143, and the placements 323,022.

Unemployment Relief

The Unemployment and Farm Relief Act, 1931.—Following the expiration of the Unemployment Relief Act, 1930, whereby the Dominion Government specified that $20,000,000 might be expended for the granting of aid for the relief of unemployment (see *Canada 1932*, p. 172), the second session of the 17th Parliament enacted the Unemployment and Farm Relief Act, 1931, (see *Canada 1933*, p. 171). Under this Act the Dominion had contributed as at Nov. 1, 1933, for public works and other undertakings, $31,057,000 and for direct relief, $11,702,000. In addition to these contributions, loans and advances were made for similar purposes.

The Relief Act, 1932.—At the third session of the 17th Parliament, the Relief Act, 1932, which received Royal Assent on May 13, 1932, was enacted. Under this Act provision was made for special relief works and undertakings in the National Parks of Canada and for the continuance of the relief measures undertaken, and being carried on, in the drought-stricken area of Saskatchewan by the Saskatchewan Relief Commission, and for taking all such other measures deemed necessary.

The administration of the Act was vested in the Minister of Labour.

Agreements were completed with all the provinces except Prince Edward Island, providing for a non-recoverable expenditure of one-third of an amount not to exceed $600 per family for the purpose of providing a measure of self-sustaining relief to families who would otherwise be in receipt of direct relief by placing such families on the land. It was provided that the remaining two-thirds of the expenditure should be contributed by the province and the municipality concerned. The agreements cover a period of two years and do not expire until March 31, 1934. The numbers of settler families and total individuals approved and settled on the land to November, 1933, was as follows: N.S., 174 and 1,098; Que., 527 and 3,285; Ont., 208 and 1,090; Man., 412 and 1,945; Sask., 487 and 2,274; Alta., 279 and 1,319; B.C., 48 and 266; totals, 2,135 and 11,277.

The Dominion Government continued to contribute to the direct relief expenditures of the provinces and municipalities on receipt of certified accounts, and also contributed 50 p.c. of the cost of operating board camps, wherein the unemployed might be cared for and useful work carried out in return for subsistence and a small cash allowance.

Agreements were entered into with the four western provinces, whereby the Dominion paid 100 p.c. of the cost of providing food, fuel, clothing and shelter to single homeless unemployed persons at a cost not exceeding 40 cents per day. The agreements also provided for the placement of single homeless unemployed persons on farms at $5 per month payable by the Dominion.

Camps for the relief of unemployment were established by the Department of National Defence at various points throughout Canada and special relief works were carried out in the National Parks for the care of single homeless persons and unemployed residents of the parks. One of the fundamental reasons for the establishment of these camps was the far-reaching injury to the State which may result from the effect of unemployment upon those just reaching manhood who are faced with idleness and uncertainty. It was with a view of preserving the morale and efficiency of this class of needy persons that this provision was made, and not with any idea of giving permanent employment to young men. The purpose was to maintain their health and efficiency until such time as they could be absorbed into the natural channels of industry. The establishment authorized in these camps as at Nov. 15, was 28,702 and the actual personnel in the camps numbered 18,427.

At Nov. 1, 1933, disbursements by the Dominion for direct relief amounted to $17,616,800, and $1,447,345 additional was contributed for the care of single homeless unemployed persons in the four western provinces. For relief settlement the Dominion contribution amounted to $177,316, and for other relief projects the Dominion disbursements were $5,175,925. The cost of administration was $67,576.

The Relief Act, 1933.—At the fourth session of the 17th Parliament, the Relief Act, 1933, which received Royal Assent on Mar. 30, 1933, was enacted.

Under this Act, the Governor in Council may: provide for special relief works and undertakings in the National Parks of Canada and elsewhere; assist in defraying the cost of the sale and distribution of the products of field, farm, forest, sea, river and mine; take all such other measures as may be deemed necessary or advisable for carrying out the provisions of this Act.

The administration of the Act is vested in the Minister of Labour.

Under this Statute, agreements have been completed between the Dominion and the provinces whereby the Dominion continues to contribute to the expenditures of the provinces for direct relief, the contribution to organized municipalities being 33⅓ p.c. with equal contributions from each province and municipality concerned. In the case of unorganized territory the Dominion Government is continuing to pay 50 p.c. of the provincial expenditures for direct relief. In the four western provinces the Dominion is continuing to contribute to the care of homeless unemployed persons, the contribution of the Dominion being 20 cents per day per individual cared for in camps and urban centres, and $5 per month for each individual placed on a farm.

Under the agreements contributions are also to be made by the Dominion for approved work in connection with the construction of the Trans-Canada Highway and also for provincial roads and undertakings and work carried out by municipalities. Relief works in the National Parks are being continued as well as the projects inaugurated by the Department of National Defence under the Relief Act, 1932, and arrangements made for additional projects.

Total disbursements made by the Dominion under the Relief Act, 1933, as at Nov. 1, 1933, were $9,297,341, of which $6,242,596 was expended for direct relief and $925,203 was contributed for the care of homeless persons in the four western provinces. The amount disbursed in connection with Dominion operated relief projects was $1,735,368.

Old Age Pensions

The Old Age Pensions Act, 1927.—The Act is administered by the Department of Labour and makes provision for the establishment of a Dominion-Provincial pensions system to be effective in such provinces as have enacted and given effect to special legislation for this purpose. To this end arrangements are made for the payment, to such a province, quarterly, of 75 p.c.[1] of the net cost of old age pensions. The provinces now operating under such agreements are: B.C., Alta., Sask., Man., Ont., and P.E.I. The following table gives the payments made under the Act and the numbers of pensioners, by provinces, as at Sept. 30, 1933.

Summary of Old Age Pensions in Canada, as at September 30, 1933, by Provinces, with date effective in each case

Item	Alberta Aug. 1, 1929	B.C. Sept. 1, 1927	Manitoba Sept. 1, 1928	Ontario Nov. 1, 1929	Sask. May 1, 1928	P.E.I. July 1, 1933	N.W.T. Jan. 25, 1929	Total
Total numbers of pensioners, Sept. 30, 1933	5,729	7,575	8,787	44,919	8,782	984	5	76,781
Averages of monthly pensions....$	17·98	18·87	18·83	17·88	16·54	10·61	20·00	–
Total amounts of pensions paid Jan. to Sept. 1933..$	889,389	1,245,317	1,465,360	6,421,649	1,290,630	14,520	1,043	11,327,908
Dominion Government's shares.....$	666,815	931,806	1,097,837	4,790,926	968,631	10,890	1,043	8,467,948
Total amounts of pensions paid since inception of Act to Sept. 30, 1933.....$	3,557,798	7,105,216	7,363,932	32,150,864	6,850,741	14,520	5,827	57,048,898
Dominion Government's shares.....$	2,305,323	4,307,929	4,552,409	20,271,549	4,263,567	10,890	5,827	35,717,494

The New Brunswick Legislature at its 1930 session passed an Old Age Pensions Act to come into force on a day to be fixed by proclamation, but the Act has not yet been proclaimed. An agreement has been signed between the Dominion and the province of Nova Scotia whereby payment of old age pensions in this province will commence on Mar. 1, 1934. The Gold Commissioner of Yukon was given authority in 1927 to enter into an agreement with the Dominion Government for the purpose of obtaining the benefit of the Old Age Pensions Act, but no scheme has yet been formulated. In Quebec an Order in Council was passed in October, 1930, providing for the creation of a Commission to study a system of social insurance for the province. In the Commission's fifth report published in November, 1932, the majority report declared "in favour of a contributory and obligatory sytem of old age insurance".

[1] The proportion paid by the Dominion as set in the Act of 1927 was one-half, but this was increased at the Second Session of the Seventeenth Parliament to 75 p.c., which increase was made effective from Nov. 1, 1931.

CHAPTER XIX

EDUCATION—RESEARCH COUNCILS—PUBLIC LIBRARIES

Education

The census of 1931, like those of previous decades, obtained a record of the number of the Canadian population attending school. It showed a ten-year increase of 25·8 p.c. in school attendance as compared with an increase of about 20 p.c. in the children of school ages, and less than 18 p.c. in the total population, thus providing unmistakable evidence that the school life of Canadian children has substantially lengthened. In addition to spending more years in school pupils are attending more regularly while there. The census was taken on June 1, and a question was asked as to how many months each child had attended since September 1, the maximum possible being nine months. Practically 95 p.c. of those at school were found to have attended from 7 to 9 months, where only 88 p.c. had done so in 1921; 80 p.c. of this gain was in rural districts.

Statistics of Education in Canada, 1932

Type of Institution	Number of Institutions	Number of Pupils	Number of Teachers	Expenditure
				$
Provincially-Controlled Schools—				
(a) Ordinary day	30,700[1]	2,169,621	67,623	
(b) Technical day	133	64,460	2,009	
(c) Technical evening	379	126,219	2,962	133,222,594
(d) Normal Schools	57	7,975	598	
(e) Blind and deaf	12	1,840	300[1]	
Privately-Controlled Schools—				
(a) Ordinary day	571	94,266	5,745	5,859,000
(b) Business training	187	19,203	600	(estimated)
Dominion Indian Schools	350	17,163	600[1]	2,004,957
Universities and Colleges—				
(a) Preparatory	53[2]	23,057	959	
(b) University grade	149	43,143	4,820	22,858,207
(c) Other	10[2]	26,223		
Totals	32,901	2,593,116	86,216	163,944,758

[1]Approximate.
[2]Including only affiliated schools that are not enumerated in *(b)*.

The wider diffusion of education was also reflected in the results of the census. More than 92 p.c. of the population over the age of five years in 1931 was able to read and write; in 1921 the proportion was 90 p.c. and in 1901 it was 83 p.c. Much the most rapid gains in literacy were made in Western Canada, the more recently settled provinces, where the proportion able to read and write, for the first time, equalled the proportion in the five older provinces.

Throughout the Dominion of Canada public education is a matter of provincial concern, except for the task of instructing the Indians who are wards of the Dominion Government. The administration of education is one of the chief functions of Provincial Governments, and there has developed in each province a school system with its own individuality

though the similarities are striking among all except French-speaking Quebec. As the summary table shows, only about 5 p.c. of the school population under university grade are in schools other than those of the provincial systems. Six of the provinces have provincial universities, and the remaining three have certain colleges belonging to the higher educational system.

Ordinary Day Schools of General Education.—The provincially-controlled schools in this category care for 2,169,621 pupils, the privately-controlled, 94,266, making in all 2,263,887. Except in Quebec, practically all of these pupils are distributed over twelve grades, each requiring about one year for the average child to complete. The first eight grades are generally elementary, the remaining four secondary or high school, though there is a growing tendency in several provinces to have the elementary course proper end at the sixth year, and to introduce an intermediate school or junior high school of about three years between it and the senior high school. The greatly enhanced proportion of pupils proceeding to the end of the elementary grades and starting to high school has made it necessary to focus attention on these transitional years of the school curriculum. The Dominion Bureau of Statistics calculates that over two-thirds of the children in those provinces using the uniform grading system now get as far as the entrance to high school, that fully one-half receive some high school training, and that more than one-fifth reach the final or matriculation year. The proportions are much higher in urban areas, lower in rural parts, thus making the need for reorganization of the school courses greatest in cities, where, at the same time, the possibilities are greatest.

The organization of the school system of French-speaking Quebec bears more resemblance to those of western European countries, and less likeness to those of the United States than do the other provincial school systems in Canada. The outstanding feature of the latter is the simplicity of the structure—a single straight incline up which all children proceed together from the elementary to the high school grades and thence on to a normal school or university. The Quebec Catholic system has two fairly distinct groups of institutions—the primary schools and the secondary schools. The former include the great majority of children and give a course with a strong vocational flavour especially in the upper years but do not prepare pupils for university entrance. The smaller group consists mainly of residential schools whose function is to give a classical training from early years in preparing students for the universities. Statistics of the secondary schools of Quebec are included with colleges.

Technical and Vocational Schools.—To an increasing extent in recent years, technical and industrial schools are coming to supplement the work of the schools of general education, due in considerable measure to the stimulus given to this type of education by Dominion subsidies. In 1913 the Agricultural Instruction Act provided for the distribution of $10,000,000 among the provinces in ten years; in 1919 a similar sum was voted for the advancement of technical education on condition that the provinces themselves each spend an additional amount equivalent to its share; in 1929 the time limit in which the provinces might qualify for their shares was extended five years; in 1931 a new Act authorized an annual appropriation of $750,000 over a period of fifteen years.

HANDICRAFTS IN QUEBEC HOMES

Making Domestic Rugs,
Ste. Anne de Beaupré, Que.

Weaving Loom,
Ste. Agnes, Que.

Spinning in the Home at
St. Irenée, Que.

Quebec Handicrafts—Among the features which contribute to the old world atmosphere characteristic of the province of Quebec, home handicrafts stand prominently forward. They are much more than a practical means of providing for the rural family's needs in clothing, woollens, carpets, household decorations, etc., or a mere attraction to tourists. They are an outlet for the artistic expression of a people close to nature and peculiarly and highly endowed artistically. In order to encourage the work, the Quebec Government, through its Department of Agriculture, established a Handicraft School in 1930, with a view to the encouragement of spinning, weaving, etc., in the home.

The Department of Agriculture has a staff of 12 lecturers and 2 designers. In 1932, 130 series of spinning and weaving courses had been given, in women-farmers' clubs and parochial groups, to 7,199 students, and there were further requests for courses that could not be met.

In the school at headquarters, more advanced courses were given to 245 students. A special summer course was given for the nuns of household science schools. This school also investigates the suitability of dyeing and textile materials. In co-operation with it, the Fine Arts and Technical Schools are helping in making rustic furniture, pottery and metalware.

The movement has since spread into the Maritime Provinces through the agency of McGill University.

the courses are not of more than one year's duration, though Ontario is now experimenting with a plan to bring teachers back for a second year of normal school training after a few years' teaching experience. Except in Quebec some attendance at a normal school or a university training college is now prerequisite to the receipt of a teaching certificate. To train teachers for higher grade certificates all of the provinces except one now have approved teacher training departments connected with their universities.

Universities and Colleges.—Canada has 149 institutions providing higher educational facilities. Over 60 of these offer only arts courses, a further 35 are theological colleges, and 15 others confine their instruction to one line of professional training such as agriculture or engineering. Some of these grant degrees but the majority are affiliated to one of the 18 universities which grant more than 95 p.c. of all degrees in the country. In many of the higher educational institutions French is the chief language of instruction, the three largest being the Université de Montréal, Université Laval at Quebec city, and the Université d'Ottawa.

There were 43,143 students of university standard in 1932, and a number almost half as great in the preparatory or high school courses conducted by many of the colleges especially the Quebec classical colleges. The importance of a third class of work—extension activities—done by the universities is difficult to express numerically. Over 22,000 pupils attend evening and Saturday classes, summer schools, and other short courses, but such work extends beyond the walls of the universities to reach hundreds of thousands every year by lectures, radio broadcasts, travelling libraries, lantern slide sets, educative gramophone records, and regular sections in the daily or weekly press.

Research Councils

The work of the universities in providing a body of skilled men and women to investigate problems of applied science and industry has been facilitated as well as supplemented within the past few years by the formation of organizations for research by the Dominion and some of the Provincial Governments. What is now the National Research Council was first established in 1916, the Research Council of Alberta in 1921, the Ontario Research Foundation in 1928, and the Research Council of Saskatchewan in 1930. Close co-operation is maintained with the universities on the one hand and industrial concerns on the other. The directors of research are generally drawn from the university staffs and are assisted by a selection of young graduates.

The Alberta Council has dealt mainly with fuels, road materials, geological and soil surveys, due to the predominance of agriculture and non-metallic minerals among the province's resources, and space at the provincial university has been used for laboratories. The Ontario Research Foundation is housed in Queen's Park, Toronto, in close proximity to the university, and in 1932 has been conducting studies in five main departments: textiles, metallurgy, veterinary science, chemistry and biochemistry. The scheme of organization under which the Foundation operates provides that half of the cost shall be borne by the Legislature and half by the subscriptions of industries and private individuals.

Seven years ago the Government authorized the National Research Council to establish its first laboratory, and early in 1930 investigations were begun in a temporary building in Ottawa in chemical, physical and aeronautical problems. About the same time construction of new laboratories at a cost of $3,000,000 was begun. These were opened by the Governor General and have been occupied since midsummer, 1932, the original temporary quarters now serving as an annex. The Council itself consists of 15 members, and two classes of associate committees work in conjunction with it. Advisory committees have been established on chemistry, physics, botany, mining and metallurgy, nitrogen fixation, electrical measuring instruments and engineering standards, their function being to report on problems referred to them by the Council. The other type of committee is appointed to direct or undertake definite research problems in co-operation with the Council, and usually has in its membership representatives from other organizations making investigations into the same problems. The Council gives financial assistance to researches in university, industrial and other government laboratories, to facilitate the purchase of equipment or the provision of technical assistance essential to researches that are in hand. Over 100 investigations of this kind are at present being assisted in 25 different laboratories. Further, in order to give graduates of Canadian universities specialized training in scientific investigation, the Council has established a system of post-graduate scholarships. They are of four main classes varying with the qualifications and experience of the applicants; bursaries of the annual value of $600, studentships $750, fellowships $1,000, and a few travelling fellowships valued at $1,500. All except the last are tenable at the various Canadian universities. These involve an annual expenditure of about $50,000.

Public Libraries

Apart from the books that the Canadian reader may buy for his own use or borrow from his friends, there are the following three main sources of reading material to which the public has access:—

First is the lending library operated as a profit-making business from which books may be borrowed, usually at a few cents per day or week. Lending libraries are to be found, usually in connection with a store in towns of all sizes, and though there is no record of the reading done from this source there is no doubt that it is very considerable.

Next comes the church or parish library, the predominating type of community library provision throughout Quebec where there are 275, and in French-Canadian sections of other provinces. The books, usually several hundred in number, are the property of the parish church and are generally kept in it or at the house of the parish priest. Churches in some English-speaking communities maintain libraries, but the proportion is not nearly as high as in Quebec where there are comparatively few of the public municipal or association libraries common to the other provinces.

Lastly, in the cities and larger towns of the eight English-speaking provinces there are generally libraries supported wholly or in part by municipal and provincial funds, but only in Ontario is there a considerable number of established public libraries in smaller communities. In this

province there are 473 public libraries (not counting city branches) of which almost half are in unincorporated communities. The numbers of public libraries which are reported as operating in the other provinces in 1932 are: Prince Edward Island, 2; Nova Scotia, 14; New Brunswick, 9; Quebec, 21; Manitoba, 20; Saskatchewan, 27; Alberta, 20; British Columbia, 33; the Yukon, 3. If 700 (the average for Ontario) be taken as the average population served by the libraries in rural or semi-rural communities, the number of persons served by the Dominion's 622 public libraries is about 4,400,000 or 42·4 p.c. of its population. In British Columbia and Ontario the proportion is over 50 p.c.; in some of the more rural Maritime and Prairie Provinces it is in the neighbourhood of 20 p.c.

In past years smaller communities have had to rely for public library service mainly on "travelling libraries". These are cases of about 50 books, made available from a publicly maintained collection of books at the provincial capital in the five most westerly provinces, and from McGill University's similar system in the four remaining provinces. But since the combined circulation of books from these sources is scarcely a million volumes annually, (fewer than a third of the outside loans of the Toronto Public Library, to mention a comparison) and almost half of this travelling library circulation is in the province of Saskatchewan, they obviously do not take the place of established libraries in supplying reading for the smaller communities. With a view to improving this situation librarians are directing efforts toward the formation of larger administrative library units,—counties or similar areas which will include with the larger towns the smaller settlements and rural areas surrounding them. A five-year experiment now in progress in the Fraser Valley of British Columbia, financed by the Carnegie Corporation, is designed to demonstrate the possibilities of district library organization when it has at its disposal a central repository of books and a convenient means of transporting them (a book-van) from place to place. In some of the Ontario counties, the town libraries have established stations or branches in the adjoining area, and the aim is toward co-operative purchases and general access to a central stock of books by existing libraries. Over a period of three years the Department of Education in Nova Scotia has been gradually introducing a scheme to provide library service in each county by putting in each school, small temporary packages of books, transferable within the county four times yearly. The scheme is considered by its sponsors to be a temporary expedient only, and it is their hope that it will give rise to a demand for county library organization more like that toward which Ontario and British Columbia have been taking steps, and which is generally practised in some other countries.

CHAPTER XX

MISCELLANEOUS STATISTICS

Public Health, Hospitals and Charitable Institutions

In Canada, generally speaking, the administration of public health activities and the establishment and maintenance of such institutions is in the hands of the various Provincial Governments, under the powers given them in Sec. 92 of the British North America Act of 1867.

Exercising particular jurisdiction over some phases of the general health of the people of the Dominion is the Department of Health of the Dominion Government, while the Dominion Council of Health acts as a clearing house on many important questions. This Council consists of the Deputy Minister of the Dominion Department of Pensions and National Health as Chairman, together with such other persons as may be appointed by the Governor in Council to hold office for three years. The public health activities of the Dominion Government include the following divisions: Quarantine, Immigration, Leprosy, Marine Hospitals, Venereal Disease, Child Welfare, Sanitary Engineering, Proprietary or Patent Medicine, Laboratory of Hygiene, Food and Drugs, Hospital Advisory Services.

The Toronto Hospital for Consumptives, Weston, Ontario; one of the largest tuberculosis hospitals in Canada. Canada now has 31 tuberculosis hospitals operating, with 6,044 beds. The total number of tuberculosis beds, including those in Public hospitals, is 8,292. If treatment is to be effective, the diagnosis must be made, and treatment begin, early. To this end, certain of the provinces have established travelling chest clinics to encourage periodic examination of "contacts".

Photo, courtesy National Sanitarium Association.

In classifying the various types of social service in Canada certain broad and well-established groups manifest themselves. These divisions are: (1) Hospitals, Dispensaries and Out-patient Departments; (2) Mental Hospitals and Institutions for the Feeble-minded and Epileptic; (3) Institutions for the Blind, Deaf and Dumb; (4) Homes for Adults and

Homes for Adults and Children; (5) Orphanages, Child-caring Institutions, Day Nurseries and Child-placing Agencies and voluntary organizations. The list of voluntary organizations engaged in some branch of social service is a comprehensive one and covers every variety of social service.

The most familiar of all public institutions established to administer and foster the general health of the community is the general hospital common to all cities and towns and prosperous rural communities. Where hospitals cannot be maintained in remote districts, Red Cross outposts or rural clinics in charge of district nurses are established. There were in operation on Jan. 1, 1932, 784 hospitals with a total of 52,853 beds, and with 666 salaried physicians, 689 internes, 4,603 graduate nurses and 9,756 nurses in training. The number of in-patients treated during 1931 was 599,440 and the collective stay (number of days' treatment) of all patients was 11,471,697. The number of patients treated in out-patient departments in connection with public hospitals during 1931 was 693,398, showing a total number of treatments of 1,888,634. The total receipts reported amounted to $42,734,963, and total expenditures to $43,417,489.

Number of Public Health and Charitable Institutions for Canada, by Provinces, as at June 1, 1932

Type of Institution	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
Hospitals	4	37	29	103	216	45	112	131	100	7	784
Out-Patient Depts.	–	7	11	48	40	18	17	25	25	–	191
Mental Institutions	1	18	1	9	16	4	2	3	4	–	58
Incurable Hospitals	–	–	1	6	7	–	2	3	1	–	20
Charitable and Benevolent Institutions:—											
Homes for Adults	1	9	8	28	63	4	–	–	5	–	118
Homes for Adults and Children	–	6	9	44	13	3	–	1	3	–	79
Orphanages	2	10	7	41	29	13	5	3	9	–	119
Day Nurseries	–	1	1	7	8	2	–	–	1	–	20
Child-Placing Agencies and Children's Aid Societies	2	14	4	1	56	4	3	4	3	–	91
Juvenile Immigration Societies	–	2	1	2	9	1	2	1	1	–	19
Blind, Deaf and Dumb	–	2	–	5	2	1	–	–	1	–	11
Grand Totals[1]	10	99	61	246	419	77	126	146	128	7	1,319

[1]Out-patient departments are not included in the grand totals as the large majority of them are operated in connection with hospitals.

Second in importance to the general hospitals are the public mental hospitals for the insane. These hospitals are assisted in their care of indigent patients by municipal and provincial grants. In addition, we have private hospitals for the insane, public hospitals for the feeble-minded, county asylums and institutions for children of retarded mental growth. There are 58 institutions that care for the insane, mentally deficient and epileptic. There were present in these institutions on Jan. 1, 1933, 33,290 inmates. The total receipts for 1932 including government grants and fees were $12,131,035 and the total expenditures $12,041,155.

Homes or hospitals for incurables supply maintenance, nursing, medical and surgical aid to persons suffering from chronic and incurable diseases and the nature of the services given is such as to call for special reference. Many hospitals for incurables care not only for those suffering

from incurable diseases but also for the aged, indigent, feeble-minded and epileptic. There are 20 of these institutions in operation. The average number of patients per day during 1931 was 1,923, the bed capacity 2,338 and the total number under treatment 2,607. Total receipts amounted to $995,807 and total expenditures to $945,814.

Charitable and benevolent institutions for adults and children include refuges and homes, child-welfare institutions, hospices, houses of refuge, county and municipal homes, poorhouses and houses of industry. The number of adults in such institutions on June 1, 1931, was 11,750 and the number of children 39,269, making a total of 51,019 under care. No later figures are available.

Judicial Statistics

The collection and publication of criminal statistics was first authorized by an Act of 1876 (39 Vict., c. 13), and the results have been published upon a comparable basis from that time to the present, and are now collected and published by the Dominion Bureau of Statistics under the Statistics Act (8-9 Geo. V, c. 43). It should be remembered that while the criminal code undergoes little change over periods of time, the figures of summary convictions depend very much upon the changes in the customs of the people, and are apt to increase with the increasing urbanization of the population. The most significant column of the following table is the figure of criminal offences per 100,000 of population. Attention may be drawn to the increase in the proportion of both criminal offences and minor offences to population in recent years, convictions for criminal offences having risen from 277 per 100,000 population in 1924 to 424 per 100,000 population in 1931 and convictions for minor offences from 1,535 per 100,000 in 1924 to 3,113 per 100,000 in 1931. However, for 1932, a substantial betterment was shown in each of these classes.

Convictions for Criminal Offences, by Groups, and Total Convictions for Minor Offences, years ended Sept. 30, 1921-32, with Proportions to Population.

Year	Criminal Offences							Minor Offences		
	Offences against—			Other Felonies and Misdemeanours	Total of Criminal Offences					
	The Person	Property with Violence	Property without Violence							
	No.	No.	No.	No.	No.	P.C. of all offences	Per 100,000 pop.	No.	P.C. of all offences	Per 100,000 pop.
1921....	8,197	2,609	12,059	2,081	24,946	14·2	284	152,227	85·9	1,731
1922....	7,291	2,783	11,607	2,610	24,291	15·3	271	134,049	84·7	1,498
1923....	7,550	2,076	11,482	3,075	24,183	15·1	266	135,069	84·8	1,487
1924....	7,595	2,536	12,790	2,635	25,556	15·3	277	141,663	84·7	1,535
1925....	7,826	2,749	13,892	2,644	27,111	15·3	289	150,672	84·7	1,610
1926....	7,799	2,296	14,262	2,679	27,036	13·8	287	169,171	86·2	1,803
1927....	8,343	2,671	15,154	2,809	28,977	13·1	304	191,285	86·9	2,009
1928....	9,140	2,991	16,072	3,856	32,059	11·6	332	243,123	88·4	2,517
1929....	10,392	3,529	17,271	4,001	35,193	10·9	359	286,773	89·1	2,927
1930....	11,052	4,647	18,498	6,584	40,781	11·8	410	304,860	88·2	3,068
1931....	11,773	5,288	21,528	5,475	44,064	12·0	424	323,024	88·0	3,113
1932....	10,327	5,194	20,766	5,510	41,797	12·4	402	294,858	87·6	2,841

It should be understood that the classification of offences in the above table is irrespective of the more technical classification into "indictable" and "non-indictable" offences under the Criminal Code, the object here being to show a broad record of criminal and minor offences respectively since 1921.

Of the total convictions for criminal and minor offences for 1932, *viz.*, 336,655, the sentences imposed were: gaol or fine, 242,127; penitentiary, 2,892; reformatory, 1,156; death, 23; and other sentences, 90,457.

Death sentences have fluctuated over the past ten years between a minimum of 12 in 1927 and a maximum of 26 in 1929. For 1931 they were 25 and for 1932, 23.

Police

Police statistics are collected by the Bureau of Statistics from cities and towns having populations of 4,000 and over. In 1932 there were 152 such municipalities from which returns were received. The following table gives these statistics by provinces.

Police Statistics, by Provinces, calendar year 1932

Province	Number of—					Number of the Population to each Policeman	Number of Arrests per Policeman
	Cities and Towns	Population	Police	Arrests	Summonses		
Prince Edward Island	1	12,361	8	336	311	1,545	42
Nova Scotia	12	167,344	136	4,511	1,137	1,230	33
New Brunswick	5	87,500	86	2,819	950	1,017	32
Quebec	38	1,403,902	2,008	51,901	12,078	699	25
Ontario	68	1,734,958	1,875	32,517	94,662	925	17
Manitoba	7	273,012	309	5,478	23,284	883	17
Saskatchewan	8	149,015	145	2,717	3,039	1,027	18
Alberta	4	192,747	194	4,034	4,890	993	20
British Columbia	9	344,536	431	6,993	15,063	799	16
Canada	152	4,365,375	5,192	111,306	155,394	840	21

Offences reported to the police numbered 311,212; there were 254,512 prosecutions, resulting in 205,488 convictions. The number of automobiles reported stolen was 8,291 and 8,156 were reported recovered. The value of other goods stolen was $2,253,755, and the value of goods recovered was $1,040,361.

Royal Canadian Mounted Police.—The Royal Canadian Mounted Police is a Constabulary maintained by the Dominion Government. It was organized in 1873 and was then known as the North West Mounted Police; in 1904, its name was changed to the Royal Northwest Mounted Police and in 1920, to the Royal Canadian Mounted Police. In 1920, the former Dominion Police, with Headquarters at Ottawa, whose duties were largely connected with guarding of Public buildings in that city and Canadian Government dockyards at Halifax and Esquimalt, were absorbed by the Royal Canadian Mounted Police. From a Force of 300 men in 1873, it has grown to one of 2,500 at the present time.

The Force is controlled and administered by a Minister of the Crown (at present, the Minister of Justice) and it may be employed anywhere in Canada. It is primarily responsible for the maintenance of law and

order in Yukon, the Arctic regions and the unorganized Northwest Territories; it performs a variety of services for the Dominion Government in all provinces, and a number of the Dominion departments utilize its services in investigations and in administrative work. Amongst the many services rendered for the Dominion Government, the repression of the traffic in noxious drugs, the protection of Government buildings and dockyards, enforcement of Dominion laws, including the Migratory Birds Convention Act, and the duties of the Preventive Service of the Department of National Revenue by air, land and sea may be mentioned.

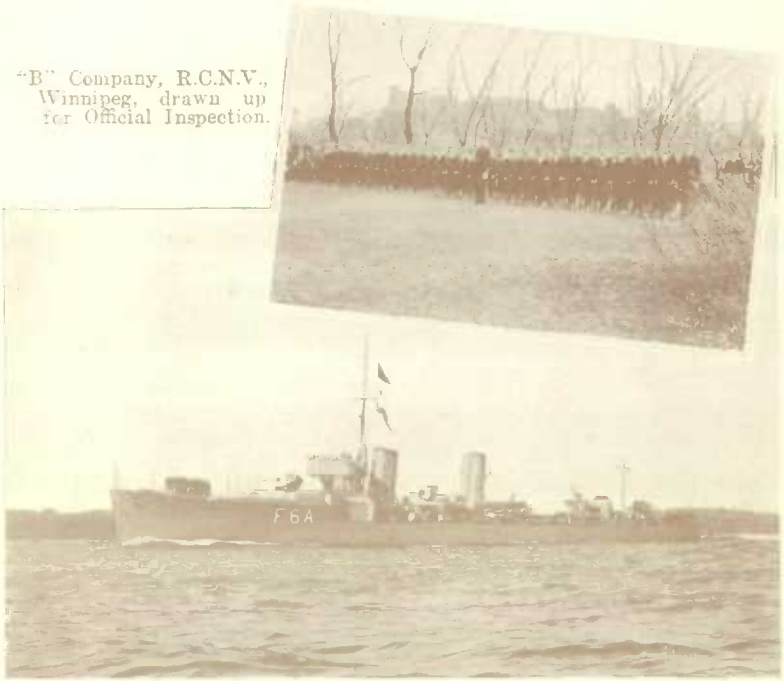
Two "mounted" members of the Force meet on patrol in Alberta.

Royal Canadian Mounted Police at Musical Drill, Military Tattoo, Ottawa, September, 1933.
Photo, Canadian Government Motion Picture Bureau.

Under the Royal Canadian Mounted Police Act, any province may enter into an agreement with the Dominion Government for the services of the Royal Canadian Mounted Police to enforce provincial laws upon payment for its services, and at the present time, such agreements are in force with the provinces of Prince Edward Island, Nova Scotia, New Brunswick, Manitoba, Saskatchewan and Alberta.

The Force is divided into 15 divisions of varying strength distributed over the entire country. The term of engagement is 5 years for recruits with re-enlistment for 1 year or 3 years. The officers are commissioned by the Crown. Recruits are trained at Regina, Saskatchewan. The course of training is six months and consists of drill, both mounted and on foot, physical training, including instruction in wrestling and boxing and detailed lectures on police duties. Instructional courses for promotion are held and where practical, an annual refresher course of training is given.

"B" Company, R.C.N.V., Winnipeg, drawn up for Official Inspection.



H.M.C.S. *Vancouver*—Canadian Destroyer in Commission on the Pacific Coast.
Photos, courtesy Department of National Defence.

National Defence

Militia.—Canada is organized in 11 military districts, each under a Commander and his District Staff.

The militia of Canada is classified as active and reserve, and the active is subdivided into permanent and non-permanent forces. The permanent force consists of 14 regiments and corps of all arms of the service, with an authorized establishment limited to 10,000, but at present the strength is about 3,500. The non-permanent active militia is made up of cavalry, artillery, engineers, machine gun, signalling, infantry and other corps.

The total establishment of the Canadian non-permanent militia totals 9,029 officers and 125,722 other ranks.

The reserve militia consists of such units as are named by the Governor in Council and of all able-bodied citizens between the ages of 18 and 60, with certain exemptions. The reserve of the active militia consists of: (1) reserve units of city and rural corps, (2) reserve depots, (3) reserve of officers.

The appropriation for the militia for the year ending Mar. 31, 1934, is $8,883,484, as compared with an expenditure of $8,718,881 for the fiscal year 1932-33.

Air Force.—The Air Force in Canada consists of the Royal Canadian Air Force classified as active and reserve. The Active Air Force is subdivided into the Permanent Active Air Force and the Non-Permanent Active Air Force.

The Royal Canadian Air Force controls and administers all Air Force training and operations, and carries out operations on behalf of other Government Departments. The Aeronautical Engineering Division of the Air Force, in addition, acts in an advisory capacity on technical matters to the Controller of Civil Aviation and to civil aviation organizations.

The strength of the Royal Canadian Air Force on Aug. 1, 1933, was 106 officers and 585 other ranks.

The appropriations for the Royal Canadian Air Force for the fiscal year 1933-34 totalled $1,405,000, as compared with an expenditure of $1,554,400 in 1932-33.

Civil Aviation.—The Controller of Civil Aviation is concerned with the administration of the Air Regulations and the control of commercial and private flying.

The appropriation for civil aviation for the fiscal year 1933-34 was $195,000.

Navy.—The Royal Canadian Navy was established in 1910. The authorized complements are: 104 officers and 792 men of the permanent force (Royal Canadian Navy); 70 officers and 430 men of the Royal Canadian Naval Reserve; and 80 officers and 930 men of the Royal Canadian Naval Volunteer Reserve. Ten appointments of officers of the Royal Canadian Naval Volunteer Reserve are reserved for graduates of the Royal Military College who have had naval training during their Royal Military College course. The vessels at present maintained in commission are: the destroyers *Champlain* and *Saguenay* and the mine-sweepers *Festubert* and *Ypres,* based on Halifax, N.S.; the destroyers *Vancouver* and *Skeena* and the minesweeper *Armentières,* based on Esquimalt, B.C. H.M.C. Dockyards are at Halifax and Esquimalt, having been taken over from the Imperial Government in 1910. Naval depots are maintained at both bases, and are used as training headquarters for the personnel of the R.C.N., R.C.N.R., and R.C.N.V.R.

The appropriations for naval services for 1933-34 amounted to $2,422,000. The expenditure for the year ended Mar. 31, 1933, was $2,167,328.

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