CANADA 1931

AN OFFICIAL HANDBOOK OF PRESENT CONDITIONS AND RECENT PROGRESS

The Armorial Bearings of the Dominion were authorized November 21, 1921. Three considerations were kept in view in determining the combination of arms, crest, supporters, and motto: firstly, that Canadians stand to the King in the relation of British subjects; secondly, that Canada, though an integral part of the British Empire, is a member of the League of Nations; and lastly, that Canada was founded by the men of four different races—French, English, Scottish and Irish—and inherits the culture of all four. The arms are those of England, Scotland, Ireland and France, with a "difference" to mark them as Canadian, namely, on the lower third of the shield, a sprig of maple on a silver shield. The crest is a lion holding in its paw a red maple leaf, a symbol of sacrifice. The supporters are, with some slight distinctions, the lion and unicorn of the Royal Arms, the lion upholds the Union Jack, and the unicorn the ancient banner of France. The motto—A MARI USQUE AD MARE—"From sea to sea"—is an extract from the Latin version of verse 8 of the 72nd Psalm—"He shall have dominion also from sea to sea, and from the river unto the ends of the earth." There is a tradition that the Fathers of Confederation derived the designation "Dominion" from this verse.

The Peace Tower, Parliament Buildings, Ottawa.

From a drawing by The National Development Bureau, Dept. of the Interior

DOMINION BUREAU OF STATISTICS
OTTAWA, CANADA

CANADA 1931

An Official Handbook of Present Conditions and Recent Progress

Published by Authority of the Hon. H. H. Stevens, M.P.
Minister of Trade and Commerce

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FOREWORD

DURING the existing world-wide depression, Canadians, though less affected by the slump than the peoples of many other countries, should strenuously and earnestly devote themselves to the study of the economic conditions of the Dominion, with a view to co-operating in the restoration of prosperity. The present popularized analysis of the current economic conditions of Canada at the threshold of the New Year is accordingly presented for their consideration and guidance.

As the result of the growth of the Dominion and the increasing complexity of its institutions, there is an increasing need of an official handbook of Canada, dealing with the whole range of its economic and social institutions, and giving a succinct and popular account of its problems and its progress, while devoting special attention to the facts of the existing economic situation. While the current reports of our national bureau of public information, the Dominion Bureau of Statistics, deal in great detail with the subjects of population, production, external and internal trade, transportation, prices, finance, education, criminality, etc., these 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. It is largely based upon two somewhat similar previous publications of the Bureau, one issued at the time of the Diamond Jubilee of Confederation and the other a year ago. However, it is felt that the present issue has been very considerably improved both in format and in contents.

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 1931.

H. H. STEVENS,
Minister of Trade and Commerce.

OTTAWA, January 1, 1931.

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.

INTRODUCTION

Economic Review of 1930

THE economic recession, beginning in the latter half of the preceding year, developed into a major depression in 1930. The relationship of the various phases of economic activity was again demonstrated by general developments characteristic of the declining phase of the business cycle. The decline of commodity and stock prices was continued, business operations showed curtailment, and money rates reached a lower point than for several years. In entering upon 1931, and by way of general interpretation of the several chapters of this handbook, the leading economic developments of 1930 may be briefly reviewed in the setting of the current economic cycle.

THE GENERAL SETTING

A downward fluctuation of a cyclical nature was general in most lines of business during 1930. A sharp contrast was presented to the trend of expansion dominating the economic life of Canada from 1921 to 1929. The volume of production at the peak of prosperity, reached in the early part of 1929, was greater in most lines than in any similar period in the history of the Dominion. From the low levels reached during the post-war deflation culminating in 1921, productive enterprise steadily acquired momentum, the impressive results effected during the nine-year period being especially evident in the first six months of 1929. The expansion during the period was interrupted by the recession of the later part of 1924, which proved to be of short duration. Industrial expansion was continued in the next year and exhibited great vitality until the maximum was reached during 1929. The index of industrial production, maintained by the Bureau shows that general output during 1929 was 65 p.c. greater than in 1923, when a temporary peak was established. This index is a weighted composite of the leading statistical factors, embracing forest production, mining, manufacturing and construction.

The depression of 1930 resembles in many respects the traditional derangement which tends to recur from time to time, simultaneously affecting the economic welfare of many countries. One element in the reversal of the prosperity trend in the latter part of 1929 was the obvious fact of overcapacity. The capital equipment of the producers had been expanded to such an extent that the product could not be sold at a remunerative price. It is characteristic of the period of superactivity that the expansion of capital equipment is carried to excess. Inventories in many directions, though not generally heavy in the form of visible overstocks of goods and materials in warehouses, in transit, in process of manufacture or on the shelves of the final distributors, have been large in relation to products in the hands of consumers through instalment sales. Though appearing in the form of accounts receivable, they were, in economic effect, inventory assets. The

marked drop in wholesale prices was the usual result of heavy supplies accompanied by a cautious attitude in the purchase of commodities on the part of the consumer handicapped by reduced purchasing power. Heavy losses were occasioned by the deflation of the stock markets. While call loans are a special type of credit supposedly limited to financing stock market operations, they serve to inject purchasing power into every channel of trade, and the stock market crisis of October, 1929, led to the curtailment of this source of credit accommodation.

As new records were established in most lines of economic enterprise in 1929, the year is not a fair yardstick with which to measure the accomplishment of 1930. The declines in industrial operations commenced in June, 1929, and were accelerated during the last quarter of the year, when the stock market collapse drew attention to the seriousness of the situation. The volume of business was nearly maintained for several months of 1930, but further marked curtailment in the last nine months of the year brought general recognition that the Dominion was faced with a major depression. Business advances cannot be gauged in a big way from one year to another, as in that case we would be making comparisons at different phases of the economic cycle. Despite the contraction in the latter part of the year, 1929 will be regarded as an abnormal period in which maxima were reached in most lines of industrial enterprise.

Owing to the marked expansion achieved in the post-war period, business activity at the end of 1930 has not been reduced by the current depression farther than to the level of 1927. The setback involved in the cyclical recession of the last seventeen months, though decidedly severe if comparison be made with the maximum of 1929, still left business operations greatly in advance of the level from 1921 to 1926. Among the contributing factors to that expansion may be listed a succession, beginning with 1925, of four exceptionally favourable harvests, culminating in 1928 in yields which fixed new high records. Paralleling the agricultural revival of these years, a resumption set in of the development of the unexploited natural resources as a source of raw materials. Assisted by imported capital, the development of the forested and mineral regions of northern Canada has resulted in increased hydro-electric power installation, expansion in pulp and paper production and a new high record in mineral output. The rapid long-term growth of the last decade is more significant than the current reversal, generally regarded as of a temporary nature.

The inordinate activity of 1928 and 1929 was due in large measure to the keen demand for additional plant and transportation facilities. As has already been pointed out, the sharp reversal in the fundamental demand along this line marked the turning point in 1929 from prosperity to depression. Owing to the moderate rate of operations necessary to meet demands for general consumption, the present capacity, speaking generally is ample for all requirements which may arise for some time.

The Iron and Steel Industry.—An excellent barometer of activity in the group engaged in the production of plant and equipment is the output of iron and steel. The uses of iron and steel are fairly general in the production and renewal of railway and industrial equipment, explaining the strategic position

occupied by the industry in reflecting cyclical fluctuations. For the first ten months of 1930, the cumulative production of pig iron amounted to 662,000 long tons, as compared with outputs of 921,000 tons and 839,000 tons during the corresponding periods of 1929 and 1928, respectively. The production of steel ingots and castings for the first ten months of 1930 totalled 877,000 tons, as against 1,204,000 tons and 1,029,000 tons made during the corresponding periods of 1929 and 1928, respectively. The decline in the output of the primary iron and steel industry was 27 or 28 p.c. below the same months of 1929. In appraising the significance of this curtailment, it should be realized that in 1929 the industry, primarily engaged in the production of capital equipment, was more actively employed than in any other peace-time period of similar duration.

Hydro-Electric Power.—Despite the absence of important coal deposits in the central provinces, it is estimated that for every dollar expended for the actual development and transmission of electric energy, six dollars are required to apply this power to its ultimate uses. The heavy expenditure resulting from present development of our water-power resources during the current period is an indication of the industrial growth which will be the natural sequel. The largest development under active construction in 1930 was the Beauharnois project, involving an expenditure of $60,000,000, but, as described in Chapter VIII, other large developments are in progress throughout the country. The output of electric energy in the first ten months of 1930 was 14,694,000,000 kilowatt hours compared with 14,496,000,000 in the same period of 1929, an increase of 1·5 p.c. Thus the depression in general industry was reflected in a declining *rate* of increase in the output of electric energy rather than in an absolute decline. The long-term expansion of the power industry is so rapid that a cyclical recession in the Dominion, such as that in evidence during the first ten months of 1930, does not entirely counterbalance the normal growth.

Mineral Production.—Expansion in mining operations during the period of economic activity culminating in 1929 compared favourably with the growth in other lines of economic enterprise. The prospector had shown untiring energy in exploring the Precambrian shield and other territory of promise, thus locating an impressive list of interesting prospects. A considerable number of mining properties of proven value were, at the beginning of the present year, undergoing development with a view to beginning or increasing production in 1930. In some instances, these expectations have not been realized owing to the fall in market values, particularly of copper, lead, zinc and silver. The depression, however, did not prevent further expansion in the output of several of the important metals and minerals. During the first nine months of 1930, the production of copper was 235,800,000 pounds, a gain of 32·5 p.c. over the same period of 1929. The output of zinc at 195,000,000 pounds showed a gain of 30 p.c. Lead was produced at a rate of 5 p.c. greater than in the same period of 1929. Nickel was up 8·5 p.c., and gold showed a gain of 4·6 p.c. The output of petroleum, at 1,039,000 barrels, was 31 p.c. greater. During the first nine months, the output of coal was 10,552,000 tons, compared with 12,879,000 tons in the same period of 1929. Considerable curtailment was in evidence in the production of salt, feldspar,

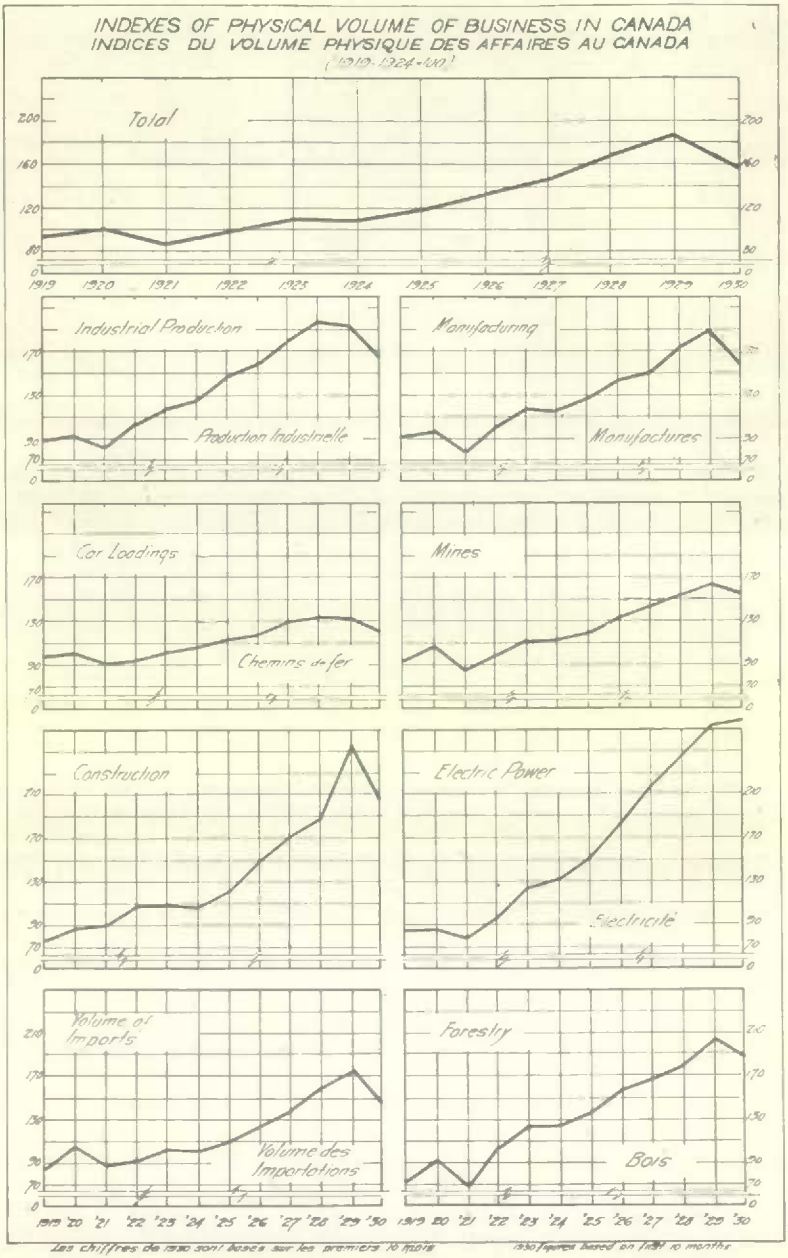
gypsum, asbestos, cement and clay products. Owing to lack of demand and low prices, a reduction was made in the output of several of the base metals during the last quarter. In most cases development of ore bodies and plants has been continued so that production may respond readily to improved market conditions.

Construction.—The records of the construction industry are generally regarded as being of great value for barometric purposes. During a time of depression, the existing plant and equipment, generally speaking, is more than sufficient to meet current demands for industrial products. Once the fixed capital equipment is again operated at a high percentage of capacity corresponding to the state of affairs in the period of maximum prosperity, the construction industry immediately acquires additional momentum. The high level of operations from 1927 to 1929, as shown by the value of contracts awarded being in excess of $400,000,000 per year, is a fitting commentary upon the correlation of the industry with economic progress. During that period, the increased employment afforded to a growing force of workers by the construction industry and the strong demand for building materials reacted powerfully upon the whole economic life of the Dominion. The decline in construction during 1930 coincided with the recurrence of a major depression. Contracts awarded during the first ten months were valued at $393,000,000, a decline of 21 p.c. from the same period of 1929. Building permits issued in 60 cities during the first 10 months of 1930 were 33 p.c. less than in the same period of the preceding year.

Automobile Production.—The fluctuations in the automobile industry are known to correspond in general with the ups and downs of construction. An optimistic outlook and a high level of purchasing power leads to expansion in both lines, while the lack of effective demand such as occurs in a time of depression results in drastic curtailment. The expansion in the use of the motor car was one of the striking features of the decade subsequent to the war, exerting a powerful influence on productive capacity. The widespread use of the motor car in Canada was indicated by the registration of nearly 1,200,000 cars in 1929.

The output of automobiles during the first 10 months of 1930 was 143,163, being 42 p.c. less than in the same period of 1929. The contraction in the production of automobiles has affected the prosperity of other industries engaged in the manufacture of raw materials and accessories. The tire and petroleum refining industries had received a great impetus through the phenomenal growth of automobile production, and the reaction during 1930 had an adverse influence on the demand for these products. The imports of crude rubber at 56,700,000 pounds in the first 10 months of 1930 showed a decline of 17·4 p.c. from the same months of 1929. The petroleum refining industry continued to handle a heavy volume, the imports of crude petroleum being 867,700,000 gallons, a gain of 3·1 p.c. over the same period of the preceding year.

Pulp and Paper.—The pulp and paper industry met with rapid development in the nine-year period ended in 1929, acquiring first rank among the manufacturing industries of Canada. The industry headed the list for the


INDEXES OF PHYSICAL VOLUME OF BUSINESS IN CANADA
INDICES DU VOLUME PHYSIQUE DES AFFAIRES AU CANADA
(1919-1924=100)
Total
Industrial Production
Production Industrielle
Manufacturing
Manufactures
Car Loadings
Chemins de fer
Mines
Construction
Electric Power
Electricité
Volume of Imports
Volume des Importations
Forestry
Bois
1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930
Les chiffres de 1930 sont basés sur les premiers 10 mois
1930 figures based on first 10 months

gross and net value of the output as well as for distribution of wages and salaries. As the demand for lumber for building purposes slackened, pulp and paper became the chief industry depending upon the forest for its raw materials. The rapid expansion of the last five years has resulted in obvious over-capacity, in that the market is unable to absorb the output at profitable prices. Even in prosperous years the growth of the industry was considerably more rapid than was justified by the moderate expansion in the demand for newsprint, and price reduction became imperative at the end of 1928. During 1930, a year of acknowledged depression, the industry operated at 70·4 p.c. of capacity. Production during the first 10 months amounted to 2,111,000 tons, compared with 2,245,000 tons in the same period of 1929. The long-term growth of the industry is illustrated by the fact that the output of newsprint in 1929 was 2,727,000 tons as compared with 805,114 tons in 1921. In the meantime, increases in output were shown steadily from year to year.

THE CROP OF 1930

One of the chief reactionary factors influencing the social economy of Canada in the current period is the reduction in the purchasing power of the farmer. This has been caused by the moderate yields of the last two years and the very low prices obtained for agricultural products. An index of crop yields, expressed as a percentage of the average from 1915 to 1924 equalling 100, stands at 101·5 in 1930 compared with 82·0 in 1929. The per acre yield of Canadian field crops in 1929 was at a lower level than in any year during the period of observation from 1915 to the present. Aside from 1929, the yield of 1930 was less than in any other year since 1921 with the exception of 1924. It is perhaps not altogether a coincidence that subnormal crops were harvested in 1921, 1924 and 1929 when business conditions showed a reactionary trend. The opinion is held that one of the chief factors operating to expand or contract industrial enterprise is the yield of the principal farm crops. In a country such as Canada where agriculture occupies a large place among the economic activities of the nation, the crop yield cannot but affect the general trend of business. A drop in volume adversely affects the transportation companies and a decline in the value of exports of wheat and flour is prejudicial to the exchange rate, tending to depress the Canadian dollar on the principal external money markets. The subnormal wheat crop of 1929 adversely affected the earnings of the basic industries such as the railways, lake and ocean freight carriers and financial institutions engaged in financing the wheat crop. A direct result of the retarded movement of the 1929 wheat crop was the inactivity of the principal harbours and shipping centres. But the situation was one of passing importance which could have been restored by a normal production and marketing in later years. The second phase of the wheat situation consisted in the drastic decline of prices during 1930. From the early months of the year, wheat prices started on a prolonged decline which, with a few minor rallies, continued to the last quarter. The price of wheat declined from $1.30 per bushel in January to about $0.60 in November. The visible supply of Canadian wheat was 188,700,000 bushels at the end of October, compared with 214,000,000 bushels on the same date of last year. The dealers and elevator companies have

reversed their policy since last year and have sold for future delivery most of the wheat purchased from the farmers. It follows that a considerable reduction has been made in actual grain holdings and in future contracts which remain to be absorbed before the next harvest.

FINANCE

As a period of depression draws to a close, finance is normally one of the phases finding itself in a greatly strengthened position. Active business conditions and relatively high commodity and stock prices such as existed during the greater part of 1929 usually result in a strained financial condition. At the end of October, 1929, current loans of the chartered banks at $1,473,000,000 were $3,000,000 greater than the notice deposits of the same date. Subsequently, both of these accounts have declined, but the drop in current loans has been much greater than in notice deposits. Current loans on October 31 last were $244,000,000 less than on the same date of 1929. The decline in notice deposits in the same period was limited to $38,000,000. The surplus of notice deposits over current loans on October 31, 1930, was $200,000,000.

The substantial gain in the gold reserve was a constructive factor which should not be overlooked. The Department of Finance held gold on October 31, 1930, to the amount of more than $107,000,000, a gain of $44,000,000 or 71 p.c. during the year. In the meantime, the decline in the Dominion note issue was $30,700,000, leaving a total of $180,800,000 on October 31 last. The section of the Dominion note issue supported by the gold holdings showed an increase of $36,700,000, while the section supported by approved securities, according to the Finance Act of 1923, showed a decline of $67,500,000. These tendencies demonstrate the greater strength of the currency situation made possible through gold imports from New York and direct shipment to the Royal Mint from Canadian gold mines.

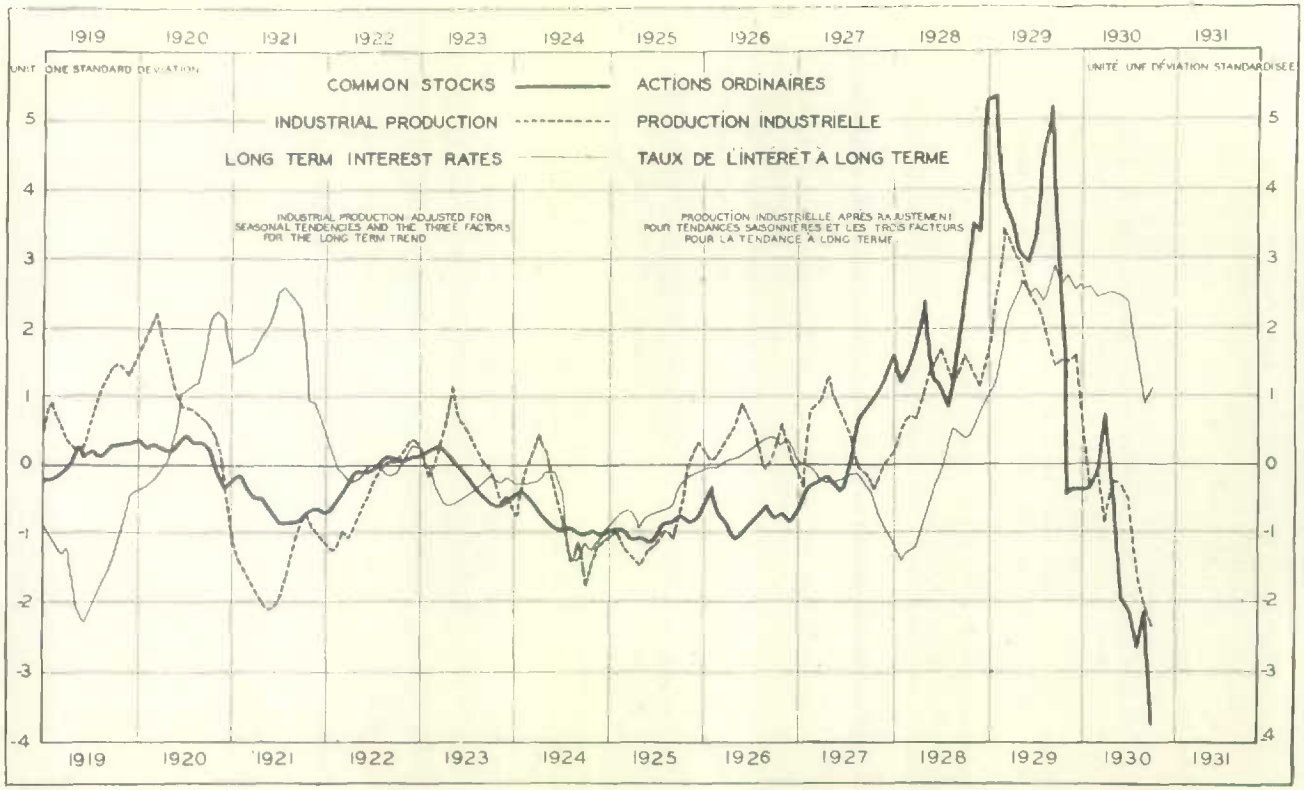
As the interest rate on current and call loans in Canada is fairly well stabilized, very moderate change being made either in time of prosperity or of depression, the trend of fundamental interest rates may be determined by the prices of high grade bonds. Since last year, the decline in long-term interest rates is one of the most constructive developments. The rise in bond yields was the best indication of the tight credit conditions in evidence during the greater part of 1929. The high call rates on the New York market had attracted liquid resources from many quarters. Upon the decline of the rate in September and October, 1929, a large proportion of these loans was withdrawn. In November, 1930, the average yield on four Dominion Government bonds was 4·54 p.c. The same bonds yielded an average of 5·06 p.c. in November of the preceding year. The yield on Ontario Government bonds in October last averaged 4·50 p.c. compared with 4·95 p.c. in October, 1929. With current rates in external money markets at the lowest level in years, there are reasons to believe that this factor will ultimately be a powerful stimulus to the recovery from depression. Thus far easy money has not exercised the customary stimulating effect, because lack of confidence in available investment media has counteracted its influence and prevented it

serving as an effective force. With the restoration of confidence in domestic enterprises and the return of political stability in foreign countries, the tendency of idle funds will be to gravitate toward productive enterprises.

Wholesale Prices.—A fundamental decline in wholesale prices is a normal development during a major depression and the price recession of 1930 was no exception to the rule. Much has been said regarding the causes of the downward trend, which obviously must include factors exerting a pressure not confined by political or economic boundaries. Its coincidence with the movement of the leading nations back to currencies based on the gold standard has attracted much attention, and in consequence a gold shortage has been offered as an explanation. This seems inadequate, however, since it takes no account of the tremendous increases in post-war productive capacity that have followed the general inception of mass production and standardization in industry. Production of raw materials and their subsequent absorption by consumers and manufacturers have risen much in advance of the growth in population during the past decade. Basic agricultural crops also have increased rapidly, with the result that consuming capacity has been inadequate to absorb the enlarged production without price concessions.

Tightened credit in most important commercial countries during 1929 was obviously one of the main causes of the severe decline in commodity prices from the third quarter of that year to the present. Interest rates were at a high level caused by the keen demand for funds on the stock exchanges as well as in expanded productive operations. Credit conditions have been quite altered in the last twelve months, general depression having relieved the pressure on the money market. An enforced policy of cheap and plentiful money tends to arrest deflation and reverse the downward trend. In a period of declining prices there is a natural tendency to restrict purchases to a minimum. Inventories in many cases are now below normal, and in consequence substantial buying for merchandizing or industrial purposes may be expected to gather momentum. The index of wholesale prices was 79·8 in November, a decline of about 16·6 p.c. from the same month of 1929. The maladjustment of prices during the same period is indicated by the drop of 44·2 p.c. in raw products of field origin. In connection with the prospects regarding the near future of wholesale price levels, it is noteworthy that there has been little recent improvement in the position of most primary commodity markets, and the unusually large gap between raw and finished products would indicate gradual declines for the latter in the absence of a substantial recovery in raw products.

Common Stocks.—The close interconnection of various economic phenomena is shown by the decline in common stock prices during 1930. The curtailment of industrial operations and the severe decline in wholesale prices reacted against the revenue prospects of Canadian corporations. The resulting deflation of speculative values during the course of the year was drastic. The trend from January to April was upward, but the failure of business conditions to show improvement during the first half of the year led to further liquidation, temporarily culminating in June. The market strengthened to reach an intermediate peak about the middle of September. A new low


1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931
UNIT ONE STANDARD DEVIATION
UNITÉ UNE DÉVIATION STANDARDISÉE
COMMON STOCKS
ACTIONS ORDINAIRES
INDUSTRIAL PRODUCTION
PRODUCTION INDUSTRIELLE
LONG TERM INTEREST RATES
TAUX DE L'INTÉRÊT À LONG TERME
INDUSTRIAL PRODUCTION ADJUSTED FOR SEASONAL TENDENCIES AND THE THREE FACTORS FOR THE LONG TERM TREND
PRODUCTION INDUSTRIELLE APRÈS RAJUSTEMENT POUR TENDANCES SAISONNIÈRES ET LES TROIS FACTEURS POUR LA TENDANCE À LONG TERME
5
4
3
2
1
0
-1
-2
-3
-4

point was touched on October 22 after severe liquidation prompted by reactionary factors at home and abroad. The general index number was 111·3 in October compared with 155·7 in January, 1930, a decline of 28·5 p.c. in nine months. Industrials during the same period declined 41 p.c., while utilities were down 15·4 p.c.

To sum up, the economic depression of 1930 was international in its scope and one of the most severe ever brought about by peace-time conditions. The main causal elements in precipitating the depression have been: (1) the international race to increase production and capture markets, (2) the breaking down of price control schemes and (3) the acute credit stringency. Owing to the widespread derangement, many of Canada's industries were adversely affected, but the depression in the Dominion was less severe than in most countries of equal commercial importance. Considering the immense natural resources and recuperative power of the Dominion, a feeling of optimism is fully justified regarding the trend in future years.

It may be of interest in conclusion to draw attention to the two charts which accompany this Introduction. The chart relating to the indexes of physical volume in Canada shows the trend of eight important factors by years from 1919 to 1930. The major depression of 1921 left its impress on each of the curves and declines were also general in 1930, except in the case of output of electric power, where the percentage of gain in evidence from 1921 to 1929 was sharply curtailed.

The chart showing three representative factors traces for the past decade, after adjustment for seasonal tendencies and long-term trend, three movements whose interrelations are regarded as of special importance, namely, the movement of common stock prices representative of speculation, the movement of industrial production representative of business activity and money rates representative of credit. Though these movements must always be interpreted in the light of current influences, they tend to move in the order named.

CHAPTER I

AREA—TOPOGRAPHY AND DRAINAGE—CLIMATE

Area

The area of Canada as revised on the basis of the results of explorations in the north, the area taken from Quebec by the Labrador Boundary Award of 1927, and recent adjustments made in the area of Ontario, is 3,690,043 square miles. This figure compares with 13,491,977 square miles for the British Empire, 3,776,700 for the continent of Europe, 3,743,529 for the United States and its dependent territories, 2,974,581 for the continent of Australia, and 121,633 square miles for the British Isles. Roughly, Canada is almost as large as Europe or the United States with its dependencies, is more than thirty times as large as the British Isles, and comprises 27 p.c. of the British Empire. The details by provinces are shown in the following table:—

Land and Water Area of Canada by Provinces and Territories as in 1930

Province or Territory	Land	Water	Total
	sq. miles	sq. miles	sq. miles
Prince Edward Island	2,184	–	2,184
Nova Scotia	20,743	685	21,428
New Brunswick	27,710	275	27,985
Quebec	571,004	23,430	594,434
Ontario	363,282	49,300	412,582
Manitoba	224,777	27,055	251,832
Saskatchewan	237,975	13,725	251,700
Alberta	248,800	6,485	255,285
British Columbia	349,970	5,885	355,855
Yukon	205,346	1,730	207,076
Northwest Territories:—			
Franklin	546,532	7,500	554,032
Keewatin	218,460	9,700	228,160
Mackenzie	493,225	34,265	527,490
	3,510,008	180,035	3,690,043

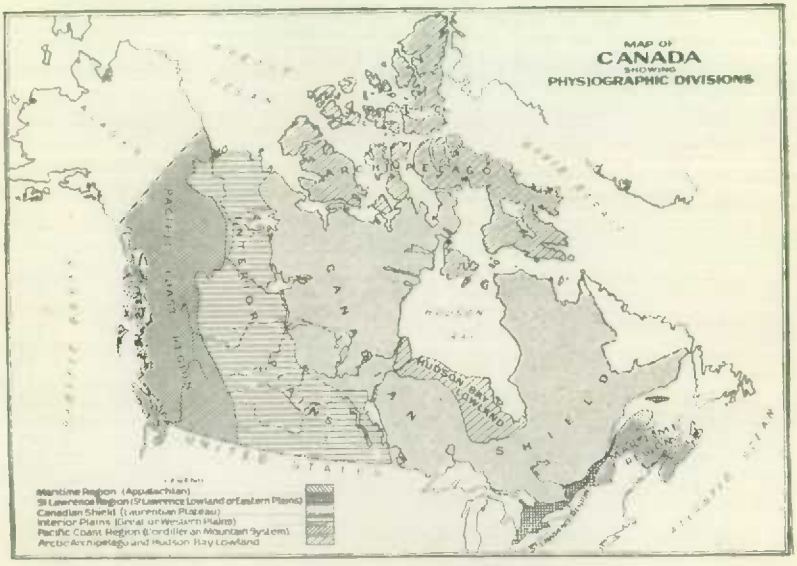
Topography and Drainage

The surface features of Canada are such as to divide the country into several clearly defined natural areas.

The exposed surface of the old Precambrian continent forms one of the largest divisions and has been called the Canadian Shield, the Archæan Peneplain and, in its southern portion, the Laurentian Highland. The mountainous country of the west constitutes the Cordilleras or Pacific Coast region, while the mountains of eastern United States, in their continuation across the border, form the Appalachian Highland of Eastern Canada or Maritime region. The Great Plains, with various subdivisions, occupy the area between the mountainous area of the west and the great, roughened surface of the Canadian Shield. The St. Lawrence Lowlands lie between the Laurentian and Appalachian Highlands. Within the borders of the Canadian Shield an

area on the southern margin of Hudson bay has been referred to as the "clay belt" or Hudson Bay Lowland. It occupies a part of the basin that during the glacial period was submerged and covered with a coating of clay which smoothed over its inequalities and concealed most of the underlying rocks. Since its emergence the surface has been but slightly altered by drainage channels cut across it.

The general direction of the mountain ranges and the rugged features of the Canadian Shield are such as to militate against easy communication in an east-west direction, made necessary by the fact that population is concentrated in the southern portions of the provinces. To some extent this handicap is overcome by the positions of several chief waterways.



The waterways of Canada constitute not only one of its most remarkable geographic features, but one of the most vital elements of its national existence. One glance at the map suffices to show Canada's advantageous position in this respect—the superb St. Lawrence system, comprising gulf, river and great lakes penetrating nearly half way across the continent, which has made Montreal the largest grain-shipping port of the world; the interior lakes and large rivers, including the great Mackenzie system as yet almost undeveloped—these waterways represent an actual or potential contribution to the economic life of the Dominion, both in the electric energy they develop or are capable of developing and the freight they carry or are destined to carry, which place them among the greatest of our natural assets.

The great drainage basins of Canada are the Atlantic (524,900 square miles), the Hudson bay (1,486,000 square miles), the Arctic (1,290,000 square miles), the Pacific (387,300 square miles) and the gulf of Mexico (12,365 square miles).

Most important of the lakes and rivers of Canada is the chain of the Great Lakes with their connecting rivers, the St. Lawrence river and its tributaries. This chain is called the St. Lawrence River system. The Great Lakes, separating the province of Ontario from the United States and connected by a series of canals with the St. Lawrence river, allow vessels drawing not over 14 feet of water to proceed from the Atlantic ocean to the interior of the Dominion as far as Fort William and Port Arthur, twin cities situated on lake Superior, practically half way across the continent.

Lengths of Principal Rivers and Tributaries in Canada

(Important tributaries represented by indentation.)

River	Miles
Flowing into the Atlantic Ocean	
Romaine	270
Moisie	210
St. John	390
Miramichi	135
St. Lawrence (to head of St. Louis)	1,900
Saguenay (to head of Peribonka)	405
St. Maurice	325
Richelieu	210
Ottawa	696
Trent	150
Grand	165
Thames	163
French (to head of Sturgeon)	180
Sturgeon	110
Spanish	153
Mississagi	140
Thessalon	40
Nipigon (to head of Ombabika)	130
Flowing into Hudson Bay	
Hayes	300
Nelson (to lake Winnipeg)	400
Nelson (to head of Bow)	1,600
Red (to head of lake Traverse)	355
Red (to head of Sheyenne)	545
Assiniboine	590
Souris	450
Qu'Appelle	270
Winnipeg (to head of Firesteel)	475
English	330
Saskatchewan (to head of Bow)	1,205
North Saskatchewan	760
South Saskatchewan (to head of Bow)	865
Bow	315
Belly	180
Red Deer	385
Churchill	1,000
Beaver	305
Kazan	455
Dubawnt	580
Severn	420
Winisk	295

River	Miles
Flowing into Hudson Bay—concluded	
Albany (to head of Cat river)	610
Moose (to head of Mattagami)	340
Nottaway (to head of Waswanipi)	400
Rupert	380
Eastmain	375
Big	520
Great Whale	365
Leaf	295
Koksoak (to head of Kaniapiskau)	535
Kaniapiskau	445
George	365
Flowing into the Pacific Ocean	
Columbia (total)	1,150
Columbia (in Canada)	465
Kootenay	400
Fraser	695
Thompson (to head of North Thompson)	270
North Thompson	185
South Thompson	120
Blackwater	140
Nechako	255
Stuart	220
Porcupine	525
Skeena	335
Nass	205
Stikine	335
Alsek	260
Yukon (mouth to head of Nisutlin)	1,765
Yukon (Int. boundary to head of Nisutlin)	655
Flowing into the Arctic Ocean	
Anderson	465
Hay	350
Mackenzie (to head of Finlay)	2,525
Liard	570
Athabasca	765
Slave	258
Peace (to head of Finlay)	1,054
Coppermine	525
Backs	605

Apart from the St. Lawrence, the great waterway of the eastern half of the Dominion, other systems also merit some attention. The Saskatchewan river, for example, flowing eastward from the Rocky mountains to lake Winnipeg and thence northward by the Nelson river into Hudson bay, drains a great part of the plains of the western provinces. In the north, the Mac-

kenzie river, with its tributaries the Slave, Liard, Athabaska and Peace rivers, follows the northerly slope of the Great Plain and empties into the Arctic ocean, its waters having traversed, in all, a distance of 2,525 miles. The Yukon river, after draining a great part of the Yukon Territory, flows northward through Alaska into the Behring sea after a course of 1,765 miles. The Fraser, Columbia, Skeena and Stikine rivers flow into the Pacific ocean after draining the western slopes of the mountains of British Columbia.

Lake Superior, with its area of 31,810 square miles, is the largest body of fresh water in the world. As the international boundary passes through lakes Superior, Huron, Erie, St. Clair and Ontario, only about half of the areas of these lakes is Canadian. The whole of lake Michigan is within United States territory. From the western end of lake Superior to the mouth of the St. Lawrence there is, with the aid of the canal system, a continuous navigable waterway. The total length of the St. Lawrence river from the head of the St. Louis river to Pointe-des-Monts, at the entrance of the gulf of St. Lawrence, is 1,900 miles. The tributaries of the St. Lawrence, several of which have themselves important tributaries, include the Ottawa river, 696 miles long, the St. Maurice river, 325 miles long, and the Saguenay (to head of Peribonka), 405 miles long.

In addition to the Great Lakes there are large bodies of inland water in other parts of Canada. Of these only the following principal lakes, with their respective areas, need be mentioned:—in Quebec, lake Mistassini (870 square miles); in Ontario, lake Nipigon (1,730 square miles); in Manitoba, lake Winnipeg (9,459 square miles), lake Winnipegosis (2,086 square miles) and lake Manitoba (1,817 square miles); in Saskatchewan, Reindeer lake (1,765 square miles); in Alberta, lake Athabaska (2,762 square miles). All these are within the boundaries of the provinces as at present constituted and are exclusive of lakes situated in the Northwest Territories, the largest of which are Great Bear lake (12,200 square miles) and Great Slave lake (9,800 square miles) in the District of Mackenzie.

Climate

It is difficult to generalize concerning the climate of so large an area. The greater part of the Dominion is in what may be called the colder temperate zone, while at the extreme north Arctic conditions prevail, and in certain parts, especially in southern Ontario and Vancouver island, the products are those of the warmer temperate zone.

In the main, the climate of Canada may be described as "continental", that is, subject to extremes of heat in summer and cold in winter which are not generally felt on islands or on the sea coast in the same latitudes. At the same time a considerable part is comparatively near the sea, or to great bodies of water which have a tendency to modify temperatures, as, for example, the Maritime Provinces, the peninsula of southern Ontario and the coast regions of British Columbia.

Roughly, the climate of Canada may be classified under four main types, (1) the valley and coastal type of British Columbia; (2) the prairie type; (3) that of Ontario and Quebec; (4) that of the Maritime Provinces.

The valley and coastal type of British Columbia is characterized by moderate temperatures in summer and winter, with high precipitation on the coast. In the interior valleys of the Okanagan and Kootenay country the winter temperatures are distinctly lower and the precipitation very much less than on the coast.

Winter in Canada.—This scene is characteristic of many parts of Canada where the finest ski-ing country is within easy reach of the inhabitants of cities and towns. Ski-ing has made tremendous strides in Canada and numbers its devotees in tens of thousands.

Engraving, courtesy Dept. of the Interior

The outstanding features of the prairie climate are the much scantier precipitation and the more severe cold of winter. Fortunately, the precipitation comes at the time of the year when it is most needed, *i.e.*, in the growing period, though in southern Alberta the summer precipitation is often light. A moderating influence on the climate of the western prairies is the *chinook* wind—a warm southwest wind which originates over the Pacific ocean and, after being forced upward and deprived of its moisture by the Cordilleras, descends down the eastern slopes of the Rocky mountains. The effects of the *chinooks* are felt as far north as the Peace River country. A change of wind, from the northeast to the southwest in the area affected will literally melt the snow before it and has been known to cause a rise in temperature in the winter season of from −20°F to +40° F. within a few hours in parts of southern Alberta. The climate of the Prairie Provinces is also modified by their elevation, which increases steadily as one proceeds west from Winnipeg. Thus, while the Canadian Pacific Railway at Winnipeg station is 766 feet above mean

sea level, it is 1,204 feet at Brandon, 1,896 feet at Regina, 2,181 feet at Medicine Hat and 3,437 feet at Calgary. These high elevations are partly responsible for the strong cold winds which are a feature of the prairie climate.

Ontario and Quebec are comparatively mild in the southern districts, but severe in the winter and with a shorter summer in the more northern areas, where there is less precipitation. Quebec is generally somewhat colder than Ontario. East of Quebec city the summers are distinctly cool, the normal mean temperature for July being under 65°. Only in the country on the shores of lakes Erie and Ontario and on the St. Lawrence is the normal mean temperature in July over 70°.

In the Maritime Provinces the climate is characterized by heavier precipitation than in Ontario, and in the southern districts by more equable temperatures. Nova Scotia has a distinctly warmer winter than New Brunswick. The southwestern part of Nova Scotia is the only part of Eastern Canada where the normal mean temperature in January is above 25°.

The characteristically cold winters over the greater part of the Canadian interior are not without economic advantages. From early times they have facilitated woods operations and have indirect beneficial effects on the soil. The health and hardiness of the people gain much from the invigorating conditions which prevail. Interruptions to national endeavour due to entirely seasonal causes are becoming less pronounced as Canada becomes more and more industrialized. Even construction operations, considered among the most seasonal, are now carried on almost all the year round.

CHAPTER II

THE CONSTITUTION AND GOVERNMENT OF CANADA

The constitutional development of Canada down to Confederation is mainly based upon four important acts of the British Parliament, the Quebec Act of 1774, the Constitutional Act of 1791, the Act of Union of 1840, and the British North America Act of 1867. The first of these is chiefly important as it established the French civil law throughout the then province of Quebec. The second is noteworthy for the division of the province into the French-speaking province of Lower Canada and the English-speaking province of Upper Canada, and for the concession of representative government through an elective Legislative Assembly, which, however, had no control over the executive government except in so far as it could refuse to vote taxes (the non-tax revenue of the province was outside of its control). The third of the above-mentioned acts reunited the two Canadas under a single legislature and conceded the principle of responsible government, the executive administration being henceforth responsible to the Legislature. The fourth separated the two Canadas from their existing legislative union to make them provinces, each administering its own local affairs, in a wider confederation, which within a comparatively short period so extended its boundaries as to take in the whole of British North America except Newfoundland and Labrador.

Canada in the Empire and Among the Nations.—Since Confederation there has taken place a gradual development of the powers of the Canadian Government. Thus, in 1878, the Hon. Edward Blake secured the issuance of a new set of instructions to the Governor General providing that, with unimportant exceptions, he should act upon the advice of his Ministers. A gradual development in the status of the Dominion was also evident at the successive Colonial Conferences, the name of which in 1907 was changed to Imperial Conferences, when also, it was provided that further conferences should be between the Government of the United Kingdom and the Governments of the self-governing Dominions, and that the Prime Minister of the United Kingdom instead of the Colonial Secretary was to be President of the Conference, a move toward recognizing that the British Government was simply *primus inter pares* among the nations of the Empire. The Conference of 1911 met under this arrangement. Later, during the war, was evolved what was known as the Imperial War Conference, a gathering of the five members of the British War Cabinet and the Prime Ministers of the self-governing Dominions.

The seal upon Canadian nationhood was set by the war. For it Canada raised 595,000 men (418,000 of whom went overseas); she supplied the Allies with over $1,002,000,000 worth of munitions, besides doubling her food exports; in the Patriotic Fund, Red Cross and by other voluntary subscriptions she raised about $100,000,000, while publicly she incurred financial responsibility amounting in the aggregate to nearly two billions of dollars.

The Memorial Chamber, Peace Tower, Parliament Buildings, Ottawa.
The "Book of Remembrance" is on the altar.
Photo, courtesy Dept. of the Interior

At the close of the war, on the initiative of Sir Robert Borden, then Prime Minister of Canada, the Dominions secured recognition as signatory powers of the Treaty of Versailles and were accepted as members of the League of Nations. A Canadian Minister, the Hon. Raoul Dandurand, acted as President of the Assembly of the League in 1926. In 1927 Canada was elected as a non-permanent member of the Council of the League and in view of this honour, was represented at the sessions of the Council and Assembly of the League in 1928 by her Prime Minister, the Right Hon. W. L. Mackenzie King, who was elected a Vice-President of the League.

The present position of Canada in the British Commonwealth of Nations was clearly defined at the Imperial Conference of 1926. The Report of the Inter-Imperial Relations Committee recommended that in future the Governor General should be regarded as the personal representative of the Crown rather than as an official of the Government of Great Britain, and that the Dominions might have their own representatives in foreign countries. In defining the relative position of Great Britain and the self-governing Dominions, the Committee made the following statement, which was endorsed by the Conference:—

"They are autonomous Communities within the British Empire, equal in status, in no way subordinate one to another in any aspect of their domestic or external affairs, though united by a common allegiance to the Crown, and freely associated as members of the British Commonwealth of Nations".

In keeping with her new status, Canada welcomed in 1928, Sir Wm. H. Clark as High Commissioner for Great Britain, representing the British Government in Ottawa as the High Commissioner for Canada represents Canada in London; she also at the same time laid the foundations of diplomatic representation in several foreign countries.

The present representatives of Canada abroad and of other countries in Canada are:—

The High Commissioner for Canada in Great Britain.—Hon. G. H. Ferguson (appointed Nov. 28, 1930), Canadian Building, Trafalgar Square, London, S.W. 1.

The High Commissioner for the United Kingdom in Canada.—Sir William Henry Clark, K.C.S.I., C.M.G. (appointed April 25, 1928), 114 Wellington St., Ottawa, Canada.

Canadian Advisory Officer, League of Nations.—Dr. W. A. Riddell (appointed 1925), 41 quai Wilson, Geneva, Switzerland.

Canadian Minister in the United States.—(Vacant, December, 1930).

United States Minister in Canada.—Lieut.-Colonel Hanford MacNider (appointed August, 1930), Wellington St., Ottawa.

Canadian Minister in France.—Hon. Philippe Roy (appointed 1928), 1 rue François Premier, Paris, France.

French Minister in Canada.—(Vacant, December, 1930). Chargé d'Affaires: M. Henri Coursier, Wellington St., Ottawa.

Canadian Minister in Japan.—Hon. H. M. Marler (appointed 1929), Tokyo, Japan.

Japanese Minister in Canada.—Mr. Iyemasa Tokugawa (appointed 1929), Wellington St., Ottawa.

In October-November of 1929 representatives of the Government of the United Kingdom, of the Governments of the Dominions and of India assembled in London to consider various constitutional questions connected with the operation of Dominion legislation and the question of merchant shipping legislation.

Exactly a year later representatives of the Empire again met in London for the Imperial Conference of 1930. The work of the conference was divided

into economic and constitutional sections and met during a time of world-wide conditions of trade depression when the general atmosphere seemed propitious for the encouragement of inter-Empire trade. The Prime Minister of Canada, The Right Hon. R. B. Bennett in the early stages of the conference, enunciated his policy of reciprocal tariff preferences within the Empire and received the support of other Dominion Prime Ministers. After much discussion, the Government of the United Kingdom declined to consider the imposition of tariffs on foodstuffs entering Great Britain and Northern Ireland, although bulk buying, including a wheat quota purchasing system, was suggested as a compromise. This met with a qualified reception and arrangements were made for the 1931 conference to meet in Ottawa, an invitation along these lines having been extended by the Prime Minister of Canada.

Among the most important constitutional and economic results of the conference were:—(1) Britain agreed to maintain existing preferences given Dominion products for three years; (2) Trade proposals are to be considered in Ottawa in 1931; (3) A voluntary Empire judicial tribunal is to be created; (4) The Colonial Laws Validity Act is to be repealed; (5) Dominions may act through British ambassadors abroad; (6) The King appoints Governors General through the respective Dominion Governments.

The Constitution of Canada

In the preamble to the British North America Act, which defines our internal constitution, it is stated that the provinces of Canada, Nova Scotia and New Brunswick "have expressed their desire to be federally united into one Dominion, with a Constitution similar in principle to that of the United Kingdom". Thus our constitution is not an imitation of that of the United States, it is the British Constitution federalized. Like the British and unlike the American Constitution, it is not a written constitution. The many unwritten conventions of the British Constitution are also recognized in our own; what we have in the British North America Act is a written delimitation of the respective powers of the Dominion and Provincial Governments.

The Dominion Government.—The Act declares that the executive government of Canada shall continue to be vested in the Sovereign of the United Kingdom (sec. 9), represented for Dominion purposes by the Governor General, and for provincial purposes by the Lieutenant-Governors. The Governor General is advised by the King's Privy Council for Canada, a committee of which constitutes the Ministry of the day.

The Dominion Parliament consists of the King, the Senate and the House of Commons. It must meet at least once a year, so that twelve months do not elapse between the last meeting in one session and the first meeting in the next. Senators, 96 in number, who are appointed for life by the Governor General in Council, must be at least 30 years of age, British subjects, residents of the province for which they are appointed, and in possession of $4,000 over and above their liabilities. Members of the House of Commons[1] (245 in 1930) are elected by the people for the duration of the Parliament, which may not be longer than five years.

[1] Appendix II gives lists of Senators and Members of the House of Commons.

The members of the Fifteenth Ministry, sworn into office on August 7, 1930, are as follows:—

Fifteenth Dominion Ministry

(According to precedence as at the formation of the Cabinet.)

Occupant	Office
Rt. Hon. R. B. Bennett	Prime Minister, President of the Privy Council, Secretary of State for External Affairs, and Minister of Finance (*pro tem.*).
Hon. Sir George H. Perley, K.C.M.G.	Minister without Portfolio.
Hon. E. N. Rhodes	Minister of Fisheries.
Senator the Hon. Gideon Robertson	Minister of Labour.
Hon. Hugh Guthrie	Minister of Justice and Attorney-General.
Hon. H. H. Stevens	Minister of Trade and Commerce.
Hon. R. J. Manion	Minister of Railways and Canals.
Hon. E. B. Ryckman	Minister of National Revenue.
Hon. J. A. Macdonald	Minister without Portfolio.
Hon. Arthur Sauvé	Postmaster-General.
Col. the Hon. Murray MacLaren	Minister of Pensions and National Health.
Hon. H. A. Stewart	Minister of Public Works.
Hon. C. H. Cahan	Secretary of State.
Col. the Hon. D. M. Sutherland	Minister of National Defence.
Hon. Alfred Duranleau	Minister of Marine.
Hon. Thomas G. Murphy	Minister of Interior and Superintendent-General of Indian Affairs.
Hon. Maurice Dupré	Solicitor-General.
Hon. W. A. Gordon	Minister of Immigration and Colonization and Minister of Mines.
Hon. Robert Weir	Minister of Agriculture.

The House of Commons Chamber, Ottawa.—The Press Gallery is immediately over the Speaker's Chair and the Public Gallery is above and behind the Press Gallery.

Photo, courtesy Dept. of the Interior

NOVA SCOTIA

QUEBEC

ONTARIO

MANITOBA

SASKATCHEWAN

ALBERTA

BRITISH COLUMBIA

PROVINCIAL ARMORIAL ENSIGNS

A description of the armorial ensigns of the several provinces shown above is as follows:—

Ontario.—Granted by Royal Warrant dated the 26th May, 1868. Description—"Vert a Sprig of three leaves of Maple slipped Or, on a Chief Argent the Cross of St. George." Crest and Supporters granted by Royal Warrant dated 27th February, 1909. Description of Crest—"Upon a Wreath of the Colours a Bear passant Sable, and the Supporters on the dexter side A Moose, and on the sinister side A Canadian Deer, Both Proper." Motto—"Ut Incepit Fidelis Sic]Permanet".

Quebec.—Granted by Royal Warrant dated the 26th May, 1868. Description—"Or on a fess gules between two Fleur de Lis in Chief Azure and a Sprig of three leaves of Maple slipped Vert in base a Lion passant guardant Or".

Nova Scotia.—Granted by Royal Warrant dated 19th January, 1929, to supersede Armorial Ensigns granted 26th May, 1868. Description—"Argent a Cross of St. Andrew Azure charged with an escutcheon of the Royal Arms of Scotland," with the Crest, on a Wreath of the Colours, "A branch of laurel and a thistle issuing from two hands conjoined the one being armed and the other naked all proper," and for Supporters, on the dexter "An Unicorn Argent armed crined and unguled Or, and crowned with the Imperial Crown proper, and gorged with a Coronet composed of crosse

Powers of Parliament.—The Dominion Parliament has exclusive legislative authority in all matters relating to the following:—public debt and property; regulation of trade and commerce; raising of money by any mode of taxation; borrowing of money on the public credit; postal service; census and statistics; militia, military and naval service and defence; fixing and providing for salaries and allowances of the officers of the Government; beacons, buoys and lighthouses; navigation and shipping; quarantine and the establishment and maintenance of marine hospitals; sea-coast and inland fisheries; ferries on an international or interprovincial frontier; currency and coinage; banking, incorporation of banks, and issue of paper money; savings banks; weights and measures; bills of exchange and promissory notes; interest; legal tender; bankruptcy and insolvency; patents of invention and discovery; copyrights; Indians and lands reserved for Indians; naturalization and aliens; marriage and divorce; the criminal law, except the constitution of courts of criminal jurisdiction, but including the procedure in criminal matters; the establishment, maintenance and management of penitentiaries; such classes of subjects as are expressly excepted in the enumeration of the classes of subjects by the Act exclusively assigned to the Legislatures of the provinces.

Provincial Government.—In each of the provinces the King is represented by a Lieutenant-Governor, appointed by the Governor General in Council, and governing with the advice and assistance of his Ministry or Executive Council, which is responsible to the Legislature and resigns office when it ceases to enjoy the confidence of that body. The Legislatures are unicameral, consisting of a Legislative Assembly elected by the people, except in Quebec, where there is a Legislative Council as well as a Legislative Assembly.

The Lieutenant-Governors of the provinces, together with the names of the Premiers of the present administrations, are given in the following table:—

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patee and fleur-de-lis, a chain affixed thereto passing through the forelegs and reflexed over the back, Gold—and on the sinister, "A Savage holding in the exterior hand an arrow" with the Motto "Munit haec et altera vincit".

New Brunswick.—Granted by Royal Warrant dated the 26th May, 1868. Description—"Or on Waves a Lymphad, or Ancient Galley, with Oars in Action proper on a Chief Gules a Lion passant guardant Or".

Manitoba.—Granted by Royal Warrant dated the 10th May, 1905. Description—"Vert on a Rock a Buffalo statant proper, on a Chief Argent the Cross of St. George".

Prince Edward Island.—Granted by Royal Warrant dated the 30th May, 1905. Description—"Argent on an Island Vert, to the Sinister and Oak Tree fructed, to the Dexter thereof three oak Saplings Sprouting all Proper, on a Chief Gules a Lion passant guardant Or".

British Columbia.—Granted by Royal Warrant dated the 31st March, 1906. Description—"Argent three Bars wavy Azure issuant from the base of a demi-Sun in splendour proper, on a Chief of the Union Device charged in the centre Point with an Antique Crown Or".

Saskatchewan.—Granted by Royal Warrant dated the 25th August, 1906. Description—"Vert three Garbs in fesse Or, on a Chief of the last a Lion passant guardant Gules".

Alberta.—Granted by Royal Warrant dated the 30th May, 1907. Description—"Azure in front of a Range of Snow Mountains proper, a Range of Hills Vert, in base a Wheat-field surmounted by a Prairie both also proper, on a Chief Argent a St. George's Cross".

GLOSSARY

Argent—silver.
Azure—blue.
Charge—device on shield.
Chief—band in top of shield.
Crined—Maned.
Cross patee—a special form of cross
Fess—horizontal band across shield.
Garb—sheaf of wheat.
Gorged—bearing on the throat.
Guardant—looking full face at the spectator.
Gules—red.
Naiant—swimming.
Or—gold.
Passant—walking.
Rampant—lenping.
Sable—black.
Statant—standing.

Lieutenant-Governors of Provinces, and Premiers, 1930.

Province	Lieutenant-Governor	Premier
Prince Edward Island	Hon. Charles Dalton	Hon. A. C. Saunders.
Nova Scotia	Hon. Frank Stanfield	Hon. Gordon Harrington.
New Brunswick	Maj.-Gen. the Hon. Hugh H. McLean	Hon. J. B. M. Baxter.
Quebec	Hon. H. G. Carroll	Hon. L. A. Taschereau.
Ontario	Hon. William Donald Ross	Hon. G. S. Henry.
Manitoba	Hon. J. D. McGregor	Hon. John Bracken.
Saskatchewan	Hon. H. W. Newlands	Hon. J. T. M. Anderson.
Alberta	Hon. William Egbert	Hon. J. E. Brownlee.
British Columbia	Hon. R. Randolph Bruce	Hon. S. F. Tolmie.

Powers of Provincial Legislatures.—The Legislature in each province may exclusively make laws in relation to the following matters: amendment of the constitution of the province, except as regards the Lieutenant-Governor; direct taxation within the province; borrowing of money on the credit of the province; establishment and tenure of provincial offices and appointment and payment of provincial officers; the management and sale of public lands belonging to the province and of the timber and wood thereon; the establishment, maintenance and management of public and reformatory prisons in and for the province; the establishment, maintenance and management of hospitals, asylums, charities and eleemosynary institutions in and for the province, other than marine hospitals; municipal institutions in the province; shop, saloon, tavern, auctioneer and other licences issued for the raising of provincial or municipal revenue; local works and undertakings other than interprovincial or international lines of ships, railways, canals, telegraphs, etc., or works which, though wholly situated within one province, are declared by the Dominion Parliament to be for the general advantage either of Canada or of two or more provinces; the incorporation of companies with provincial objects; the solemnization of marriage in the province; property and civil rights in the province; the administration of justice in the province, including the constitution, maintenance and organization of provincial courts both of civil and criminal jurisdiction, and including procedure in civil matters in these courts; the imposition of punishment by fine, penalty, or imprisonment for enforcing any law of the province relating to any of the aforesaid subjects; generally all matters of a merely local or private nature in the province. Further, in and for each province the Legislature may, under section 93, exclusively make laws in relation to education, subject to certain provisions for the protection of religious minorities, who are to retain the privileges and rights enjoyed before Confederation.

Municipal Government.—Under the British North America Act, the municipalities are the creations of the Provincial Governments. Their bases of 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 4,100 municipal governments in Canada. These 4,100 municipal governments have together probably 20,000 members described as mayors, reeves, controllers, councillors, etc., their 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 the provinces themselves; for example, the total annual ordinary expenditure of Montreal is greater than that of the Provincial Government of Quebec.

CHAPTER III

POPULATION—BIRTHS, DEATHS AND MARRIAGES—IMMIGRATION

Population growth affords an excellent measure of general economic progress, and the present chapter is written from that standpoint. Introductory to the study of population growth in Canada the following table of area and population of the British Empire by continents is given.

Summary of Area and Population of the British Empire by Continents

Continent	Area in square miles, 1921	Population	
		Census of 1911	Census of 1921
Europe	121,752	45,601,214	47,600,044
Asia	2,116,084	323,543,881	332,607,788
Africa	3,897,920	39,296,361	51,048,519
America	4,077,187	9,503,351	11,164,907
Australasia	3,278,535	6,188,269	7,893,788
Grand Totals, British Empire	**13,491,977**	**424,133,076**	**450,315,046**

Historical.—It may not be generally known that the credit of taking what was perhaps the first census of modern times belongs to Canada, the year being 1665 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. After the Conquest came the influx of the Loyalists and the gradual settlement of the country, so that Canada began the nineteenth century with a population of probably 250,000 or 260,000. Fifty years later the total was 2,384,919 for the territory now included in the Dominion of Canada. There was a very rapid development in the 'fifties, and an only less substantial increase in the 'sixties, with the result that the first census after Confederation (1871) saw the Dominion launched with a population of 3,689,257.

Growth of Population in Canada, 1867-1930—continued on next page

Province	1867	1871	1881	1891
Ontario	1,530,000[1]	1,620,851	1,926,922	2,114,321
Quebec	1,160,000[1]	1,191,516	1,359,027	1,488,535
New Brunswick	272,000[1]	285,594	321,233	321,263
Nova Scotia	365,000[1]	387,800	440,572	450,396
British Columbia	[2]	36,247	49,459	98,173
Prince Edward Island	81,000[1]	94,021	108,891	109,078
Manitoba	17,000[2]	25,228	62,260	152,506
Saskatchewan	[2]	[3]	[3]	[3]
Alberta	[2]	[3]	[3]	[3]
Yukon	[2]	[3]	[3]	[3]
Northwest Territories	[2]	48,000	56,446	98,967
Totals	–	3,689,257	4,324,810	4,833,239

NOTE.—For footnotes see end of table.

Growth of Population in Canada, 1867-1930—concluded

Province	1901	1911	1921	1930
Ontario	2,182,947	2,527,292	2,933,662	3,313,000
Quebec	1,648,898	2,005,776	2,361,199	2,734,600
New Brunswick	331,120	351,889	387,876	423,400
Nova Scotia	459,574	492,338	523,837	553,900
British Columbia	178,657	392,480	524,582	597,000
Prince Edward Island	103,259	93,728	88,615	85,800
Manitoba	255,211	461,394	610,118	671,500
Saskatchewan	91,279	492,432	757,510	882,000
Alberta	73,022	374,295	588,454	660,000
Yukon	27,219	8,512	4,157	3,700
Northwest Territories	20,129	6,507	7,988	9,600
Totals	5,371,315	7,206,643	8,788,483	9,934,500[4]

[1] Estimated on basis of census, 1861.
[2] Estimated on basis of census, 1856.
[3] No figures of population for earlier years available upon which to base estimates of population.
[4] Estimated on basis of census, 1921.

The first two years of the Dominion's life were years of dull times, but from 1869 to 1873 there was general prosperity reflecting the world-wide railway building boom, the construction of the Suez canal and the industrial development of Germany. Canada during this period found many new markets, both foreign and interprovincial; nineteen new banks began business. After 1873, due again largely to outside influence, Canada entered a period of depression, losing some of her foreign markets, though conditions were somewhat alleviated by the completion of the Intercolonial Railway, and later by that of the Canadian Pacific Railway, which inaugurated the first and short-lived western boom. The adoption of a protective tariff in 1878 stimulated manufactures, but on the whole business continued depressed throughout the later 'seventies, the whole of the 'eighties and the first part of the 'nineties. Notwithstanding many evidences of growth, some of them considerable, economic conditions in general were not marked by buoyancy until close upon the end of the century.

The censuses of 1881, 1891 and 1901 reflected these conditions. 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. With 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.

It is within the present century that the spectacular expansion of the Canadian population and general economic body has taken place. The outstanding initial feature was, of course, the opening of the "last best West". It is true that western population had doubled in each of the decades following the completion of the Canadian Pacific Railway. With 1900, however, this movement became greatly accelerated. There occurred at this juncture a great broadening in world credit. Capital in huge amounts began to flow from Great Britain to undeveloped countries throughout the world, and especially Canada, which received a total of $2½ billions within a dozen years. The immigration movement, which had seldom previously exceeded

The growth of the Capital is perhaps more typical of that of the Dominion than the growth of any other Canadian city. The upper view illustrates the corner of Sparks and Elgin Streets in 1865 and the lower one is of the same location as it appears to-day. In the foreground is a part of the new Confederation Park.

50,000 per annum, rose to over five times that volume, totalling in the ten years 1903-1913 over 2,500,000, which was perhaps as many as had previously entered the country in all the years back to Confederation. Two new transcontinental railways were begun. Simultaneously with this western development came an almost equally rapid expansion in the industrial centres of eastern Canada. Not all of the "boom" was wisely directed, and some reaction was felt in 1913. Then came the war. Its results were by no means purely destructive economically. The liquidation of excess development continued and the industrial and production structure of Canada was greatly strengthened by the new demands for food and war materials. Immigration, however, fell off to a point not much above a third of the immediately pre-war period. After a post-war boom in 1920, conditions slumped economically for three years, but thereafter recovery was rapid.

The figures of the 1921 census being now ten years old, it is natural that the results concerning the profound changes which have taken place in the life of the nation in the interval should be awaited with particular interest at this time when up-to-date statistics are relied upon more than ever before for legislative, administrative, and business purposes generally. Arrangements have been made at the Dominion Bureau of Statistics to speed up the work of taking the 1931 census, and of collating and analysing the results. These will be made available to the public as early as is possible; in the meantime, the 1921 figures are the latest.

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 year 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 one 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 according to her last two censuses.

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.—2,500,000 people compared with 110,000 at Confederation.

There are numerous other features, social as well as economic, that invite analysis in a record of progress like the above. The average Canadian family was 4·96 in 1921, or about one member smaller than at Confederation. The average or "median" Canadian was 23·94 years of age in 1921, or about five years older than at Confederation, a change which reflects the smaller proportion of children, largely due in turn to the lengthening of adult life and the immigration movement. A greater masculinity of the population is due to the last-named cause, the 1921 census showing 515 males to 485 females per 1,000 of population, or 3 p.c. masculinity. In racial composition, British stocks are now 55 p.c. of the whole, and the French, 28 p.c.; in other words, in 1921, 83 p.c. of the population were of the two original racial stocks as compared with 87·73 p.c. in 1901. This decline has in the main been due to the recent heavy immigration of continental Europeans.

Origins and Religions of the People, 1901 and 1921

Origin	1901	1921	Religion	1901	1921
	No.	No.		No.	No.
British	3,063,195	4,868,903	Anglicans	681,494	1,407,994
English	1,260,899	2,545,496	Baptists	318,005	421,731
Irish	988,721	1,107,817	Confucians	5,115	27,114
Scotch	800,154	1,173,637	Congregationalists	28,293	30,730
Other	13,421	41,953	Greek Church	15,630	169,832
French	1,649,371	2,452,751	Jews	16,401	125,197
Dutch	33,845	117,506	Lutherans	92,524	286,458
German	310,501	294,636	Mennonites	31,797	58,797
Hebrew	16,131	126,196	Methodists	916,886	1,159,458
Indian	127,941	110,814	Presbyterians	842,531	1,409,407
Scandinavian[1]	31,042	167,359	Protestants	11,612	20,754
Various	107,750	629,069[2]	Roman Catholics	2,229,600	3,389,636
Unspecified	31,539	21,249	Various Sects	181,427	271,375[3]
Totals	5,371,315	8,788,483	Totals	5,371,315	8,788,483

[1] Includes Danish, Icelandic, Norwegian and Swedish.
[2] Includes 107,671 Austrians, 39,587 Chinese, 15,868 Japanese, 53,403 Polish, 106,721 Ukrainians, 766,7[illegible]9 Italians, 18,291 Negroes, 100,064 Russians, and 12,831 Swiss.
[3] Having less than 25,000 adherents each.

The Historic City of Quebec, from the St. Lawrence.

Of similar interest are the statistics of nativity of the population. In 1871, 97·28 p.c. of the population were born under the British flag, while half a century later the percentage had declined to 89·87. The United States-born population increased from 1·85 p.c. in 1871 to 4·25 p.c. in 1921, whilst other foreign-born increased from 0·87 p.c. in 1871 to 5·88 p.c. in 1921.

Canadians by nationality or citizenship numbered 8,412,383 in 1921, including 6,832,747 Canadian-born, 1,065,454 resident British-born, and 514,182 naturalized foreign-born, of whom 237,994 had been born in the United States. Of the population of 10 years of age and over, 5,665,527 or 85 p.c. could speak English, while 1,997,074, or 30 p.c., could speak French. Of the latter, 1,070,752 could also speak English. Some 196,619 could speak German as their mother tongue.

Birthplaces of the People in 1901, 1911 and 1921

Birthplace	1901	1911	1921
TOTAL POPULATIONS	5,371,315	7,206,643	8,788,483
British-born	5,092,866	6,453,911	7,898,201
Canadian-born	4,671,815	5,619,682	6,832,747
Prince Edward Island	105,629	103,410	101,513
Nova Scotia	442,898	476,210	506,824
New Brunswick	317,062	345,253	378,902
Quebec	1,620,482	1,939,886	2,266,062
Ontario	1,928,099	2,232,325	2,505,562
Manitoba	110,742	214,566	351,444
Saskatchewan	65,784	108,149	314,830
Alberta		78,205	211,643
British Columbia	60,776	87,935	167,169
Yukon	6,969	1,824	1,751
Northwest Territories		7,684	6,919
Not stated	13,374	24,235	20,128
British Isles	404,848	804,234	1,025,121
England and Wales	218,632	539,109	700,530
Ireland	101,629	92,874	93,301
Scotland	83,631	169,391	226,483
Lesser Isles	956	2,860	4,807
British Possessions	15,864	29,188	39,680
Foreign-born	278,449	752,732	890,282
Austria	28,407	67,502	57,535
France	7,944	17,619	19,249
Germany	27,300	39,577	25,266
Italy	6,854	34,739	35,531
Russia and Poland	31,231	89,984	130,334
Sweden, Norway, Denmark	12,331	54,131	58,019
United States	127,899	303,680	374,024
Asia	23,580	40,946	53,636
Other Countries	12,903	104,554	136,688

As between rural and urban distribution the change is perhaps more striking than in any other field. Though we are predominantly agricultural, our town dwellers now all but equal the numbers upon the land (4,352,122 urban and 4,436,361 rural in 1921); fifty years ago the towns and cities of Canada accounted for only 18 p.c. of the people (686,019 urban and 3,003,238 rural), and at the beginning of the present century the percentage was but 37. In 1871 the Dominion had 13 cities, 49 towns, and 106 villages; in 1921 there were 101 cities, 462 towns, and 882 incorporated villages. It is the larger cities that have grown the fastest.

Population of Cities and Towns Having over 10,000 Inhabitants in 1921, Compared with 1891, 1901 and 1911

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 population is for the city or town municipality as it existed in 1921. For footnotes see end of table.

City or Town	Province	Population			
		1891	1901	1911	1921
*Montreal	Quebec	219,616	328,172	490,504[1]	618,506
*Toronto	Ontario	181,215	209,892	381,833[2]	521,893
*Winnipeg	Manitoba	25,639	42,340	136,035	179,087
*Vancouver	British Columbia	13,709	27,010	100,401	117,217
†Hamilton	Ontario	48,959	52,634	81,969	114,151
*Ottawa	Ontario	44,154	59,928	87,062	107,843
*Quebec	Quebec	63,090	68,840	78,710	95,193
*Calgary	Alberta	3,876	4,392	43,704	63,305

Population of Cities and Towns Having over 10,000 Inhabitants in 1921, Compared with 1891, 1901 and 1911—concluded

City or Town	Province	Population			
		1891	1901	1911	1921
†London	Ontario	31,977	37,976	46,300	60,959
*Edmonton	Alberta	–	4,176	31,064[3]	58,821
*Halifax	Nova Scotia	38,437	40,832	46,619	58,372
*Saint John	New Brunswick	39,179	40,711	42,511	47,166
†Victoria	British Columbia	16,841	20,919	31,660	38,727
*Windsor	Ontario	10,322	12,153	17,829	38,591
*Regina	Saskatchewan	–	2,249	30,213	34,432
†Brantford	Ontario	12,753	16,619	23,132	29,440
*Saskatoon	Saskatchewan	–	113	12,004	25,739
Verdun	Quebec	296	1,898	11,629	25,001
†Hull	Quebec	11,264	13,993	18,222	24,117
*Sherbrooke	Quebec	10,110	11,765	16,405	23,515
*Sydney	Nova Scotia	2,427	9,909	17,723	22,545
†Three Rivers	Quebec	8,334	9,981	13,691	22,367
*Kitchener	Ontario	7,425	9,747	15,196	21,763
*Kingston	"	19,263	17,961	18,874	21,753
*Sault Ste. Marie	"	2,414	7,169	14,920[4]	21,092
†Peterborough	"	9,717	12,886	18,360	20,994
*Fort William	"	–	3,633	16,499	20,541
*St. Catharines	"	9,170	9,946	12,484	19,881
*Moose Jaw	Saskatchewan	–	1,558	13,823	19,285
*Guelph	Ontario	10,537	11,496	15,175	18,128
Westmount	Quebec	3,076	8,856	14,579	17,593
*Moncton	New Brunswick	8,762	9,026	11,345	17,488
*Glace Bay	Nova Scotia	2,459	6,945	16,662	17,007
*Stratford	Ontario	9,500	9,950	12,946	16,094
*St. Thomas	"	10,366	11,485	14,054	16,026
†Lachine	Quebec	3,761	6,365	11,688[5]	15,404
*Brandon	Manitoba	3,778	5,620	13,839	15,397
*Port Arthur	Ontario	–	3,214	11,220	14,886
†Sarnia	"	6,692	8,176	9,947	14,877
*Niagara Falls	"	3,349	5,702	9,248	14,764
*New Westminster	British Columbia	6,678	6,499	13,199	14,495
*Chatham	Ontario	9,052	9,068	10,770	13,256
Outremont	Quebec	795	1,148	4,820	13,249
†Galt	Ontario	7,535	7,866	10,299	13,216
*St. Boniface	Manitoba	1,553	2,019	7,483	12,821
*Charlottetown and Royalty	P. E. Island	11,373	12,080	11,203	12,347
†Belleville	Ontario	9,916	9,117	9,876	12,206
*Owen Sound	"	7,497	8,776	12,558	12,190
*Oshawa	"	4,066	4,394	7,436	11,940
*Lethbridge	Alberta	–	2,072	9,035	11,097
†St. Hyacinthe	Quebec	7,016	9,210	9,797	10,859
*North Bay	Ontario	–	2,530	7,737	10,692
†Shawinigan Falls	Quebec	–	–	4,265	10,625
†Levis	"	7,301	9,242	8,703[6]	10,470
*Brockville	Ontario	8,791	8,940	9,374	10,043

[1] Includes Maisonneuve, Cartierville, Bordeaux and Sault-au-Recollet. [2] Includes North Toronto, less 67 transferred in 1911 to Township of York. [3] Includes town of Strathcona and villages of North and West Edmonton. [4] Includes town of Steelton. [5] Includes parish of Lachine and Summerlea town. [6] Includes Notre-Dame de la Victoire.

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. Recent trends by years and by provinces are illustrated in the accompanying table. Birth rates were somewhat lower in 1929, and death rates slightly higher than in 1928 as a result of the influenza epidemic in January.

The number of divorces granted in Canada has increased from 19 in 1901 to 51 in 1910, to 429 in 1920, to 785 in 1928, and to 816 in 1929.

Births, Deaths and Marriages in Canada, 1921 and 1929

Province	Births		Deaths		Marriages	
	1921	1929	1921	1929	1921	1929
	No.	No.	No.	No.	No.	No.
CANADA[1]	257,728	234,915	101,155	113,450	69,732	77,265
Prince Edward Island	2,156	1,668	1,209	1,122	518	469
Nova Scotia	13,021	10,672	6,420	6,657	3,550	3,510
New Brunswick	11,465	10,224	5,410	5,213	3,173	3,117
Quebec	88,749	81,380	33,433	37,221	18,659	19,610
Ontario	74,152	68,411	34,551	38,102	24,871	27,605
Manitoba	18,478	14,236	5,388	5,808	5,310	5,269
Saskatchewan	22,493	21,310	5,596	6,707	5,101	6,535
Alberta	16,561	16,748	4,940	6,234	4,661	5,999
British Columbia	10,653	10,266	4,208	6,386	3,889	5,151
	Rates per 1,000 population					
CANADA[1]	29·4	24·0	11·5	11·6	8·0	7·9
Prince Edward Island	24·3	19·4	13·6	13·0	5·8	5·5
Nova Scotia	24·9	19·4	12·3	12·1	6·8	6·4
New Brunswick	30·2	24·4	14·2	12·4	8·4	7·4
Quebec	37·6	30·3	14·2	13·8	7·9	7·3
Ontario	25·3	20·9	11·8	11·6	8·5	8·4
Manitoba	30·3	21·5	8·8	8·8	8·7	7·9
Saskatchewan	29·7	24·6	7·4	7·7	6·7	7·5
Alberta	28·1	25·9	8·4	9·7	7·9	9·3
British Columbia	20·3	17·4	8·0	10·8	7·4	8·7

[1] Exclusive of Yukon and the Northwest Territories.

Immigration

How important a part has been played by immigration in the building up of Canada will be apparent from the preceding pages of this chapter. The present immigration policy of the Government is administered by a separate Department—the Department of Immigration and Colonization. The normal policy is one of encouragement to specified classes, more particularly agricultural labour and domestic help. Canadians prefer that settlers should be of a readily assimilable type, similar by race and language with one or other of the great races now inhabiting the country, and thus prepared for the assumption of the duties of democratic Canadian citizenship. There are strong prohibitions against undesirable classes; special legislation is also in effect with regard to the immigration of Orientals, the latter problem being fundamentally economic rather than racial.

Under a co-operative arrangement with the Government of Great Britain, certain classes of British immigrants are given assisted passages, full details regarding which and regarding other regulations pertaining to immigration may be obtained from the Department. Among the most generally acceptable immigrants in this connection are the young people of both sexes —boys who are prepared to engage in farm work and girls who will undertake domestic occupations. By an arrangement in effect between the British and Canadian and certain of the Provincial Governments, British boys settling in Canada, in accordance with certain provisions, may qualify for Government loans up to $2,500 for the purchase of farms of their own. Before becoming eligible for the loan the boy must acquire a knowledge of agricultural practice, and save up approximately $500. The loan is repayable over a period of twenty-five years.

The main movements of immigration into Canada since 1920 are shown in the following table:—

Number of Immigrant Arrivals in Canada, fiscal years ended 1920-30

Fiscal Year	Immigrant Arrivals from—			Total
	United Kingdom	United States	Other Countries	
1920	59,603	49,656	8,077	117,336
1921	74,262	48,059	26,156	148,477
1922	39,020	29,345	21,634	89,999
1923	34,508	22,007	16,372	72,887
1924	72,919	20,521	55,120	148,560
1925	53,178	15,818	42,366	111,362
1926	37,030	18,778	40,256	96,064
1927	49,784	21,025	73,182	143,991
1928	50,872	25,007	75,718	151,597
1929	58,880	30,560	78,282	167,722
1930	64,082	30,727	68,479	163,288

How the movement during 1930 compared with those of 1929 and 1928 is shown by months in the following table:—

Month	1928		1929		1930[1]	
	Immigrants	Returned Canadians[2]	Immigrants	Returned Canadians[2]	Immigrants	Returned Canadians[2]
January	3,692	1,683	4,164	1,767	3,366	1,497
February	4,312	1,812	4,634	1,698	3,963	1,493
March	14,665	2,670	14,811	2,378	14,576	2,204
April	26,983	3,313	29,113	2,641	19,309	2,928
May	23,641	3,833	26,616	2,976	17,410	3,359
June	20,303	3,526	22,021	3,426	13,171	3,309
July	15,783	3,394	16,465	3,404	8,383	3,494
August	25,340	3,602	15,022	2,660	-	-
September	11,663	3,184	11,101	2,569	-	-
October	8,041	2,691	8,817	2,407	-	-
November	6,844	2,258	7,286	2,525	-	-
December	5,515	2,154	4,943	2,028	-	-

[1]At the time of going to press the returns made by the Department of Immigration, for 1930, cover the months January to July only.

[2]The returned Canadians shown in the above are Canadians who have been domiciled for some time in the United States, not exceeding a maximum of three years. It does not, of course include Canadians returning from temporary visits in the United States, the number of whom is very large. In fact, it has been estimated that over 25 millions cross the international boundary between Canada and the United States annually.

CHAPTER IV

NATURAL RESOURCES—WEALTH, PRODUCTION AND INCOME—INVESTMENTS

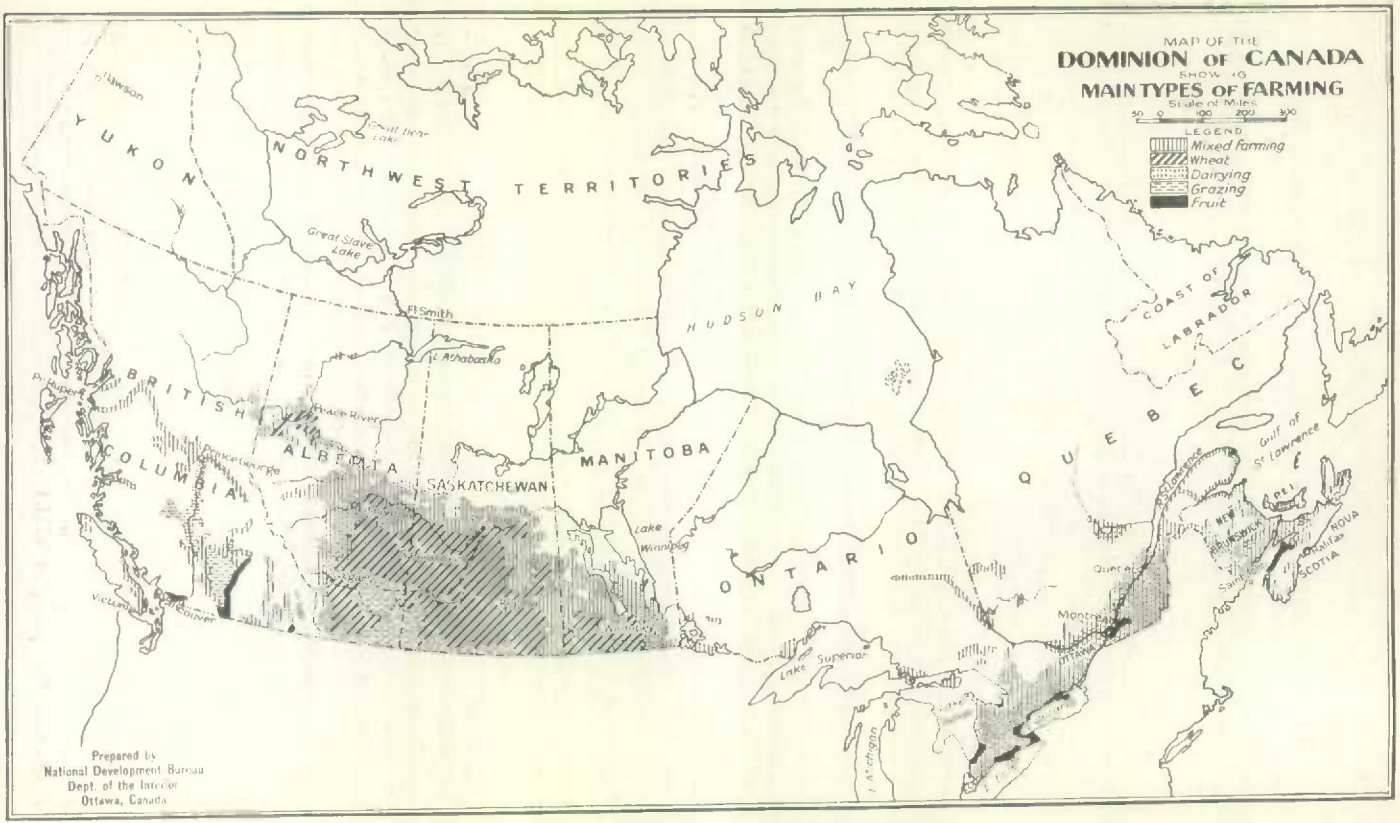
Natural Resources

The natural resources of Canada are those of a continent rather than of a country; in few countries, if any, have the same number of people such enormous undeveloped natural resources at their disposal. This fact is mainly responsible for the heavy investments in Canada of British and United States capital referred to later on in this chapter, in addition to the rapidly growing capital of the people of Canada itself.

The natural resources of Canada consist mainly of agricultural lands, forests, minerals, water powers, fisheries, and fur-bearing animals. The chapters of this handbook immediately following deal with the development of these resources, the present purpose being to give a synoptic view of their extent and importance.

Agricultural Lands.—The breeding of new early-ripening varieties of grain, such as Garnet and Reward wheat (see page 46) is materially increasing the area capable of agricultural development, so that the agricultural possibilities of the lands north of the 60th parallel are as yet practically unknown. Apart from these considerations, it is estimated that out of 1,309,724,800 acres of the land area of the nine provinces approximately 358,000,000 acres are available for use in agricultural production. This is 2½ times the present occupied area, and 5 times the present improved area of farm lands. In all the provinces except Prince Edward Island large areas are still available for settlement, and while the nature of the soil and climate varies, grain, root and fodder crops can be profitably grown in all the provinces, while stock-raising is successfully carried on both in the more densely settled areas and on their frontiers.

The Maritime Provinces are noted for their fruit and vegetable lands, perhaps particularly for the oats and potatoes of Prince Edward Island and New Brunswick and the apples of the Annapolis valley in Nova Scotia. Quebec and Ontario are pre-eminently mixed farming communities, various districts specializing in dairying, tobacco, sheep, etc., while the Niagara peninsula has long been famous for its production of both tree and bush fruits. In Manitoba, Saskatchewan and Alberta, the production of grain is still of primary importance but is giving way to more diversified types of agriculture; the stock-raising industry, once so typical of the western prairies, is regaining much of its former importance. In British Columbia the fertile valleys are devoted principally to apple and other fruit crops, while numerous districts along the coast and on Vancouver island follow general farming and market gardening.


MAP OF THE
DOMINION OF CANADA
SHOWING
MAIN TYPES OF FARMING
Scale of Miles
50 0 100 200 300
LEGEND
Mixed farming
Wheat
Dairying
Grazing
Fruit
YUKON
NORTHWEST TERRITORIES
Dawson
Great Bear Lake
Great Slave Lake
Ft Smith
L. Athabasca
HUDSON BAY
COAST OF LABRADOR
QUEBEC
BRITISH COLUMBIA
Prince Rupert
Peace River
ALBERTA
SASKATCHEWAN
MANITOBA
Lake Winnipeg
ONTARIO
Gulf of St Lawrence
St Lawrence
NEW BRUNSWICK
NOVA SCOTIA
Halifax
Quebec
Montreal
Ottawa
Lake Superior
L. Michigan
Victoria
Vancouver
Prepared by
National Development Bureau
Dept. of the Interior
Ottawa, Canada

Of the larger areas of land still available for settlement, the clay belt of northern Ontario and Quebec, which is suited to the growing of excellent crops, is to a large extent undeveloped, as well as an even larger area in northern Saskatchewan and Alberta, including the Peace River district. (See Chapter V.)

Forests.—Canada's forest areas include: (1) the great coniferous forest of the Rocky mountains and Pacific coast; (2) the northern forest, stretching in a wide curve from the Yukon north of the Great Lakes to Labrador; and (3) the forest belt extending from Lake Huron through southern Ontario and Quebec to New Brunswick and the Atlantic coast. Altogether the timber lands of the Dominion are estimated at 1,151,454 square miles, 7 p.c. of which is agricultural land. This area is estimated to contain a total of 224,304,000,000 cubic feet of standing timber calculated to yield 424,637,000,000 feet board measure of saw material and 1,122,000,000 cords of small material, chiefly pulpwood. These figures place Canada next to Asiatic Russia among the countries of the world with respect to forest resources. (See Chapter VI.)

Minerals.—Canada is now one of the leading mining countries in the world, though her mineral resources are still but imperfectly known. The great "Laurentian Shield" surrounding Hudson bay and comprising over one-third of Canada's area is composed of the oldest rocks in the world, a veritable treasure house of silver, gold, nickel, copper and baser metals. Only the southern fringe of this area has developed mineral fields, though new discoveries annually push back the frontiers. With regard to coal, it was estimated by the 12th International Geological Congress which assembled in Canada in 1913, that Canada's available reserves amount to about one-sixth of the total reserves of the world, and that 85 p.c. of these are in Alberta. Oil and gas fields, whose potentialities are being rapidly explored over a wide area exist in the western provinces, and smaller ones in Ontario and New Brunswick have been developed. (See Chapter VII.)

Water Powers.—The water area of Canada (180,035 square miles) is substantially larger than the whole land area of the British Isles, and certainly larger than the fresh water area of any other country in the world. As many parts of this well-watered country are situated at a considerable height above sea-level, there are great supplies of potential energy in the rapids and waterfalls of the rivers conveying the water from these areas to the sea. But the high place which water power occupies among Canada's national assets is due not only to Nature's bounty in regard to the number and nature of sites suitable for development but also because of their situation and the facilities they offer for the development of other great natural resources. The rapid growth of the mining, pulp and paper, and general manufacturing industries has been largely due to the availability of low-cost hydro-electric energy.

The value of this resource is enhanced by the fact that while sites are fairly well distributed from coast to coast, they are available in the greatest degree in the provinces of Ontario and Quebec where population and manufacturing is greatest, and where coal supplies have to be imported for long distances. (See Chapter VIII.)

Fisheries.—The waters off Canada's eastern and western coasts constitute vast fishing grounds which produce the chief commercial fishes in greater abundance than perhaps any other waters in the world. The fisheries were the first of Canadian resources to be exploited by Europeans. Canada's Atlantic fishing grounds extend along a coast line of more than 5,000 miles and cover an area of not less than 200,000 square miles of cold sea water coming down from the Arctic region and carrying in suspension quantities of soil and vegetable matter given up by the rivers, melting glaciers and icebergs and upon which feed immense numbers of fish of the highest food value, including cod, halibut, haddock, herring and mackerel. The inshore fisheries are 15,000 square miles in extent and among the fish taken are lobster, oyster, salmon, gaspereau, smelt, trout and maskinongé. The second great division of the Canadian fisheries is the Great Lakes and tributary waters of the St. Lawrence. These inland waters are 14,000 square miles in area and produce whitefish, trout and herring in abundance.

The great Pacific Coast fisheries are the estuarian salmon fisheries of the Fraser, the Skeena, the Nass and other rivers of the Pacific slope with its 7,000 miles of shoreline. These fisheries contribute two-fifths of the fish products of the Dominion and here also there is an interior fishing region. (See Chapter IX.)

Furs.—In the northern and unsettled areas of Canada, one of the chief resources is the fur-bearing animals, whose skins are in great and increasing demand. The large uninhabited areas of northern Quebec, Ontario, Manitoba and of the Northwest Territories furnish subsistence for many of the most highly prized fur-bearing animals, such as the beaver, fisher, fox, marten and others. After centuries of exploitation and in spite of the relatively rapid advance of settlement, the fur resources of Northern Canada still hold a foremost place among those of the fur producing countries of the world. (See Chapter X.)

Game and Scenery.—Canada's position, as one of the least settled countries of the English speaking world, adjacent to the 120,000,000 people of the United States, and the nearest Dominion to the densely populated British Isles, combines with the profusion of her game resources and with her scenery to attract great and increasing numbers of sportsmen and tourists. The valleys of Nova Scotia and New Brunswick, the broken lake country of northern Ontario and Quebec, together with the mountain districts of British Columbia, offer to the hunter and the fisherman an almost inexhaustible game preserve, and to the tourist new types of scenery. In particular, British Columbia possesses some of the most beautiful mountain areas of the world. In order that the natural beauties of the country may be preserved and popularized, the National Parks Branch of the Department of the Interior administers eleven parks, set apart for this purpose, including such great mountain areas as Jasper park in northern Alberta, and the Banff National park, also in Alberta, containing 4,200 and 2,585 square miles respectively, also Kootenay park, Glacier park and Yoho park in British Columbia. Many provincial parks are also maintained, of which the Algonquin park (2,741 square miles) in Ontario and the Laurentides park (3,565 square miles) in Quebec are the most important. The tourist traffic is annually becoming larger and more valuable to the country, having been estimated at over $299,000,000 for 1929. as described on page 115.

Wealth, Production and Income

A general survey of our national wealth, production and income may well precede a more detailed review of the more important fields of economic progress in Canada. According to the latest estimate (1928), the tangible wealth of the Dominion, apart from undeveloped natural resources, amounts to about $29 billions. This represents an increase of about $7 billions since 1921. There is no earlier figure that is strictly comparable, but it is fairly certain that there has been a growth of over four times since 1900. Agricultural values make up about $8 billions of the present total, urban real estate about $7½ billions, and steam railways about $3 billions. Ontario owns slightly more than one-third, Quebec about one-quarter, and Saskatchewan more than one-tenth. The following tables give a complete statement by items and by provinces.

Estimate of the National Wealth of Canada, 1928

Classification of Wealth	Aggregate Amount	Percentage of Total	Average Amount per head of Population
	$	p.c.	$ cts.
Farm values (land, buildings, implements, machinery and livestock)	6,251,081,000	21·60	647.24
Agricultural products in the possession of farmers and traders	1,801,440,000	6·22	186.52
Totals for Agricultural Wealth	8,052,521,000	27·82	833.76
Mines (capital employed)	841,968,000	2·91	87.18
Forests (estimated value of accessible raw materials, pulpwood, and capital invested in woods operations)	1,866,613,000	6·45	193.27
Fisheries (capital invested in boats, gear, etc., in primary operations)	31,131,000	0·11	3.22
Central electric stations (capital invested in equipment, materials, etc.)	500,007,000	1·73	51.77
Manufactures (machinery and tools and estimate for lands and buildings in rural districts; duplication excluded)	1,356,306,000	4·69	140.43
Manufactures (materials on hand and stocks in process)	795,775,000	2·75	82.39
Construction, custom and repair (capital invested in machinery and tools and materials on hand)	141,105,000	0·49	14.61
Trading establishments (furniture and fixtures, delivery equipment and materials and stocks on hand)	1,066,901,000	3·68	110.47
Steam railways (investment in road and equipment)	3,020,060,000	10·43	312.70
Electric railways (investment in road and equipment)	230,694,000	0·80	23.89
Canals (amount expended on construction to March 31, 1928)	232,273,000	0·81	24.05
Telephones (cost of property and equipment)	263,202,000	0·91	27.25
Urban real property (assessed valuations and exempted property and estimate for under-valuation by assessors and for roads, sewers, etc.)	7,582,784,000	26·20	785.13
Shipping (estimated from 1918 census)	151,708,000	0·52	15.71
Imported merchandise in store (one-half imports during 1927)	611,141,000	2·11	63.28
Automobiles (estimate of value of automobiles registered)	669,547,000	2·31	69.33
Household furnishings, clothing, etc. (estimated from production and trade statistics)	1,290,000,000	4·46	133.57
Specie, coin and other currency held by Government, chartered banks and general public	236,479,000	0·82	24.48
Totals	28,940,000,000	100·00	2,996.49

Provincial Distribution of the National Wealth of Canada, 1928

Province	Estimated Wealth	Percentage Distribution of Wealth	Estimated Population June 1, 1928	Percentage Distribution of Population	Wealth per capita
	$	p.c.	No.	p.c.	$
Prince Edward Island	152,000,000	0·53	86,400	0·89	1,759
Nova Scotia	869,000,000	3·00	547,000	5·66	1,589
New Brunswick	779,000,000	2·69	415,000	4·30	1,877
Quebec	7,302,000,000	25·23	2,647,000	27·41	2,759
Ontario	9,892,000,000	34·18	3,229,000	33·44	3,063
Manitoba	1,956,000,000	6·76	655,000	6·78	2,986
Saskatchewan	3,075,000,000	10·63	851,000	8·81	3,613
Alberta	2,349,000,000	8·12	631,900	6·54	3,717
British Columbia	2,547,000,000	8·80	583,000	6·04	4,369
Yukon	19,000,000	0·06	3,500	0·04	[2]
Canada	28,940,000,000	100·00	9,658,000[1]	100·00	2,996

[1] Includes 9,050 population in the Northwest Territories, or 0·09 p.c.

[2] As the statistics of population and wealth for the Yukon are uncertain, the per capita estimate of wealth is open to question and has not been shown.

Production and Income.—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, merchandizing, professional services, etc., are not also "productive" in a broad economic sense. At bottom it is the sum total of all economic activities that creates the national income. 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. 40 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, and this net figure is a much better criterion for measuring the value of an industry than the gross.

It will be seen that agriculture and manufactures rank as rivals for the first place in net value of production for the whole of Canada. Forestry and mining are usually next in importance, but in 1928, as was also the case in 1927, construction operations relegated these to fourth and fifth places, respectively.

In 1928 four of the six groups of total primary production show increases as compared with the previous year, these being forestry, fisheries, mining and electric power, which for 1927 had net production figures of $312, $49, $247 and $104 millions respectively. All three groups of secondary industries showed substantial advances, the figures for 1927 being: construction, $317 millions; custom and repair, $74 millions; and manufactures, $1,636 millions.

Since 1921 the total net value of primary production has risen from $1,630,549,070 and the total net of secondary production from $1,436,148,086. That is, in seven years primary production has increased in value by 40 p.c. and secondary by over 59 p.c.

Among the primary industries electric power and mining have shown the steadiest and most pronounced increases since 1921, but the advances in fisheries and agriculture have also been substantial. Trapping, between 1921 and 1922, increased from $10 millions to $17 millions—*i.e.* 70 p.c. in one year, but after 1922 the decline was steady until 1925, since when there has been a slower rate of increase from $15 millions to $17,641,000 in 1927 and a decline to $16,603,827 in 1928. Nearly 80 p.c. of the total value of the secondary industries is contributed by manufactures. The figures for manufactures in 1921 were $1,150 millions and relatively steady progress without any decided setback has been experienced. The 1928 net production of $1,819,043,025 shows an increase of 59 p.c. over the seven-year period. Construction increased from $169 millions to $220 millions or by 36 p.c. between 1921 and 1922, but, as was hardly surprising, this high level was not maintained and between 1922 and 1924 a decline set in. Since the latter year there has, however, been a steady increase to the 1928 figure.

By provinces, Ontario and Quebec occupy first place, largely because of their manufacturing pre-eminence, with Saskatchewan, British Columbia and Alberta following in the order named.

As these industries engage only two-thirds of those gainfully employed in Canada it would be safe to add one-half to the net figures to obtain the value of all productive activities—a concept which approximates to that of the national income, which we may thus put down at upwards of $6 billions.

Summary by Industries of the Value of Production in Canada, 1928

Industry	Gross	Net[1]	Per cent of Total Net
	$	$	p.c.
Agriculture	1,905,311,580	1,501,271,463	35·8
Forestry	473,559,767	323,654,008	7·7
Fisheries	70,668,167	55,050,973	1·3
Trapping	16,603,827	16,603,827	0·4
Mining	308,250,712	274,989,487	6·5
Electric Power	143,692,455	112,326,819	2·7
Total Primary Production	2,918,086,508	2,283,896,577	54·4
Construction	592,996,416	387,166,562	9·2
Custom and Repair[2]	129,085,000	82,482,000	2·0
Manufactures[3]	3,769,847,364	1,819,043,025	34·4[4]
Total Secondary Production[3]	4,491,928,780	2,288,691,587	45·6
Grand Total[3]	6,679,234,781	4,190,509,444	100·0

[1] Gross value minus value of materials consumed in the production process.
[2] Statistics of Custom and Repair were not collected after 1922 and the totals for 1928 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, shipbuilding and certain mineral industries, which are also included in other headings above. This duplication, amounting to a gross of $730,780,507 and a net of $382,078,720, is eliminated from the grand total.
[4] Manufactures not elsewhere stated.

Summary, by Provinces, of the Value of Production in Canada, 1928

Province	Gross	Net[1]	Per cent of Total Net
	$	$	p.c.
Prince Edward Island	28,994,760	23,173,899	0·55
Nova Scotia	189,172,363	134,496,407	3·21
New Brunswick	131,936,899	84,700,013	2·02
Quebec	1,656,034,946	1,007,998,347	24·05
Ontario	2,840,513,220	1,590,659,482	37·96
Manitoba	369,169,826	244,387,553	5·83
Saskatchewan	514,907,608	421,661,929	10·06
Alberta	450,763,002	348,725,315	8·32
British Columbia	492,259,464	329,240,554	7·86
Yukon	5,482,693	5,465,945	0·13
Canada	6,679,234,781	4,190,509,444	100·00

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

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 Great Britain (see table), at least $1½ billions being thus imported during 1900-1912. During the war the latent capital resources of Canada itself were for the first time exploited on a large scale, nearly $2 billions being raised in loans 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 1913 U.S. capital investments were probably around $650 millions; to-day they approach $3½ billions. British investments in Canada have in the meantime slightly declined (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 as a whole are not greatly in excess of 20 p.c. of the national wealth.

Capital Investments by Other Countries in Canada, 1913 and 1927-29

Country	1913[1]	1927[2]	1928[2]	1929[2]
	$	$	$	$
United States	650,000,000	3,086,241,000	3,303,846,000	3,470,087,000
Great Britain	2,500,000,000	2,198,254,000	2,215,304,000	2,197,682,000
Other Countries	175,000,000	225,993,000	232,940,000	236,400,000
Totals	3,325,000,000	5,510,488,000	5,752,090,000	5,904,169,000

[1] Estimates of 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 $1,745,816,000 at the beginning of 1929, or nearly 30 p.c. of the amount of outside investments in Canada. Of this, $991,652,000 was placed in the United States, $95,916,000 in Great Britain and $658,248,000 in other countries. Subsequent prosperity in 1929 enabled Canada to buy back large amounts of Canadian securities held abroad.

CHAPTER V

AGRICULTURE

Canada is basically an agricultural country and the cultivation of the soil with the closely related activities of dairying, stock-raising, fruit farming and horticulture is the chief source of wealth of the people, employing, according to the last census (1921), over 38 p.c. of the gainfully occupied male population and furnishing by far the largest part of Canadian exports.

Harvesting Wheat in Western Canada.

Photo, courtesy Dept. of the Interior

Of the total land area of Canada (3,510,008 square miles) less than one sixth is suitable for agricultural or pastoral purposes. Of this area the census of 1921 showed that about two-fifths was occupied and of the occupied lands one-half was classified as improved.

The five-sixths of Canada unsuited to agriculture is not by any means unproductive. About one-third of the entire country is covered with forest growth, only a relatively small part of which would be suited to agriculture if cleared, and under the most economic disposition most of this forest land would be reserved to produce timber in perpetuity. Again, much of the area unproductive of substantial vegetable growth is underlain by rocks whose geological formations point to rich mineral content. Even though still largely unexplored they have given rise to a great mining industry which ranks third among the primary industries, after agriculture and the forests.

Although, in proportion to the whole, the agricultural area of Canada is limited, yet the potentialities for expansion of the present area under production are great.

Recent developments and present conditions in Canadian agriculture are dealt with in the following sections on Agricultural Wealth and Production, Field Crops, Dairying, Live Stock and Fruit Growing.

Total Agricultural Wealth and Production

The estimated gross agricultural wealth of Canada is $7,978,633,000. Annual estimates of the total gross value of agricultural production show a total of over $1,667 millions in 1929 as compared with $1,100 millions in 1915.

Among the provinces, Ontario, Saskatchewan, Quebec, Alberta, Manitoba, British Columbia, New Brunswick, Nova Scotia and Prince Edward Island rank in the order given. Ontario has nearly 29 p.c. of the total agricultural wealth, Saskatchewan nearly 22 p.c., and Quebec over 18 p.c. Details are given in the following table:—

Estimated Gross Agricultural Wealth of Canada, by Provinces, 1929

("000" omitted)

Province	Lands	Buildings	Implements and Machinery	Live Stock
	$	$	$	$
Prince Edward Island	28,476	17,289	6,870	10,732
Nova Scotia	49,155	51,173	10,146	22,076
New Brunswick	61,112	45,158	13,545	17,975
Quebec	546,666	285,530	111,940	178,745
Ontario	808,124	491,330	169,954	277,720
Manitoba	315,245	113,005	67,848	66,472
Saskatchewan	877,042	216,398	176,676	134,950
Alberta	523,221	121,765	98,814	123,133
British Columbia	107,020	41,036	9,379	32,364
Canada	3,316,061	1,382,684	665,172	864,167

Estimated Gross Agricultural Wealth of Canada—concluded

Province	Poultry	Animals on Fur Farms	Agricultural Production	Total
	$	$	$	$
Prince Edward Island	1,015	3,600	26,723	94,705
Nova Scotia	1,168	929	43,538	178,205
New Brunswick	1,162	2,118	39,854	180,924
Quebec	11,282	4,541	320,422	1,459,126
Ontario	25,380	3,678	509,434	2,285,620
Manitoba	5,358	1,123	134,095	703,146
Saskatchewan	7,240	796	309,308	1,722,410
Alberta	6,785	1,602	228,589	1,103,909
British Columbia	4,464	1,090	55,235	250,588
Canada	63,854	19,477	1,667,218	7,978,633

Comparative figures of the annual agricultural revenue (agricultural production) for the five-year period 1925-29 analysed by items follow.

Gross Annual Agricultural Revenue of Canada, 1925-29

("000" omitted)

Item	1925	1926	1927	1928	1929
	$	$	$	$	$
Field crops	1,098,304	1,104,983	1,172,643	1,125,003	979,750
Farm animals	177,031	178,383	183,927	197,880	210,437
Wool	3,958	4,140	4,108	5,099	4,470
Dairy products	284,863	277,305	294,874	293,045	290,000
Fruits and vegetables	48,897	43,075	46,027	48,756	46,398
Poultry and eggs	74,267	83,569	97,937	106,653	109,346
Fur farming	3,679	3,520	4,798	6,106	8,503
Maple products	5,288	4,896	4,935	5,583	6,119
Tobacco	7,004	7,380	9,112	6,834	6,276
Flax fibre	454	208	321	509	393
Clover and grass seed	3,598	5,097	3,841	2,957	2,123
Honey	2,472	1,921	2,937	3,015	3,403
Totals	1,709,815	1,714,477	1,825,460	1,801,440	1,667,218

Field Crops

Acreages.—From 1890 to 1929 the area under field crops grew from about 15·6 million acres to over 61 million acres, an increase of 291 p.c. during forty years. This was largely due to the opening of the West, but the war also caused a wonderful manifestation of farming energy, for within the period 1913 to 1919 alone, the area under field crops grew by about 50 p.c., notwithstanding the decline of immigration and the absence of a large proportion of Canadian manhood overseas.

Yields.—The first year wheat production exceeded 100 million bushels was 1905. Six years later there were yields well over 200 million bushels, followed in 1915 by the phenomenal record of 393½ million bushels, the average yield per acre being 26 bushels—a rate never before or since reached (though the average yield in Alberta in 1923 and 1927 was approximately 28 bushels). During six of the seven years 1922-1928 the total of 1915 was exceeded—in 1922 (nearly 400 million bushels); in 1923 (474 million bushels); in 1925 (395 million bushels); in 1926 (407 million bushels); in 1927 (480 million bushels); and in 1928 (567 million bushels). The 1929 crop was short, being 304½ million bushels. (See table below for the full record).

Production, Imports and Exports, of Wheat for Canada, 1870-1929

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	1918	189,075	321,559	96,960,401
*1880	32,350	965,767	4,502,449	1919	193,260	201,757	92,499,554
*1890	42,223	406,222	3,443,744	1920	226,508	454,749	166,315,443
*1900	55,572	314,653	14,773,908	*1921	300,858	372,942	185,769,683
1910	132,078	407,639	62,398,113	1922	399,786	397,519	279,364,981
1911	230,924	375,486	97,600,904	1923	474,199	440,741	346,566,561
1912	224,159	880,387	115,744,172	1924	262,097	619,404	192,721,772
1913	231,717	357,945	135,587,447	1925	395,475	379,194	324,592,024
1914	161,280	2,180,039	86,750,125	1926	407,135	407,119	292,880,996
1915	393,543	305,179	269,157,743	1927	479,665	473,308	332,963,283
1916	262,781	304,433	174,565,250	1928	566,726	1,345,881	407,564,186
1917	233,743	281,258	169,240,340	1929	304,520	1,374,726	186,267,210

NOTE.—(1) For the above table, 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, 1870-1900, and July 31, 1910-29. (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.

While wheat stands supreme, with us, as a staple of human food, the other grain crops are of scarcely less importance for the maintenance of the live-stock industry. Their volume of production, especially in the case of oats, has attained very considerable dimensions. Oats reached the record total of close upon 564 million bushels in 1923; while in 1928 the crop reached 452 million bushels, receding in 1929 to 283 million bushels; the area under crop has expanded from 3,961,356 acres in 1890 to 12,479,477 acres in 1929. Barley, the production of which was 11,496,000 bushels in 1870, yielded a record total of 136,391,400 bushels in 1928. In 1929 the yield was 100,467,000 bushels. Yields of other field crops are shown in the table below.

Values of Field Crops.—Prices of agricultural products reached their peak during the war, and just after in 1919. They slumped steeply thereafter, falling to a very low level in 1923, recovering considerably however 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 during recent years, combined with excellent harvests, has brought the value up to $1,104,983,000 in 1926, $1,173,133,600 in 1927, $1,125,003,000 in 1928, and about $979,750,400 in 1929.

The Field Crops of Canada, 1930

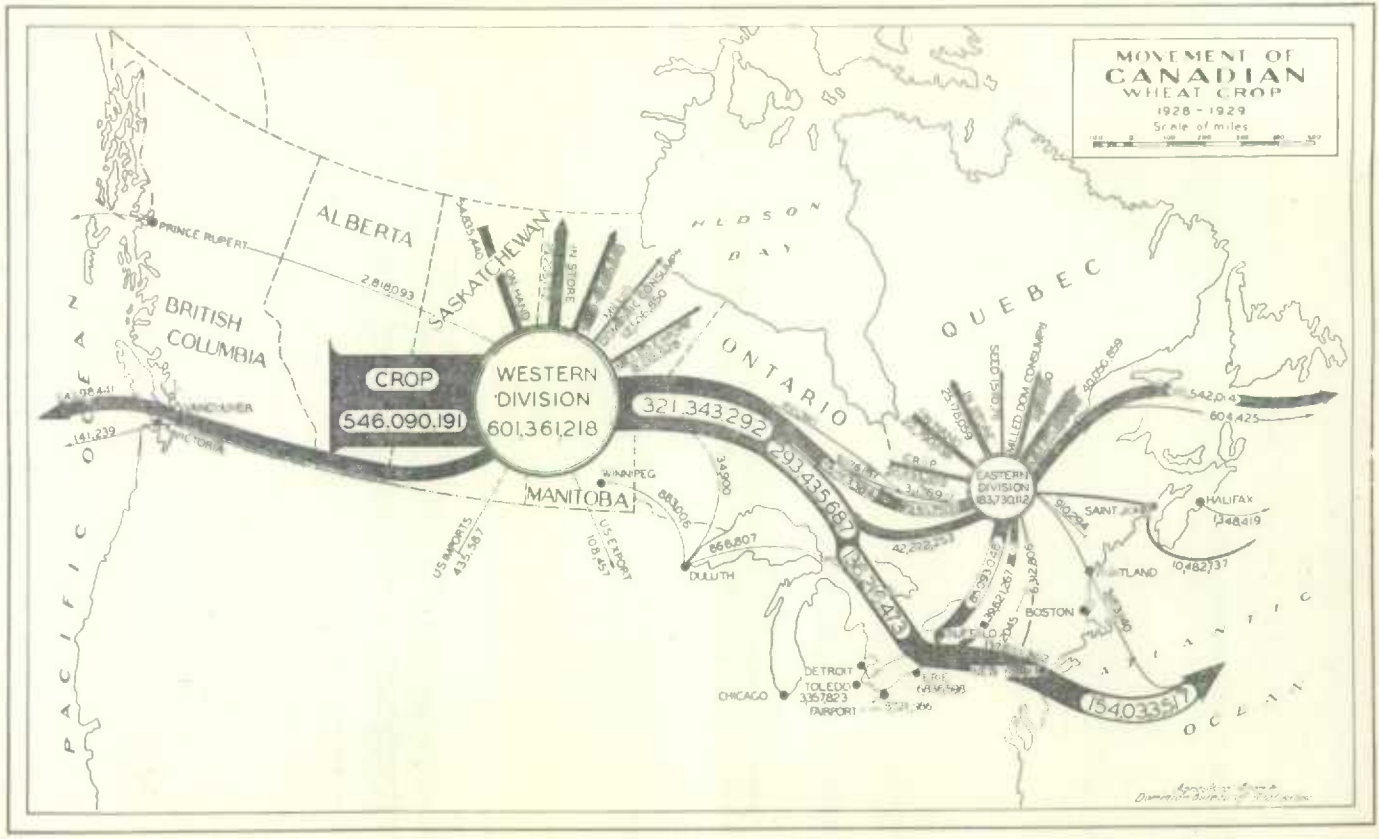
Field Crop	Area	Total Yield	Total Value
	acres	bush.	$
Wheat	24,897,200	395,854,000	173,589,000
Oats	13,221,900	429,156,000	105,019,000
Barley	5,558,000	137,963,000	27,784,000
Rye	1,441,550	22,286,500	4,429,000
Peas	125,210	2,378,200	3,364,000
Beans	91,580	1,411,600	3,236,000
Buckwheat	493,400	10,814,000	6,963,000
Mixed grains	1,193,700	43,078,000	17,966,000
Flaxseed	579,500	4,459,000	4,415,000
Corn for husking	162,000	4,801,000	3,790,000
		cwt.	
Potatoes	574,500	49,160,000	38,949,000
Turnips, mangolds, etc.	207,630	40,077,000	18,059,000
		tons	
Hay and clover	10,511,200	15,886,000	156,210,000
Alfalfa	754,800	1,524,000	18,533,000
Fodder corn	444,600	3,670,000	22,229,000
Sugar beets	52,500	486,000	3,343,000
Grain hay	–	–	21,268,000

Work of the Experimental Farms and Stations.—Apart from expansion of area and increase of volume, the production of better varieties of grain and improvement in the methods of cultivation under the scientific and educational activities of the Dominion and Provincial Departments of Agriculture have also been of great importance. The work of the Dominion Experimental Farms, first begun in 1886, at the present time includes 26 experimental

farms and stations with a total of 12,818 acres as compared with 3,472 acres on the orginal five farms. It would be impossible to enumerate, much less describe these operations here; but one outstanding achievement deserves special mention. Wheat of the Prairie Provinces is famous for its hard, dry, glutinous quality. Apart from the effects of climate and soil, its success has been largely due to the excellence of the Red Fife variety, which was discovered accidentally in 1842 by an Ontario farmer named David Fife. In 1903, however, an improved variety known as "Marquis" was produced by the Cereal Division of the Central Experimental Farm at Ottawa. During the past ten years the success of this variety has been such that it has now almost entirely superseded the Red Fife. The use of this new variety of wheat has increased by millions of dollars annually the revenue derived from wheat-growing by the farmers of Western Canada. Still more recent improvements are varieties called "Garnet" and "Reward". These are now being tried and multiplied upon an extensive scale and great hopes are entertained for their future.

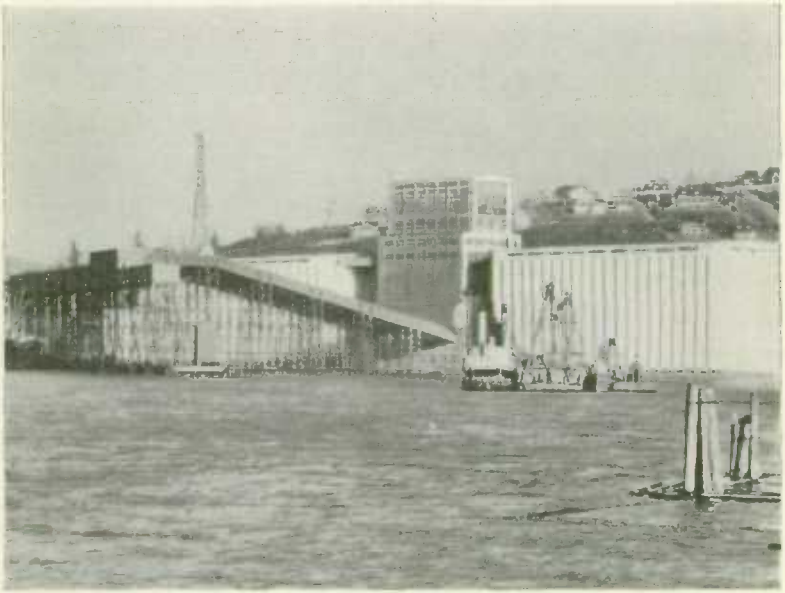
The Canadian Grain Trade.—Keeping pace with production have been the efforts to market efficiently and expeditiously the ever-increasing volume of the prairie-grown wheat, the chief market for which is distant about 5,000 miles over land and ocean from the points of production. In the production of wheat for export Canada has made great progress. The development of the Canadian grain trade, especially during the present century has been phenomenally rapid. In no country of the world are the arrangements for the inspection and grading of grain more thorough and complete, the certificates of the government inspectors being accepted everywhere as *prima facie* evidence of the quality of the grain. Since 1874 legislation has been continuously improved. In 1912 provision was first made for the appointment of the Board of Grain Commissioners, charged with the management and control of the grain trade for the whole of Canada.

The Canada Grain Act (which was extensivcly amended in 1929) governs the operation of the licensed grain elevators, the growth in number and capacity of which alone affords striking evidence of the development of the trade. Thus at the end of the last century the total number of grain elevators and warehouses in Canada was 523 with a capacity of 18,329,352 bushels; in 1929 the number was 5,481 and the capacity 358,255,000 bushels. The total exports of wheat and wheat flour grew from 5,276,898 bushels in 1870 to 309,587,418 bushels in 1924, and 421,785,327 bushels in 1929, but fell to 208,582,209 bushels in 1930, counting by fiscal years, as a result of the holding back of grain for better prices. By 1928-29 Canada had become the world's third largest wheat-producing country (the United States being first and Soviet Russia second), occupying second place in five out of the preceding six crop years ended July 31, while as a wheat exporting country she has been first six times and second three times during the nine crop years ended July 31, 1929. In 1929-30 Canada occupied sixth place among world wheat producing countries. The Canadian record for volume of wheat exports (crop year basis) was in 1928-29 when 407,564,187 bushels were exported in the form of grain and flour after the bumper harvest of 1928. For the crop year 1927-28, the exports of wheat and wheat flour amounted to the equivalent of


MOVEMENT OF
CANADIAN
WHEAT CROP
1928 - 1929
Scale of miles
ALBERTA
BRITISH COLUMBIA
SASKATCHEWAN
MANITOBA
ONTARIO
QUEBEC
HUDSON BAY
PACIFIC OCEAN
ATLANTIC OCEAN
PRINCE RUPERT
2,818,093
CROP
546,090,191
WESTERN DIVISION
601,361,218
321,343,292
293,435,687
WINNIPEG
DULUTH
668,807
883,006
34,900
US IMPORTS
435,587
US EXPORT
108,457
EASTERN DIVISION
83,730,112
910,204
SAINT
HALIFAX
1,348,419
10,482,737
BOSTON
6,302,806
DETROIT
TOLEDO
3,357,823
FAIRPORT
CHICAGO
1,540,335

332,963,283 bushels; in 1926-27 to 292,880,996 bushels; in 1925-26 to 324,592,024 bushels; in 1924-25 to 192,721,772 bushels, and in 1923-24 to 346,521,561 bushels.

The Western Wheat Pools.—Important developments have occurred in Western Canada during the last six years by the organization of what are popularly known as "Wheat Pools", which represent a form of co-operative marketing by producers. The grain producers of the Prairie Provinces had previously co-operated in the ownership and working of grain elevators, the Saskatchewan Co-operative Elevator Company, established in 1911, and the United Grain Growers, established in 1918, handling between them in a large grain year something like 73 million bushels. The formation of the wheat pools is a further development of the same principle. The inspiration of the enterprise was supplied by the success of the government control of grain marketing during the war, which control ceased in 1920. The three voluntary western wheat pools began operations, Alberta, on October 29, 1923; Saskatchewan, on September 8, 1924; and Manitoba, on January 28, 1924. In 1924 representatives of each organized a central selling agency, under a Dominion charter, with the title of the Canadian Co-operative Wheat Producers, Ltd. The method of working is to secure five-year contracts with as many wheat growers as possible, for the disposal of all the wheat grown by them, with the exception of the quantities reserved for seed and food. A fixed sum per



Alberta Wheat Pool Terminal No. 1, Storage Capacity 5,150,000 Bushels, Vancouver. Wheat exports from Vancouver have increased substantially in recent years.

Photo, courtesy Can. Govt. Motion Picture Bureau

bushel on the basis of the price for No. 1 Northern is paid by *interim* instalments and by final payments according to the price realized and after the deduction of expenses of marketing, elevator charges, and commercial reserve. The claim made for the pools is that better prices are obtained for the members than by the ordinary system of marketing. The Annual Report of the Canadian Wheat Pool covering the crop year 1929-30, shows that the Central Selling Agency of the three Pools handled 121,741,879 bushels of wheat and 24,040,982 bushels of coarse grains that year, involving a turn-over of $195,783,778. The Pools now operate over 1,600 country elevators and 11 terminals at Vancouver, Prince Rupert, Fort William, Port Arthur and Buffalo. Total membership in the Wheat Pools of Canada is well over 145,000, and reserve funds exceed $30,000,000.

The World Wheat Situation, 1930.—The economic depression which has prevailed throughout the world since the autumn of 1929 has borne particularly hard on agriculture with the result that in many countries the Governments have been called upon to render assistance, by the introduction of tariff and other legislation, or, as in the case of our own Prairie Provinces, by indirect financial support.

The European crop of wheat and coarse grains, in 1929, was above the average in both quantity and quality, and the yields of potatoes, turnips, beets and other root crops were exceptionally large, being offered so cheaply as partly to take the place of grain for human food and for live-stock feed in those countries, such as Germany, France, and Italy, where a tariff maintained the internal prices of wheat at a high level.

Curtailment of export trade with these countries, coupled with the marketing in the last five months of 1929 of a large surplus of wheat, estimated to have been well over 100 million bushels, by Argentina, just before that country's new crop was harvested, and the unexpected re-appearance of Soviet Russia, in the latter half of 1930, as an exporter of wheat, aggravated a situation which was already serious. Still another factor was the Oriental grain trade. In the normal course of things the Far East provides an outlet for low grade coarse grain but this has been greatly narrowed as a result of the depreciation of silver and thus of the purchasing power of these countries.

The above are some of the factors which have combined to bring about the drastic fall in prices of wheat, basis Fort William and Port Arthur, from $1.68 per bushel for No. 1 Northern, on August 3, 1929, to 51c. at present (Dec. 22, 1930) and in the face of a considerably reduced 1929 world crop of wheat compared with 1928. The situation has weighed particularly heavily on exporters of wheat, who, like Canada, depend on a world market.

Special Crops.—In addition to the ordinary crops grown on a field scale, there are a number of special crops suited to particular localities which in the aggregate represent an important contribution to Canada's agricultural wealth. These comprise tobacco, maple syrup and sugar, sugar beets for beet sugar, flax for fibre, etc. Tobacco, now grown principally in Quebec and Ontario, is annually increasing in importance. A production of 11,267,000 lb. from 11,906 acres in 1900 has increased to 29,876,350 lb. from 36,310 acres in 1929. Maple syrup and maple sugar were produced to the value of about $5,250,620 in 1930, of which 69 p.c. was produced in Quebec. Sugar

beets are now grown in Ontario where there are two sugar beet factories, and in Alberta where there is one. The production of sugar beets ranged from 71,000 in 1916 to 370,000 tons in 1925, but dropped to 334,000 tons in 1929. The production of refined beetroot sugar reached a maximum of 89,280,719 lb. in 1920, and was 69,399,213 lb. in 1929. The production of flax for fibre and fibre seed reached considerable dimensions during the war; in 1920 the production of fibre reached its maximum of 7,440,000 lb. with a value for fibre, seed and by-products of $7,130,000; in 1929 the value was $329,857. Hops are grown to the extent of 1,049 acres in British Columbia, the total yield during the last seven years ranging, according to the season, from 680,901 lb. in 1922 to 1,425,875 lb. in 1927, and 967,178 lb. in 1928; the yield in 1929 was 1,444,600 lb. The total estimated production of honey in Canada in 1929 was 30,978,735 lb. as compared with 25,574,798 in 1928; the values for the two years were $3,402,837 and $3,015,243 respectively. The production of clover and grass seed was 19,178,395 lb., with an estimated value of $2,123,016, in 1929.

Canada's Milling Industry.—The most important manufacturing industry connected with the field crops is flour milling, which 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 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. The number of mills in 1929 was 1,325, including over 1,000 country mills; the capital invested was $68,000,000, the cost of raw materials $151,000,000, while the value of products was $181,000,000. The exports of wheat flour in the fiscal year 1868-69 were 375,219 barrels valued at $1,948,696, while in the fiscal year ended March 31, 1929, 11,405,728 barrels of flour, valued at $65,117,779, were exported from Canada to other countries, and for the fiscal year ended 1930 the exports were 7,893,960 barrels valued at $45,457,195. Disregarding the 1930 figure, which reflects the abnormal conditions prevailing, the quantity of flour exported increased over 30 times in the sixty years between 1869 and 1929 while the value increased nearly 35 times.

Flour produced from the crop of 1928 made a new record for the flour-milling industry in Canada for during the crop year ended July 31, 1929, wheat ground in commercial flour mills totalled 94,795,316 bushels and flour produced amounted to 20,893,252 barrels. Previous high figures were for the crop year 1923-24 when 92,995,000 bushels of wheat were ground, producing 20,845,000 barrels of flour. The figures for the crop year ended July 31, 1930, were 70,630,963 bushels of wheat and 15,757,850 barrels of flour.

The total daily capacity of flour mills in 1930 was nearly 150,000 barrels. Canada has to-day the largest flour mill in the British Empire, with a daily capacity of 24,500 barrels.

The Live-Stock Industry

Although somewhat overshadowed by the grain-growing industry the raising of live stock has made very substantial progress not only in point of numbers but by the improvement of breeding stock. Fortunately, virulent animal diseases, which affect so disastrously the farm live stock of Europe, have never obtained a footing in Canada. Numerically, since the first census after Confederation (1871) horses have increased from 836,743 to 3,376,487 in the year 1929; cattle from 2,484,655 to 8,930,988; and swine from 1,366,083 to 4,381,725. The number of sheep has fluctuated considerably; in 1871 it was 3,155,509 but for many years afterwards it declined. Since 1926 the number has increased from 3,142,476 to 3,262,706 in 1927, 3,415,788 in 1928 and 3,728,309 in 1929. The wool clip has correspondingly increased from 17,959,896 lb. to 20,283,000 lb. but owing to a falling off, in 1929, of the average price of wool the value of the clip did not rise in proportion, being $4,131,000 in 1926 and $4,057,000 in 1929. The provisional estimate of the 1930 clip is 21,016,000 lb., valued at $2,522,000, wool prices having fallen 30 to 40 p.c. and being now the lowest on record.

Numbers of Farm Live Stock in Canada, 1930

Description	Number	Description	Number
Horses—			
Stallions	20,073	Goats milking	5,062
Mares	1,556,260	Goats not milking	7,966
Geldings	1,406,666	Total	13,028
Colts and fillies	312,029		
Total	3,295,028	Swine—	
		Brood sows	506,865
Mules	5,704	Other pigs	3,493,069
		Total	3,999,934
Cattle—			
Bulls	285,907	Poultry—	
Milch cows	3,683,453	Hens	56,247,141
Calves	1,935,091	Turkeys	2,399,497
Other cattle	3,032,682	Geese	1,159,867
Total	8,937,133	Ducks	988,664
		Total	60,795,169
Sheep	2,014,786		
Lambs	1,681,263		
Total	3,696,049	Rabbits	56,419

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 a large scale slaughtering and meat-packing industry, 1929 returns showing only 74 establishments engaged in slaughtering and meat packing as compared with 193 in 1871, but the industry showed a capital investment of $67,777,803 as compared with $419,325 in 1871. The number of employees had increased

from 841 to 10,762 and salaries and wages from $145,376 to $13,998,716 over the same period. The cost of materials used in 1929 was $151,814,517, and the value of the products $185,842,902.

Exports of Live Stock and Their Products.—Total exports of cattle in the fiscal year 1930 numbered 239,372 head valued at $13,119,462, of which 236,332 head valued at $12,916,519 went to the United States. Exports of swine in the fiscal year 1930 numbered 3,787 valued at $66,165, of which

The Meat-Packing Industry.—Dressing hogs in a Toronto meat-packing plant.
Photo, courtesy Can. Govt. Motion Picture Bureau

shipments to the value of $46,741 went to the United States. In the same year shipments of bacon and hams to other countries amounted to 267,026 cwt. valued at $6,579,726, of which exports to the United Kingdom were valued at $5,555,743.

Total exports of animals and animal products amounted in 1929-30 to $133,009,145, of which $66,894,165 went to the United States and $40,673,780 to the United Kingdom.

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, as the market expanded, especially for Canadian cheese the quality of which is world famous, for exchange in trade. This export market grew until

for the fiscal year ended March 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 in the case of butter, exports of which have dropped from about 99,000 cwt., valued at $3,352,000 in the fiscal year 1927 to 19,000 cwt. valued at $764,800, in the fiscal year 1929, and 13,000 cwt. valued at $544,000 for the fiscal year 1930. The cheese exports for the fiscal year 1929 were 1,126,000 cwt. valued at $25,000,000; and for 1930, 923,000 cwt. valued at $18,000,000.

Ontario is the leading Province in dairying. The illustration shows a fine herd of Holsteins at Woodstock, Ontario.

Photo, courtesy Dept. of the Interior

On the other hand, an analysis of production figures indicates that while the industry has shown a decrease in the total number of creameries and cheese factories of from 3,161 in 1920 to 2,807 in 1929, the butter produced increased from 111,692,000 lb. valued at $63,625,000 in 1920 to 169,495,000 lb. valued at $63,008,000 in 1925 and has tended to remain fairly steady since, being: 177,209,000 lb. valued at $61,753,000 in 1926; 176,979,000 lb. valued at $65,710,000 in 1927; 168,027,000 lb. valued at $64,702,538 in 1928; and 174,724,000 lb. valued at $67,291,000 in 1929.

Factory cheese production increased in quantity from 149,202,000 lb. valued at $39,101,000 in 1920 to 162,117,000 lb. valued at $28,710,000 in 1921, fluctuated widely between 1921 and 1925 in which year the quantity produced was 177,139,000 lb. valued at $36,572,000, and has since shown a

decrease, in quantity produced, to 171,732,000 lb. valued at $28,808,000 in 1926; 138,057,000 lb. valued at $25,522,000 in 1927; 144,585,000 lb. valued at $30,494,000 in 1928 and 118,646,000 lb. valued at $21,388,000 in 1929.

Fundamental changes appear to 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 table below that the total value of all products of the industry shows a very satisfactory trend over the four years 1925-28.

Value of the Dairy Production of Canada, by Provinces, 1929, with Dominion Totals for 1925-28

Province	Dairy Butter	Creamery Butter	Home-made Cheese	Factory Cheese	Miscellaneous Factory Products	Milk consumed fresh or otherwise used	All Products
	$	$	$	$	$	$	$
Prince Ed. Island	350,000	745,069	100	243,452	53,670	1,553,000	2,955,291
Nova Scotia	2,501,000	1,777,183	100	3,794	1,069,484	6,112,000	11,463,561
New Brunswick	1,888,000	747,024	100	109,218	332,293	5,957,000	8,733,635
Quebec	6,745,000	20,366,452	23,000	6,239,139	2,567,023	50,757,000	86,697,614
Ontario	6,363,000	23,682,187	13,000	14,529,309	14,238,774	56,931,000	115,757,240
Manitoba	1,968,000	5,724,640	18,000	10[illegible]351	640,075	5,947,000	14,404,066
Saskatchewan	5,280,000	5,541,464	2,000	39,091	864,208	11,407,000	23,124,763
Alberta	3,080,000	5,825,248	25,000	198,047	674,130	9,126,000	18,928,425
British Columbia	754,000	1,520,515	1,500	11,929	1,662,288	5,748,000	9,678,232
Canada, 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	30,494,463	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

As regards value, the industry is increasing its contribution to total national production and the above production figures, in conjunction with those for exports, indicate that the home market is demanding a larger proportion of the products.

The Fruit-Growing Industry

The Canadian climate and soil are eminently adapted for fruit-growing and the Annapolis valley, the Niagara peninsula, and the Okanagan district, of B.C., are world-famous. 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, but progress has been very rapid during the last ten years. The first apple trees were planted about 1850; but not until after completion of the Canadian Pacific Railway in 1886 were there many trees planted for commercial purposes. In 1891 the area under all kinds of fruit in British Columbia was 6,500 acres; by 1921 this area had expanded to 43,569 acres.

In 1929 the total value of Canadian commercial fruits was $19,591,240, including apples, $10,461,075; pears, $654,501; plums and prunes, $584,261;

An Orchard in Bloom, Penticton, B.C.

peaches, $1,684,746; cherries, $856,912; strawberries, $1,796,528; raspberries, $886,620; other berries, $533,864; apricots, $115,693; and grapes, $2,017,040.

Manufactures Dependent on Fruit Growing.—The most important industry associated with fruit growing is that of fruit and vegetable canning, preserving, etc. Factories are located at convenient points throughout the districts where fruit and vegetable crops are a specialty. Another closely related industry is the manufacture of vinegar, cider, pickles and sauces. In 1929 these two industries operated 332 establishments, representing a capital investment of $38,973,000 and with a production valued at over $40,000,000, which was an increase of nearly $5,000,000 over the production of 1928.

The wine industry has grown very rapidly in the last decade, the estimated value of native wines produced increasing from $706,000 in 1921 to $5,541,000 in 1929, and this expansion has stimulated a large increase in the acreage and production of grapes so that in 1929 grapes were second in importance among Canadian fruit crops.

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 $228,616,000 for the fiscal year ended March, 1930, constitutes a substantial factor in Canada's international balance of trade.

Of the total forested area of 1,151,454 square miles, about 17·3 p.c. carries mature, merchantable timber, 9·7 p.c. carries immature but nevertheless merchantable forest products, and 48·2 p.c. consists of accessible young growth which will eventually be merchantable. The remaining 24·8 p.c. is inaccessible or unprofitable under present conditions.

The total volume of standing timber has been estimated at 224,304 million cubic feet capable of being converted into 424,637 million board feet of lumber and 1,121,993,000 cords of pulpwood, ties, poles and similar forest products. The eastern provinces are estimated to contain about 41 p.c., the Prairie Provinces 25 p.c., and British Columbia 34 p.c. of this total volume. The total annual drain on the forests including loss by fire, etc., is now estimated at 4,778 million cubic feet, but it does not follow that our capital will be exhausted in the forty-seven 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 twenty millions at our present annual rate of use, which amounts to about 303 cubic feet per capita.

Steps are now being taken toward placing our forests on a sustained yield basis, and it is now profitable as a commercial investment to plant trees in Canada under certain conditions which are steadily becoming more favourable, though the full benefit of intensive management will take some time to appear.

Represented in the three great forest divisions of Canada are approximately 160 different species of plants reaching tree size. Only thirty-one 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.

Canada has been aptly termed "the Empire's storehouse of softwood supplies" and successive British Empire Forest Conferences have stressed the importance from the Empire standpoint of the conservation of this

resource. The principal danger has always been the enormous wastage through forest fires and insect pests, and the efforts of all Canadian forest authorities have been directed to the solution of these problems.

Largely owing to the educational work which has been done along these lines, public interest has been drawn to the danger that threatens from these sources, though much still remains to be done if Canada's supply of softwoods is to be assured in sufficient quantity to meet future industrial needs.

To present an adequate survey of this great national asset it is necessary first to give a general review of operations in the woods, following this by surveys of sawmill operations and of pulp and paper manufacturing respectively, the two great primary industries founded directly upon the forest. Again, on lumber and paper are founded the long and varied array of our wood and paper-using industries. A short statement is given concerning these.

Operations in the Woods

The value of forest production resulting from operations in the woods of Canada is, according to latest figures, $213 millions annually, being made up of logs and bolts for sawmills valued at $76 millions; pulpwood for domestic use and export valued at $75 millions; firewood valued at $41 millions; hewn railway ties valued at $6 millions; poles and round mining timber valued together at nearly $6 millions; 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 2,988 million cubic feet of standing timber annually. In connection with operations in the woods therefore, the forests not only provide the raw material for the sawmills, pulp-mills, wood distillation, charcoal, excelsior and other plants, but they also provide 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 tanbark, 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 1924 to 1928 inclusive.

Value of the Products of Woods Operations, by Products, 1924-28

Product	1924	1925	1926	1927	1928
	$	$	$	$	$
Logs and bolts sawn	83,141,692	71,854,926	70,982,675	69,215,284	71,824,195
Pulpwood used	44,241,582	48,012,602	54,033,273	54,582,190	59,578,417
Firewood	39,336,771	39,515,657	40,032,804	40,582,774	41,164,270
Pulpwood exported	13,536,058	14,168,935	14,067,030	15,702,705	15,269,660
Hewn railway ties[1]	14,251,450	14,491,557	6,792,087	6,242,865	5,871,724
Logs exported	4,855,298	4,778,108	4,809,257	5,054,783	4,607,286
Square timber exported	3,317,225	2,643,543	2,643,543	2,865,906	3,772,137
Telegraph and telephone poles	3,621,415	3,802,036	3,828,193	3,948,723	4,934,371
Round mining timber	1,296,710	1,249,021	1,566,938	1,657,162	998,146
Fence posts	1,414,363	1,418,961	1,318,291	1,281,633	1,506,050
Wood for distillation	562,525	463,616	462,818	482,277	476,726
Fence rails	452,377	454,910	440,097	431,057	463,469
Miscellaneous exports	2,281,013	2,674,693	2,493,365	2,072,619	961,685
Miscellaneous products	838,231	3,747,996	965,957	1,511,749	1,522,663
Total Values	213,146,710	209,276,561	204,436,328	205,631,727	212,950,799

[1]The figures for 1924-25 include sawn ties, which are included under "logs and bolts sawn" in the 1926-28 estimates.

The Lumber Industry

With the increased costs of longer haulage as the more accessible forests become exhausted, many improvements have been introduced in the lumbering industry of to-day. Logging railways, in some cases, now transport the logs direct from the woods to the mill; tractors are replacing horses in many cases; and in pulp and paper operations there is a tendency to cut pulpwood throughout the year so as to keep up a steady supply for the mills. In British Columbia the scarcity of drivable streams and the greater size of the logs have resulted in methods differing radically from those of the East. One of the most characteristic of these developments has been the use of cable systems whereby the logs are hauled and assembled by donkey engines.

A Stand of Western Cedar in British Columbia.
Photo, courtesy Dept. of the Interior

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 1928 4,337,253 M feet board measure of sawn lumber, valued at $103,590,035. 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 produce 2,865,994 thousand shingles, valued at $10,321,341; 1,138,417 thousand lath, valued at $4,802,616; as well as numerous other products to the value of $20,710,762; bringing the total value of the products of the industry up to $139,424,754, over four times that of Confederation days.

The following table gives the production of lumber and other sawmill products by provinces. British Columbia produced nearly 45 p.c. of the total; Ontario, 22·5 p.c.; Quebec, 19·5 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, 1928

Province	Lumber Production		Other Sawmill Products	Total all Products
	Quantity	Value	Value	Value
	M ft. b.m.	$	$	$
Prince Edward Island	4,794	114,985	16,925	131,910
Nova Scotia	114,912	2,347,267	1,094,181	3,441,448
New Brunswick	283,738	7,336,329	2,373,304	9,709,633
Quebec	580,856	15,590,508	11,582,789	27,173,297
Ontario	856,903	26,074,528	5,347,702	31,422,230
Manitoba	78,015	1,898,605	146,541	2,045,146
Saskatchewan	17,817	411,246	6,543	417,789
Alberta	109,691	2,376,209	170,892	2,547,101
British Columbia	2,290,527	47,440,358	15,095,842	62,536,200
Totals	4,337,253	103,590,035	35,834,719	139,424,754

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, which increased considerably during 1929, shipments having been made during the year from British Columbia ports to points as far west as Toronto.

The Pulp and Paper Industry

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

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 by a drop in 1921 which was general throughout the industrial field. Since that year there has been a steady recovery resulting in a total for 1928 of $233,077,236 and a further new record of $243,970,761 for 1929.

The following table gives the gross and net values of production for the industry as a whole for the five years, 1925 to 1929.

	Gross Production	Net Production
1925	$193,092,937	$116,577,947
1926	215,370,274	130,004,809
1927	219,329,753	134,516,673
1928	233,077,236	144,586,815
1929	243,970,761	147,096,012

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 salary 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. In these comparisons, only the manufacturing stages of the pulp and paper industry are referred to, no allowance being made for the capital invested, the men employed, the wages paid nor the products of the operations in the woods, which form such an important part of the industry as a whole.

There are three classes of mills in the industry. These in 1929 numbered 34 mills making pulp only, 46 combined pulp and paper mills, and 28 mills making paper only. The present tendencies are toward the building of the larger combined mills of the type known as "self-contained newsprint mills", and toward the merging of individual companies into a comparatively small number of large groups.

Production of Wood Pulp in the two Principal Provinces, and in Canada, 1924-29

Year	Quebec		Ontario		Canada	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	$	tons	$	tons	$
1924	1,170,314	44,090,213	927,533	31,622,586	2,465,011	90,323,972
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

In 1929 the 80 mills making pulp produced 4,021,229 tons valued at $129,033,154, representing an increase of 11·5 p.c. in quantity and 6·5 p.c. in value over 1928, and of this, over 74 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 22 p.c. was made for export. The manufacture of pulp is increas-

ing in Canada both in quantity and value, particularly pulp made in combined mills for their own use. There is also an increase in pulp made for sale in Canada, while there is a decided decrease in pulp made for export without further manufacture in Canada.

Of the total pulp production in Canada in 1929, 60 p.c. was groundwood, 22·7 p.c. unbleached sulphite, 8 p.c. bleached sulphite, 6·2 p.c. sulphate or kraft and the remainder, screenings and other wood fibre.

The total production of paper in 1929 was 3,197,149 tons, which with certain unspecified products was valued at $193,193,022. Newsprint and similar paper made up 2,725,331 tons, or 85 p.c. of the total, valued at $150,800,157; paper boards made up 7·8 p.c., wrapping paper 2·8 p.c., book

Pulpwood in Kenogami Lake, Quebec.

and writing paper 2·3 p.c., and miscellaneous papers the remainder. The production of paper has more than tripled in the last eleven years in Canada, 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 are being produced in increased quantities in Canadian mills.

Canada's newsprint production in 1929 was almost 95 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. With several of the larger companies adopting a definite policy of shutting down their old mills in the United States and building new mills in Canada, to equal or exceed their previous production, it seems reasonable to assume that, while there may be fluctuations, the Canadian production will increase for some years to come with little or no increase in the United States.

The preliminary figures of newsprint production for 1930, are as follows:—

	tons		tons
January	206,305	July	216,978
February	189,154	August	202,043
March	207,485	September	195,490
April	228,048	October	213,817
May	237,681	November	201,703
June	213,634		

Trade.—A striking reflection of the increased production of newsprint between 1910 and 1929 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 fiscal year 1929-30 Canada exported 2,485,179 tons of newsprint valued at $145,401,482. This single item of export thus ranks at present second only to wheat. Canadian newsprint is exported to 26 different 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 21 p.c. in 1928-29 and nearly 26 p.c. for the fiscal year 1929-30), owing chiefly to the increased exportation of wheat, its character has changed. Of the exports of products of forest origin, fully or chiefly manufactured goods now form 69 p.c. and unmanufactured or partly manufactured, 31 p.c. Raw materials form less than 9 p.c. of the total. The forest industries in Canada have ceased to exist merely as "hewers of wood" for the wood-using and paper-using industries of Great Britain and the United States; each year sees a larger proportion of our forest products retained in Canada and subjected to some further form of manufacture by the industries which have developed in this country.

Industries Founded on Wood and Paper.—According to the latest available statistics there were in 1928 4,213 establishments, consisting of 2,205 depending on sawmills, and 2,008 depending on the paper-mills for their materials. They employ 79,529 workers who were paid over $97 millions, and their products are valued at more than $310 millions. 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

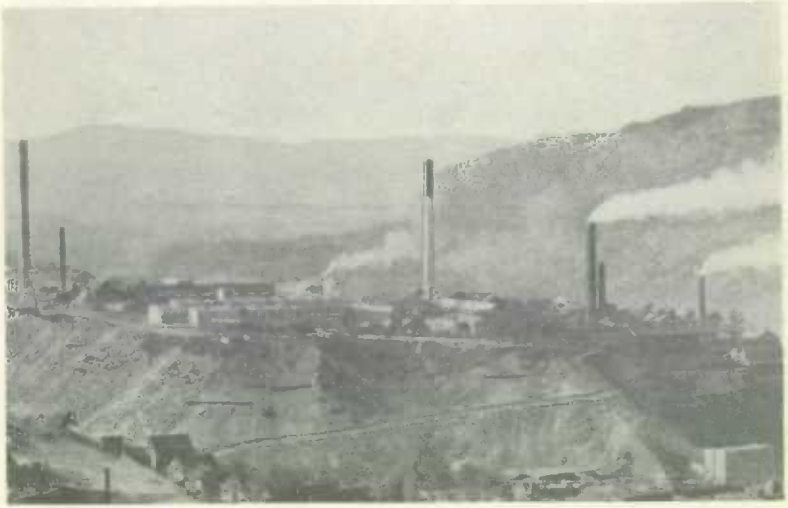
Canada's mineral industry, third in importance among the primary industries of the Dominion, being surpassed in output value only by the great basic industries of agriculture and forestry, brings to the nation a prestige beyond the monetary measure of the mineral output. First in nickel, first in asbestos, second in cobalt, third in gold, third in silver, fourth in lead and copper, and sixth in zinc among the world's producers, Canada enjoys an enviable position in the mining world with every prospect of continued expansion. Thirty-five p.c. of the freight tonnages moved in Canada are to and from the mines.

Historical.—It is almost two hundred years since the mining and metallurgical industries of Canada were founded. Operations were at first confined to coal and iron ore, and the manufacture of cast and wrought iron. The coal seams of Cape Breton have the distinction of being the first to be worked in North America. Metallurgy began on the St. Maurice river when in 1730 a furnace for smelting the local bog iron ores was established; these forges continued to operate until 1880. Another historic discovery (1740) was that of a deposit of argentiferous galena (Anse à la Mine) on lake Timiskaming, one of the oldest known metalliferous deposits in North America—less than ten miles from the fabulously rich silver veins of Cobalt, unknown for another century and a half.

Though isolated discoveries like these continued, 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, including: iron mining in various parts of Ontario and Quebec; the mining of copper ore in the Eastern Townships of Quebec; the washing of alluvial gold on the St. Francis and other tributaries of the St. Lawrence; and the institution of lode-gold mining in Nova Scotia. Meanwhile the Fraser River and Cariboo gold rushes of the 'fifties had founded the colony of British Columbia.

While the work of the Geological Survey thus marked the first important epoch in the history of Canada's mineral industry, the completion in 1885 of the Canadian Pacific Railway opened a second chapter of even greater significance. Vast new territories were rendered accessible in which the prospector showed the way to other enterprise. 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. Similar 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 discoveries in the Rouyn section of



The Metallurgical Plant of the Consolidated Mining and Smelting Company, Trail, B.C.—This company and its subsidiaries are the largest base metal smelters and refiners in the British Empire.

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 Patricia district in 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.

An important event in the mining industry in recent years has been the merger of the two leading nickel producers, The Mond Nickel Co. and The International Nickel Co. of Canada, in one strong unit, under the latter name, controlling the world's principal nickel-copper deposits. Development of the Frood ore deposit jointly owned by the two former companies, is being carried forward rapidly and a further extension of industrial enterprise is taking place at Sudbury as a result of the expansion in mining and smelting.

It will be seen from the charts on p. 68 that the increase in value of the total mineral production since 1921 has been almost entirely due to the influence of the metallic group. The production of the six chief metals is shown by quantity (in order to discount the influence of fluctuations in price) in the lower charts.

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 1929 Canada's mineral production was computed to be worth $310,850,246, or an average per capita of $31.73, the highest point recorded in Canadian history.

In order of total values, the leading mineral products of Canada are: coal, copper, gold, nickel, cement, lead, clay products, asbestos, silver, stone, zinc, natural gas, sand and gravel, lime, petroleum, gypsum, cobalt and salt. This list of eighteen products includes all that reach an output value of one million dollars or over; together they make up about 98 p.c. of the total recorded value of mineral production. In addition to these main products, about thirty other minerals were recovered in commercial quantities during the year. Canada's known mineral resources in fact comprise almost every variety of mineral, many of the deposits being sufficiently extensive or rich to be of world importance. Canada produces 90 p.c. of the world's nickel; 65 p.c. of the world's asbestos; about 50 p.c. of the world's cobalt; 9·5 p.c. of the world's gold; 8·2 p.c. of the world's lead; 8·9 p.c. of the world's silver; 5·3 p.c. of the world's zinc and 5·3 p.c. of the world's copper.

While the metallics are the chief sources of mineral wealth and have shown very rapid growth in recent years, showing a production in 1929 of precious and base metals to the value of $154,454,056, compared with $132,012,454 in 1928, and $113,561,030 in 1927, the non-metallics and the clay products groups have also shown steady increases in production.

The value of production of non-metallics increased from $88,986,246 in 1927 to $93,239,852 in 1928 and to $97,861,356 in 1929. The sub-group fuels (mainly coal) showed a production valued at $76,787,397 in 1929 or more than 78 p.c. of the total value for the group. The most striking progress among the fuels has, however, been made by petroleum. In 1927 the production of crude petroleum was 476,591 barrels valued at $1,516,043; in 1928 it was 624,184 barrels; valued at $2,035,300; and in 1929 it had risen to 1,117,368 barrels valued at $3,731,764. The increase is almost entirely due to the greater production from Western Canada. Before 1927 notable success had been achieved in this district and in the three years under review this was followed up by greater drilling activity, especially in the Turner Valley and other areas in the outer foot-hills, with encouraging results. The complex geology of the region, however, and the depth to which it is necessary to drill make extensive preparatory drill testing necessary and progress is retarded. United States and British as well as Canadian capital has been attracted to the district in recent years.

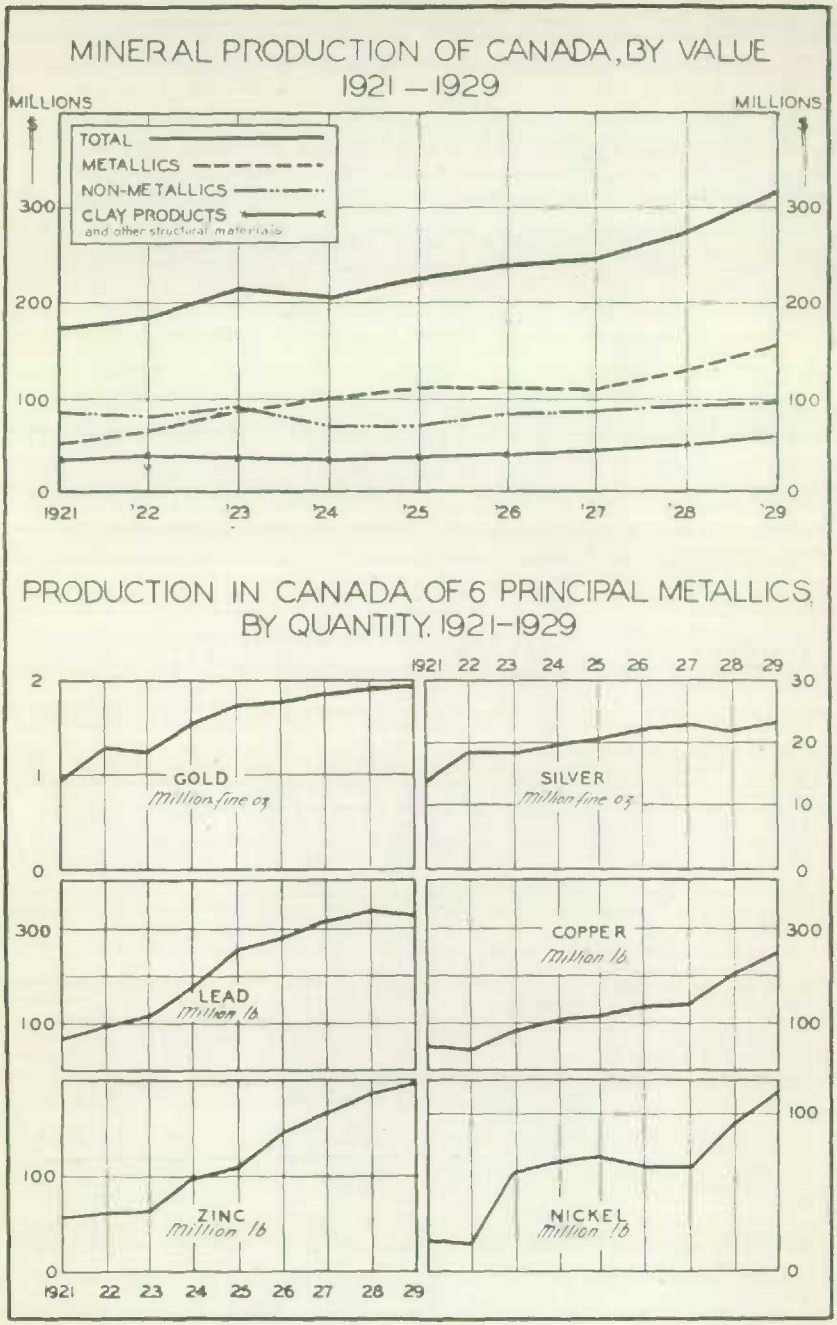
Clay products and other structural materials such as cement, stone, sand and gravel, and lime, show an increase of from $44,809,419 in 1927 to $49,737,181 in 1928, and to $58,534,834 in 1929. This increase is in line with the increase in construction for that period dealt with in Chapter XII.

The following table gives the figures of total mineral production for the years 1928 and 1929:—

Mineral Production 1928 and 1929

Item	1928		1929	
	Quantity	Value	Quantity	Value
		$		$
METALLICS				
Gold fine oz.	1,890,592	39,082,005	1,928,308	39,861,663
Silver fine oz.	21,936,407	12,761,725	23,143,261	12,264,308
Nickel lb.	96,755,578	22,318,907	110,275,912	27,115,461
Copper lb.	202,696,046	28,598,249	248,120,760	43,415,251
Lead lb.	337,946,688	15,553,231	326,522,566	16,544,248
Zinc lb.	184,647,374	10,143,050	197,267,087	10,626,778
Cobalt and platinum metals	-	3,009,062	-	3,457,960
Other metals	-	546,225	-	1,168,387
Totals	-	132,012,454	-	154,454,056
NON-METALLICS				
Fuels				
Coal ton	17,564,293	63,757,833	17,496,557	63,065,170
Natural gas M cu. ft.	22,582,586	8,614,182	28,378,462	9,977,124
Petroleum, crude brl.	624,184	2,035,300	1,117,368	3,731,764
Peat ton	1,497	5,845	2,607	13,339
Totals	-	74,413,160	-	76,787,397
Other Non-Metallics				
Asbestos ton	273,033	11,238,360	306,055	13,172,581
Feldspar ton	31,897	284,942	37,527	340,471
Gypsum ton	1,246,368	3,743,648	1,211,689	3,345,696
Mica ton	3,660	87,168	4,053	118,549
Quartz ton	282,522	523,933	265,949	561,527
Salt ton	299,445	1,495,971	330,264	1,578,086
Talc and soapstone	-	219,358	-	229,198
Other non-metallics	-	1,233,312	-	1,727,851
Totals	-	18,826,692	-	21,073,959
CLAY PRODUCTS AND OTHER STRUCTURAL MATERIALS				
Clay products (brick, tile, sewer pipe, pottery, etc.)	-	12,381,718	-	13,904,643
Cement brl.	11,023,928	16,739,163	12,284,081	19,337,235
Lime ton	508,889	4,534,568	674,087	5,908,610
Stone, sand and gravel	-	16,081,732	-	19,381,346
Totals	-	49,737,181	-	58,534,834
Grand Totals	-	274,989,487	-	310,850,246

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 1929 establish new records for asbestos, cement, clay products, copper, gold, lime, natural gas, nickel, petroleum, salt, stone and zinc—a rather remarkable thing in view of the downward trend of values.


MINERAL PRODUCTION OF CANADA, BY VALUE
1921 — 1929
MILLIONS
$
MILLIONS
$
TOTAL
METALLICS
NON-METALLICS
CLAY PRODUCTS
and other structural materials
300
200
100
0
1921
'22
'23
'24
'25
'26
'27
'28
'29
PRODUCTION IN CANADA OF 6 PRINCIPAL METALLICS, BY QUANTITY, 1921–1929
1921 22 23 24 25 26 27 28 29
GOLD
Million fine oz
SILVER
Million fine oz
LEAD
Million lb
COPPER
Million lb
ZINC
Million lb
NICKEL
Million lb

The mineral production of Canada for 1928 and 1929 is given by provinces in the following table. It will be noticed that in 1929 Ontario produced nearly 38 p.c. of the total; British Columbia was second with nearly 22 p.c. although the proportion shows a reduction over the two years covered by the figures; Quebec ranked third with about 15 p.c.

Mineral Production of Canada, by Provinces, 1928 and 1929

Province	1928		1929	
	$	p.c. of total	$	p.c. of total
Nova Scotia[1]	30,524,392	11·10	30,904,453	9·94
New Brunswick	2,198,919	0·80	2,439,072	0·79
Quebec	37,037,420	13·47	46,358,285	14·93
Ontario	99,584,718	36·22	117,662,505	37·85
Manitoba	4,186,853	1·52	5,423,825	1·75
Saskatchewan	1,719,461	0·63	2,253,506	0·72
Alberta	32,531,416	11·83	34,739,986	11·17
British Columbia	64,496,351	23·45	68,162,878	21·92
Yukon	2,709,957	0·98	2,905,736	0·93
Totals	274,989,487	100·00	310,850,246	100·00

[1]Includes a small production from Prince Edward Island.

Subsidiary Industries.—On the products of the mine as a basis, has been reared a most important superstructure of subsidiary industries. Coal and iron are well-known as the pillars of industrialism; to these may now be added petroleum. Altogether the industries producing (1) iron and its products, (2) the products of the non-ferrous metals, (3) the products of the non-metallic minerals, and (4) chemicals, produced in 1929 commodities to the value of approximately $1,400,000,000, the capital invested being nearly $1,535,000,000 and the number of employees about 214,000. Included in these manufactures are several of the best known in Canada, such as agricultural implements, machinery, automobiles, electrical apparatus, miscellaneous chemicals and many others.

Trade.—The exports of Canadian minerals and manufactures based on the mine or quarry are considerably under the imports. Considering the three groups, iron and its products, non-ferrous metals and non-metallic minerals, imports of $591,000,000 compared with exports of $261,000,000 for the fiscal year ended March, 1930.

Review of 1930

Prospecting and New Developments.—In 1930 prospecting was curtailed to some extent owing to the world-wide financial depression, but several large mining companies maintained forces in the field and the development of promising properties discovered in previous years was continued. In the Maritime Provinces the Coxheath copper property was further explored and shipments were made from the Stirling lead-zinc mine. In Quebec the Noranda mine and smelter operated steadily throughout the year, though copper prices were drastically reduced. The Amulet mine shipped copper

concentrates to Noranda and zinc concentrates to Belgium until October when low prices brought on a curtailment of operations; the Waite-Montgomery continued to ship to Noranda until the latter part of the year. The Noranda Mines, Ltd., in conjunction with the British Metals Corporation and the Nichols Copper Co., is building a copper refinery at Montreal East. This plant is expected to be in operation early in 1931 and will handle blister copper from the Noranda smelter. In Ontario the copper refinery of the Ontario Refining Co., in which the International Nickel Co. owns a substantial interest, began production in July, and the Falconbridge Nickel Mines, Ltd., shipped copper-nickel matte to Norway; the Errington mine

A Colliery in the Maritime Provinces.

Photo, courtesy Can. Govt. Motion Picture Bureau

shipped copper, lead, and zinc concentrates; the gold mines increased their output appreciably in 1930. In Manitoba the development at the Flin Flon is progressing smoothly to production; mill construction at the Sherritt-Gordon continues. The Turner Valley area in Alberta showed an increase in the production of oil. In British Columbia at the great Trail plant an extensive chemical industry, which will use some of the smelter by-products, is being established; for example, sulphur fumes are being used for the manufacture of sulphuric acid, which in turn is used to convert phosphate rock into superphosphate of lime for use as a fertilizer. The Yukon Territory continued to produce alluvial gold, and concentrates from the silver-lead ores of the Mayo district were sent to American smelters as in previous years.

Production.—Details of the output by minerals for the six-months period Jan. 1 to June 30, 1930, with the estimated figures for the calendar year, are given in the table below.

Mineral Production, January to June, 1930, and Official Estimate for Calendar Year 1930[1]

Item	1930 January 1 to June 30		1930 Estimate for 12 months	
	Quantity	Value	Quantity	Value
		$		$
METALLICS				
Gold.....fine oz.	976,235	20,180,568	2,089,766	43,199,000
Silver.....fine oz.	13,223,559	5,457,098	26,171,651	10,057,000
Nickel.....lb.	55,113,525	12,995,271	103,782,000	24,429,000
Copper.....lb.	157,530,826	22,361,384	301,017,167	38,687,000
Lead.....lb.	172,204,062	7,229,984	329,033,531	12,922,000
Zinc.....lb.	123,371,385	4,826,289	259,700,849	9,393,000
Cobalt and platinum metals.....	-	1,783,948	-	4,347,000
Other metals.....	-	197,064		
Totals.....	-	75,031,606	-	143,124,000
NON-METALLICS				
Fuels				
Coal.....ton	7,159,761	25,854,127	14,925,000	53,000,000
Natural gas.....M cu. ft.	15,928,745	5,665,391	29,566,000	10,561,000
Petroleum, crude.....brl.	639,884	2,171,382	1,500,000	5,120,000
Peat.....ton	1,543	7,856	3,000	15,000
Totals.....	-	33,698,756	-	68,696,000
Other Non-Metallics				
Asbestos.....ton	123,693	4,570,733	244,000	8,600,000
Feldspar.....ton	7,858	80,566	26,000	266,000
Gypsum.....ton	440,065	1,284,474	1,060,000	2,875,000
Mica.....ton	400	52,721	1,200	110,000
Quartz.....ton	56,757	126,595	200,000	400,000
Salt.....ton	146,484	849,453	283,000	1,575,000
Talc and soapstone.....	-	104,242	-	202,000
Other non-metallics.....	-	561,263	-	1,354,000
Totals.....	-	7,630,047	-	15,382,000
CLAY PRODUCTS AND OTHER STRUCTURAL MATERIALS				
Clay products (brick, tile, sewer pipe, pottery, etc.).....	No half-yearly reports owing to seasonal nature of operations		-	11,000,000
Cement.....brl.			10,857,000	17,685,000
Lime.....ton			490,000	4,477,000
Stone, sand and gravel.....ton	.....	.....	-	16,500,000
Totals.....			-	49,663,000
Grand Totals.....	-	-	-	276,865,000

[1] See p. 67 for the final figures for mineral production for the years 1928 and 1929.

Production in Canada of metals, non-metals and fuels during the first six months of 1930 was valued at $116,360,409, as compared with $123,702,334 for the half year ended June 30, 1929. Lessened coal production, lower output of asbestos and the falling off in metal prices were the principal contributory factors to the decline.

The average monthly prices of metals, particularly silver, copper, lead and zinc, showed a considerable decline during the period, and have been the cause of shutting down or curtailing operations of some of the smaller properties. Nevertheless metals as a group showed the least decline in value of production the figure being only 0·6 p.c. In quantities produced nearly all metals exceeded the outputs for the first six months of 1929.

The production of non-metallics, other than fuels, showed a recession of 19·9 p.c. as compared with the same period in 1929, and the fuels declined by nearly 13 p.c. All items of the fuel group other than coal, *viz.*, natural gas, petroleum and peat showed substantial increases in both quantities and values of production.

Preliminary figures for the whole year corroborated the half-year statement; metals lost 12 p.c. in total value, but it is noteworthy that the estimated production of gold for 1930 from Canadian mines is greater than the 1929 gold production of the United States which, subject to revision, was given as $42,514,300. This means that unless the United States has increased its production for 1930, Canada now ranks as the world's second largest gold producer. Non-metals, including fuels, declined 14 p.c.; clay products and other structural materials, on which no reports were collected for the half-year because of the recognized seasonal character of operations, showed a loss of 15 p.c. over the totals for the preceding calendar year. In comparison with the total value of mineral production in 1929 of $310,850,246, the official estimate for 1929 placed the aggregate at $303,876,000, so that the estimate for 1930 can be taken as reasonably correct.

Monthly records of employment are collected by the Bureau and issued in the form of index numbers based on the monthly average for the calendar year 1926 as 100. On this basis general mining during the period ended October 1, 1930, stood at 117·4, as against 118·6 during the first ten months of 1929 and 113·1 in the same months of 1928. Coal mining showed an average employment index of 102·9 as compared with 106·4 in the first ten months of last year. Metal mining stood at 146·0 as against 136·3 during the same period in 1929. Non-metal mining was recorded at 125·8, whereas during the first ten months of the preceding year the figure was 135·9. Seasonal conditions affect each class of mining in a different manner. Coal mining shows a decline in the summer months, while metal mining and non-metal mining indexes of employment usually reflect increased activity during the same period.

Lessened demand and lower prices are having a deterrent effect on the mining industry at the present time, but nevertheless companies are showing their faith in the future of the industry in Canada by planning for larger production when conditions become more favourable.

CHAPTER VIII

THE WATER POWERS OF CANADA

Canada is richly endowed with water-power resources and ranks high among the nations of the world in total development and per capita utilization of water power and hydro-electricity.

This development is not confined to particular districts, but, with the exception of the central part of the prairie region, extends from the Atlantic to the Pacific. There is now scarcely a village or hamlet in Canada where electricity is not available and over 98 p.c. of all electricity sold is produced by water power. Also future expansion of hydro-electric power for both domestic and industrial use is assured for some time to come by substantial quantities of water power not yet developed but which are within commercial transmission range of the present industrial centres.

As shown in the following tabulation Canada's water-power resources total over 20 million horse-power at ordinary minimum flow and almost 34 million horse-power ordinarily available for six months of the year. These resources provide for an installation, under ordinary commercial conditions, of about 43,700,000 horse-power. As the total hydraulic installation at the beginning of 1930 was 5,727,162 horse-power it follows that only slightly more than 13 p.c. of Canada's recorded water-power resources have so far been developed. Construction in progress will add approximately 400,000 horse-power to the installation by the end of 1930.

Available and Developed Water Power in Canada at January 1, 1930

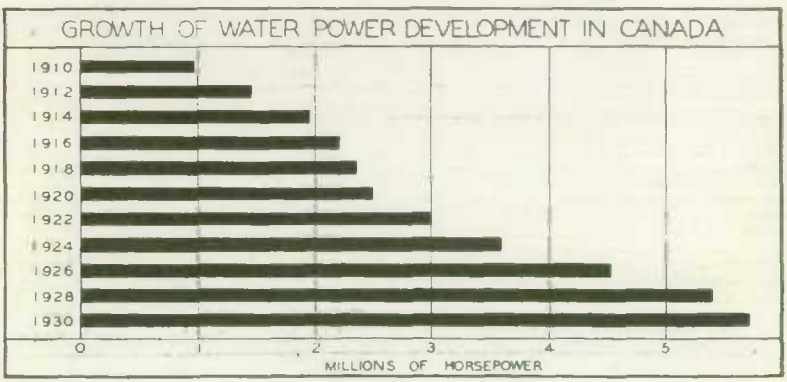
Province	Available 24-hour Power at 80 per cent Efficiency		Turbine Installation H.P.
	At Ordinary Minimum Flow H.P.	At Ordinary Six Months Flow H.P.	
1	2	3	4
British Columbia	1,931,000	5,103,500	559,792
Alberta	390,000	1,049,500	70,532
Saskatchewan	542,000	1,082,000	35
Manitoba	3,309,000	5,344,500	311,925
Ontario	5,330,000	6,940,000	1,952,055
Quebec	8,459,000	13,064,000	2,595,430
New Brunswick	68,600	169,100	112,631
Nova Scotia	20,800	128,300	109,124
Prince Edward Island	3,000	5,300	2,439
Yukon and Northwest Territories	294,000	731,000	13,199
Canada	20,347,400	33,617,200	5,727,162

There are many factors which have promoted the development of Canada into a great manufacturing country, the courage and enterprise of her people undoubtedly being the greatest, but cheap hydro-electric power has played a very important part in not only the purely manufacturing phase of this growth but also in the development of other resources in which Canada is so richly endowed. It has also made possible the establishment of many industries which are dependent on large quantities of low-priced power for successful operation. To foster and retain this beneficial effect of cheap hydro-electric power on Canadian industries, the province of Quebec has prohibited the export out of Canada of any further supplies of hydro-electric power developed within the province and Ontario does not allow any exports of Ontario hydro-electric power by any plant in excess of half of that plant's capacity, or at rates lower than those offered Canadian customers.

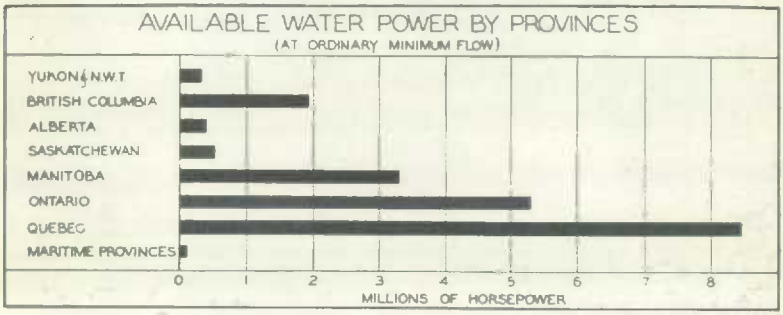
The rapid expansion of the pulp and paper industry has been due almost entirely to the abundance of cheap water power close to a supply of the finest of pulpwood. A supply of cheap hydro-electric power practically at tidewater has made possible the establishment of the aluminium industry which imports by water its raw material, and cheap water power has also been a main factor in the establishment and development of many electro-chemical and electro-metallurgical industries throughout Canada. The mining industry, which has had a rapid growth during the past decade also owes much of its growth to water power, and manufacturing industries have largely adopted electricity as motive power, over 70 p.c. of manufacturing machinery being electrically driven which is practically all developed from water power.

The pulp and paper industry, alone maintains a hydraulic installation totalling approximately 579,000 h.p. and purchases for power purposes, from the hydro-electric central stations, electricity estimated at about 859,000 h.p., making a total of about 1,438,000 h.p. of hydraulic power used in the industry.

In addition to hydraulic power being used as motive power by this industry, large quantities of hydro-electric power are at present used in electric steam boilers. This is mostly seasonal and off peak surplus power, but in a few cases is power developed in advance of the demand for regular industrial uses.



Electro-chemical and electro-metallurgical processes require such large amounts of power per unit of product that such industries are only practicable where abundant and low-cost power is available. That Canada has such power and has also extensive and widespread deposits of very many of the raw materials susceptible to such processes has resulted in the building up of a very extensive production of abrasives, graphite, nitric acid, fertilizers, calcium carbide and similar electro-thermal or electrolytic products, while the recovery or refining of many metals, notably, zinc, copper, gold, and many of the rarer metals by similar processes is now of first magnitude.



Capital Invested in Water Power.—The capital reported by hydro-central-electric stations, including all transmission and distribution lines, and estimated for water power development in other industries for 1929 aggregated around $1,200,000,000, which was greater than the capital in any single industry in Canada excepting agriculture and railways.

Coal Equivalent of Developed Water Power.—It is not accurate to state that so much coal was saved by the use of water power because, in a great many cases, the power would not have been used if the water power had not been available, but the coal equivalent of the water power utilized in 1929, using a unit value of 1·67 pounds of coal per kilowatt hour, which was the average consumption in the United States in 1929, was 17,300,000 tons. This is almost equal to the total coal mined in Canada and equal to 49 p.c. of the total coal consumed in Canada in 1929.

Expansion in 1930.—A review of the progress of water-power development indicates that the greatest activity on record prevails throughout the Dominion. Installations aggregating more than 1,680,000 h.p. are under active development from coast to coast. Many of these installations are designed for additional equipment, which when installed will add a further 2,000,000 h.p. to the total.

In British Columbia subsidiaries of the British Columbia Power Corporation are carrying on extensive developments on the Stave and Bridge rivers on the mainland and on the Jordan river on Vancouver island. At Ruskin on the Stave river the first unit, 47,000 h.p., of an ultimate 188,000 h.p. will be in operation before the end of 1930, while on the Bridge river it is planned

to have the initial 80,000 h.p. of an ultimate installation of 600,000 h.p. in operation in 1932. At the Jordan River station a fourth unit of 180,000 h.p. is being added during the present year. The Powell River Co. is developing 44,000 h.p. on the Lois river to supplement the power already in use in its pulp and paper mill, while the Northern British Columbia Power Co. is installing the initial 6,000 h.p. of a 32,000 h.p. plant on the Falls river.

The first hydro-electric undertaking in the province of Saskatchewan was placed in operation in June 1930, when power was delivered in Flin Flon

Great Falls Development, Winnipeg River, Manitoba, 168,000 horse-power. Manitoba Power Company, Limited.

Photo, courtesy Water Power and Reclamation Service, Dept. of the Interior

from the initial 42,000 h.p. of an 84,000 h.p. development by the Churchill River Power Co. at Island Falls on the Churchill river. Power from this plant is also transmitted to the Sherritt-Gordon Mines at Cold Lake.

Two large developments are under way on the Winnipeg river in Manitoba. The Northwestern Power Co. (Winnipeg Electric Co.) is developing the Seven Sisters site, which will ultimately comprise an installation of six units of 37,500 h.p. each. The initial installation of three units under partial head is expected to commence operation in 1931. At Slave Falls the city of Winnipeg is constructing a plant designed for eight 12,000 h.p. units, two of which are expected to be in operation about September 1931.

The outstanding development in the province of Ontario is the commencement of construction at the Canyon on the Abitibi river by the Hudson's Bay Power Co., where it is planned to install 275,000 h.p. The Hydro-Electric Power Commission of Ontario is completing its Alexander Landing plant of 54,000 h.p. on the Nipigon river, is adding a tenth unit of 58,000 h.p.

to its Queenston station, and, in co-operation with the Ottawa Valley Power Co., is carrying on the development at Chats Falls on the Ottawa river, where 224,000 h.p. is being installed, all except a small amount reserved for local use to be distributed by the Commission.

In Quebec province the Beauharnois Light, Heat and Power Co. is constructing a power and ship canal fifteen miles in length providing 27 foot navigation connecting lakes St. Francis and St. Louis, expansions of the St. Lawrence river. At the lake St. Louis end a 500,000 h.p. station is being constructed. The first units supplying 200,000 h.p. are to be in operation by October 1932. The Shawinigan Water and Power Co. has commenced construction of the first of six new developments on the Upper St. Maurice river. This plant, located at Rapide Blanc, will have an initial installation of 160,000 h.p. The company, as the result of additional storage provided on the Mattawin river, is also adding units of 25,000 h.p. and 30,000 h.p. respectively to its Grand Mère and La Gabelle plants on the St. Maurice river. The Alcoa Power Co. is installing the first stage, four units of 65,000 h.p. each for operation early in 1931, in its plant at Chute à Caron on the Saguenay river. This development is expected to ultimately reach 1,000,000 h.p. The James MacLaren Co. has completed a 90,000 h.p. plant at High Falls on the Lièvre river. This plant is designed for an installation of 120,000 h.p. and a second plant of the same size is projected at a lower site on the same stream. In addition to the development at Chats Falls already mentioned other smaller developments are under way in the province.

In the Maritime Provinces the town of Edmundston, N.B., is enlarging its hydro-electric development on the Green river by raising the dam and adding a new unit of 1,050 h.p., while the Avon River Power Co. is completing a 4,500 h.p. plant on the Black river, N.S., to be tied into its Avon River system.

Central Electric Stations.—Although there are many small electric light and power plants in Canada which use fuel and serve small villages, over 98 p.c. of all electricity sold in Canada is developed by water power. As stated above, there is hardly a village in Canada that is not now served with electricity and the growth of the industry has been both rapid and steady. In 1920 the total number of light and power customers was under 900,000, but by 1928 it had increased to 1,464,000, or by 64 p.c., and the quantity of electricity generated had increased from 5,894,867,000 kilowatt hours in 1920 to 16,337,804,000 in 1928 and to an estimate of 18,074,000,000 for 1929. Thus the output grew in nine years to over three times its size in 1920. Over three-quarters of all homes, both urban and rural, in British Columbia are using electricity, in Quebec and Ontario the ratio is over two-thirds, and in Canada as a whole, over 57 p.c. are using electricity.

The rates charged for both light and power are very low, rates for domestic light averaging as low as 0·8 of a cent in one large city, and average rates of 1·5 to 2·5 cents per kilowatt hour are common. For power loads of 100 horse-power, rates range from 1·04 cents to 3·0 cents for 200 hours use, or approximately 15,000 kilowatt hours per month. These averages change with different loads and consumptions, but the above gives some idea of the low cost of electricity in Canada and industries such as pulp and paper mills

using large quantities of power are supplied with power at rates considerably lower than the small customer. A monthly record of power production is obtained by the Dominion Bureau of Statistics from all companies generating over 1,000,000 kilowatt hours of energy per year. The table below shows the average monthly production of electrical energy from water and from fuel for the calendar years 1925 to 1930.

Average Monthly Output of Central Electric Stations in Canada, 1925-30

(Thousands of kilowatt hours)

Year	From Water	From Fuel	Total
1925	826,532	16,006	842,538
1926	991,041	16,746	1,007,787
1927	1,193,481	18,944	1,212,425
1928	1,340,292	21,192	1,361,376
1929†	1,472,700	30,000	1,502,700
1930*	1,445,743	24,874	1,470,617

*Eleven months' average.
†Partly estimated.

CHAPTER IX

THE FISHERIES OF CANADA

The Canadian Fishing Grounds.—Canada's extensive fishing grounds border the Atlantic and the Pacific and also include an unrivalled inland fresh-water system of lakes and rivers. On the Atlantic, from Grand Manan to Labrador, the coast line, not including lesser bays and indentations, measures over 5,000 miles. The bay of Fundy, 8,000 square miles in extent, the gulf of St. Lawrence, fully ten times that size, and other ocean waters

The estuarian salmon fisheries of British Columbia produce two-fifths of the fisheries wealth of the Dominion. The illustration shows part of a salmon catch, Skeena river.

Photo, courtesy Can. Govt. Motion Picture Bureau

comprise not less than 200,000 square miles, or over four-fifths of the fishing area of the North Atlantic. In addition, there are 15,000 square miles of Atlantic inshore waters controlled entirely by the Dominion. Large as are these areas they represent only a part of the fishing grounds of Canada. The Pacific coast of the Dominion measures 7,180 miles in length and is exceptionally well sheltered, while throughout the interior is a series of lakes which together contain more than half of the fresh water on the planet, Canada's share of the Great Lakes alone amounting to over 34,000 square miles—a total which does not include lake Winnipeg (9,457 square miles), lake Manitoba, and others of even greater area.

Still more important than the extent of the Canadian fishing grounds is the quality of their product, food fishes improving in proportion to the purity and coldness of the waters in which they are taken. By this standard, the Canadian cod, halibut, herring, mackerel, whitefish and salmon are the peers of any in the world. It is possible, therefore, to state that by far the most valuable fisheries of the western hemisphere, if not of the globe, pertain to Canada.

The Modern Industry.—The present fishing industry of Canada is the growth of the past 60 years. In 1836 the production of fish in what are now the Maritime Provinces had an estimated value of $1,500,000, while that of Lower Canada was about $1,000,000. In 1870 it was $6½ millions and this more than doubled by 1878. In the '90's it passed $20 millions and in 1912, $34 millions. The highest record was reached in 1918 with $60 millions. In 1928 the value was $55 millions and, in 1929, $53½ millions. From records of the catch so far available it is estimated that the value of the fisheries in 1930 will equal if not exceed the previous year. The above figures represent the total value of fish marketed, whether in a fresh, dried, canned or otherwise prepared state.

The following tables show the growth of the industry by Provinces for the years 1900, 1914 and 1929, and the production by principal kinds for the years 1928 and 1929.

Growth of the Fisheries by Provinces, 1900, 1914 and 1929

Province	Value of Production			Per cent from each Province		
	1900	1914	1929	1900	1914	1929
	$	$	$	p.c.	p.c.	p.c.
Prince Edward Island	1,059,193	1,261,666	1,297,125	4·9	4·1	2·4
Nova Scotia	7,809,152	7,730,191	11,427,491	36·2	24·7	21·4
New Brunswick	3,769,742	4,940,083	5,935,635	17·5	15·8	11·1
Quebec	1,989,279	1,924,430	2,933,339	9·2	6·2	5·5
Ontario	1,333,294	2,755,291	3,919,144	6·2	8·8	7·3
Manitoba	455,749	849,422	2,745,205	2·1	2·7	5·1
Saskatchewan	262,410	132,017	572,871		0·4	1·1
Alberta		86,720	732,214	1·2	0·3	1·4
British Columbia	4,878,820	11,515,086	23,930,692	22·7	36·8	44·7
Yukon	not known	69,725	24,805	–	0·2	–
Totals	21,557,639	31,264,631	53,518,521	100·0	100·0	100·0

Fisheries Production by Principal Kinds, 1928 and 1929

(Each over $1,000,000 in value and arranged by value in 1929)

Kind		1928		1929	
		Quantity Caught	Value Marketed	Quantity Caught	Value Marketed
			$		$
Salmon	cwt.	2,284,170	17,829,267	1,549,325	14,976,110
Lobsters	"	322,437	5,183,988	372,820	5,696,542
Cod	"	2,150,078	6,285,777	1,979,440	5,394,636
Halibut	"	329,923	3,812,321	335,824	4,832,296
Herring	"	2,336,061	2,869,784	2,263,244	2,861,965
Pilchards	"	1,610,252	2,563,137	1,726,851	2,199,834
Whitefish	"	180,695	2,192,567	196,386	2,453,703
Haddock	"	481,708	1,733,781	545,409	1,951,642
Sardines	brl.	285,990	1,291,722	249,194	1,626,764
Pickerel or doré	cwt.	142,610	1,616,442	128,500	1,453,847
Trout	"	90,075	1,319,150	90,656	1,320,858
Smelts	"	83,103	1,172,748	75,330	1,122,897

The fisheries are also of importance from the standpoint of capital and labour. In the primary operations of catching the fish the total capital represented by vessels, boats, nets, traps, piers, wharves, etc., is about $25 millions, of which $21 millions are invested in the sea fisheries and over $4 millions in the inland fisheries. Employees in these primary operations number 58,000. In the secondary operations of fish-canning and -curing, the establishments number about 700, the capital invested is about $26 millions and the employees number 15,500.

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 capture is an average export. In the fiscal year ended March 31, 1930, total exports amounted to $35,697,027, of which $14,928,048 went to the United States and $4,107,761 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 in 1929-30 amounted to $3,695,431, of which 33 p.c. came from the United States; 46 p.c. of the imports were canned fish, chiefly sardines.

The above immense expansion reflects 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 entire catch. The lobster fishery of the East 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 1870 there were but three lobster canneries

on the Atlantic coast of Canada; to-day these canneries number over 400, giving work to 6,000 people; 30,000,000 lobsters is a normal catch. The salmon canneries of the Pacific which are all large ones, numbered 61 in 1928 and the salmon pack amounted to 2,035,629 cases of 48 lb. each; these figures are ten times as large as they were when the first shipment of canned salmon went from British Columbia to Great Britain around the Horn.

Materials Used and Values of Products of Fish-Canning and -Curing Establishments, 1927-1929

Material and Product	1927	1928	1929
Material used—			
Fish	14,379,521	15,617,194	17,061,702
Salt	360,056	444,471	413,722
Containers	3,290,932	4,144,425	3,802,791
Other	334,337	372,677	218,644
Totals	18,364,846	20,578,767	21,496,859
Product—			
Fish marketed for consumption, fresh	7,123,490	8,275,669	9,057,253
Fish canned, cured or otherwise prepared	23,961,119	27,992,063	25,909,007
Totals	31,084,609	36,267,732	34,966,260

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, the black bass of the Quebec and Ontario highlands, and the trout of the Nipigon. 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 here during the summer months.

The Government and the Fisheries.—The Dominion Department of Fisheries (first established on a separate basis in 1928) 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 and Ontario 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 Government. 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 30 main hatcheries, 10 subsidiary hatcheries, and 5 salmon retaining ponds, while stations for the conduct of biological research into the numerous complex problems furnished by the fisheries are established 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 1930 was $2,433,738, and the revenue, $197,565.

The New Brunswick Sardine Industry.—Fishermen laying a weir at St. Andrews. The total sardine catch in 1929 had a marketed value of $1,626,764. Canned sardines to the value of $623,824 were exported to 15 countries in the fiscal year 1930 as compared with $469,841 in the previous year.

Photo, courtesy Can. Govt. Motion Picture Bureau

Conditions in 1930.—Preliminary figures of the catch of sea fish for the ten months ended October 31, 1930, show the total catch as 9,150,838 cwt. with an estimated value to the fishermen of $22,143,426 compared with 8,927,242 cwt. valued at $23,262,696 for the corresponding period of 1929.

The increase in the total quantity of the catch is the result of the success of the salmon fisheries of British Columbia, and the fact that there is no corresponding increase in total value is due to the large proportion of some of the cheaper varieties, *viz.*, pinks and chums, contained in the increase in the catch of salmon for that province. The total catch of salmon in British Columbia in the first ten months of 1930 amounted to 2,304,959 cwt., valued at $7,491,752, compared with 1,320,721 cwt., valued at $6,736,384 in the corresponding period of 1929. The pack of British Columbia salmon rose from 1,322,170 cases in the ten months ended October 31, 1929, to 2,139,361 cases in the corresponding period of 1930.

During the fiscal year ended 1930 Canadian fish and fish products found markets virtually all over the world, and in spite of depressed conditions generally, total exports reached $35,697,000 as compared with $36,156,000 in 1929. Imports of these products amounted to $3,700,000, about the same as in the previous fiscal year.

Canada's fish export trade includes everything from frozen smelts and canned sardines to canned whale meat, but the biggest single item in point of value is canned salmon, the value of this commodity exported being $8,302,000.

Other than canned and preserved fish there is a big and growing export trade in fresh and frozen fish and the figures in this particular are one of the few bright spots in the fiscal year 1930 trade record, being $11,484,000 as compared with $11,258,000 in 1929. Most of these exports go to the United States and the greatest single item, lobsters, had a value of $2,318,000 as compared with $1,613,000 the previous year, thus accounting for far more than the increase in value of fresh fish exports as a whole.

CHAPTER X

THE FUR TRADE

The fur trade is the oldest Canadian inland industry, for it was the appeal of the highly prized pelts which early adventurers secured from the Indians and took back to Europe which led to the early settlement of the country. As early as 1599 Pont-Gravé and Chauvin built Tadoussac as the centre of trade with the Indians of the Saguenay and routes quickly spread inland. The desire to gain control of the lucrative trade led to the formation of companies and associations which, in return for monopolies and privileges, agreed to promote colonization; but the interests of settlement and those of the fur trade were essentially antagonistic and could never be made to work together.

The first company chartered to trade in furs was formed by a group of French merchants in 1603 and the first company trading post was established at Hochelaga in 1611. Under British rule, exploration of the Northwest proceeded and it was found that the territory abounded in wild life. In 1670 an English Company—the Hudson's Bay Co.—was formed to develop this region. The charter was obtained by Prince Rupert, who became the first Governor of the Company. The Hudson's Bay Co. soon organized a chain of posts throughout the Northwest and is said, with truth, to have held that territory until the Dominion had grown to absorb it.

Another great company to trade in furs was formed by a number of Montreal merchants in 1783. This company proved very aggressive and one of its officers, Alexander Mackenzie, was the first white man to cross the main body of the North American continent from east to west. This he accomplished in 1793, crossing the Rocky mountains *via* the Peace River pass and proceeding to the Pacific by way of the Parsnip, Fraser, Blackwater and Bella Coola rivers. There followed a period of the keenest competition between the Northwest Co. and the Hudson's Bay Co. By 1816 the rivals had absorbed or ruined eleven other competitors, but were on the verge of ruin themselves, and in 1821 joined forces under the name of the older company. The Northwest Co. brought to the territory controlled by the Hudson's Bay Co., the Pacific and Arctic watersheds, and the amalgamated company was given legal recognition of its monopoly of 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 Canada, after nearly three and a half centuries of exploitation, 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 to which all the provinces and territories contribute.

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 1919-20 to 1928-29 are given below. The values given represent the market values of the pelts taken by trappers and those sold from fur farms. The proportion of the latter has risen from about 3½ p.c. of the total value for earlier years of the decade to 11 p.c. in 1927-28 and 13 p.c. in 1928-29.

Season	Number of Pelts Taken	Total Value of Fur Production
		$
1919-20	3,600,004	21,387,005[1]
1920-21	2,936,407	10,151,594
1921-22	4,366,790	17,438,867
1922-23	4,963,996	16,761,567
1923-24	4,207,593	15,643,817
1924-25	3,820,326	15,441,564
1925-26	3,686,148	15,072,244
1926-27	4,289,233	18,864,126
1927-28	3,601,153	18,758,177
1928-29	5,150,328	18,745,473

[1] Fur prices in this first post-war year were abnormally high. Any comparison of this figure with those of later years should take this fact into account.

Among the provinces and territories, Ontario now ranks first with nearly 24 p.c. of the total valuation, followed in order by Quebec, 14 p.c., Alberta, well over 13 p.c., Saskatchewan, 12 p.c., and the Northwest Territories, with nearly 9 p.c.

A study of the above figures, while useful in indicating the trend of the industry as a whole, does not indicate the relative importance of different species of fur-bearing animals—how they contribute to the total and in what proportion.

In order of values, for the latest season given, muskrat led with a total of 2,785,994 pelts valued at $3,924,949; silver fox was second, showing 26,259 pelts valued at $2,738,373; and mink was third with 79,548 pelts valued at $1,663,114. Muskrat has, in fact, been Canada's chief fur producer during the last decade, having held first place in eight out of the ten years, and supplanting in this respect beaver, which was supreme in the early days of the trade and which has usually held second place since. In the seasons 1920-21 and 1924-25, beaver temporarily regained its former supremacy, but for the year 1928-29 dropped to fourth place.

The latest two years have witnessed the rise of silver fox to second place due, in large measure, to the increasing importance of fur farming, from which source come most of the silver fox pelts at present marketed. In 1919-20 the total number of silver fox pelts was under 4,000, while in 1928-29 it was 26,259 and the average price per pelt ($104 for 1928-29) has held up remarkably well in the face of this increased production. Badger is another fur

which, although at present only tenth on the list, is becoming important. In 1919-20 the average value of the pelt of this animal was $1.44, while for 1928-29 it was $21.30.

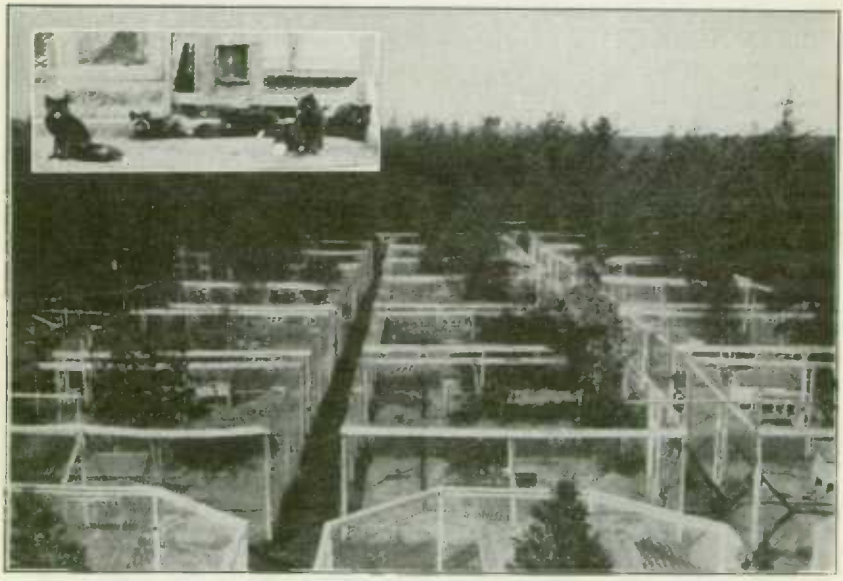
Canadian manufacturers of fur goods, including the dressing and dyeing of raw furs, have shown a rapid growth in recent years, the gross production having increased from about 5 million dollars in 1920 to $22,876,000 in 1927 and $23,277,000 in 1928, the latest year for which statistics of manufactures are available. In the latter year there were 237 establishments employed in the industry and wages and salaries paid out amounted to $4,692,505. The cost of raw materials, largely raw furs, amounted to $14,127,000 and thus the net value of $9,150,000 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 fiscal year 1924 imports of raw furs were $6,734,815; by 1928 they had risen to $13,289,863 and in 1929 reached $14,206,619. The imports for the fiscal year ended March 1930 ($8,662,790) reflected the conditions of the 1929-30 season 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 1914-1918 St. Louis captured the supremacy for the United States, although since the war London has regained much of her former prestige. A result of the changed situation this 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. Annual auctions are now conducted there, and regular sales are also held at Winnipeg and Edmonton.

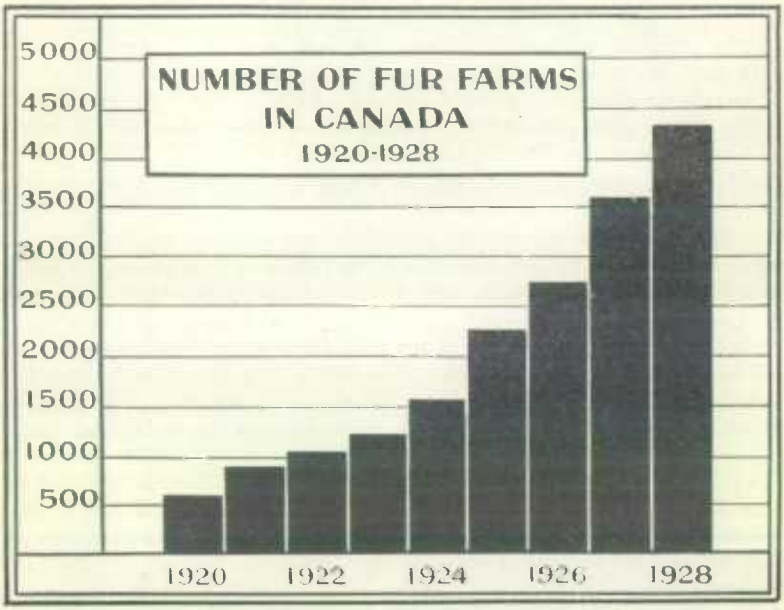
A century ago the value of furs exported exceeded that of any other Canadian product; the total output is not declining, but exports for the year 1930 were only about 1·7 p.c. of our total exports of Canadian merchandise. The preceding graph illustrates the trend of export valuations over the past ten years; it will be seen that it has been definitely upward in face of the fact that the trend of prices generally has been downward. Of the total export valuation of furs in 1930, nearly 55 p.c. went to the United States and 41 p.c. to the United Kingdom.

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 experiments 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, racoon, skunk, marten, fisher and coyote. 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 1928 was 4,326, compared with 3,565 in 1927 and 2,826 in 1926. During the five-year period 1924–28 the number increased by 179 p.c. Fox, mink and muskrat farms are the chief kinds with 2,631; 268; and 216 respectively.



Fox Farming in Canada.—A well laid out silver fox farm in Prince Edward Island.
Engraving, courtesy Dept. of the Interior

The total number of fur-bearing animals born on fur farms in 1928 was 169,477, compared with 83,161 in 1927, and the number which died from various causes was 17,350, compared with 14,480 the previous year. The numbers killed for pelts were 32,987 in 1928 and 29,800 in 1927, and the numbers and values of pelts sold were 30,262 pelts valued at $2,163,014 in 1927 and 30,836 valued at $2,389,026 in 1928. The value of live fur-bearing animals sold from farms at present exceeds that of pelts. The total number of all kinds of animals sold from farms in 1928 was 26,379 valued at



$3,837,420 and for 1927, 17,387 valued at $2,652,150. Silver fox in 1928 contributed 93 p.c. of this total and the highest price received during the year for a silver fox was $1,000.

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 wild spaces.

CHAPTER XI

THE MANUFACTURES OF CANADA

In primitive societies (as among the early settlers of Canada in the 17th and 18th centuries) manufacturing is normally carried on within the household for the needs of the household. At a later period, small shops spring up to meet demands of the immediate neighbourhood. Still later, with the use of power-driven machinery and the cheapening of transportation, the factory system is born, and manufacturing becomes concentrated in large establishments situated usually in large industrial centres.

This last-mentioned stage of development was no more than well founded when Canada became a Dominion. Flour milling, it is true, had reached considerable proportions, and there were substantial clothing and iron and steel manufactures. All told, however, the value of Canadian manufactured products in 1870, as recorded at the first Dominion census, reached only $221 millions, the capital invested in factories being $78 millions, and the number of employees 188,000.

The encouragement of Canadian manufactures by tariffs had been discussed during the '50's and to some extent commenced in 1858, but it was not until 1878 that a general policy of protection was adopted. Thereafter, a considerable growth took place, though at the end of the nineteenth century the value of products was only $481 millions, the capital employed $446 millions, and the number of employees 339,000.

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 value of Canadian manufactures had risen to $1,165 millions, the capital invested to $1,247 millions, and the number of employees to 515,000; but by 1920, the "peak" year, the gross value of Canadian manufactured products was no less than $3,772 millions, the capital invested $3,371 millions, and the number of employees 609,586. Hundreds of millions of capital had been attracted from outside (see page 41) in achieving this striking result. The figures declined later, but the accompanying table will reveal the situation by provinces in the last year for which comprehensive data are available (1928). Subsequent gains in 1929 have brought the figures back to even higher levels than 1920.

Census of Manufactures, 1928

Province	Number of Establishments	Capital	Number of Employees	Value of Products	
				Amount	Per cent of Total
Prince Edward Island	277	3,121,568	2,035	4,445,160	0·12
Nova Scotia	1,167	138,809,331	19,222	84,948,608	2·25
New Brunswick	794	114,660,886	17,963	67,410,742	1·79
Quebec	7,231	1,583,350,884	204,959	1,073,162,291	28·47
Ontario	9,900	2,275,921,056	320,729	1,949,724,119	51·72
Manitoba	871	159,721,124	25,166	159,435,094	4·23
Saskatchewan	737	44,622,135	6,173	59,125,280	1·57
Alberta	778	92,190,476	12,827	100,744,401	2·67
British Columbia and Yukon	1,624	367,898,589	48,949	270,851,669	7·18
Canada	23,379	4,780,296,049	658,023	3,769,847,364	100·00

According to the latest census available, Canada possessed in 1928, 23,379 manufacturing establishments, whose capital investment in lands, buildings, equipment, etc., amounted to $4,780,296,049, which employed 658,023 persons with salaries and wages amounting to $755,365,772, consumed $1,950,804,339 worth of raw materials (not including fuel) and produced goods to the value of $3,769,847,364. As above indicated, however, the preliminary figures for 1929 show gains of from 8 to 10 p.c.

This great growth in manufactures has been helped, especially since the war, 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 employ-

The Assembly Line in a Canadian Automobile Factory.—The manufacture of automobiles ranked fifth among Canadian industries in 1928; the value of production was nearly 144 million dollars.

Courtesy Can. Govt. Motion Picture Bureau

ment for Canadian labour. Among the industries particularly affected are: mining, oils, pulp and paper, breweries, aircraft, textiles, motor cars and various metal industries, rubber goods, sugar, etc. The movement has been encouraged by the desire to sell in the Canadian market free of duty and to enjoy tariff preferences throughout the British Empire.

That Canada with her vast agricultural, forest, and other resources should be the centre of large flour-milling, meat-packing, butter and cheese, fish-packing, lumber, pulp and paper and electric power industries is natural enough but the proportions to which many industries, based on imported raw materials, have grown is not so generally realized. The following tabulation, showing absolute increases in the imports for 1900, 1914 and 1930 for 25 leading raw and semi-manufactured materials, reflects very clearly the increasing scope of manufacturing processes during the present century.

Commodity		1900	1914	1930
Alumina and cryolite	lb.	45,700	31,225,900	273,176,600
Bituminous coal	ton	2,769,938	13,754,244	13,886,010
Cocoa, raw	lb.	779,050	6,887,800	18,909,700
Cotton, raw	"	54,912,849	76,993,026	126,069,888
Cotton seed oil, crude	"	5,062,300	26,578,880	40,065,300
Furs, raw	$	1,240,589	2,335,051	8,476,974
Grease, for soap and leather	lb.	5,517,405	13,995,011	16,758,800
Hides, raw	$	4,214,412	8,777,694	8,402,075
Iron ore [1]	ton	72,519	1,972,207	2,456,919
Leather, unmanufactured	$	1,095,341	3,035,609	5,919,500
Lumber, rough sawn	M ft.	99,711	466,950	161,696
Manganese, oxide of	lb.	126,725	4,749,938	198,154,800
Manila and sisal grass	"	.....	18,901,000	45,958,800
Oils, for soap	gal.	212,237	393,862	2,874,972
Petroleum, crude	"	334,704	177,925,688	1,178,201,001
Rubber, raw	lb.	3,002,576	4,450,430	73,327,150
Silk, raw	"	69,832	101,669	1,668,972
Skelp iron, for pipe	"	24,746,900	203,191,600	338,727,300
Sugar, for refining	"	267,623,607	694,336,500	901,899,200
Sulphur	"	21,128,656	59,712,420	472,996,500
Tin, in blocks	"	2,244,100	4,607,600	5,631,800
Tin plate	"	50,210,800	105,758,400	154,117,700
Tobacco, raw	"	7,928,382	17,508,449	17,113,472
Wire, rods for wire	"	83,987,000	139,612,300	103,413,200
Wool, raw	"	8,054,699	7,252,119	10,334,255

[1] In 1900 the statistics cover "Ores of metal", imports consisting largely of iron ore.

Statistics of the forty leading industries of 1928 are given on p. 94. The pulp and paper industry has now definitely taken precedence over flour and grist-mill products as regards total value of production. Between the years 1922 and 1925 the long supremacy of the older industry was threatened by the new giant of the present century, with honours going first to one and then to the other. Since 1925 there has been no doubt as to the result, pulp and paper having each year substantially increased its lead until in 1928 the gross value of the products of this industry were more than 37 million dollars in excess of that of flour and grist-mills. The main changes in the order of industries compared with 1927 relate to: automobiles, which now ranks fourth instead of sixth and which during the year increased the value of its gross production by nearly 27 p.c.; non-ferrous metal smelting, which now ranks after rubber goods and has taken precedence over electrical apparatus and

supplies; the petroleum industry, which now ranks eleventh instead of fifteenth and whose gross production has increased by 29 p.c.; castings and forgings, and also rolled products, pig iron, etc., both of which industries have improved their positions substantially; and sugar refineries which has fallen from seventeenth place to twenty-fourth with a reduction in the value of gross production of about 14 p.c.

From a standpoint of capital investment the pulp and paper industry is second, by a wide margin, to central electric stations, sawmills coming a low third.

A Modern Newsprint Machine.—This machine, 234 inches wide, is capable of producing over 130 tons of newsprint daily.

Regarding the textile industry as a group, a new record was established in 1928, the output valued at $415,402,464, representing an increase of $33,395,007, or 8·7 p.c. as compared with 1927. This is the highest figure attained since the general depression in 1921; it was exceeded only once, in 1920, when at a time of inflated values, the value of production amounted to $443,770,953. Although exact figures for the physical volume of production are not available there is no doubt that the volume in 1928 far surpassed that of 1920. This is borne out by the fact that the value of production in 1928 was only $28,368,489, or 6·4 p.c. lower than that of 1920, while the index number of wholesale prices of fibres, textiles and textile products declined from 303·2 in 1920 to 162·4 in 1928—a drop of 46·5 p.c. There is, therefore, justification for assuming that the year 1928 was in all respects a record one as regards the capital invested, number of employees, salaries and wages paid, the volume and value of production and the value added by manufacture.

Principal Statistics of Forty Leading Industries, 1928

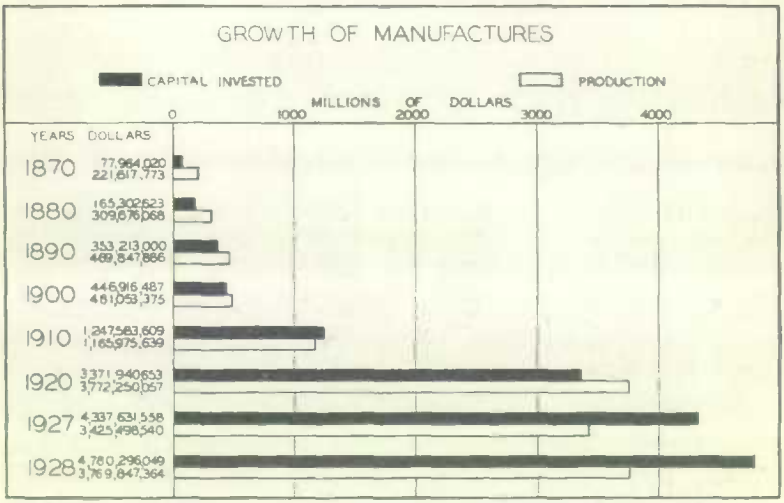
Industry	Establishments	Capital	Employees	Salaries and Wages	Cost of Materials	Gross Value of Products
	No.	$	No.	$	$	$
Pulp and paper	110	685,687,459	33,614	47,322,648	88,490,421	233,077,236
Flour and grist mills	1,319	63,514,575	6,556	7,606,674	165,032,821	195,698,124
Slaughtering and meat-packing	75	66,198,507	11,244	14,242,362	142,396,342	174,096,419
Automobiles	14	97,056,328	16,749	29,548,114	114,892,190	162,867,495
Central electric stations	1,049	956,919,603	15,855	24,087,420	31,365,636	143 692,455
Sawmills	2,967	175,729,448	44,862	34,721,520	80,451,801	136,424,754
Butter and cheese	2,804	45,129,830	11,411	11,755,547	99,202,776	130,212,308
Rubber goods, including footwear	45	70,459,066	17,095	18,943,730	45,118,570	97,208,713
Non-ferrous metal smelting	10	120,035,742	7,526	12,228,738	33,260,225	94,341,702
Electrical apparatus	137	87,952,674	18,193	22,756,209	38,784,421	93,672,452
Petroleum refining	25	56,531,614	4,319	6,922,580	57,383,841	83,122,172
Castings and forgings	327	95,326,911	20,782	26,759,016	31,530,148	81,904,852
Cotton yarn and cloth	38	90,960,011	21,615	17,688,791	44,704,779	79,219,582
Railway rolling stock	35	89,053,842	22,417	32,452,781	38,110,053	73,422,057
Bread and bakery products	2,482	44,377,449	15,422	16,901,238	36,151,747	71,227,097
Printing and publishing	753	60,822,600	16,113	24,243,906	15,696,759	67,879,806
Clothing, women's factory	444	25,557,610	16,351	16,685,894	36,233,645	63,326,594
Steel and rolled products, pig iron, etc	40	114,292,363	9,057	15,470,836	27,164,463	62,071,674
Cigars and cigarettes	79	37,243,547	6,644	6,197,918	18,469,843	61,077,732
Breweries	78	67,148,686	5,003	7,080,761	20,737,486	60,910,398
Biscuits, confectionery, chewing gum, etc	283	52,353,082	13,274	12,534,629	28,480,230	60,404,223
Hosiery, knit goods and gloves	165	60,399,926	17,974	15,056,696	31,251,936	58,551,758
Planing mills, etc	788	53,431,576	12,131	13,330,829	30,021,888	52,700,315
Sugar refineries	8	48,625,818	2,381	3,671,086	40,551,874	52,085,155
Machinery	161	69,404,536	10,855	14,938,096	18,976,526	51,046,140
Boots and shoes, leather	199	31,433,028	15,505	14,982,608	26,383,043	50,018,802
Sheet metal products	145	45,346,299	8,732	10,636,976	24,660,978	49,846,671
Clothing, men's factory	218	27,263,996	11,879	13,085,548	24,567,328	48,477,178
Acids, alkalies, salts and compressed gases	41	44,250,661	2,943	4,143,302	23,404,991	42,336,846
Furniture and upholstering	366	39,829,474	12,539	13,689,344	16,312,469	41,825,534
Agricultural implements	66	91,142,820	10,867	13,599,953	17,607,861	41,199,841
Printing and bookbinding	912	38,755,308	11,794	15,692,133	13,321,821	41,018,466
Distilleries	18	51,287,103	1,884	2,560,459	10,137,114	38,423,743
Fish-curing and -packing	713	26,941,283	15,434	5,261,096	20,578,767	36,267,732
Leather tanneries	91	31,259,692	3,952	4,486,828	26,253,779	35,202,080
Coke and gas products	45	92,145,190	3,914	5,608,779	17,104,246	34,708 447
Furnishing goods, men's	159	21,064,504	9,909	7,270,875	17,321,124	30,314,552
Brass and copper products	97	23,576,863	5,437	6,797,416	15,716,748	28,457,430
Paints and varnishes	68	24,256,008	2,881	3,967,295	14,489,934	27,868,046
Coffee, spices, etc	61	14,599,825	1,668	2,201,043	21,257,199	27,201,292
Totals, forty leading industries	17,435	3,937,364,857	496,781	577,221,674	1,603,637,823	3,016,407,780
Grand Totals, all industries	23,379	4,780,296,049	658,023	755,199,372	1,950,804,339	3,769,850,364
Percentage of forty leading industries to all industries	74·57	82·36	75·48	76·43	82·20	80·00

The leading centres of manufactures to-day are Toronto and Montreal, with totals of $565 millions and $554 millions, respectively. After these come Hamilton with $166 millions, Winnipeg with $105 millions, Vancouver with $94 millions, Oshawa with $85 millions, and Ottawa with $62 millions. There are 47 other places having manufactures of $10 millions or over.

The trend of gross production of the manufacturing industries so far as it can be estimated at the time of going to press (December, 1930) appears to be upward, for 1929, to the extent of about 10 p.c. as compared with 1928.

The principal industrial groups to show increases are: iron and its products, non-metallic minerals, wood and paper, non-ferrous metals, chemicals and allied products, and central electric stations.

Trade in Manufactures.—Canada is now not only the second largest manufacturing country in the British Empire, but her exports of manufactured goods to the other Dominions are rapidly increasing. 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 1929 these exports reached 702 million dollars in value whereas in 1900 they were below the 100 million dollar mark and fourteen years later were but 159 million dollars.

The war years stimulated all exports and in 1920 the record total of 799 million dollars was reached for manufactured goods, though this was under conditions of greatly inflated prices (wholesale prices increased from 102·3 to 243·5 or by 138 p.c. between 1914 and 1920). The influence of the war did away with foreign competition and the prevailing general prosperity gave to Canadian manufacturers opportunities for entering new lines of production—opportunities which were made the most of, as the figures show.

If comparison be made on the basis of the proportion of raw and manufactured materials exported, to total exports then the proportion of manufactured goods is found to have increased from 37 p.c. in 1914 to 64 p.c. in 1920 and the proportion of raw materials to have correspondingly decreased from 63 p.c. to 36 p.c. over the same period. Between 1920 and 1925 the proportions fluctuated within very narrow limits round 56 p.c. for manu-

factures and 44 p.c. for raw materials, but since 1925 the figures for raw materials have shown a tendency to increase somewhat, their proportions being 47·1 p.c. in 1926, 46·2 p.c. in 1927, 47·2 p.c. in 1928 and 48·5 p.c. in 1929. Manufactured goods have shown a corresponding tendency to decrease their proportion slightly in recent years to make up the 100 p.c. for all exports. In a comparison of this nature, however, it must be remembered that the total exports of Canadian produce have increased from 432 million dollars in 1914 to 1,239 million in 1920 and 1,364 million in 1929 or by nearly 216 p.c. in the 16-year interval.

A Canadian Automobile Tire Factory.—The manufacture of rubber goods, including tires, footwear, etc., is now the eighth industry in importance. In 1925 the value of the products was 62 million dollars; in 1928 it was 77 million. Canadian tires to the annual value of 16 million dollars are exported to 46 countries.

Courtesy Can. Govt. Motion Picture Bureau

The proportion of imports of manufactured goods to total imports has shown a tendency to increase slightly though steadily in recent years, being 72·5 p.c. in 1920 and 77 p.c. in 1929. Total imports over the 16 years between 1914 and 1929 have however only increased from 619 million to 1,266 million dollars or by about 104 p.c.

Conditions during 1930.—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, which is based on returns received from establishments having 15 hands and over. These industries employ close upon 550,000 workpeople, and while the indexes are lower for

each month of 1930 compared with 1929, it will be noticed from the following table that for the first six months of 1930 they were above those for corresponding months of 1928. Such manufacturing groups as the non-ferrous metals, the non-metallic minerals, electrical apparatus and vegetable foods showed a relatively high condition of employment during 1930.

Indexes of Employment in Manufactures

(1926=100)

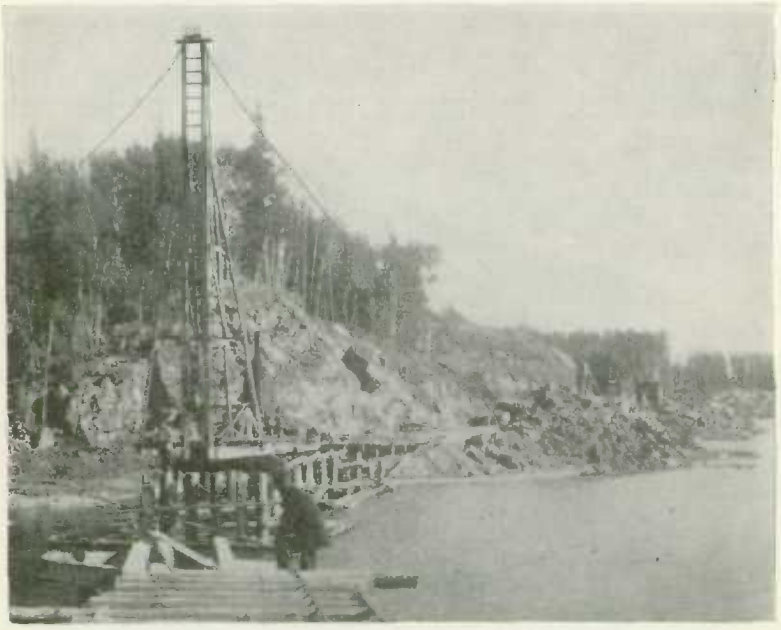
Month	1928	1929	1930	Month	1928	1929	1930
January 1	97·9	107·8	106·5	July 1	113·1	120·3	111·3
February 1	102·3	112·8	110·2	Aug. 1	115·2	121·6	110·2
March 1	104·7	115·7	110·9	September 1	115·9	119·8	108·2
April 1	106·6	116·5	111·3	October 1	115·7	120·2	107·8
May 1	109·0	119·8	112·4	November 1	115·1	117·2	104·6
June 1	112·6	121·2	113·6	Dec. 1	112·9	112·8	100·6

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 whose progress is more sensitive to the state of the money market and the cyclical fluctuations of general business conditions.

The industry as a whole was, until quite recently, regarded as highly seasonal. Winter inevitably brought on a serious contraction in operations and summer witnessed the employment of more men than could possibly be retained throughout the year. But new types of construction and mechanical improvements are now making it possible to work more steadily



Railway Construction.—A pile driver at work on the Flin Flon branch of the Hudson Bay Railway.

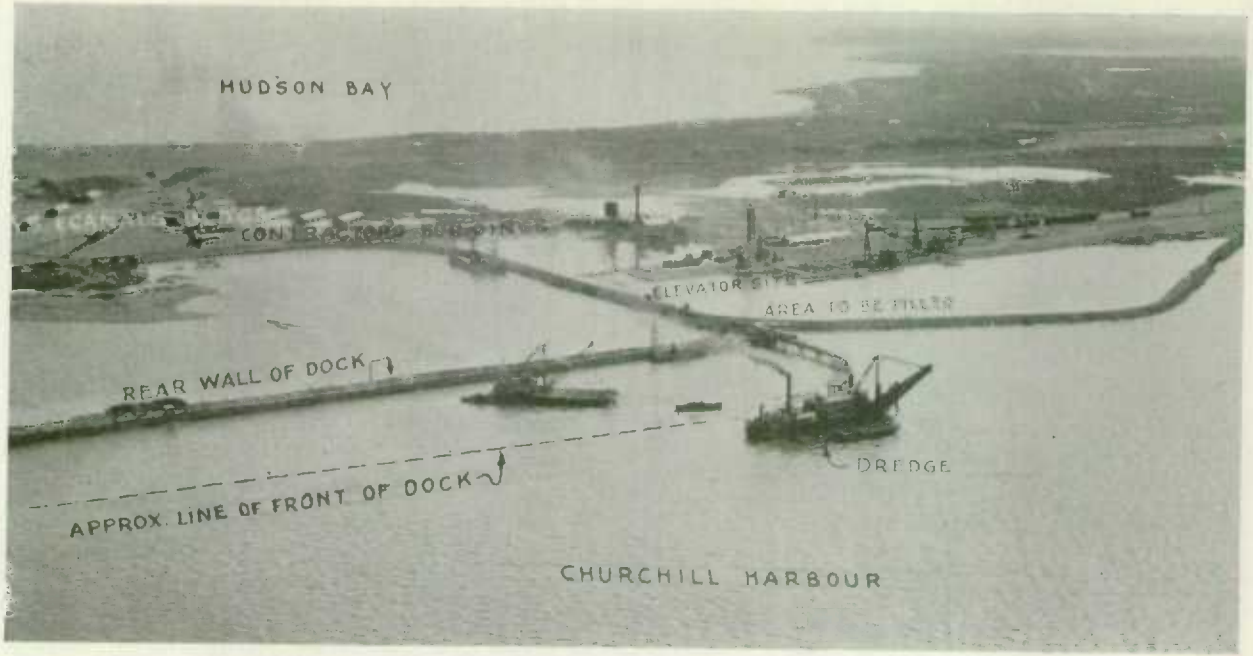
Photo, courtesy Canadian National Railways

on all branches of construction the year round. The winter of 1928-29 witnessed the completion over ice, and by engineering methods which were almost revolutionary, of the Hudson Bay Railway. In the face of frost and snow, blizzard and muskeg, this feat of engineering construction proceeded, and steel reached Churchill in March, 1929. While the construction industry is still of a pronounced seasonal character, the results of present-day methods in building construction are seen in the relatively large proportion of work now undertaken in the winter months. According to MacLean Building Reports, Ltd., the construction contracts awarded throughout Canada for building operations totalled $576,652,000 during the calendar year 1929 and for the months of April to September inclusive they were $344,130,000. This means that during the fall and winter months, October to March inclusive, contracts reached $232,522,000 or over 40 p.c. of the total for the year. In the case of the figures for building permits for 61 principal Canadian cities, published by the Dominion Bureau of Statistics, very much the same situation is found to exist; the value of permits for these cities, for April to September inclusive (1929), was $143,061,000 and for the entire year $234,945,000. In this case, therefore, the value of permits taken out in the fall and winter months was also nearly 40 p.c.

Transportation and Public Utilities.—Railway expenditures for maintenance of way and structures are steadily growing items of operating expenses and now reach about 100 million dollars per year for steam railways and 4½ million dollars per year for electric railways. Capital investments in new lines were $38,111,225, and in additions and betterments, $106,926,685 (including $59,271,535 for equipment) for steam railways in 1929, making a total of $145,037,910 as compared with $70,077,000 in 1928. For electric railways the expenditures on road and equipment during 1929 amounted to $9,416,397.

The good roads program of the Dominion and Provincial Governments, undertaken largely since the war, has been another large item of expenditure. Under the Canada Highways Act of 1919 there has been spent $20,000,000, by the Dominion Government alone, for roads, in addition to the heavy expenditures of the provinces, both under the Act (by which they contributed 60 p.c. of the total expenditure, and the Dominion 40 p.c.), and otherwise. The increased use of motor vehicles for passenger and freight movement has been the primary cause of the greatly increased expenditures in recent years. For the year 1929, expenditures for construction and maintenance of highways reached $57,875,410, and during the present year 1930 such expenditures will, no doubt, be greater, as much of the $20,000,000 voted in September, 1930, by the special session of Parliament called to deal with unemployment, will be used to assist the provinces and municipalities in construction operations of this kind.

In the case of public utilities, the annual expenditures on construction account are always considerable. The property and equipment accounts of the telephone systems of Canada increased by over 19 million dollars during 1928 and telegraph and cable companies reported expenditures for construction aggregating $3,203,000 for the same year.



Harbour Developments at Port Churchill, Manitoba.—The photograph of which the above picture is a reproduction was taken in August, 1930.

Air Force photo

Building Operations.—The foregoing transportation and public utility expenditures have a decidedly appreciable stabilizing effect on the industry as a whole, but 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 five complete years, are as follows:—1925, $297,973,000; 1926, $372,947,900; 1927, $418,951,600; 1928, $472,032,600; and 1929, $576,651,800. The table given below shows the values of such contracts for the eleven months of 1930 to November 30, by types of construction, as compared with the same months of 1929.

Construction Contracts Awarded

(MacLean Building Reports, Ltd.)

Type of Construction	11 months, 1929		11 months, 1930	
	No.	Value	No.	Value
		$		$
Apartments	338	22,012,500	299	14,706,000
Residences	23,740	102,049,100	19,016	74,005,000
Totals, Residential	*24,078*	*124,061,600*	*19,315*	*88,711,000*
Churches	293	8,395,400	239	6,509,100
Public Garages	812	12,775,500	641	6,845,200
Hospitals	112	8,629,000	92	14,616,200
Hotels and Clubs	279	18,672,600	146	12,838,700
Office Buildings	484	35,477,400	313	24,897,900
Public Buildings	387	17,468,400	364	16,397,200
Schools	504	21,682,800	454	33,458 300
Stores	1,521	23,643,100	969	9,502,600
Theatres	62	3,055,200	72	2,354,100
Warehouses	510	29,306,400	342	17,481,800
Totals, Business	*4,964*	*179,105,800*	*3,632*	*144,901,100*
Totals, Industrial	*849*	*61,419,800*	*546*	*31,100,600*
Bridges	393	11,005,300	387	9,056,900
Dams and Wharves	265	23,917,900	151	9,824,800
Sewers and Watermains	516	16,563,900	997	23,080,800
Roads and Streets	943	40,878,500	1,925	39,119 100
General Engineering	188	87,150,200	363	86,663,000
Total Engineering	*2,305*	*179,515,800*	*3,823*	*167,744,600*
Grand Totals	*31,996*	*544,103,000*	*27,316*	*432,457,300*

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 1929 the value of buildings thus authorized was $234,944,549 as compared with $219,105,715 in 1928. For the eleven months of 1930, the unrevised figure is $148,359,706. The cities included in the estimate with the corresponding values of the permits are as follows:—

Building Permits, by Cities, 1928, 1929 and 1930*

Province and City	1930*	1929	1928
	$	$	$
Prince Edward Island—Charlottetown	47,500	20,000	–
Nova Scotia	3,337,670	5,748,282	3,078,176
Halifax	2,970,783	5,209,245	2,808,357
New Glasgow	142,110	305,370	64,515
Sydney	225,777	233,667	205,304

*11 months to Nov. 30.

Building Permits, by Cities, 1928, 1929 and 1930*—concluded.

Province and City	1930*	1929	1928
	$	$	$
New Brunswick	3,029,044	2,037,934	1,262,266
Fredericton	482,000	23,500	148,015
Moncton	456,492	768,698	270,813
Saint John	2,090,552	1,245,736	843,438
Quebec	38,990,199	57,984,175	49,933,504
Montreal—Maisonneuve	30,829,236	46,065,924	36,347,901
Quebec	4,410,421	5,684,183	5,710,144
Shawinigan Falls	468,510	770,618	1,163,581
Sherbrooke	769,550	755,240	1,128,233
Three Rivers	842,910	1,488,065	1,681,450
Westmount	1,669,542	3,220,145	3,902,195
Ontario	62,760,737	95,055,827	104,777,566
Belleville	178,440	533,730	239,323
Brantford	608,967	473,387	802,528
Chatham	610,780	813,560	780,020
Fort William	1,216,100	1,759,000	2,062,000
Galt	255,824	527,315	378,581
Guelph	364,189	607,377	462,815
Hamilton	6,100,800	7,008,320	6,342,100
Kingston	1,047,086	908,900	678,203
Kitchener	1,329,510	1,645,351	1,524,625
London	2,714,675	2,408,900	2,561,705
Ningara Falls	444,348	905,510	2,056,415
Oshawa	174,995	1,478,090	3,015,070
Ottawa	6,166,705	3,403,333	5,421,085
Owen Sound	111,800	529,850	262,375
Peterborough	787,525	618,278	625,577
Port Arthur	982,865	555,945	5,292,545
Stratford	408,747	354,849	224,412
St. Catharines	586,542	1,432,392	1,249,141
St. Thomas	179,862	172,190	362,732
Sarnia	616,698	1,021,962	814,586
Sault Ste. Marie	587,698	782,059	402,419
Toronto	27,557,493	47,698,654	51,607,188
York and East York Townships	5,940,616	9,824,273	8,210,380
Welland	190,825	301,500	309,866
Windsor	2,200,880	5,571,849	4,518,723
East Windsor	419,983	561,382	758,315
Riverside	156,320	383,225	496,460
Sandwich	177,430	856,190	762,775
Walkerville	451,000	1,631,000	2,108,000
Woodstock	192,034	287,456	447,602
Manitoba	6,967,804	12,007,695	11,816,635
Brandon	194,509	404,342	428,130
St. Boniface	180,695	553,103	871,105
Winnipeg	6,592,600	11,050,250	10,547,400
Saskatchewan	9,038,291	16,950,228	13,449,826
Moose Jaw	1,058,003	1,025,474	1,074,078
Regina	2,699,323	10,022,631	6,619,206
Saskatoon	5,280,965	5,902,123	5,756,542
Alberta	9,305,054	17,953,321	10,292,579
Calgary	3,991,461	11,417,144	6,302,142
Edmonton	4,273,170	5,670,185	3,374,971
Lethbridge	970,118	559,392	498,590
Medicine Hat	70,305	306,600	116,876
British Columbia	14,883,407	27,187,087	24,465,163
Kamloops	193,435	241,247	128,761
Nanaimo	101,093	112,040	45,269
New Westminster	533,465	1,011,629	1,928,324
Prince Rupert	145,995	93,648	176,804
Vancouver	12,051,956	21,572,727	19,445,288
North Vancouver	133,140	292,515	912,780
Victoria	1,724,323	3,862,681	1,827,937
Totals—61 cities	148,359,706	234,944,549	219,105,715

*11 months to Nov. 30

These 61 cities had, in 1921, about 32·6 p.c. of the population of Canada, while in 1929, the latest complete year, their building permits had a value equal to 41 p.c. of the total contracts awarded according to MacLean Building Reports, Ltd. Official summary figures of building permits since 1920 are given below. The index numbers of wages and prices of materials show the fluctuations in building costs over the period. It will be seen that while wages have advanced by about 12·3 p.c. over the ten-year period, the cost of materials has been reduced by over 40 p.c.

Building Permits, 1920–1930

Year	Value of Building Permits Issued	Index Numbers of Value of Permits Issued (1920=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)
	$				
1920	117,019,622	100·0	152·4	180·9	–
1921	116,794,414	99·8	122·7	170·5	71·1
1922	148,215,407	126·7	108·6	162·5	76·7
1923	133,521,621	114·1	111·7	166·4	80·9
1924	126,583,148	108·2	106·7	169·1	80·3
1925	125,029,367	106·8	103·8	170·4	84·9
1926	156,386,607	133·6	100·0	172·1	100·0
1927	184,613,742	157·8	96·7	179·3	109·0
1928	219,105,715	187·2	98·1	185·6	118·8
1929	234,944,549	200·8	99·0	197·5	129·7
1930*	148,359,706	126·8	91·4	203·2	128·2

*11 months to Nov. 30.

CHAPTER XIII

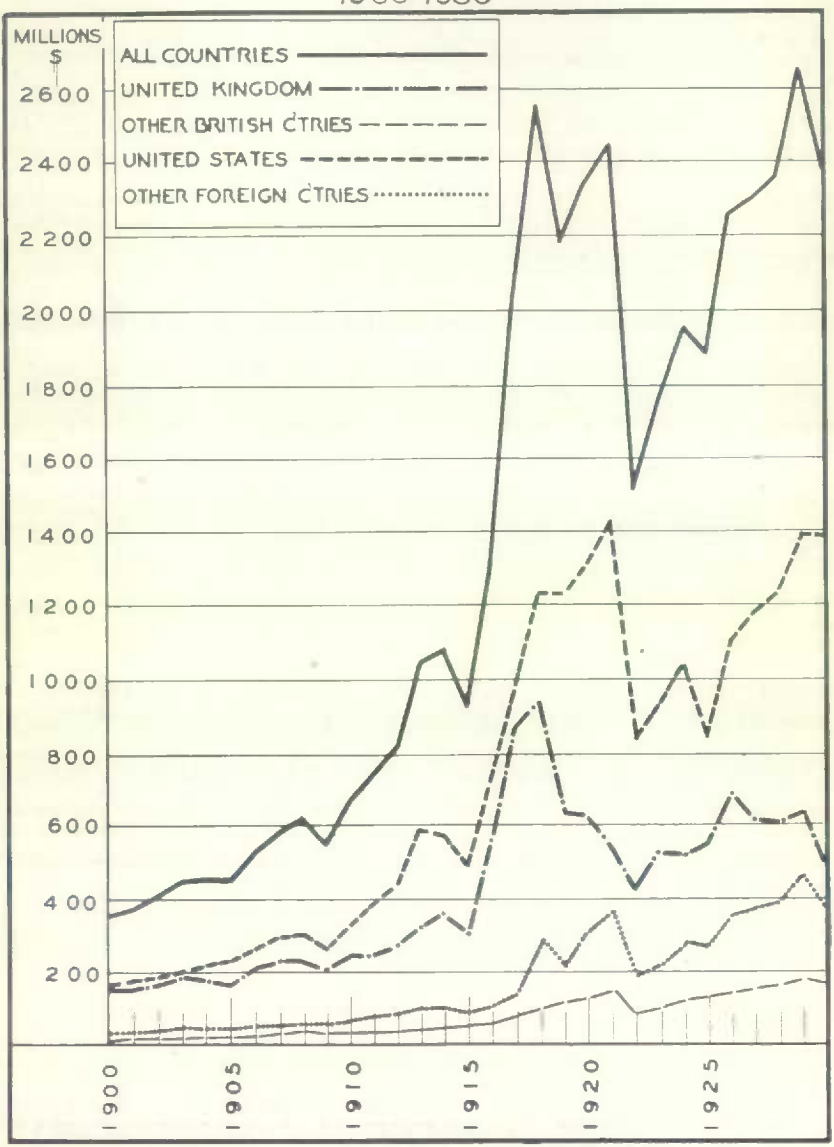
EXTERNAL TRADE OF CANADA—NON-COMMODITY EXCHANGES—TARIFF RELATIONS

The development of a country industrially is illustrated in the character of the goods it imports and exports. In the early years, Canada's imports consisted chiefly of manufactured products and the exports of raw or semi-manufactured products, but since the opening of the twentieth century the reverse is the rule, a large percentage of the imports consisting of raw and semi-manufactured products for use in Canadian manufacturing industries, while the exports are made up largely of products which have undergone some process of manufacture.

The trade of Canada reflects, as perhaps no other single medium, the gradual growth in the productive system outlined elsewhere in this handbook. From an isolated and dependent community Canada has become a nation trading with practically every country of the world, exceeding many older countries in trade. Canada to-day leads the world in exports of printing paper, nickel and asbestos; occupies second place in exports of automobiles, wheat and wheat flour and fourth place in the exports of wood pulp. These staples make up about 50 p.c. of the Dominion's total domestic exports. In addition she occupies a very high place in the exports of many other staple products such as lumber and timber, fish, copper, barley, cheese, raw furs, whiskey, meats, rubber tires, farm implements, pulpwood, cattle, raw gold, silver, lead, rye, oats, rubber footwear, leather and hides. In volume of trade, Canada also stands high among the leading nations of the world. From 1913 to 1929 she advanced from eighth position in imports, tenth in exports, and ninth in total trade to fifth position in imports, exports and total trade, exceeded only by the United States, United Kingdom, Germany and France. In 1929 she occupied third place in exports per capita and fourth place in total trade per capita, being exceeded in the former respect by New Zealand and Denmark and in the latter by New Zealand, Denmark and the Netherlands. In no other field is the progress of Canada more significantly written than in her trade annals.

The outstanding feature in Canada's trade record is the increasing foothold she has gained in foreign markets. To assist in this attack a Commercial Intelligence Service was established some years ago in the Department of Trade and Commerce. It has been strengthened until it now has commissioners or trade representatives at 36 strategic points in other countries. At headquarters in Ottawa are divisions for the answering of trade inquiries, for the collection of the latest data with regard to foreign tariffs, for the maintenance of directories of exporters and foreign importers, etc.

AGGREGATE EXTERNAL TRADE OF CANADA 1900-1930



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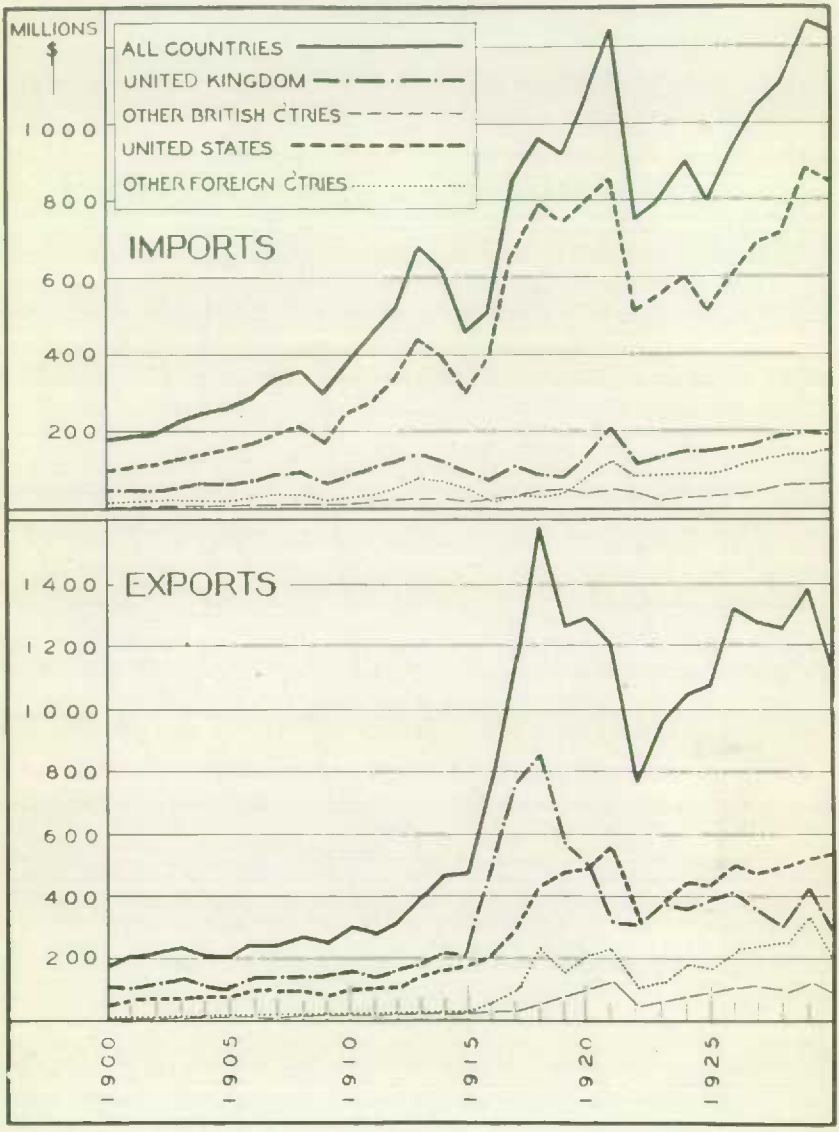
EXTERNAL TRADE
IMPORTS AND EXPORTS
1900–1930



Total Trade

Canada's total trade for the fiscal year 1930 amounted to $2,393,212,000, a reduction of almost 10 p.c. compared with 1929 but an increase of 1·4 p.c. compared with 1928 and about twenty times the total trade at Confederation. In the 33 years from Confederation to 1900 the total trade of Canada increased by 197 p.c., but from 1900 to 1930 it has increased by 572 p.c.

The Dominion's total trade with the United Kingdom in 1930 was $472,355,000, showing a decrease compared with 1929 of 24·5 p.c. and with 1928 of 21·2 p.c. Total trade with the United States in 1930 was $1,384,062,000, a decrease of 0·4 p.c. compared with 1929 but an increase of 13·8 p.c.

The Port of Montreal.

Photo, courtesy Can. Govt. Motion Picture Bureau

compared with the fiscal year 1928. 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 $25,186,403 in 1929 and $24,679,768 in 1930, which is a very small proportion (about 1 p.c.) of total trade for those years. The graphs on pp. 105-6 and the following table show the trend of total Canadian trade (*i.e.*, excluding the small percentage of foreign merchandise exported) during the present century.

Total Canadian Trade with British Empire and Foreign Countries

Fiscal Year	Canadian Trade with—				
	United Kingdom	Other British Empire	United States	Other Foreign Countries	Total Canadian Trade
	$	$	$	$	$
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	627,975,484	165,570,872	1,367,624,374	468,218,033	2,629,388,763
1930	471,017,913	161,428,269	1,362,407,864	373,677,838	2,368,531,884

In 1930 the percentage of total Canadian trade with the United Kingdom was 19·9, with other British countries 6·8, with the United States it was 57·5, and with other foreign countries 15·8, whereas in 1929 total Canadian trade with these same countries was in the following proportions: 23·9 with the United Kingdom, 6·3 with other British countries, 52 with the United States, and 17·8 with other foreign; and in 1922: 28 p.c. with the United Kingdom, 5·3 p.c. with other British, 54·3 p.c. with the United States, and 12·4 p.c. with other foreign.

As regards total Canadian trade therefore the trend in recent years has been downwards with the United Kingdom, definitely upwards with other British countries, and on the whole upwards with the United States and other foreign countries.

Imports

For the fiscal year ended March 31, 1930, imports were less by $17,405,509, or 1·4 p.c., than for the year 1929. Of the total imports of $1,248,273,582 for 1930, $847,450,311, or 68 p.c., came from the United States; $189,179,738, or 15·1 p.c., from the United Kingdom; $63,523,966, or 5·1 p.c., from other British countries; and $148,119,567, or 11·8 p.c., from other foreign countries. In 1929 the proportions were 68·7 p.c., 15·3 p.c., 5 p.c., and 11 p.c. respectively and for 1922, 69 p.c., 15·6 p.c., 4·3 p.c., and 11·1 p.c.

The percentage of imports from the United States to total imports has therefore shown a slight decline in recent years. The same thing is true of imports from the United Kingdom. The imports from other British countries and other foreign countries have both increased in proportion to total imports.

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

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	63,377,958	868,012,229	140,247,523	1,265,679,091
1930	189,179,738	63,523,966	847,450,311	148,119,567	1,248,273,582

Commodities are classified by the Bureau of Statistics into nine main groups as follows: agricultural and vegetable products, animal 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 in the four last-named groups and the wood, wood products, and paper group showed increases during 1930, the other groups showed decreases which overshadowed the increases by $17,406,000—the total decrease of 1930 imports compared with 1929.

The most important group from a standpoint of imports was iron and its products, under which classification the imports reached $316,878,627, by far the most important items being machinery, rolling mill products, automobile parts, automobiles and farm implements. Although the group as a whole showed a decrease of nearly 30 million dollars compared with 1929 the first-named of the above items increased by $8,855,000 or close to 15 p.c. The other groups in order of value of imports were: agricultural and vegetable products (chiefly alcoholic beverages, fruits, sugar, grains, rubber, vegetable oils, tea, etc.); non-metallic minerals and their products (chiefly coal and petroleum); and fibres, textiles and textile products. The imports of each of these groups were over $185,000,000.

The following table shows the positions of the thirty chief commodities in import trade for the last two fiscal years.

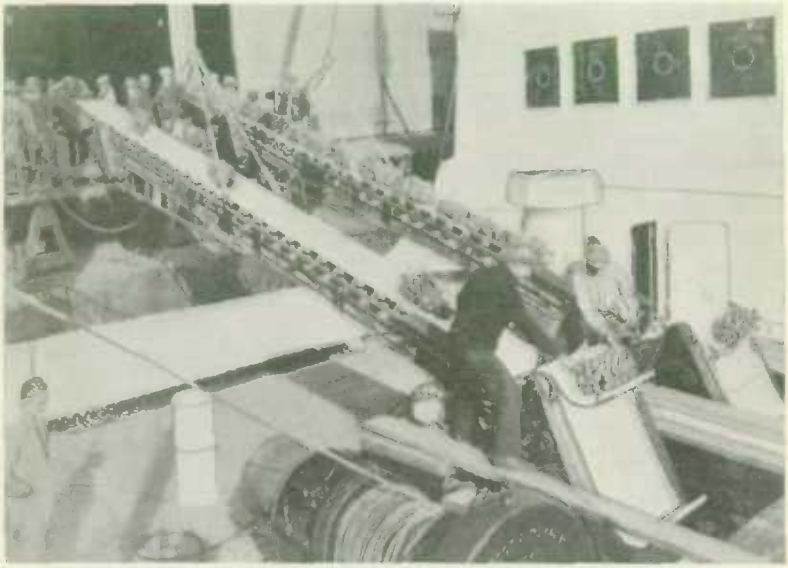
Thirty Chief Commodities Imported, 1929 and 1930

Rank		Commodity (In order of value, 1930)	Imports, fiscal year ended March, 1930		Increase (+) or Decrease (−) 1930 Compared with 1929	
1929	1930		Quantity	Value	Quantity	Value
				$		$
1	1	Machinery	–	69,117,528	–	(+) 8,854,937
3	2	Coal ton	18,497,880	56,812,418	(+) 719,694	(+) 1,151,567
7	3	Crude petroleum gal.	1,178,201,001	50,951,202	(+)257,549,561	(+)13,291,128
4	4	Spirits and wines "	3,737,756	44,484,526	(−) 88,418	(−) 3,864,054
10	5	Electric apparatus	–	37,611,263	–	(+)10,836,048
2	6	Automobile parts	–	35,746,929	–	(−)20,014,485
5	7	Automobiles No.	38,912	34,464,666	(−) 10,952	(−) 8,504,810
8	8	Plates and sheets (iron) cwt.	11,546,325	31,755,866	(+) 542,858	(+) 1,090,040
6	9	Farm implements	–	30,075,453	–	(−)10,217,446
12	10	Green fruits	–	23,778,878	–	(−) 2,136,958
11	11	Sugar, for refining lb.	901,899,200	22,924,556	(+)48,155,600	(−) 3,480,643
9	12	Raw cotton "	116,509,158	21,682,463	(−)22,225,634	(−) 6,521,818
14	13	Gasolene gal.	169,026,215	18,869,236	(+)16,967,943	(+) 830,869
18	14	Books and printed matter	–	18,130,779	–	(+) 1,591,146
13	15	Engines and boilers	–	15,146,437	–	(−) 4,160,813
22	16	Copper and its products	–	14,808,632	–	(+) 1,830,640
26	17	Structural iron and steel cwt.	7,372,760	14,789,071	(+) 1,368,160	(+) 2,960,837
21	18	Paper	–	14,764,645	–	(+) 1,150,050
15	19	Raw rubber lb.	73,327,150	14,711,057	(−) 4,376,872	(−) 2,698,947
19	20	Corn bush.	14,839,040	14,149,266	(+) 710,152	(+) 357,123
17	21	Silk fabrics and velvets	–	13,093,458	–	(−) 3,522,222
24	22	Wood, manufactured	–	12,707,883	–	(+) 321,262
30	23	Clay and its products	–	12,253,769	–	(+) 1,836,509
29	24	Vegetable oils gal.	13,665,996	12,244,151	(+) 4,666,000	(+) 1,434,970
16	25	Raw and dressed furs	–	11,657,968	–	(−) 5,248,216
31	26	Settlers' effects	–	11,181,203	–	(+) 790,281
25	27	Planks and boards M ft.	221,448	11,103,065	(−) 46,317	(−) 1,220,608
20	28	Worsteds and serges Yd.	8,314,658	10,908,771	(−) 2,011,300	(−) 2,818,888
27	29	Tea lb.	38,102,295	10,694,379	(−) 1,323,661	(−) 1,058,142
33	30	Glass and glassware	–	10,453,706	–	(+) 736,187

It is an interesting study to note the changing relations over a number of years between the commodities listed by rank. Machinery, which now heads the list with imports valued at 69 million dollars, was in sixth place ten years ago when its imports were valued at 37 million dollars, being then outranked by: sugar and products, $74 millions; coal, $60 millions; cotton goods, $51 millions; woollen goods, $46 millions; and rolling mill products, $40 millions.

Exports

The total exports for the fiscal year ended March 1930 were $1,144,938,070, of which $24,679,768 were exports of foreign produce. The domestic exports were, therefore, $1,120,258,302 and showed a reduction of 18 p.c. compared with 1929. Of these domestic exports $281,838,175 (25·2 p.c.) went to the United Kingdom, $514,957,553 (45·9 p.c.) to the United States, $97,904,303 (8·8 p.c.) to other British countries and $225,558,271 (20·1 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 1930 show the



Unloading a Cargo of B.W.I. Bananas by Belt Conveyer at Montreal.—The most striking development of Canada's growing trade with the British West Indies, during the fiscal year ended March 31, 1930, has been the increased importation of bananas direct from Jamaica, in Canadian vessels, instead of through the United States as formerly. In 1929, 3,531,015 bunches of bananas were imported from the United States and only 56,785 bunches from Jamaica. For the fiscal year 1930 the figures were: United States 1,188,351 bunches, Jamaica 2,729,353 bunches.

Photo, courtesy Canadian National Railways

effects of the wheat marketing situation of 1929 in the reduction of the percentage of all exports going to the United Kingdom from 31·5 in that year to 25·2 in 1930. On the other hand exports to the United States have risen from 36·7 p.c. of all exports in 1929 to 45·9 p.c. in 1930.

Recent years have shown an increasing percentage of exports to other foreign and other British countries. In 1914 the percentage of exports going to other foreign countries to total exports was 6·8, in 1929 it was 24, and in

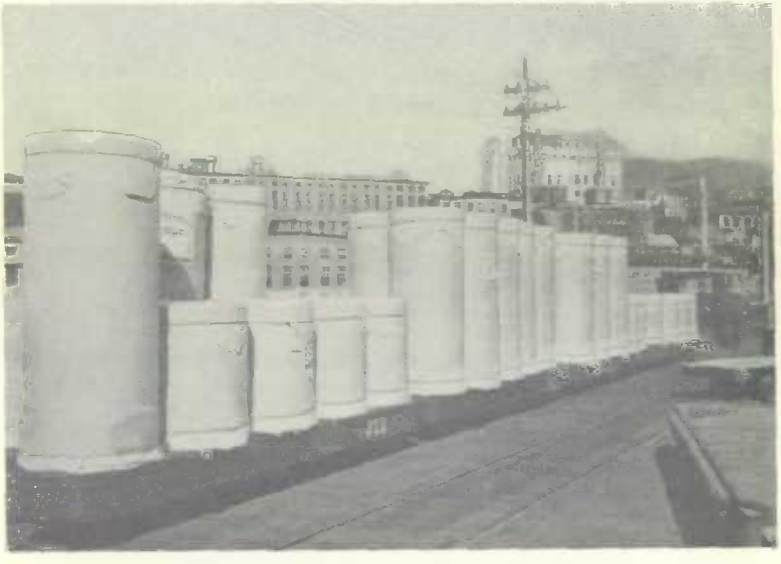
1930, 20·1. The increase in the proportion going to other British countries has not been so spectacular, but this percentage has risen from 5·4 p.c. of total exports in 1914 to 7·8 p.c. in 1929 and 8·8 p.c. in 1930.

The following table gives the domestic exports to British and foreign countries for the fiscal years 1906, 1914, 1922, 1929 and 1930.

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	106,396,532	499,612,145	327,970,510	1,363,709,672
1930	281,838,175	97,904,303	514,957,553	225,558,271	1,120,258,302

Of the nine main classification groups, agricultural and vegetable products ranked first in exports. The exports for the group reached $384,635,751. Wheat was by far the chief item accounting for 56 p.c. of the total. While still the most important group, exports under this head fell by 40 p.c. compared with 1929 owing almost entirely to the falling off of wheat exports.



Loading Canadian Newsprint for Export, Vancouver.—Printing paper now ranks second in order of value among the commodities exported from Canada.

The second group in importance was wood, wood products and paper, with a total of $289,566,675, showing an increase of $944,930 compared with 1929. Newsprint paper was the chief item here and accounted for over half the exports. Non-ferrous metals and their products was third, followed rather closely by the animals and animal products group. The former, with a total of $154,319,429, showed the substantial increase of $41,541,235 over the previous year, or nearly 37 p.c.; the chief items, and those which contributed to the increase were gold (exports of which reached over $34 million, an increase of nearly 178 p.c. over 1929), copper, nickel and aluminium. The total for the animal and animal products group was $133,009,145, a decrease of $25,748,127 compared with 1929. The other groups were all under $30 million with the exception of iron and its products, of which exports totalled $78,589,580.

The table which follows compares the positions of thirty chief commodities in export trade for the last two fiscal years.

Thirty Chief Commodities Exported, 1929 and 1930

Rank		Commodity (In order of value, 1930)		Total Exports, fiscal year ended March, 1930		Increase (+) or decrease (−) 1930 Compared with 1929	
1929	1930			Quantity	Value	Quantity	Value
					$		$
1	1	Wheat	bush.	177,006,369	215,753,475	(−) 193,453,182	(−) 212,770,851
2	2	Printing paper	cwt.	49,703,585	145,401,482	(+) 4,438,999	(+) 3,058,418
4	3	Planks and boards	M ft.	1,807,138	49,446,887	(+) 111,028	(+) 1,783,038
3	4	Wheat flour	brl.	7,893,960	45,457,195	(−) 3,511,768	(−) 19,660,584
5	5	Wood pulp	cwt.	17,359,190	44,913,995	(+) 409,025	(+) 18,273
8	6	Copper, ore and blister	"	2,396,284	37,735,413	(+) 321,861	(+) 10,830,925
6	7	Automobiles	No.	79,861	35,307,645	(−) 23,705	(−) 7,752,088
7	8	Fish	cwt.	3,763,243	34,767,739	(−) 793,134	(−) 214,376
19	9	Raw gold		-	34,375,003	-	(+) 21,978,559
12	10	Whiskey	gal.	2,904,579	25,856,136	(+) 549,148	(+) 1,733,411
13	11	Nickel	cwt.	1,065,175	25,034,975	(−) 9,647	(+) 1,154,483
11	12	Raw furs		-	18,706,311	-	(−) 5,543,861
16	13	Farm implements		-	18,396,688	-	(+) 2,525,770
10	14	Cheese	cwt.	922,937	18,278,004	(−) 203,155	(−) 6,903,849
15	15	Rubber tires	No.	3,238,290	18,039,924	(−) 53,614	(−) 1,079,915
14	16	Meats		-	15,030,671	-	(−) 4,154,259
18	17	Pulp wood	cord	1,345,692	13,860,209	(−) 60,891	(−) 326,891
27	18	Aluminium, in bars	cwt.	771,919	13,828,010	(+) 333,820	(+) 5,219,763
17	19	Cattle	No.	239,372	13,119,462	(−) 1,544	(−) 1,574,581
21	20	Asbestos, raw	ton	286,497	12,074,065	(+) 17,618	(+) 806,877
20	21	Silver ore and bullion	oz.	22,576,768	11,569,855	(+) 1,807,967	(−) 393,073
22	22	Lead	cwt.	2,379,143	10,637,887	(−) 301,301	(−) 492,448
9	23	Barley	bush.	14,817,071	10,388,735	(−) 20,882,696	(−) 15,355,236
28	24	Rubber footwear	pair	11,854,671	9,986,392	(+) 2,165,626	(+) 1,396,542
29	25	Zinc	cwt.	1,730,591	8,366,712	(+) 159,408	(+) 59,865
39	26	Apples, green	brl.	1,882,280	8,111,943	(+) 801,753	(+) 3,244,763
50	27	Potatoes	bush.	7,957,568	8,042,226	(+) 3,008,412	(+) 4,958,774
32	28	Fertilizers	cwt.	4,872,908	7,990,313	(+) 1,424,366	(+) 1,912,275
26	29	Raw hides	"	569,573	7,730,914	(+) 66,948	(−) 1,748,777
31	30	Machinery		-	7,154,706	-	(−) 182,369

Wheat has been the leading export for more than twenty years and even though exports in 1930 show a decrease of $212,770,851 in value this commodity still holds first place. But there have been many changes within this period in the order of all the other commodities listed. So recently as ten years ago wheat was first, with exports valued at $185 millions; followed by meats (now sixteenth), $96 millions; wheat flour, $94 millions; planks and boards, $75 millions; and printing paper (now second), $54 millions.

Review of Calendar Year, 1930.—The monthly trade figures for 1930 as available when going to press and as compared with 1928 and 1929 were as follows ($000 omitted):—

Imports and Exports by Months, 1928-30

Month	Imports			Exports of Canadian Produce		
	1928	1929	1930	1928	1929	1930
	$ 000	$ 000	$ 000	$ 000	$ 000	$ 000
January	79,506	96,958	84,662	82,561	94,924	73,507
February	86,007	97,042	80,922	88,565	82,259	66,690
March	120,455	135,329	113,026	106,975	114,763	89,595
April	78,490	97,517	71,402	59,098	65,728	50,744
May	113,582	125,615	101,545	118,021	107,473	77,261
June	110,704	111,949	91,544	107,121	112,176	78,703
July	103,404	114,201	84,551	125,531	102,219	76,408
August	114,175	111,631	77,906	112,493	96,265	69,290
September	106,066	99,380	87,900	109,828	87,751	81,046
October	112,341	116,271	78,358	141,809	119,266	82,781
November	102,967	108,734	76,325	167,014	111,068	73,061
December	94,621	84,365	-	130,847	88,520	-

The Canadian Trade Balance

Since Confederation, exports of all produce from Canada to all countries have exceeded imports in twenty-six years, while imports have exceeded exports in thirty-seven years. The net excess of exports over imports during the sixty-three years totalled $1,736,022,000. 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 1903-1913, years of heavy capital imports.

Since Confederation there has been an excess of exports to the United Kingdom in fifty-one years, while an excess of imports has occurred in twelve years. The net excess of exports to the United Kingdom during the whole sixty-three years has amounted to $5,964,529,000. The largest excess of exports, amounting to $779,749,000, was in the war year 1918, while the largest excess of imports, amounting to $36,985,000, occurred in 1872. Since 1889, exports to the United Kingdom have exceeded imports in every year.

During the past sixty-three years Canada's trade balance with the United States has been unfavourable in fifty-seven years, while in only six years has it been favourable. Since Confederation the excess of imports from the United States over exports has amounted to the colossal sum of $5,711,756,000. From 1882 to date Canada's trade balance with the United States has been "unfavourable" in every year. Canada had a favourable trade balance with the United States only during the first four years following Confederation and during the years 1880 and 1882. The largest excess of imports from the United States over exports, amounting to $374,734,000, occurred during 1917.

Canada's present position among the principal countries of the world with respect to trade balance is set forth in the following table:—

Trade Balances of the Principal Countries of the World, calendar years 1928 and 1929

Credit balance marked (+) Debit balance marked (−)

Rank		Country	1928		1929	
1928	1929		Amount	Per capita	Amount	Per capita
			Million $	$	Million $	$
1	1	United States	(+) 1,037·6	(+) 8 65	(+) 841·1	(+) 7.01
2	2	British India	(+) 299·1	(+) 0 94	(+) 237·3	(+) 0 75
4	3	Argentina	(+) 111·9	(+) 10.52	(+) 88·6	(+) 8.12
6	4	Brazil	(+) 33·1	(+) 0 84	(+) 39·7	(+) 0.99
5	5	New Zealand	(+) 49·8	(+) 34 50	(+) 33·3	(+) 22.72
19	6	Germany	(−) 633·0	(−) 10 01	(+) 11·3	(+) 0.18
10	7	Sweden	(−) 38·4	(−) 6 31	(+) 8·9	(+) 1 47
7	8	British South Africa	(−) 3·4	(−) 0 35	(−) 3·4	(−) 0 37
9	9	Denmark	(−) 21·8	(−) 6 27	(−) 22·9	(−) 6.56
14	10	Japan	(−) 103·0	(−) 1 63	(−) 30·1	(−) 0.47
13	11	Norway	(−) 88·3	(−) 31 58	(−) 84·5	(−) 30.06
3	12	Canada	(+) 151·8	(+) 15 7	(−) 90·6	(−) 9.13
11	13	Belgium	(−) 39·5	(−) 4 98	(−) 91·1	(−) 11.39
8	14	Australia	(−) 17·0	(−) 2 71	(−) 107·7	(−) 16.91
16	15	Switzerland	(−) 117·6	(−) 29 50	(−) 131·9	(−) 32 84
15	16	Spain (1927 and 1928)	(−) 117·6	(−) 5 32	(−) 136·4	(−) 6.04
17	17	Netherlands	(−) 280·9	(−) 30 39	(−) 308·7	(−) 39 93
12	18	France	(−) 82·4	(−) 2 02	(−) 323·5	(−) 7.90
18	19	Italy	(−) 394·8	(−) 9 67	(−) 337·2	(−) 8 27
20	20	United Kingdom	(−) 1,718·7	(−) 37 67	(−) 1,860·5	(−) 40.67

It will be seen from the above comparison that Canada's position among the nations as regards the balance of trade fell from third in 1928 to twelfth in 1929.

Non-Commodity Items of Foreign Exchange

A nation's commodity trade alone, however, cannot be taken as a complete index of its prosperity or otherwise, 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 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 with other countries were set down and totalled the debit or credit difference would be a final invisible item representing an export or import of capital and this would bring the nation's trade account into a state of balance. Just as in the case of an individual an excess of expenditures over receipts must be made up by borrowing 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, is designed to cover Canada's business relations and exchanges with other countries as a whole.

In this statement an effort has been made to bring together all the debit and credit items of the nation's business for the year 1929. The result shows a reversal of the net outward capital movement which has been characteristic of Canadian international transactions for the previous few years.

Estimated Balance of Canada's International Payments, 1929

("000" omitted)

Item	Exports Visible and Invisible	Imports Visible and Invisible	Balance
1. Commodity Trade—	$	$	$
Recorded merchandise exports and imports	1,208,338	1,298,993	
Exports and imports of gold coin and bullion and subsidiary coin	51,112	3,746	
Unrecorded imports of ships	-	4,000	
Deductions for settlers' effects shown elsewhere and miscellaneous items	11,385	18,630	
Totals (visible)	1,248,065	1,288,109	− 40,044
2. Freight payments and receipts	95,847	134,026	− 38,179
3. Tourists' expenditures	299,188	111,301	+ 187,887
4. Interest payments and receipts	90,929	307,017	− 216,088
5. Non-commercial remittances	15,000	24,000	− 9,000
6. Expenditures of Governments	11,750	11,300	+ 450
7. Charitable and missionary contributions	900	1,800	− 900
8. Insurance transactions	45,000[1]	22,000[1]	+ 23,000
9. Advertising	4,000	-	+ 4,000
10. Motion picture royalties	-	3,750	− 3,750
11. Capital of immigrants and emigrants	11,250	10,493	+ 757
12. Export and import of electrical energy	4,075	97	+ 3,978
Grand Totals	1,826,004	1,913,893	− 87,889
13. Net capital movement (indirect est.)	87,889	-	+ 87,889
	1,913,893	1,913,893	—

[1]Approximate.

The Tourist Trade.—An item in the above which deserves special mention is the tourist trade. For the latest year for which complete returns are available (1929) this was calculated to have brought nearly $300,000,000 into the country. The sum thus spent in Canada is considerably larger than the corresponding amounts spent by Canadian tourists abroad, *viz.*, $111,301,000 in 1929. By far the most important factor in the above is the automobile traffic between Canada and the United States, it being estimated that United States tourists spent $208,744,000 in Canada in 1929, while

Tourist Expenditures, 1924-29

Year	Expenditures of Tourists from other countries in Canada	Expenditures of Canadian Tourists in other countries	Excess of Expenditures of Foreign Tourists over those of Canadian Tourists
	$	$	$
1924	166,764,000	73,060,000	93,704,000
1925	186,972,000	76,047,000	110,925,000
1926	195,918,000	88,961,000	106,957,000
1927	230,223,000	101,296,000	128,927,000
1928	266,693,000	100,646,000	166,047,000
1929	299,188,000	111,301,000	187,887,000

Canadian tourists spent about $65,000,000 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 represents an "invisible" export which is increasing steadily in value year by year. The preceding table gives summarized statistics of the tourist trade for the six-year period 1924-29.

Canadian-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 4·9 persons and in Canada, one to every eight. At dozens of points along the border, paved roads lead into Canada. Automobiles may be entered free of duty up to six months, good hotel and private tourist home accommodation is available and tourist camps are plentiful. No passports are required and the visitor from the United States finds language, customs and living conditions very similar to those in his own country. 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, but it is the automobile which has, in the last decade, created such an amazing increase in the volume of tourist travel.

Canada's Tourist Possibilities.—An alluring scene in the Maritime Provinces. Anglers trout fishing in the renowned Lake Rossignol section of Nova Scotia.

Engraving, courtesy Dept. of the Interior

As yet little advantage has been taken of the sales opportunity presented by this annual influx of millions of visitors, money expended for merchandise amounting to only a small fraction of the $100 worth of goods which United States tourists are permitted to carry back duty free. With the development of this market by intelligent study, proper advertising and sales methods, retail trade in Canada could be increased by millions of dollars annually.

It must not be thought, however, that all the benefits of the tourist business accrue to Canada. Canadians are attracted by the larger United States' cities with their larger theatres, museums, etc., 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 the population as Canadian tourists to the United States, the income accruing to Canada from this source would be more than one billion dollars instead of approximately $290 millions as at present, for the expenditures of tourists who arrive by ocean ports are estimated at only $10,685,000.

Tariff Relations

The British Empire.—Canada's first grant of a trade preference was made in 1897, when she introduced the principle of the "reciprocal" tariff, which was at once applied to the United Kingdom and some other British countries.

However, under treaties existing at the time, the "reciprocal" tariff had to be extended to certain foreign countries and was therefore not a British preferential tariff in the accepted sense of the term. The concessions to foreign countries ceased in 1898 as a consequence of the denunciation by Great Britain of her most-favoured-nation treaties with Germany and Belgium. This left Canada free to confine her lower tariff rates to the United Kingdom and to sister Dominions and colonies. A British preferential tariff was established in 1898 (Aug. 1) consisting of a remission of 25 p.c. of the duty ordinarily paid, which remission was increased on July 1, 1900, to 33⅓ p.c. In 1904, the 33⅓ p.c. preferential reduction was superseded, in the case of certain commodities, by the establishment of fixed preferential rates.

In the Customs Tariff Act, 1907 (which provided for a tripartite tariff scale, *viz.*, the British preferential, the intermediate, and the general), it was enacted that the Government might, by Order in Council, extend the provisions of the British preferential tariff to any British country, and the provisions of the intermediate tariff, in whole or in part, to any British or foreign country that might grant satisfactory benefits in return. Since 1907 the British preferential tariff has been on most goods, 33⅓ p.c. less than the general tariff. The intermediate tariff is somewhat lower than the general.

For years, Canada has granted free trade to Newfoundland in fish and fish products, but as regards other products the British preferential tariff has applied since 1928. Canada has trade treaties or agreements with

Australia and the British West Indies. Each of these treaties contains schedules of goods upon which Canada and the other parties concede to each other special rates of duty lower than the respective general tariffs. In the case of the West Indies treaty, these schedules cover a very wide range of goods and the reductions from general tariff rates are in most cases substantial. In the case of the treaty with Australia, the schedules are more limited and, as respects some of the goods mentioned, the reductions are not so great.

Preferential tariff treatment for Empire products was established in Great Britain in 1915, for practically all dutiable goods, other than alcoholic liquors, but import duties are levied on only a comparatively limited list of commodities. Preferential rates have been provided in nearly every case where a duty has been imposed since 1919.

The Irish Free State has a somewhat different tariff but with several British preferential rates, which apply to Canadian goods. The British preferential schedule of the New Zealand tariff is extended to Canadian goods, except in the case of motor cars and certain parts, on which there are special rates to Canada between the British preferential and the general. In Northern Rhodesia (except Congo Basin) and in Southern Rhodesia, Canadian products are granted the British preferential rates, which are in force on the generality of goods. The Union of South Africa has incorporated in her tariff minimum and maximum rates of duty, and a certain number of the minimum rates have been accorded to Canada. The Union tariff is in force also in the native territories of Basutoland, Bechuanaland, and Swaziland, as well as in South-West Africa and Walfisch Bay. Several other parts of the Empire, *viz.*, Cyprus, Fiji, Western Samoa, Mauritius, British North Borneo, Brunei, Sarawak and Gibraltar grant various preferences to Canadian products over goods of non-British origin.

Foreign Countries.—Arising out of old British treaties which are applicable to Canada, later British treaties, favoured nation clauses of commercial treaties sanctioned by Canadian Acts of Parliament, or Canadian conventions of commerce, Canada extends on a reciprocal basis most-favoured-nation customs treatment to the following countries:—

Argentine Republic,	France,	Portugal,
Belgium,	Hungary,	Roumania,
Colombia,	Italy,	Serb-Croat-Slovene Kingdom,
Cuba,	Japan,	Spain,
Czechoslovakia,	Latvia,	Sweden,
Denmark,	Lithuania,	Switzerland,
Estonia,	Netherlands,	Venezuela.
Finland,	Norway,	

Under mutual most-favoured-nation customs treatment each contracting country accords to the goods of the other the lowest duties applied to similar products of any foreign origin unless there are reservations. Most-favoured-nation obligations do not include preferences which a country may exchange with its Dominions or colonies.

CHAPTER XIV

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

Internal trade in Canada, as in the case of other nations, is of primary importance among economic activities. The home consumption of goods and services by a population of nearly 10,000,000 requires a much greater expenditure of economic activity than that required for the prosecution of external trade. Internal trade includes manufacture for domestic consumption, the transportation and distribution of goods to the final consumer 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 in the first place 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, as it were, 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 imports. Diverse resources in various parts of the country led to a vast exchange of products, and growing wealth gave rise to increasing abundance of services so that internal trade assumed ever greater proportions.

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 1928 the grand total value of the activities of those occupied in production alone was $6,679,000,000 while the combined money value of external trade (imports and Canadian exports) was $2,337,305,809. When it is considered that to the above sum must be added the value of the many kinds of *services* performed in Canada the importance of internal trade is obvious.

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 moving of goods of all descriptions so that the ultimate consumer may conveniently obtain them, is a business which involves many millions of dollars in capital and employs many thousands of hands. A census of Canadian trading establishments taken in 1924 showed that there was invested in retail establishments alone $1,250 millions and that sales amounted to $2,500 millions. Sales at wholesale were estimated to be at least two-thirds of that amount.

Chain Stores.—In recent years great changes have taken place in the organization of the distribution of goods. The chain store has appeared and is now doing a large and growing proportion of the work of retailing merchandise, nevertheless this type of store is not occupying the whole field. In a study made by the Bureau of Statistics, in 1930, of 210 chain-store organizations, it was estimated that independent stores still do 75 p.c. or more of the retail business of the Dominion. In food products, the most developed section of the chain store movement, they probably account for about 25 to 30 p.c. of the business. An important result of the chain store movement is the rise of organized independents. Large numbers of independent stores are forming common buying and advertising organizations, thus bringing to themselves some of the economies of large scale dealings enjoyed by chain stores. The next few years are likely to see keen competition between these rival organizations.

Merchandising outlets in the 210 chain-store systems mentioned above numbered 11,869, of which 2,965 were for food products, 991 for tobacco, 512 for toilet articles, 428 for women's, misses' and children's clothing, 410 for house furnishings, 387 for drugs and drug sundries, 378 for hardware, and so forth. Total sales were $256 millions. Food products represented 54·9 p.c. of this, women's clothing 4·2 p.c., men's clothing 3·8 p.c., tobacco 3·4 p.c., dry goods and notions 3·1 p.c., hardware 3·0 p.c., toilet articles 2·7 p.c., boots and shoes, 2·5 p.c., etc.

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 1929 this revenue freight totalled 115,187,000 tons. The returns by provinces throw light on inter-provincial trade in Canada. For example, over 24,000,000 tons of freight originated in Ontario and about 28,000,000 were received from foreign connections. Over 35,000,000 tons, however, were unloaded at stations within the province and over 21,000,000 delivered to foreign connections, hence at least 2,500,000 tons, in addition to Western grain passing through Ontario elevators, must have come from other provinces. The accompanying table shows the figures for revenue freight by provinces for the first eight months of 1930 with comparative figures for 1929.

Freight Originated for Eight Months ended August 31, 1930

Province	Loaded at Stations in Canada	Received from Foreign Connections	Total
	tons	tons	tons
Prince Edward Island	167,053	-	167,053
Nova Scotia	4,991,127	83,325	5,074,452
New Brunswick	1,637,831	502,855	2,140,686
Quebec	6,889,170	2,457,675	9,346,845
Ontario	14,213,638	16,223,019	30,436,657
Manitoba	2,865,905	188,591	3,054,496
Saskatchewan	3,179,834	330,218	3,510,052
Alberta	4,626,996	187,769	4,814,765
British Columbia	3,916,437	261,011	4,177,448
Totals for eight months, 1930	42,487,991	20,234,463	62,722,454
Totals for eight months, 1929	49,953,841	24,667,942	74,621,783

Freight Terminated for Eight Months ended August 31, 1930

Province	Unloaded at Stations in Canada	Delivered to Foreign Connections	Total
	tons	tons	tons
Prince Edward Island	220,383	63	220,446
Nova Scotia	4,370,172	270,506	4,640,678
New Brunswick	1,491,458	952,689	2,444,147
Quebec	7,182,073	3,389,976	10,572,049
Ontario	19,863,451	11,236,611	31,100,062
Manitoba	2,914,987	123,454	3,038,441
Saskatchewan	2,450,617	305,618	2,756,235
Alberta	2,560,402	4,509	2,564,911
British Columbia	2,954,813	1,681,919	4,636,732
Totals for eight months, 1930	44,008,356	17,965,345	61,973,701
Totals for eight months, 1929	51,319,979	23,750,670	75,070,649

Stock Markets

A subject often classified under the head of finance but which has affinities with 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 situated 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 the market crash of November 1929, however, trading has fallen away considerably due to heavy losses, business depression and caution on the part of the investing public.

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

Number of Shares Traded on the Montreal Stock Exchange

Month	1928	1929	1930
January	1,517,295	4,173,257	988,789
February	1,274,280	2,037,891	830,534
March	1,393,587	2,157,613	1,133,969
April	1,603,000	1,117,430	1,601,764
May	1,727,793	1,287,879	1,088,587
June	1,214,858	766,813	1,389,170
July	700,127	928,841	308,399
August	924,940	2,103,138	558,387
September	900,422	1,854,675	817,409
October	2,308,349	3,609,402	1,350,604
November	3,217,754	2,077,720	466,867
December	2,208,717	1,088,757	–

Index Numbers of Seventeen Mining Stocks

(1926=100)

Month	1928	1929	1930
January	134·0	125·7	77·9
February	121·4	123·7	86·2
March	121·5	120·3	85·2
April	115·6	112·7	83·3
May	118·1	108·9	76·3
June	125·6	103·9	73·2
July	131·9	109·6	68·7
August	123·6	114·8	68·0
September	121·9	104·8	68·7
October	113·0	90·1	61·3
November	116·5	75·7	60·5
December	115·1	74·5	–

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, they 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. Since then the trend has been more gradually to lower levels with a minor upward movement in March and April 1930. For August 1930 the index for industrials registered only 153·1; that for utilities 116·0 and that for all stocks 125·1.

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 60·5 in November, 1930.

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 1874 to 1896, however, there was an unprecedented fall, Canada participating in

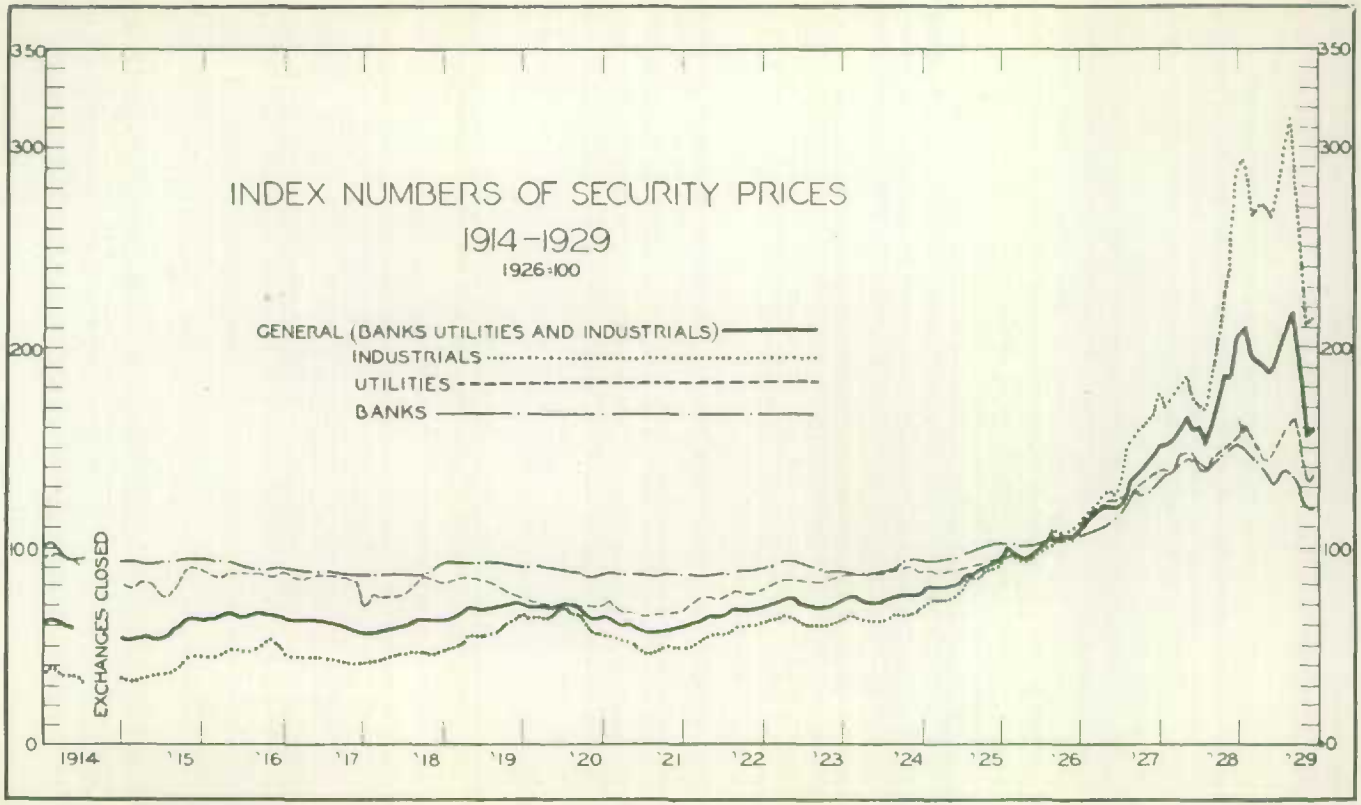
this movement to the extent of a drop of at least 50 points, attributable to monetary factors, the great increase in production, and improved transportation facilities. From this point until 1913 prices again tended upward. It was a period of rapid and unprecedented prosperity almost the world over, 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 a slump developed until the Great War, during which the rise of prices was again stupendous. 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 jumped to 160·3 in 1925. During 1926 the trend was downward, though Canadian prices in that year did not fall as much as those in leading countries because of the high level for wheat. In 1927 they dropped to 152·5 from 156·2 in 1926. In 1928 they were 150·6 and in 1929, 149·3. During the year 1930 there has been a very marked downward trend in commodity prices, particularly in the course of raw materials such as grains, non-ferrous metals and some items in the textile group. In October, 1930, the wholesale prices index registered 127·1, the lowest level since June, 1916.

Security Prices, 1930.—The Bureau 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 accompanying chart shows the course of security prices from 1914 to 1929; the continuation of the series is shown in the table of investors index numbers for 1930. Tables of index numbers of traders' activities and of mining stocks during the past three years are also given.

Investors' Monthly Index Numbers of Common Stocks

(1926=100)

Month	Banks	Utilities	Industrials	Total
1930				
January	120·3	133·3	209·1	155·7
February	120·4	141·0	205·5	155·3
March	118·3	137·4	210·2	157·6
April	118·6	143·7	220·9	166·5
May	117·7	133·3	196·3	152·1
June	115·2	124·2	165·4	134·7
July	113·1	122·3	162·2	132·0
August	113·3	116·0	153·1	125·1
September	117·6	123·1	160·1	130·8
October	113·3	112·7	129·2	111·3
November	109·3	109·5	129 0	109·6

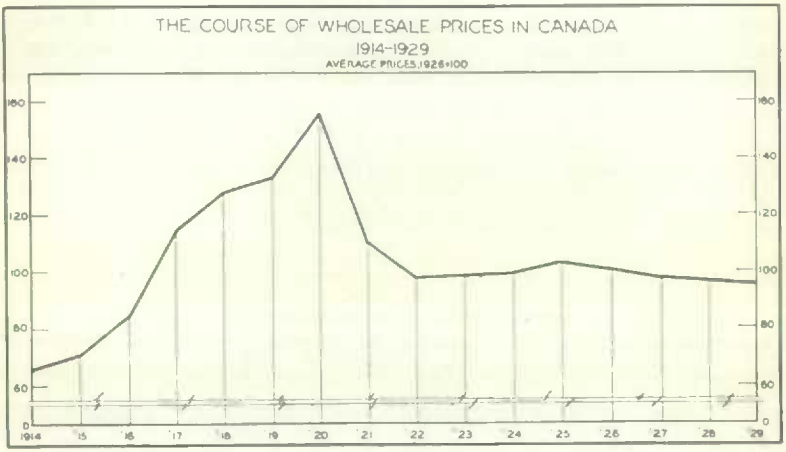

INDEX NUMBERS OF SECURITY PRICES
1914–1929
1926=100
GENERAL (BANKS UTILITIES AND INDUSTRIALS)
INDUSTRIALS
UTILITIES
BANKS
EXCHANGES CLOSED
350
300
200
100
0
1914
'15
'16
'17
'18
'19
'20
'21
'22
'23
'24
'25
'26
'27
'28
'29

Traders' Index Numbers of the Prices of the Twenty-five Best Selling Industrial and Public Utility Common Stocks on the Montreal and Toronto Exchanges

(1926=100)

Month	1928	1929	1930
January	317·7	1,039·5	828·9
February	322·0	1,125·8	864·3
March	338·5	1,057·3	898·6
April	379·5	962·4	1,010·9
May	417·1	955·1	921·2
June	388·0	968·0	821·3
July	391·2	1,032·1	768·6
August	391·3	1,170·1	731·3
September	470·6	1,230·4	778·4
October	553·2	1,125·8	618·1
November	714·1	769·2	612·7
December	809·7	786·7	–

NOTE.—The "Trader's Index" measures the trend of gains or losses for an "average" trader who buys and sells as a whole and turns over his investments every week.



New Index Numbers of Wholesale Prices, 1913-1930*

(1926=100)

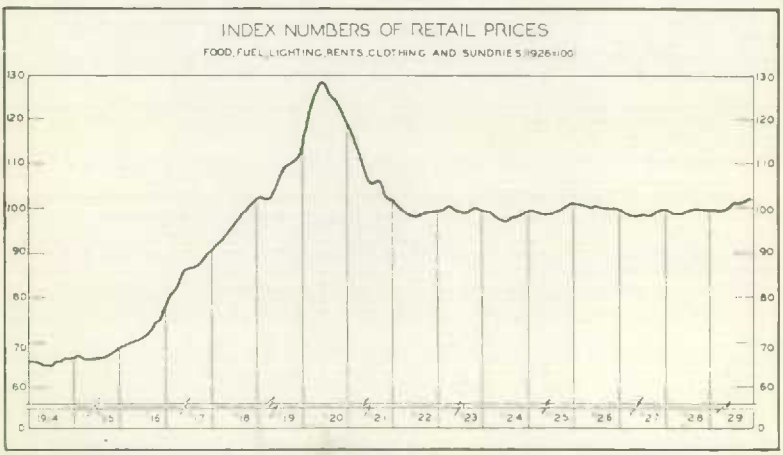
1913	64·0	1922	97·3	1930[1]	
1914	65·5	1923	98·0	January	95·6
1915	70·4	1924	99·4	February	94·0
1916	84·3	1925	102·6	March	91·9
1917	114·3	1926	100·0	April	91·7
1918	127·4	1927	97·7	May	89·9
1919	133·9	1928	96·5	June	88·0
1920	155·9	1929	95·6	July	85·8
1921	110·0	December	96·1	August	84·1
				September	82·5
				October	81·4
				November	79·8

*236 commodities to 1926, thereafter 502.
[1]By months, January to November inclusive.

Cost of Living

Statistics relating to the cost of living constitute a very important phase of price statistics. Index numbers of retail prices and cost of living 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 66·0 for the year 1914, 124·2 in 1920, and 98·9 in 1928 and 100·0, exactly the same as in 1926, 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 102·2. There has been a steady decline from January. The index for rent, however, has risen consistently, not only throughout 1930, but from 1927. The food index has shown a relatively rapid decline since the early months of 1930.



Index Numbers of Retail Prices, Rents and Costs of Services, 1927-1930

(Average prices in 1926 = 100)

Year	Total Index	Food Index	Fuel Index	Rent Index	Clothing Index	Sundries Index
1927	98·5	98·1	97·9	98·8	97·5	99·6
1928	98·9	98·6	96·9	101·2	97·4	99·0
1929	100·0	101·0	96·8	103·3	96·9	99·2
November	101·5	104·3	97·1	105·5	96·5	99·6
December	101·6	104·8	97·3	105·5	96·5	99·6
1930[1]—						
January	102·2	106·5	97·3	105·5	96·5	99·6
February	101·9	106·0	97·3	105·5	95·9	99·6
March	101·5	104·8	97·4	105·5	95·9	99·6
April	100·4	101·1	97·2	105·5	95·9	99·6
May	100·2	100·7	95·8	106·5	95·0	99·6
June	100·1	100·4	95·6	106·5	95·0	99·6
July	99·6	98·5	95·6	106·5	95·0	99·6
August	98·9	96·3	95·9	106·5	95·0	99·6
September	97·4	93·1	95·8	106·5	91·6	99·6
October	97·1	92·8	96·4	105·5	91·6	99·6
November	97·0	92·6	96·4	105·5	91·6	99·4

[1] By months, January to November inclusive.

CHAPTER XV

TRANSPORTATION AND COMMUNICATIONS

Railways.—The Dominion is a land of magnificent distances. From coast to coast is more than 3,500 miles, the population being distributed in the main along the southern border. Between different parts of the country intervene sections of rough and difficult terrain which present crucial problems both for the transportation engineer and operator. In the pioneer days when the rivers afforded almost the sole routes of travel (the St. Lawrence in particular reaches into the heart of the continent), difficulties of the same nature were encountered in the frequent falls and rapids. It is significant, therefore, that the earliest important expenditure for public works in Canada was for canals; that, later, when the railway era began, it was a railway that set the seal to Confederation and another that conditioned the entrance of our westernmost province; and that to-day the two great railway systems are the largest single employers of labour in the Dominion. The periods of rapid railway development, namely in the 'fifties, in the 'eighties and in the first fifteen years of the present century, were attended with the most profound results on general economic conditions in Canada.

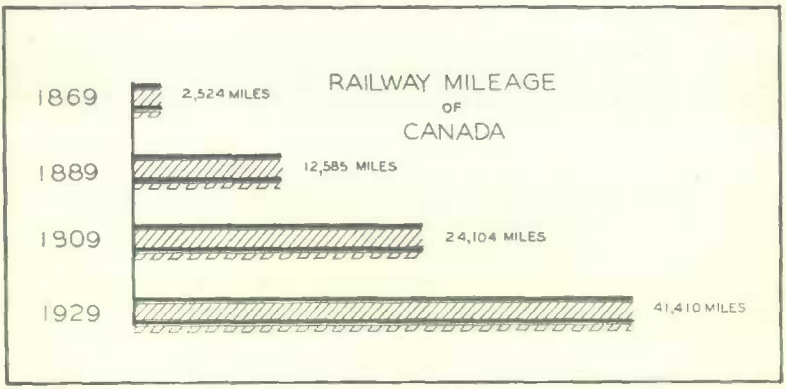
The first Canadian railway was constructed in 1836 between St. Johns, Que., and Laprairie; it was sixteen miles long and was operated by horses, for which locomotives were substituted in 1837. The second railway was opened in 1847, and the third in 1848. In 1850 there were only 66 miles of railway in Canada.

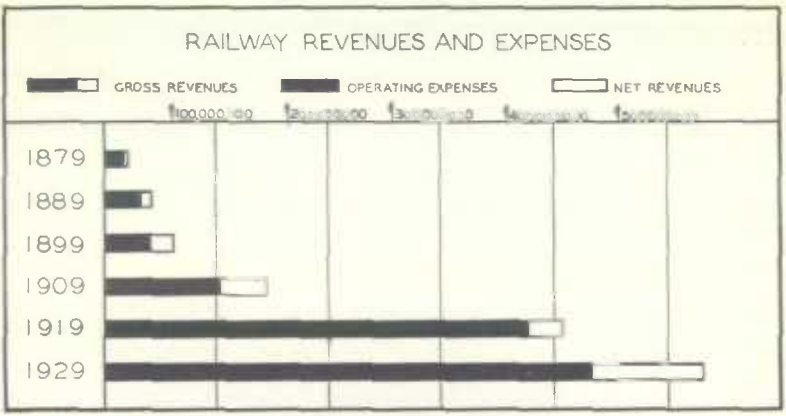
The railway era proper may be said to have begun in 1851 with the inauguration of the Grand Trunk system and several subsidiary lines throughout Ontario and Quebec. At Confederation these had grown to 2,278 miles. The Intercolonial, which linked the Maritimes to Quebec and Ontario, was, as already noted, a part of the Confederation compact. The next and most important step was the building of the Canadian Pacific Railway, completed in 1885, which opened and made the whole of the great West an integral part of the Dominion. The second and third transcontinentals, namely, the Canadian Northern Railway and the Grand Trunk Pacific (with the National Transcontinental) belong to the later era of the twentieth century, and their inception is thus within common memory. With their completion Canada possessed the most extensive railway system of any country for its population, no other in the world exceeding us in mileage per capita.

The Intercolonial and P.E.I. Railways were from the first owned and operated by the Dominion Government. In 1915, on the failure of the Grand Trunk Pacific Company to take over the National Transcontinental Railway from Moncton, N.B., to Winnipeg, the Government itself undertook its operation, together with that of the Lake Superior Branch of the G.T.P. In 1917, again, the Government acquired the capital stock of the Canadian

Northern Railway Company, and in 1919 was appointed receiver for the Grand Trunk Pacific. Later in 1919, the Grand Trunk was included in the Government railway system, which in 1922 was consolidated and re-organized under a single national board. This great system now controls 22,915 miles of railway, being the largest single system in North America; it includes the Quebec Bridge, which has a central span of 1,800 feet, the longest in the world. Side by side is the Canadian Pacific with its 14,655 miles of road, exclusive of 851 miles controlled in Canada and 5,079 miles controlled in the United States, its subsidiary steamship lines on the Atlantic and the Pacific, and its record in overcoming the geographical obstruction of the Rockies. Besides its importance to Canada, the Canadian Pacific, running in a northern latitude, forms, with its auxiliary steamship services, a comparatively short way from Europe to the Far East, and thus ranks as one of the great trade routes of the world.

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.

Canada's railway situation in 1929 may be summed up as follows: a population of between 9,500,000 and 10,000,000 was served with a total of 41,410 miles of single track, and an additional 14,457 miles of second and third main track, industrial track, yard and sidings. The single track mileage in Ontario was about 10,873; Saskatchewan had 7,760 miles, Alberta 5,543, Quebec 4,891, Manitoba 4,294 and British Columbia 4,024. The investment in Canadian railways was approximately $3,153,340,000 and the gross earnings were $534,106,044. The number of employees was 187,846 and the wages bill $290,732,500. The Canadian railways carried about 39 million passengers and 115 million tons of freight during the year and used about 30 p.c. of all the coal consumed in Canada. The railways are supplemented by efficient and adequate marine services, chains of sumptuous hotels extending from coast to coast, and no less than 41,359 miles of telegraphs were under their control and operated directly by them.

Conditions during 1930.—The light movement of freight experienced by the sudden curtailment of business during the fall months of 1929 continued through 1930, decreases being recorded for each month from January to July compared with the same months in both 1929 and 1928. For the seven months the revenue ton-miles were less than in 1929 by 12 p.c. and gross revenues were less by over 48 million dollars. Loadings of grain in the Western Division, however, have picked up since the harvesting of the new crop and have reduced the losses in other commodities, but the total loadings for the first 41 weeks were still below last year's loadings by 112,750 cars in the Western Division and by 186,328 cars in the Eastern Division. The largest losses at November 22 were: miscellaneous freight, 90,615 cars; grain and grain products, 47,604 cars; lumber, 45,947 cars; coal, 37,382 cars; merchandise, 40,937 cars, and other forest products, 30,212 cars.

The railway gross operating revenues and revenue car loadings, by months for 1929 and 1930 are shown in the table below.

Month	Railway Gross Operating Revenues		Gross Operating Revenues, Two Large Railways		Total Revenue Car Loadings	
	1929	1930	1929	1930	1929	1930
	$000	$000	$000	$000	No. 000	No. 000
January	38,398	33,864	30,935	26,787	252	242
February	38,429	33,016	30,722	25,904	261	232
March	44,754	37,643	35,851	29,419	282	257
April	45,034	36,805	36,300	28,797	284	244
May	45,291	37,845	36,742	30,217	307	277
June	44,860	38,995	36,850	31,904	310	269
July	47,362	38,071	38,807	31,324	313	264
August	45,617	38,804	36,703	31,813	318	281
September	48,142	44,340	39,638	37,356	335	303
October	49,575	-	40,798	-	353	308
November	41,481	-	33,772	-	284	250
December	39,991	-	32,122	-	231	-

Canals.—Canals, as stated, were the earliest large transportation works in Canada. One of the first locks was a small one constructed by the Hudson's Bay Company at Sault Ste. Marie and was destroyed by United States troops in 1814. Another to be built was 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 six 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 and (6) from the Atlantic ocean to Bras d'Or lakes in Cape Breton. The total length of the waterways comprised in these systems is about 1,594 statute miles. Among projected canals the most important are the Georgian Bay route and the deepening of the St. Lawrence waterways including the new Welland ship canal. As illustrating growth, freight traffic through the Welland has increased from about $1\frac{1}{3}$ million tons in 1872 to $7\frac{2}{3}$ millions in 1929. Total canal traffic in 1929 reached 13,700,000 tons which was 5 million tons less

Welland Ship Canal.—A recent aerial photograph of the flight of twin locks down the face of the escarpment between lakes Erie and Ontario. These twin locks, which are known as Nos. 4, 5 and 6, permit ships to be passed up the escarpment at the same time as other vessels are being passed down. The aggregate lift is $139\frac{1}{2}$ feet.

Engraving, courtesy Dept. of the Interior

than the record made in 1928. Up to the end of Sept., 1930, grain shipments have been heavier than in 1929 and the Welland and St. Lawrence canals show increases of 870,000 tons and 250,000 tons, respectively, over last year's traffic, but are still well below the 1928 tonnage. Light iron ore and coal traffic has been the chief factor in the decrease of 12 million tons through the Sault Ste. Marie locks up to Sept. 30, 1930.

The new Welland Ship Canal, which has recently been completed, is generally acknowledged to be one of the great engineering feats of the world. The lock gates were first opened on April 21, 1930, but the official opening of the canal is scheduled for the spring of 1931. The Dominion Government had expended $112,892,000 net on the construction works up to March 31, 1930, including $9,378,626 net during the fiscal year 1930.

The depth of water on the sills is 30 feet, which enables present lake vessels of the deepest draught to proceed from upper lake ports to Prescott without breaking bulk. When passage through the St. Lawrence rapids has been made possible for these vessels by the construction of canals of equal depth to the new Welland, access may be had to the port of Montreal. The total length of the canal is 27·7 miles and the estimated time required for a vessel to pass through it is 8 hours. There are seven lift locks and one guard lock on the canal, which overcome a total drop of 326·5 feet from lake Erie to lake Ontario. The lift of the Welland Ship Canal locks has no precedent in actual construction for locks of their size. Near Thorold are three sets of twin locks, which have been built in pairs to enable vessels to lock on the upward journey at the same time as others are locking downward.

The construction of the canal was commenced before the war and, after temporary abandonment during that period, proceeded uninterruptedly to completion.

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. Altogether there were, in 1929, 56 electric railway companies in operation, owning 2,202 miles of track and about 4,000 cars with a capitalization of $221,000,000. They carried 837,000,000 fare passengers in 1929, paid wages of over $27,000,000 and had a gross revenue of about $58,000,000.

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 $8½ millions, operating on 66,061 miles of steam and electric railway, boat lines and stage routes, and with gross receipts of about $27 millions. They issue money orders and travellers' cheques to the amount of between $80 millions and $90 millions annually.

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 $300,000,000 in 1929 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. 99.) In 1929 Dominion, Provincial, and municipal expenditures on the improvement and maintenance of roads amounted to $76,000,000.

Mileage Open for Traffic, Jan. 1, 1930 and Expenditures on Highways, 1929

Class of Highway	Mileage Open
Unimproved earth	179,392
Improved earth	138,551
Gravel	63,514
Waterbound macadam	4,349
Bituminous macadam	1,914
Bituminous concrete	915
Cement concrete	1,450
Other	15
Total	390,060

Expenditures, 1929	
	$
For construction	55,173,160
For maintenance	21,109,686

On Nov. 1, 1930, the new Windsor-Detroit Vehicular Tunnel, another link between Canada and the United States, was formally opened for traffic. The structure is modern in every way and permits of the passage of 1,000 motor vehicles per hour.

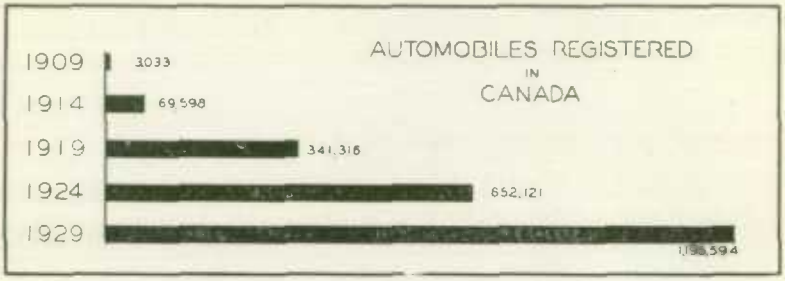
The motor car is, of course, a relatively modern improvement. Commencing as a toy and developing as a luxury of the rich, it now ranks as a comfort to those in moderate circumstances and a necessity of life to large sections of the population. It is the *raison d'être* of the road improvements just mentioned; it has taken from the railways not only passenger traffic but a large volume of parcel and short haul freight. The automobile manufacturing industry, since its beginning little more than twenty years ago, had, in 1929, developed a production valued at $177 millions on a capitalization of $98 millions, employing about 16,500 persons. Twenty years ago the number of motor vehicles registered in Canada was about 3,000. In 1929 the number was nearly 1,195,600 while over 262,625 cars and chassis were manufactured in Canada in that year. (See table below for motor vehicle registration by provinces). So omnipresent has the motor car become that it is now customary to state the number in relation to total population. Thus in Nova Scotia in 1929 there was one motor to every 14 of population, in New Brunswick to 14, in Quebec 16, in Ontario 6, in Manitoba 9, in Saskatchewan 7, in Alberta 7, and in British Columbia 6. Canada has more motors proportionately (one per 8 people) than any other countries except the United States (one per 5), the Hawaiian Islands (one per 6), and New Zealand (one per 8).

Motor Vehicles Registered in Canada, by Provinces, Calendar Years 1920-1929

NOTE.—The number of motor vehicles in the Yukon is included in the totals for Canada.

Year	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
	No.	No.	No.	No.	No.
1920	1,419	12,450	11,196	41,562	177,561
1925	2,955	22,853	19,072	97,657	344,112
1929	6,141	40,014	31,852	169,547	544,476

	Manitoba	Saskatchewan	Alberta	British Columbia	Canada
	No.	No.	No.	No.	No.
1920	36,455	60,325	38,015	28,000	407,064
1925	51,241	79,078	54,357	56,618	728,005
1929	77,840	130,229	99,650	95,647	1,195,594



Air Navigation.—Still more recent as an invention is the aeroplane, which is already of economic importance in the transportation of passengers and supplies to new and remote mining areas, etc. The total mileage of aircraft increased from 185,000 in 1922 to 6,284,079 in 1929, in which year 124,751 passengers, 3,903,908 pounds of freight or express, and 430,636 pounds of mail were carried.

The aeroplane has proved a boon to Canada in the development of her mining, forest, fishery, water-power and other resources. By the relative shortening of 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.

Regular mails are carried by aeroplane between London, Toronto, Kingston, Ottawa, Montreal, and Quebec, and these routes are supplemented by many branch feeding lines. The St. Hubert Aerodrome is the terminal

for air services. There are about sixty air harbour or sea-plane stations scattered over the country and more than a score of amateur light-aeroplane clubs partly supported by the Dominion Government. Private planes are increasingly engaged in commercial work. (See also pp. 136 and 137.)

By Order in Council P.C. 2585, which was passed on November 8, 1930, the Dominion Government gave approval to the participation of the Canadian National Railways in the organization of a Canadian rail-air system of transportation. The other groups prominent in the formation of the new transportation service are the Canadian Pacific Railway, Western Canada Airways Ltd., and Aviation Corporation of Canada. Practical experience over a number of years has clearly demonstrated that commercial airways in Canada can best be operated in conjunction with the railways, and the active organization of the new system is expected to proceed at once.

Shipping.—The tonnage of sea-going vessels entered and cleared at Canadian ports showed an almost continuous increase up to 1914; and again since the Armistice there has been a steady increase. The tonnage of coasting vessels has also grown, increasing from 10 million tons in 1876 (the first data compiled) to 97 million tons in the fiscal year ended March 31, 1929, as compared with an increase in sea-going and inland international tonnages from 13 millions in 1868 to 94 millions in 1929.

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 8,645 representing 1,366,074 tons in 1928.

In the '70's shipbuilding was an important industry in Canada, especially in the Maritime Provinces, when 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 numbers of vessels built and registered each year from 1885 to 1914. The war stimulated shipbuilding and there was a temporary activity assisted by the marine program of the Dominion Government. During 1928, the latest year for which complete statistics are available, 22 steel vessels of 27,777 gross tonnage, and 46 wooden vessels of 3,029 gross tonnage were built. Of the $16,344,616 representing the total value of production in 1928, however, only $5,257,265 was for vessels built or under construction, while $7,228,898 was for repairs and custom work, and $3,858,453 for other products, including aeroplanes, boilers, engines, structural steel, etc.

Telegraphs.—Canada's first telegraph line was erected in 1846-7 between Toronto, Hamilton, St. Catharines and Niagara. In 1847 also the Montreal Telegraph Company 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 Company, which remained alone in the field until the building of the Canadian Pacific Railway and the Canadian Government telegraph lines. To-day there are 360,000 miles of telegraph wire in Canada. They handle over 18,000,000 messages, from which the revenue is over $16 millions. In addition, six trans-oceanic cables have termini in Canada, five on the Atlantic and one on the Pacific, and handle

5 million cablegrams annually. There is also the Marconi Wireless Telegraph Company and some 34 Government-owned and 74 privately-owned radio telegraph stations, on the east and west sea-coasts and on the Great Lakes. The number of wireless messages handled is now over 400,000. Radio telephony has also been established, the total number of radio stations, including private receiving stations, increasing from 33,456 in 1924 to 425,000 in 1930.

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 1929 the number of telephones was over 1¼ millions with a 4 million wire mileage, the investment being over $263 millions. 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.

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 is now 12,409, the postal revenue being approximately $39 millions. The auxiliary money order branch issues orders payable in Canada to the amount of $174 millions annually, and in other countries to the value of about $23 millions. In addition, postal notes to the value of $15 millions are issued. Postage stamps are sold in Canada to the value of approximately $26 millions annually. During the war, the domestic letter rate was increased to 3 cents per ounce, but was reduced again 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 the 1st July, 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.

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 1930 each person in Canada expended approximately $3.70. This is more remarkable when it is considered that rates of postage have decreased during this period.

The air mail service inaugurated about Christmas 1927 has developed rapidly. In the first year of operation, 1927-28, the mileage flown was 9,538 and the weight of mail carried, 38,484 lb.; for 1928-29 the figures were 308,161 miles and 321,584 lb.; and during 1929-30, 688,219 miles were flown and

425,280 lb. of mail carried. The proportion of mail carried to miles flown has decreased each year, owing to the extension of the service to new and relatively thinly populated areas which have not enjoyed a frequent mail service in the past. Apart from the fact that these services will build up in the course of time, the benefits accruing to Canadians in isolated communities are sufficient to warrant such expansion of the service as has been made.

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

Canada's Air Mail Service.—On the International service between Montreal and New York. A Canadian Colonial plane taking on Canadian mail for Albany at the St. Hubert airport near Montreal.

Engraving, courtesy Dept. of the Interior

down the Athabasca, 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 has been 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. This service expedites the transcontinental movement of mails by 24 hours.

CHAPER XVI

PUBLIC FINANCE

Dominion Finance.—At Confederation the revenues which had previously accrued to the treasuries of the provinces were transferred to the Dominion, notably the customs duties. 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 was to become responsible for the debts of the provinces. Since the main source of the revenues of the provinces was now taken over, the Dominion was to pay annual subsidies to the provinces for the support of their Governments and Legislatures. These subsidies have from time to time been increased. For the years ended March 31, 1928, 1929 and 1930, they were:—

Subsidies of Dominion to Provincial Governments, fiscal years ended 1928-1930

Province	1928	1929	1930
	$	$	$
Prince Edward Island	381,932	381,932	381,932
Nova Scotia	661,841	661,841	661,841
New Brunswick	666,766	666,766	666,766
Quebec	2,256,420	2,256,420	2,256,420
Ontario	2,642,612	2,642,612	2,642,612
Manitoba	1,491,836	1,500,214	1,508,591
Saskatchewan	2,032,575	2,047,935	2,063,295
Alberta	1,643,942	1,657,188	1,576,685
British Columbia	738,816	738,817	738,817
Totals	12,516,740	12,553,725	12,496,959

At Confederation the functions of government were at their minimum and required a comparatively small expenditure, so that the amount of revenue collected from the people was comparatively small, and the tax revenue still smaller. The Confederation agreement, however, provided for completion of the Intercolonial Railway, and that with British Columbia for the construction of the Canadian Pacific Railway; later on the National Transcontinental was undertaken. Indeed, the single item of railways and canals accounts for almost the entire increase in the national debt down to the Great War which cost the country some $1,700,000,000 besides the heavy obligations for pensions. Further, the current ideas of the functions of government differ very widely from those which originally existed. Literally scores of increased services are now required from the Government; where the Government at Confederation had only about 1,500 employees it has to-day some 44,000. (See p. 181).

A summary review of the financial situation of the Dominion as at March 31, 1930, is given in the balance sheet which follows:—

Balance Sheet of the Dominion of Canada, as at Mar. 31, 1930

(From the Public Accounts)

ACTIVE ASSETS—	
Cash on hand and in Banks	$ 27,991,597
Specie Reserve	65,927,474
Advances to Provinces, Banks, etc.	140,578,126
Advances to Foreign Governments	30,834,720
Soldier and General Land Settlement Loans	57,036,174
Miscellaneous Current Accounts	44,454,361
Total Active Assets	$ 366,822,452
Balance being Net Debt, Mar. 31, 1929 (exclusive of interest accrued and outstanding carried forward)	2,177,763,959
	$ 2,544,586,411
LIABILITIES—	
Dominion Notes in Circulation	$ 174,326,618
Bank Note Circulation Redemption Fund	6,363,362
Post Office Account, Money Orders, Postal Notes, etc., outstanding	5,091,768
Savings Bank Deposits	26,086,036
Insurance and Superannuation Funds	70,422,860
Trust Funds	20,976,277
Contingent Funds	713,948
Province Accounts	9,623,817
Funded Debt	2,228,128,629
Interest Due and Outstanding	2,853,096
	$ 2,544,586,411

NOTE.—The Dominion of Canada is also responsible for principal and interest on loans negotiated by railways, under various Acts of Parliament, amounting to $590,491,292.

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

Dominion Finances, 1868-1930

Fiscal Year	Revenue Receipts	Per capita Receipts	Total Expenditure	Per capita Expenditure	Net Debt at end of Year	Net Debt per capita
	$	$	$	$	$	$
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	434,386,537[1]	49·64	528,302,513[2]	60·11	2,340,878,984[3]	266·36
1926	380,745,506[1]	40·78	355,186,423[2]	37·83	2,389,731,099	254·51
1927	398,695,776[1]	42·07	358,556,751[2]	37·67	2,347,834,370	246·64
1928	422,717,983[1]	44·49	378,658,440[2]	39·21	2,296,850,233	237·82
1929	455,463,874[1]	46·97	388,806,313[2]	38·62	2,225,504,705	227·17
1930	441,411,806[1]	44·45	398,211,539[2]	40·10	2,177,763,959	222·29

[1] Exclusive of special receipts of $1,905,648 in 1921, $2,147,503 in 1926, $1,757,704 in 1927, $6,924,594 in 1928, $4,687,967 in 1929, and $4,540,479 in 1930.

[2] Includes advances to railways, Canadian Government Merchant Marine, etc., of $110,662,055 in 1921, $11,205,910 in 1926, $11,569,413 in 1927, $18,493,509 in 1928, $13,646,000 in 1929, and $8,259,905 in 1930.

[3] The net debt of Canada reached a maximum, for any fiscal year, at March 31, 1923, when it was $2,453,776,869.

For the first eight months of the current fiscal year ended November 30, 1930, total Dominion revenues were $266,327,700 compared with $321,803,497 for the similar period of the preceding fiscal year, customs revenues totalling $95,892,758 compared with $130,584,871. Total expenditures for the same periods were $274,296,879 and $269,649,992, respectively.

Recent Changes in Taxation.—The sales tax, which had been reduced from 5 p.c. to 4 p.c. in 1927, to 3 p.c. in 1928, and to 2 p.c. in 1929, was further reduced to 1 p.c. by the Dunning Budget of May 1, 1930. Income tax amendments, in the general direction of reducing the tax, were also made.

An extended downward revision of the tariff based upon enquiries made by the Tariff Advisory Board was also made in the May-day Budget, and the principle of "countervailing duties" was introduced and applied to sixteen specified items.

At the special session of the 17th Parliament called in September, 1930, the Prime Minister and Acting Minister of Finance, the Right Honourable R. B. Bennett, introduced detailed tariff changes designed to ensure additional employment and stated that a further revision of the tariff would follow at the next session. The principle of "countervailing duties" introduced by the Dunning Budget was modified so that fixed rates of duty were applied to the items mentioned in the former countervailing schedule.

General tariff increases were applied to certain agricultural products, iron and steel, textiles, boots and shoes, etc., and steps were taken by the Government to ensure that the purchaser be safeguarded against increased prices. The Tariff Advisory Board was abolished.

Inland Revenue.—In the fiscal year ended March 31, 1930, the gross amount of customs duties collected by the Department was $199,011,628, as compared with $200,479,505 in 1929 and $171,872,768 in 1928. The total of excise duties and excise war taxes collected in the fiscal year ended March 31, 1930, was $129,825,117, as compared with $148,374,269 in 1929 and $149,724,171 in 1928. The total of income tax collected in the fiscal year ended March 31, 1930, was $69,020,726, and of business profits war tax $173,300 as compared with $59,422,272 and $455,232 respectively in the previous year.

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 their retention of 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 waterpowers, 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 expansion in the ordinary revenues and expenditures and the increases in direct liabilities of the Provincial Governments are shown by aggregated figures for the years 1873-1929 and by individual provinces for 1929.

Aggregate Provincial Revenues and Expenditures, 1873-1929, and by Provinces, 1929

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
1925	132,398,729	136,648,242	857,257,360
1926	146,450,904	144,183,178	893,499,812
1927	156,845,780	152,211,883	915,237,988
1928	168,109,505	165,538,910	963,169,888
1929 (provisional)	184,598,024	177,542,192	1,034,071,264
Prince Edward Island	1,083,571	1,033,315	3,132,234
Nova Scotia	7,390,410	7,288,480	55,277,896
New Brunswick	5,991,375	6,521,575	53,063,658
Quebec	39,976,283	35,964,487	101,144,764
Ontario	65,549,718	61,906,824	429,289,134
Manitoba	12,150,490	12,344,493	98,705,271
Saskatchewan	16,096,666	15,971,231	66,729,579
Alberta	15,265,084	13,686,261	115,548,417
British Columbia	21,094,427	22,825,520	111,180,311

[1]Statistics for the Province of Saskatchewan are for 1913.

Municipal Finance.—Under 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 4,100 municipal governments in Canada. These 4,100 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 the provinces themselves; for example, the total annual ordinary expenditure of Montreal is greater than that of the Provincial Government of Quebec.

The cost of municipal government, like the cost of provincial and Dominion government, has greatly increased in recent years, as a result of the diminished purchasing power of the dollar and larger expenditures on education and other public services. Thus the aggregate taxes imposed by the municipalities of Ontario increased from $34,231,214 in 1913 to $110,811,025 in 1928. In Quebec the aggregate ordinary expenditures of the municipalities increased from $19,478,740 in 1914 to $32,928,855 in 1928. In Manitoba, again, municipal taxation has increased from $9,922,537 in 1912 to $19,463,666 in 1929; in Saskatchewan, from $7,811,328 in 1914 to $27,944,725 in 1928, in Alberta from $9,791,846 in 1914 to $11,922,319 in 1928 and in British Columbia from $8,698,820 in 1914 to $15,928,562 in 1928. The tax receipts of the municipalities of Nova Scotia were $6,653,310 in 1929 as compared with $3,254,094 as recently as 1919.

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 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

The Royal Mint, Ottawa.

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 dollar is a gold dollar weighing 25·8 grains, nine-tenths fine gold, and thus containing 23·22 grains of gold. Five-dollar and ten-dollar Canadian gold pieces have been coined at the Canadian branch of the Royal Mint 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. The Canadian gold reserves, which exist for the redemption of Dominion notes, contain, besides Canadian gold coin, British and United States gold coin, which is also legal tender in Canada, as well as bullion.

Dominion Notes.—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 steadily prior to 1914, and 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 June, 1930, were $174,219,000. About 60 to 70 p.c. of these Dominion notes are in the hands of the banks as reserves. Dominion notes are legal tender everywhere in Canada except at the offices which the Government maintains for their redemption. During the war period this redemption was suspended but gold payment was resumed on July 1, 1926.

Bank Notes.—As already stated, 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 profit. For the last forty years no note holder of a failed bank has lost a dollar. The note holder is the prior creditor in the case of the failure of a bank. The circulation of bank notes has proceeded on somewhat parallel lines with that of Dominion notes as is shown by the following table:—

Year	Dominion Note Circulation (averages for the year)	Bank Note Circulation (averages for the year)
	$	$
1870	7,294,103[1]	15,149,031
1880	13,403,958[1]	22,529,623
1890	15,501,360	32,834,511
1900	26,550,465	46,574,780
1910	89,628,569	82,120,303
1915	159,080,607	105,137,092
1920	305,806,288	228,800,379
1925	212,681,059	165,235,168
1926	190,004,824	168,885,995
1927	184,898,003	172,100,763
1928	201,171,816	176,716,979
1929	204,381,409	178,291,030
1930[2]	170,236,722	160,534,436

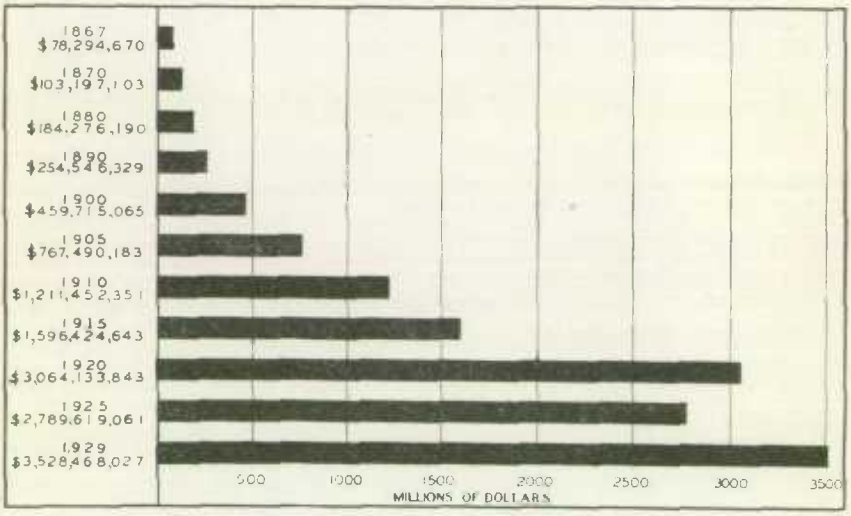
[1] Circulation on June 30. [2] Averages for nine months.

Banking.—About the commencement of the 19th century the growth of Canadian business was being hampered by the unsatisfactory and chaotic currency situation. The need for a stable paper currency was temporarily met by the army bills referred to above, but the withdrawal of this currency at the close of the war of 1812 directed public attention once more to the expediency of securing a currency through the establishment of banks. The Bank of Montreal commenced business as a bank of note issue in 1817, the Bank of Quebec, the Bank of Canada at Montreal and the Bank of Upper Canada at Kingston in 1818, the Bank of New Brunswick in 1820, and a

second Bank of Upper Canada at York in 1821, while the Halifax Banking Company (private) commenced business in 1825 and the Bank of Nova Scotia in 1832. Later banks included the Bank of British North America, which commenced business in Canada in 1836, Molsons Bank established in 1853, the Bank of Toronto in 1855, the Banque Nationale in 1860, the Bank Jacques Cartier (later the Banque Provinciale du Canada) in 1862, the Union Bank in 1866, the Canadian Bank of Commerce in 1867, the Merchants Bank of Halifax (now the Royal Bank) in 1869, the Dominion Bank in 1871, the Bank of Hamilton in 1872, the Banque d'Hochelaga in 1873, the Bank of Ottawa in 1874, the Imperial Bank in 1875, the Standard Bank in 1876, and others of more recent date. Barclay's Bank (Canada), a subsidiary of the British bank of that name, was established in 1929.

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, 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. Though usually described as of Scotch parentage, from its resemblance in certain features, especially the branch banks, the Canadian system is really derived from that of the United States in the first half of the 19th century, the latter system having developed along different

THE GROWTH OF THE ASSETS OF CANADIAN CHARTERED BANKS
1867-1929
(BASED ON ANNUAL AVERAGES)



lines after the Civil War. 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 present century has been in banking, as in industry, an era of amalgamations and of elimination of the weaker organizations, the number of chartered banks which was 36 in 1881, and 34 in 1901, having dropped to 25 in 1913, and to 11 in 1929. 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 1930 to 4,069. From 1867 to Sept., 1930, the total assets have grown from $78,000,000 to $3,228,000,000.

In recent years the banks of Canada have extended their business outside of the country itself and at the beginning of 1930 had among them 189 branches in foreign countries, mainly in Newfoundland, the British and foreign West Indies, Central and South America, and also 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 Sept. 30, 1930, are shown in the table below:—

Bank	Number of Branches in Canada and Abroad	Total Assets Sept. 30, 1930	Liabilities to Shareholders Sept. 30, 1930	Liabilities to the Public Sept. 30, 1930	Total Liabilities Sept. 30, 1930	Loans and Discounts Sept. 30, 1930	Deposits by the Public Sept. 30, 1930
		$ 000,000	$ 000,000	$ 000,000	$ 000,000	$ 000,000	$ 000,000
Bank of Montreal	671	794	74	714	788	472	625
Bank of Nova Scotia	346	268	35	231	266	171	201
Bank of Toronto	202	128	15	112	127	81	98
Banque Provinciale du Canada	334	53	5	47	52	31	42
Canadian Bank of Commerce	780	657	60	591	651	409	498
Royal Bank of Canada	966	889	70	812	882	584	667
Dominion Bank	140	135	16	118	134	88	101
Banque Canadienne Nationale	585	149	14	133	147	90	120
Imperial Bank of Canada	203	142	15	125	140	90	105
Weyburn Security Bank	30	5	1	4	5	2	3
Barclay's Bank (Canada)[1]	1	8	1	7	8	1	1
Totals, 1930	4,258	3,228	306	2,894	3,200	2,019	2,460
Totals, 1910	2,621[2]	1,211	179	1,019	1,198	870	910
Totals, 1900	641	460	98	356	454	279	305

[1]Barclay's Bank commenced operations in Canada in September, 1929.
[2]1911.

Through the operation of the clearing houses, a record of inter-bank transactions has been maintained, since the opening of the first clearing house in 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, $3,722 millions in 1916, $6,254 millions in 1919, and $7,109 millions in 1920 at the height of the inflation period. 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—an increase of nearly 72 p.c. in five years.

The Heart of the Financial District of Montreal.—St. James Street, showing the Royal Bank Building.

Photo, courtesy Dept. of the Interior

Bank Clearings and Bank Debits, 1924-1930

Year	Exchanges of the Clearing Houses of Chartered Banks in Canada	Bank Debits to Individual Accounts
	$000,000	$000,000
1924	17,008	27,157
1925	16,762	28,126
1926	17,715	30,358
1927	20,508	36,094
1928	24,555	43,477
1929	25,105	46,670
1930[1]--		
January	1,746	3,211
February	1,511	2,815
March	1,696	3,092
April	1,618	3,082
May	1,845	3,427
June	1,745	3,398
July	1,686	3,094
August	1,526	2,802
September	1,579	2,967
October	1,956	3,618
November	1,578	2,974

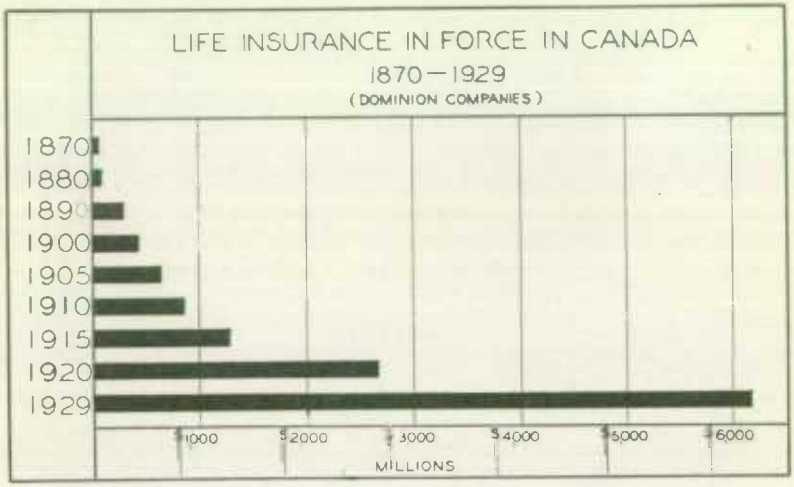
[1]By months January to November inclusive.

Insurance

Life Insurance.—The life insurance business was introduced into Canada by companies from the British Isles and the United States. Among the first companies to transact life insurance business in Canada may be mentioned: Scottish Amicable (1846), Standard (1847), Canada Life (1847), Ætna (1850), Liverpool and London and Globe (1851), and Royal (1851). No fewer than 14 companies began business in the early '70's, including four native companies, namely: Sun (incorporated 1865, began business 1871), Mutual of Canada (Ontario Mutual, 1870), Confederation (1871) and London (1874). By 1875 there were at least 26 companies and possibly several more, competing for the available business in Canada, as against 47 active companies licensed by the Dominion and a few provincial companies in 1929. Of the 47 companies licensed by the Dominion 28 were Canadian, 7 British and 12 foreign.

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 policy holder. The benefits which may now be obtained under a life insurance policy are calculated to meet the needs of the policy holder and of his dependants, whether in event of old age or in event of death or of disability. Within the last few years there has been 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.

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 growth in the amount of life insurance in force has been phenomenal. In 1869 the total life insurance in force in Dominion companies was only $35,680,000 as compared with $6,157,308,010 at the end of 1929. The increase in the life insurance in force in Canada during the single year 1929 was greater than the total amount in force in Canada even so late as 1903, and the increase in the premium income of all life companies licensed to transact business in Canada was from $193 millions in 1928 to $211 millions in 1929.



The table below shows the growth of life insurance month by month in 1930 as compared with 1929. 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, 1929 and 1930

Month	1929	1930	Month	1929	1930
	$000	$000		$000	$000
January	50,116	46,268	July	55,799	47,375
February	46,957	45,159	August	42,032	36,666
March	49,060	49,924	September	43,520	39,283
April	52,901	52,299	October	52,634	45,525
May	50,673	49,624	November	56,188	46,382
June	54,136	54,901	December	54,857	–

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. Among the other pioneer fire insurance companies still in operation, mention may be made of the following: the Quebec Fire Assurance Co., which commenced business in 1818 and was largely confined in ownership and operations to Quebec province; the British America Assurance Co., incorporated in 1833, the oldest company in Ontario; the Western Assurance Co., organized in 1851 and, after a rapid and steady growth, one of the largest companies of its kind on the continent; two American companies, the Ætna Insurance Co., of Hartford, Conn., and the Hartford Fire Insurance Co., which commenced business in Canada in 1821 and 1836 respectively.

The report of the Superintendent of Insurance for the year ended Dec. 31, 1929, shows that at that date there were 216 fire insurance companies doing business in Canada under Dominion licences, of which 51 were Canadian, 64 were British and 101 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 76 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 we have statistics) 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. At the end of 1929, besides the $9,431 millions of fire insurance in force in companies with Dominion licences, there were also $1,325 millions in force in companies with provincial licences, and over $859 millions in force with companies, associations, or underwriters not licensed to transact business in Canada, or a grand total of about $11,615 millions of fire insurance in force in the Dominion.

The trend of the growth of fire insurance in force in companies licensed by the Dominion Government is indicated by the following figures:—

Year	Fire Insurance in force at end of Year
	$
1880	411,563,271
1890	720,679,621
1900	992,332,360
1910	2,034,276,740
1920	5,969,872,278
1925	7,583,297,899
1926	8,051,444,136
1927	8,287,732,966
1928	8,869,512,819
1929	9,431,169,952

Miscellaneous Insurance.—Since 1875 the growth of insurance business other than fire and life has been a steady one. The report of the Superintendent of Insurance for the calendar year 1880 shows that the number of companies duly licensed for the transaction of accident, guarantee, plate glass, and steam boiler insurance—the only four classes of miscellaneous insurance then transacted—was 5, 3, 1 and 1, respectively. Miscellaneous insurance now includes 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, 10 companies transacted business of this kind, such insurance was sold in 1929 by 225 companies, of which 47 were Canadian, 57 British and 121 foreign.

The total net premium income for 1929 was $42 millions and the most important class of miscellaneous insurance, according to the amount of premiums received, is automobile insurance, which has greatly increased 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 $573,604, and in 1929 $16,829,000. The premium income of employers' liability and workmen's compensation accident insurance came second with $5,636,000. Hail insurance companies were third, with a premium income in 1929 of $3,567,000 as compared with $6,919,000 in 1928. The premium income of all accident and sickness insurance combined, however, totalled $12,537,000 in 1929.

Loan and Trust Companies

Business such as that now transacted by loan and trust companies was first carried on by an incorporated Canadian company in 1844, when the Lambton Loan and Investment Co. was established. In order to legalize and encourage such operations, an Act to this end was passed by the Legislature of Canada in 1846, followed in 1847 and 1849 by similar Acts in New Brunswick and Nova Scotia respectively. These early companies were termed building societies; their activities comprised mainly the lending of money on security of real estate and also the lending of money to members without their being liable to the contingency of losses or profits in the business of the society. In addition to these operations, such companies were authorized, by an Act of 1859, to "borrow money to a limited extent". Later, by the Building Societies Act of 1874, authority was given to receive money on deposit and to issue debentures subject to certain restrictions.

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 until 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 increases were again 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 make voluntary returns so that all-Canadian totals are again available. The paid up capital stock of loan companies at the end of 1929 amounted to $43,336,327; reserve funds to $43,162,701; liabilities to the public $162,761,270, and to shareholders $90,885,972; a total of $253,647,242.

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 minor 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 origina 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, whether operating under Dominion or under provincial licences, show an increase from $805 millions in 1922 (the earliest year for which figures are available), to $2,060 millions at the end of 1929. Of this enormous amount, $1,836 millions was in estates, trusts and agency funds.

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 five years are shown below:—

Yield of Province of Ontario Bonds by Months, 1926-1930

Month	1926	1927	1928	1929	1930
	p.c.	p.c.	p.c.	p.c.	p.c.
January	4·80	4·65	4·30	4·65	4·90
February	4·80	4·65	4·20	4·70	4·90
March	4·80	4·60	4·25	4·85	4·85
April	4·80	4·56	4·25	4·95	4·85
May	4·80	4·55	4·35	5·00	4·85
June	4·80	4·55	4·40	4·95	4·83
July	4·80	4·55	4·50	4·95	4·80
August	4·80	4·55	4·60	4·90	4·60
September	4·80	4·55	4·60	5·00	4·45
October	4·80	4·50	4·55	4·95	4·50
November	4·75	4·47	4·55	4·95	4·50
December	4·75	4·35	4·60	4·90	–

Commercial Failures.—The cumulative total of commercial failures in Canada for the first ten months of 1930 as reported to the Dominion Bureau of Statistics under the provisions of the Bankruptcy and Winding Up Acts was 1,941 as compared with 1,766 in 1929, 1,614 in 1928, 1,478 in 1927, and 1,437 in 1926, over the same ten-month period.

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

Commercial Failures by Provinces, 1926-1930

Year	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
1930[1]	2	53	37	827	635	82	111	120	74	1,941
1929	1	71	61	927	761	91	84	101	69	2,166
1928	4	90	56	767	758	103	63	126	70	2,037
1927	4	66	74	658	681	97	54	135	72	1,841
1926	4	63	74	654	655	84	68	113	58	1,773

[1]Ten months January to October inclusive.

Commercial Failures by Groups, 1926-1930

Year	Trade	Manufactures	Agriculture	Logging, Fishing	Mining	Construction	Transportation and Public Utilities	Finance	Service	Not Classified	Total
1930[1]	977	395	92	10	8	43	36	24	222	134	1,941
1929	1,100	443	125	4	11	61	21	5	239	157	2,166
1928	884	505	108	31	23	70	45	5	263	103	2,037
1927	818	430	116	30	26	63	36	–	243	79	1,841
1926	805	390	135	27	20	52	34	1	225	84	1,773

[1]Ten months January to October inclusive.

CHAPTER XVIII

LABOUR

Occupations of the People.—The latest decennial census, taken in 1921, showed that in Canada there were 3,173,169 gainfully employed persons, in a population of 6,671,236 aged 10 years and over. This was a proportion of 47·6 p.c., compared with 49·4 p.c. gainfully occupied in the population of 1911. The decrease in this ratio during the decade was chiefly due to three causes, *viz.*, the suspension of immigration during and following the Great War, changes in laws governing school attendance and working conditions, and the presence of widespread business depression in 1921, accompanied by much unemployment, especially for male workers.

Of the number gainfully occupied in 1921, 2,683,019 or 84·6 p.c. were males, and 490,150 or 15·4 p.c. were females. In the 1911 census, 86·6 p.c. were males, and 13·4 p.c. were females. In 1921, the proportions of working males and females were 77·5 p.c. and 15·3 p.c., respectively, of the total populations of these sexes aged 10 years and over; these ratios in 1911 were 79·5 p.c. and 14·3 p.c., respectively.

The following table shows the industrial distribution of occupied males and females:—

Occupations of the Gainfully Employed Population of each Sex in Canada, Numbers and Percentages in each Occupation, 1921, and Percentages, 1911.

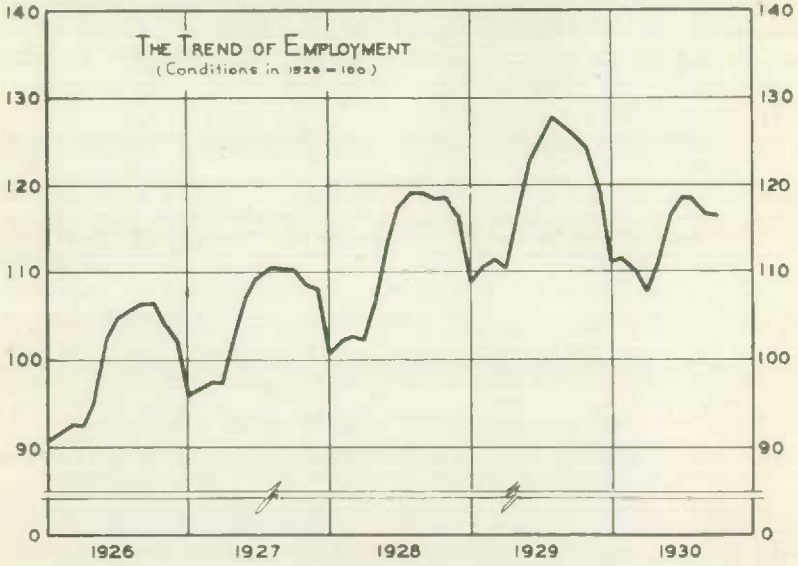
Occupational Group	Numbers		Percentages			
	Males 1921	Females 1921	Males		Females	
			1911	1921	1911	1921
Agriculture	1,023,706	17,912	38·9	38·2	4·4	3·7
Building trades	284,052	627	10·4	10·6	–	0·1
Domestic and personal service	77,783	134,632	3·2	2·9	38·1	27·5
Civil and municipal government	81,959	12,582	3·1	3·1	1·1	2·6
Fishing and hunting	29,241	51	1·5	1·1	–	–
Forestry	39,808	7	1·8	1·5	–	–
Manufactures	449,348	106,410	16·6	16·7	27·0	21·7
Mining	50,860	203	2·6	1·9	–	–
Professional	103,479	118,670	2·7	3·8	15·9	24·2
Trade and merchandising	295,836	77,911	10·2	11·0	11·6	15·9
Transportation	246,947	21,145	9·0	9·2	1·9	4·3
Totals, Gainfully Employed	2,683,019	490,150	100·0	100·0	100·0	100·0

It appears from this table that there were no especially marked changes in the industrial distribution of male workers during the decade 1911 to 1921; agriculture, despite an absolute gain in numbers employed, showed a small decrease in its proportion to the total, while mining declined both in number of employees and proportion. On the other hand, professional services and trade reported both absolute and percentage gains.

Among female employees, there was an absolute increase in the number of factory operatives as compared with 1911, but their proportion to the total workers declined considerably, probably in part as a result of changes in school attendance and labour laws. The ratio for the domestic and personal service group reflects changing economic conditions and greater opportunities for female employees in other branches of industry. The gain in professional and commercial occupations for women was particularly noteworthy, while that in transportation was also important.

Employment During 1930

The importance of current statistics on employment has for some years been recognized in Canada, and a monthly record of the numbers 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 hereunder shows the trend of employment during the last five years.



During the twelve months of 1930, some 7,200 employers reported to the Dominion Bureau of Statistics an average working force of 993,845 persons. Monthly index numbers, based on the 1926 average as 100, are calculated from these returns from employers; in the twelve months of 1930, the general index averaged 113·4, compared with 119·0 and 111·6 in the same months of 1929 and 1928, respectively. Employment, therefore, was in smaller volume during 1930 than in the preceding year, but the number employed was generally greater than in the twelve months of 1928. The accompanying table shows monthly index numbers of employment for the five economic areas since 1929, with yearly averages since 1921.

Index Numbers of Employment as Reported by Employers, by Economic Areas, as at the first of each month, November, 1929, to December, 1930, 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, 1930.

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—						
Nov. 1.....	124·6	122·8	126·5	129·5	113·9	124·6
Dec. 1.....	113·3	118·4	123·1	119·0	108·3	119·1
Averages.....	114·8	113·4	123·1	126·3	111·5	119·0
1930—						
Jan. 1.....	113·6	107·4	116·1	111·0	99·1	111·2
Feb. 1.....	112·1	108·2	117·1	109·8	99·9	111·6
Mar. 1.....	110·2	106 6	115·6	105·3	104·2	110·2
April 1.....	107·8	103·7	112·7	103·2	106·0	107·8
May 1.....	113·1	106·1	115·7	109·2	110·7	111·4
June 1.....	122·4	114·5	117·8	115·8	113·3	116·5
July 1.....	141·1	116·8	116·9	120·4	113·5	118·9
Aug. 1.....	140·9	114·7	115·7	126·2	115·8	118·8
Sept. 1	122·5	113·6	113·6	129·8	114·6	116·6
Oct. 1.....	116·2	113·0	114·6	130·0	112·1	116·2
Nov. 1.....	110·1	111·9	111·6	125·8	105·4	112·9
Dec. 1.....	109·5	106·7	108·2	118·6	100·0	108·5
Averages, 12 months	118·3	110·3	114·6	117·1	107·9	113·4
Relative Weight by Economic Areas as at Dec. 1, 1930...	7·7	28·3	40·8	14·9	8·3	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 Maritime Provinces reported a higher level of employment in 1930 than in any other year for which data are available; this was largely due to an important program of road work undertaken during the summer. In the remaining provinces, the indexes averaged lower than in 1929, when the record reached its maximum.

A comparison of the figures for 1928 and 1930 shows that employers in the latter year reported slightly greater activity than in the former, in all except the Prairie Provinces, where the index averaged 117·1, or only slightly less than the 1928 mean of 117·9.

Employment in Leading Cities.—The Dominion Bureau of Statistics prepares monthly statements for eight of the leading industrial centres in the Dominion, namely, Montreal, Quebec City, Toronto, Ottawa, Hamilton, Windsor and the adjacent Border Cities, Winnipeg and Vancouver. The accompanying table gives index numbers for these cities, by months since November, 1929, with yearly averages since 1922.

Index Numbers of Employment as Reported by Employers in Leading Cities, as at the first of each month, November, 1929, to December, 1930, with Yearly Averages since 1922.

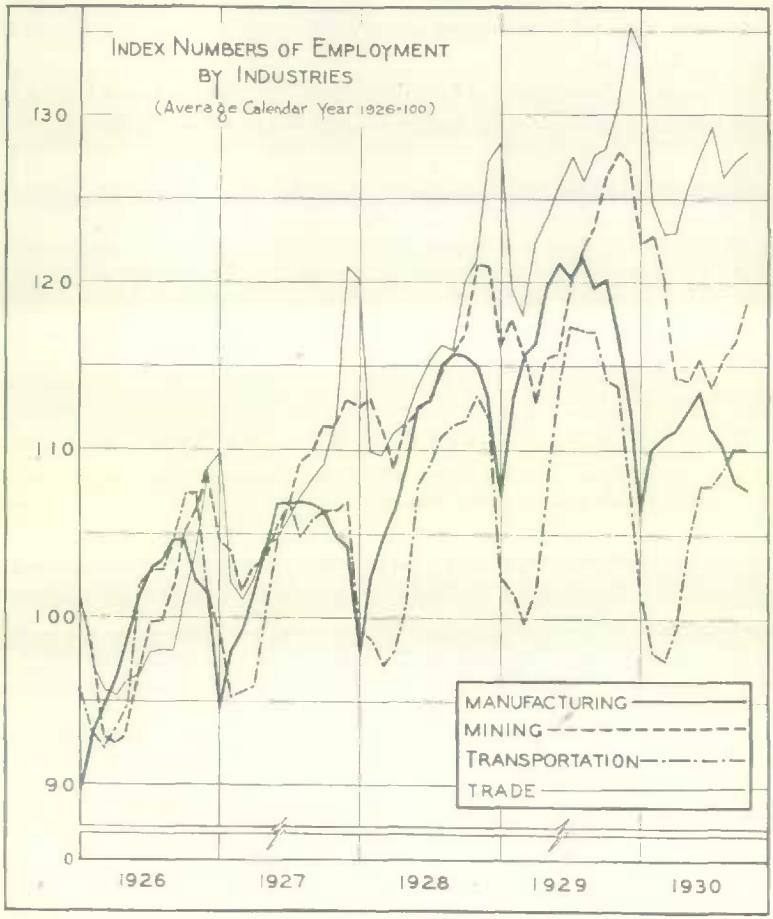
Year and Month	Montreal	Quebec	Toronto	Ottawa	Hamilton	Windsor[2]	Winnipeg	Vancouver
1922—Averages....	86·0	–	96·1	–	–	–	93·9	81·5
1923—Averages....	92·7	–	98·0	107·2	94·6	–	90·6	82·5
1924—Averages....	93·0	99·6	94·3	102·3	86·0	–	86·5	86·2
1925—Averages....	94·2	97·9	95·7	100·1	88·0	85·1	88·5	92·6
1926—Averages[1]...	99·7	99 1	99·6	100·0	99·3	99·9	99·2	99·9
1927—Averages....	103·0	111·3	105·7	107·7	103·1	86·2	104·1	100·7
1928—Averages....	108·2	119·9	112·1	115·8	108·2	137·3	110·1	104·3
1929—								
Nov. 1.....	121·8	133·6	125·0	125·0	130·4	134·9	115·8	111·6
Dec. 1.....	117·1	127·1	122·9	121·8	128·7	123·5	113·8	109·4
Averages.....	115·3	124·2	121·3	120·7	128·4	153·2	112·3	109·2
1930—								
Jan. 1.....	107·2	123·4	117·6	119·1	123·8	116·5	109·9	104·2
Feb. 1.....	109·5	112·5	116·4	115·4	122·8	128·1	106·9	107·2
Mar. 1.....	108·7	110·0	115·9	116·0	120·4	136·7	104·6	108·3
April 1.....	109·2	111·7	116·5	116·2	120·4	140·9	103·4	110·4
May 1.....	110·8	115·3	117·8	125·3	118·4	150·5	105·7	110·8
June 1.....	116·6	122·3	118·5	130·4	118·0	149·4	107·1	110·8
July 1.....	116·0	130·1	117·8	129·4	115·0	134·9	109·6	110·2
Aug. 1.....	114·5	138·2	115·4	131·8	112·6	120·8	110·3	111·7
Sept. 1.....	113·2	138·5	114·7	125·6	105·6	121·2	110·7	114·0
Oct. 1.....	114·1	138·3	116·2	127·5	103·7	113·9	109·5	112·1
Nov. 1.....	112·6	135·3	115·5	124·6	102·0	116·5	108·6	110·4
Dec. 1.....	108·6	128·0	113·8	116·0	104·6	113·6	104·3	107·4
Averages, 12 mos.	111·8	125·3	116·3	123·1	113·9	128·6	107·6	109·8
Relative Weight by Cities as at Dec. 1, 1930[3].....	14·1	1·4	12·7	1·3	3·4	1·5	3·3	3·2

[1] See footnote to preceding table, also headnote. [2] Includes adjacent "Border Cities".
[3] Percentages of Dominion total.

In Montreal, Toronto and Hamilton, the indexes in 1930, though lower than in the preceding year, were higher than in 1928 and earlier years of the record. Firms in Quebec City, Ottawa and Vancouver reported a rather greater volume of employment than in any other year for which data are available. Employment in Windsor and the adjacent Border Cities, and Winnipeg, however, was less than in either 1928 or 1929, although the numbers employed were larger than in earlier years of the record.

Employment by Industries.—An analysis of the data by industrial groups shows that during 1930, employment in services and trade was rather brisker than in 1929, the previous maximum. In manufacturing, logging and transportation, activity was lower than in 1929 or 1928, although it was higher than in earlier years on record. Mining and communications reported curtailment as compared with the preceding year, but the indexes in these two divisions were higher than in 1928 and other years for which data are available. Construction, stimulated to some extent by projects undertaken for the relief of unemployment, afforded on the whole practically the same volume of employment as in 1929, while activity was greater than in preceding years on record.

Within the manufacturing division, the iron and steel industries suffered especially from the depression which prevailed during 1930. The index for this group towards the close of the year was more than twenty points lower than in the autumn of 1929. The pulp and paper, rubber, textile, building material, leather and lumber groups also afforded less employment in 1930 than in the preceding year. On the other hand, vegetable food and electrical apparatus factories (the latter including radio manufacturing), showed greater activity than in any other year for which statistics are available.



Index Numbers of Employment as Reported by Employers, by Industries, as at the first of each month, January, 1930, to December, 1930, with Yearly Averages since 1921.

Year and Month	Manufacturing	Logging	Mining	Communications	Transportation	Construction and Maintenance	Services	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	106·2	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—									
Jan. 1.....	106·5	200·2	122·5	128·2	101·9	92·7	123·5	133·8	111·2
Feb. 1.....	110·2	209·8	123·0	120·7	98·2	88·0	125·2	124·6	111·6
Mar. 1.....	110·9	178·3	119·8	118·7	97·7	83·7	125·0	123·0	110·2
April 1.....	111·3	87·6	114·5	117·1	99·5	86·4	126·1	123·1	107·8
May 1.....	112·4	63·5	114·1	117·3	104·3	112·0	128·9	125·6	111·4
June 1.....	113·6	90·0	115·6	119·5	108·0	137·0	134·7	127·6	116·5
July 1.....	111·3	82·1	113·8	119·7	108·0	170·1	142·7	129·5	118·9
Aug. 1.....	110·2	61·5	115·5	121·0	108·9	179·8	142·4	126·4	118·8
Sept. 1.....	108·2	54·3	116·6	120·9	110·2	169·2	143·4	127·3	116·6
Oct. 1.....	107·8	70·8	118·9	119·5	110·1	163·0	136·7	127·9	116·2
Nov. 1.....	104·6	90·9	121·9	119·9	106·0	148·8	126·9	129·2	112·9
Dec. 1.....	100·6	106·5	117·8	115·3	102·5	127·3	123·9	134·8	108·5
Averages— 12 months.....	108·9	108·0	117·8	119·8	104·8	129·8	131·6	127·7	113·4
Relative Weight by Industries as at Dec. 1, 1930..	50·7	3·0	5·5	3·1	12·3	13·4	2·2	9·8	100·0

[1] See footnote to table on p. 155; also headnote.

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 unionists throughout Canada. During the first ten months of 1930, some 1,700 of these reported an average membership of 204,911, of whom 20,862 were, on the average, unemployed. This was a percentage of 10·2, as compared with that of 4·8 recorded in the months, January to October, 1929. Unemployment among trade unionists in all provinces and practically all industries was greater than in the preceding year, but towards the latter part of 1930, some improvement over the early months of 1930 was shown in the Western Provinces. The accompanying table contains percentages of unemployment among trade union members in the different provinces from October, 1929 to October, 1930, with yearly averages since 1919.

Percentages of Unemployment in Trade Unions, by Provinces

Year and Month	Nova Scotia and P.E.I.	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada
1919—Averages...	3·1	2·0	3·4	2·7	2·1	3·2	2·0	7·9	3·4
1920—Averages...	1·8	2·0	7·2	3·4	3·1	3·2	2·8	11·2	4·9
1921—Averages...	11·3	8·5	16·6	9·7	8·5	7·8	7·8	23·5	12·7
1922—Averages...	7·1	4·3	8·6	5·0	8·9	5·4	6·1	12·4	7·1
1923—Averages...	3·0	2·0	6·7	3·7	5·8	3·0	6·0	5·8	4·9
1924—Averages...	5·1	4·0	10·9	6·1	6·5	4·3	5·4	5·8	7·2
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—									
Oct. 1.....	2·3	2·3	7·8	4·4	9·3	4·0	7·2	6·9	6·0
Nov. 1.....	5·1	3·0	13·6	6·3	10·5	8·8	10·8	9·8	9·3
Dec. 1.....	5·2	2·4	14·5	9·7	12·8	13·0	13·9	11·5	11·4
Averages.....	4·0	1·6	7·7	4·3	7·1	5·3	6·4	5·9	5·7
1930—									
Jan.....	7·8	4·0	11·3	9·8	10·0	12·1	13·7	13·8	10·8
Feb.....	6·1	3·2	12·1	11·1	10·4	15·0	14·9	14·8	11·5
Mar.....	5·5	3·9	10·0	10·8	10·5	14·7	16·9	12·4	10·8
April.....	5·6	2·8	8·3	8·8	8·9	11·0	15·6	9·7	9·0
May.....	4·1	2·2	14·8	7·7	9·0	7·9	16·5	10·6	10·3
June.....	3·3	2·8	17·5	7·4	9·2	8·9	14·2	8·4	10·6
July.....	5·8	2·5	11·5	8·1	8·4	8·2	12·7	8·8	9·2
Aug.....	5·2	1·6	12·3	8·5	7·2	6·7	4·6	8·9	9·3
Sept.....	5·2	2·3	12·7	9·6	6·5	4·9	8·7	10·1	9·4
Oct.....	4·1	4·6	14·5	11·2	8·8	7·7	9·2	10·5	10·8
Averages, 10 months..	5·3	3·0	12·5	9·3	8·9	9·7	13·4	10·8	10·2

Unemployment Relief Act, 1930

The Dominion Unemployment Relief Act, 1930, was enacted by the Seventeenth Parliament in September, 1930. The Act specifies that $20,000,000 might be expended "in constructing, extending or improving public works and undertakings, railways, highways, bridges, and canals, harbours and wharves; assisting in defraying the cost of distribution of products of the field, farm, forest, sea, lake, river and mine; granting aid to provinces and municipalities in any public work they may undertake for relieving unemployment and reimbursing expenditures made by provinces and municipalities in connection with unemployment, and generally in any way that will assist in providing useful and suitable work for the unemployed". Administration of the Act is vested in the Minister of Labour and an advisory committee on expenditure consisting of the Minister of Railways and Canals, the Minister of Public Works, the Minister of the Interior and the Minister of Marine. Under the regulations governing the administration of the Act the Minister is authorized to enter into agreements with the several provinces for the expenditure of the $20,000,000 appropriated under the Act, either for the purpose of immediate relief or for assisting local public works undertaken to provide employment. The sum of $4,000,000 was set aside to provide for the payment to municipalities of one-third of their expenditures in the direct relief of persons for whom work could not be procured, the Provincial Govern-

m ts and the municipalities each being required to assume responsibility for one-third of the expenditure for this purpose.

In regard to public work undertaken for the relief of unemployment the regulations provide that agreements should be made between the Minister and the Provincial Governments whereby the municipalities would pay one-half the total expenditures on public works undertaken by them, the Dominion and Provincial Government concerned each contributing one-fourth of the total amount. Exception is made where municipalities, by reason of recent abnormal expenditures for unemployment relief, are unable to bear half the cost of such public works. All agreements under the Act must be in accordance with the principles contained in the Fair Wages and Eight-Hour Day Act, 1930.

Agreements have been entered into with the Canadian Pacific Railway Company and the Canadian National Railways whereby there will be expended by these railway companies a sum of approximately $26,000,000 in the performance of certain works and the purchase of certain material over and above the normal expenditure of the said railways, such works to be commenced immediately and to be completed within the next fifteen months. As compensation to the said railway companies the Dominion agrees to pay out of the amount appropriated by the Unemployment Relief Act interest at the rate of 5 p.c., calculated for a period of 18 months, on the total estimated cost of the works.

A grant of $500,000 has also been made to the Railway Grade Crossing Fund from which fund, under the provisions of the Railway Act, contributions are made for the purpose of obviating dangerous level crossings, in order to provide employment.

The following summary will show the standing of the appropriation as at December 12th.

Unemployed Relief Allotments and Commitments under the Unemployment Relief Act, by Provinces, as at Dec. 12, 1930.

Province	Allotment	Dominion Commitments Approved	Balance Unallotted	Total Cost of Public Works
	$	$	$	$
Prince Edward Island	90,000	72,000	18,000	144,000
Nova Scotia	700,000	587,878	112,122	1,974,339
New Brunswick	500,000	203,150	296,850	406,300
Quebec	2,850,000	2,322,937	527,063	8,504,950
Ontario	3,850,000	2,806,820	1,043,180	13,384,131
Manitoba	900,000	758,293	141,707	2,293,457
Saskatchewan	1,000,000	431,285	568,715	1,477,941
Alberta	900,000	862,484	37,516	2,667,536
British Columbia	900,000	746,334	153,666	2,343,115
Yukon	20,000	20,000	–	20,000
Direct Relief	4,000,000	5,000	3,995,000	–
Grade Crossing Fund	500,000	500,000	–	1,050,000
Canadian Pacific Railway Co.	863,550	863,550	–	11,514,000
Canadian National Railways	882,412	882,412	–	14,159,403
Administration	100,000	* 3,049	96,951	–
Balance	1,944,038	–	1,944,038	–
Totals	20,000,000	11,065,192	8,934,808	59,939,172

*Actually expended.

Transactions of the Local Offices of the Employment Service of Canada

In co-operation with the provinces, the Dominion Department of Labour maintains local employment offices in 67 centres throughout the Dominion. The volume of business transacted in these bureaux is to some extent indicative of current labour conditions. Up to November 30, 1930, 538,819 applications for work and 330,359 vacancies were registered, while the regular and casual placements effected numbered 171,415 and 142,513 respectively; in the same period of 1929, the applicants numbered 508,031, the positions notified 399,265, and the regular placements 245,789, while the casual positions filled numbered 124,767. There was thus a considerable decline in both vacancies offered and positions filled during 1930, while the number of persons applying for work increased slightly.

Labour Legislation and its Administration.—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, 1930, 729 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 copes with the unemployment problem; 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. In several of the provinces likewise, namely, in Quebec, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia, Departments or Bureaux 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 safeguarding 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 1929, there were in existence in Canada 1,953 international locals having 203,514 members, and 825 national unions with a membership of 115,962. The total number of organized workers reported to the Department of Labour was therefore 319,476, compared with 300,602 in 1928. Of the latter number, 186,917 unionists belonged to international craft organizations, while 113,685 were members of the national unions.

Union Benefits.—The labour bodies distribute large amounts of money to their members in the form of benefits, the chief of these being death, unemployed and travelling, strike, sick and accident, and old age pension payments. Canada's share of the benefits from the international organizations is not known, but apart from these amounts, the distribution in Canada of benefits aggregated $445,627 in 1929, compared with $406,041 in 1928.

Trades and Labour Congress of Canada.—The oldest federated labour organization in the Dominion is the Trades and Labour Congress, which is the recognized head of the internationally organized workers in Canada and their representative in dealing with legislative matters. This congress was established in 1873, but did not actually function until 1886.

Annual meetings are held in different cities, that for 1930 taking place in Regina during September, and being attended by 225 delegates. Among the many important matters dealt with, probably the most timely concerned unemployment. The congress reiterated the proposals on this subject which during the past few years it has submitted to the Government. Important among these were recommendations respecting the increasing and the stabilization of employment; the institution of tariff reform designed to give protection and preference to Canadian labour; the fullest development of our natural resources; the encouragement of building during the winter; the abolition of private employment agencies and the development of the employment offices maintained under The Employment Offices Co-ordination Act. The establishment of a national system of unemployment insurance, based on contributions by the State, the employer and the employee, was also advocated. In other important resolutions, the congress went on record as favouring the establishment or the extension of the benefits of mothers' allowances, old age pensions, minimum wage laws and other acts promoting the social welfare of the population.

The All-Canadian Congress of Labour.—The All-Canadian Congress of Labour, which declares that the Canadian labour movement must be freed from the reactionary influence of unions controlled in the United States, 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 by (*a*) their organization in autonomous bodies for economic purposes; (*b*) the education of the workers as to the necessity of working-class political action, and (*c*) the furtherance of such legislation as shall be of immediate benefit to the workers and which tends to increase their social and political power.

Annual meetings of this body are held, that in November, 1929, having been attended by 84 delegates, representing a membership of 52,429 workers. Many resolutions were passed at this meeting, some of these dealing with the extension of the labour movement and the closed shop, the promotion of labour representation in politics, and the establishment of a national unemployment insurance scheme.

Federation of Catholic Workers of Canada.—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. These accepted for their guidance the encyclical on "The Conditions of the Working Classes" issued on May 15, 1891, by Pope Leo XIII, the provisions of which were later proclaimed by Pope Pius X as fundamental rules for workingmen's associations.

With the growth of the Catholic union movement, 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 principles of this body were approved by the religious authorities and 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.

Since its establishment in 1921, the Federation of Catholic Workers has met regularly each year. The 1930 convention was held in Montreal in September and was attended by 150 delegates. Forty-nine resolutions were presented for consideration; these dealt with the restriction of communistic activities, and also of immigration, with unemployment and with many matters of more local interest.

Industrial Disputes.—During 1929, the losses to industry and to workers through industrial disputes were less than in any other year since 1901, with the exception of 1915. There were 88 disputes, involving 12,924 workers and a time loss of 154,936 working days, compared with 97 disputes involving 18,239 workers and 238,132 working days in 1928. The maximum loss in working days was 3,942,189 in 1919, and the minimum was 106,149 in 1915. During the twelve months of 1930, there were 66 disputes involving 14,300 workers and 89,150 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.

On Oct. 26-27, 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.

In the federal elections held in July, 1930, 13 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.

Organized labour is represented in the Cabinet by Senator The Hon. G. D. Robertson, Minister of Labour, under whose administration the 1930 unemployment relief program of the Government is being carried out.

Of the three labour candidates who contested seats in the Ontario general election in October, 1929, one was elected. Four ridings were contested by communist candidates, but all were defeated.

Employers' Associations.—In recent years, the growth of employers' organizations has been a noteworthy movement in Canada. These associations are representative of a wide variety of interests, and include agricultural, commercial, manufacturing and professional organizations. The Department of Labour issues yearly reports dealing with the activities of such employers' organizations, that for 1930 showing 791 main organizations, 779 branch associations, and a reported membership of 946,244. In 1929, there were 691 main organizations and 761 branch associations, with a membership of 888,820.

Co-operative Associations.—Co-operative associations in Canada numbered 1,095 in 1930, with a total membership of 690,685. In 1929, there were 936 of these organizations, which reported 512,835 members. This type of organization includes the grain growers of the prairies, the largest co-operative organization in Canada (for note on the wheat pools, see page 00), the dairy farmers and the fruit and vegetable growers in the eastern provinces. In addition, there are some 325 co-operative distribution societies affiliated with a central co-operative union. There is also a number of consumers' co-operative societies outside the union, the majority being in the western provinces. Consumers in Canada are, however, less inclined to co-operative effort than in the older countries of Europe, owing to the more individualistic character of the population and the higher standard of living made possible by higher wages. In the province of Quebec, great success has been achieved in the organization of "People's Banks" for the providing of short term credit for small farmers and industrial workers; 168 of such banks reported to the Provincial Government in 1928, their membership numbering 41,000 and their aggregate loans amounting to over five millions annually.

CHAPTER XIX

EDUCATION—LIBRARIES—ART—RESEARCH COUNCILS

Education

Education in Canada, according to the terms of the British North America Act, is, with the exception of Indian education, under the jurisdiction of the Provincial Governments, with the result that a distinct, though in most cases a similar system of public schools has evolved in each province. In these schools, in 1929, following the regular day-time courses of elementary and secondary instruction, 2,080,949 pupils were enrolled, or 87 p.c. of the persons enrolled in all educational institutions of the Dominion. To provide for this number of pupils 29,707 school houses and 65,305 teachers were required. About 13 p.c. of this group were doing work of secondary or high school grade.

A second important group of students is comprised of those attending technical or vocational schools, and night schools. Their number, which has been rapidly increasing in recent years, reached 122,671, or about 5 p.c. of the total for all institutions of learning in 1929. About one-third of these were in full-time day courses, practically all of which are of secondary grade, as also are many of the evening courses. To accommodate this enrolment, 281 schools were used, and 4,389 teachers employed.

In private elementary and secondary schools (including 55,970 in primary schools and 3,215 in nursery schools independent of the control of commissioners and trustees in Quebec) there were 74,235 pupils, or roughly 3 p.c. of the total enrolment of all schools in the Dominion. In private business colleges, 18,600 students were reported.

Universities and colleges offering higher education numbered 120 in 1929 with a net enrolment (exclusive of some 4,000 elsewhere listed) of 68,043. Over half of this number was in courses of university grade in the regular session, while the remainder was fairly evenly divided between preparatory courses, and short or special courses. Exclusive of preparatory, or pre-matriculation students, the number of students in attendance at the regular session at each of the 23 universities was as follows (provincial universities in italics): University of Montreal, 6,428; *University of Toronto*, 6,066; McGill University, Montreal, 3,191; Laval University, Quebec City, 3,054; *University of Manitoba*, Winnipeg, 2,504; *University of British Columbia*, Vancouver, 1,743; Queen's University, Kingston, Ont., 1,562; *University of Saskatchewan*, Saskatoon, 1,415; *University of Alberta*, Edmonton, 1,280; University of Ottawa, 1,026; University of Western Ontario, London, 958; Dalhousie University, Halifax, 869; *Victoria University, Toronto, 854; Acadia University, Wolfville, N.S., 512; McMaster University, Hamilton,

415; Mount Allison University, Sackville, N.B., 397; *University of Trinity College, Toronto, 306; *University of New Brunswick*, Fredericton, 294; St. Francis Xavier University, Antigonish, N.S., 278; Bishop's University, Lennoxville, Que., 157; University of King's College, Halifax, 73; St. Joseph's University, St. Joseph, N.B., 72; St. Dunstan's University, Charlottetown, P.E.I., 71.

The above-mentioned four groups—ordinary, technical, private and university-college—account for almost 99 p.c. of all students in Canadian educational institutions. The remainder is in schools for teacher-training, schools for the blind and deaf, and Indian schools. A convenient summary for the Dominion on the basis of the above groups may be given as follows:—

Statistics of Education in Canada, Calendar Year 1929

Type of Institution	Number of Institutions	Number of Pupils	Number of Teachers	Expenditure
				$
Ordinary day schools under public control	29,707	2,080,949	65,305	
Technical and night schools	281	122,671	4,389	130,658,883
Schools for teacher-training	45	8,904	488	
Schools for blind and deaf	11	1,743	300[2]	
Private elementary and secondary schools, and business colleges	692	92,835	4,783	4,975,119[3]
Universities and colleges	120	68,043	6,226	15,841,615
Indian schools	340	15,347	295	2,215,412[4]
Totals	31,196	2,387,057[1]	81,786	153,691,029

[1] Exclusive of 3,435 duplicates.
[2] Approximately.
[3] Includes $2,956,119 for subsidized independent schools in Quebec. Balance estimated on "per pupil" basis.
[4] Appropriation of Dominion Parliament only. No record of contributions from churches, etc.

Educational systems in Canada have made especially rapid progress in the present century. Examples of that progress are the advances in technical and high school education. In addition may be mentioned work for the mentally and physically subnormal; medical and nurse inspection of schools; the effective child labour and compulsory attendance laws enacted; the consolidation of schools, with conveyance of children to schools, and the creation of municipal school districts, rural graded schools and rural high schools—all designed to secure larger taxation areas and thus support better classes of schools—bringing high school education within the reach of rural children, creating rural centres with community halls (thus increasing social opportunities in rural communities), providing facilities for teaching manual training, domestic science, if not vocational or semi-vocational work, etc.

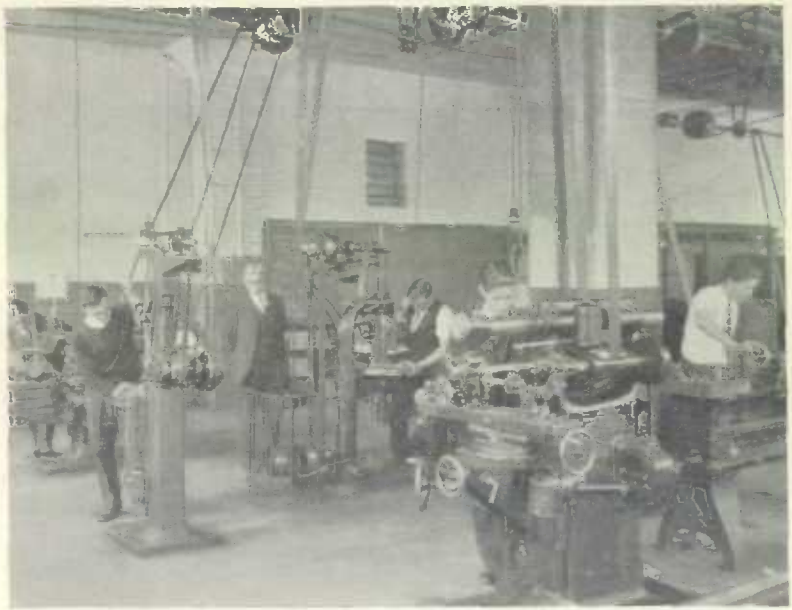
But perhaps the most significant measure of the progress of common school education in Canada is afforded by the statistics of illiteracy. At the first census of the Dominion (1871), 20 p.c. of the people over twenty years of age were "illiterate", in the sense of being unable to read or write. At the last census (1921), the percentage of illiteracy was only 5·1, or 4·5 when

*Federated with University of Toronto.

Indians are excluded. When it is remembered that in the meantime Canada has had to handle an inflow of millions of foreign born immigrants with their lower standards in matters like education—under the impact of which the homogeneous population of 1871 has been rendered decidedly otherwise—the achievement is indeed noteworthy.

A further significant fact illustrating the widening scope of educational activities is that over 300,000 persons in educational institutions to-day are practically adults, that is, are over sixteen years of age, or are in classes designed for persons who have discontinued attendance at common schools.

There has been a marked growth also in so-called secondary education. The high school of to-day is a continuation of the elementary school, a means of extending education without reference to vocation. In 1929 there were well over 200,000 pupils enrolled in high school grades, 80 p.c. of whom were not looking forward to university work or the teaching profession, but were attending high school merely to extend their basic education. High school work, or its equivalent, to-day is not confined to so-called high schools, but may even be taken in the one-room rural school if accommodation and the



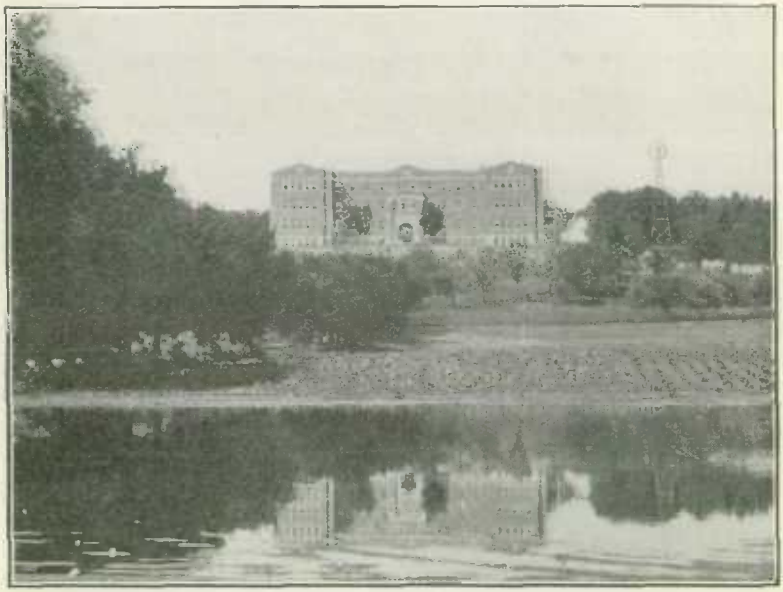
Machine Shop Practice in a Technical School.—Technical education has grown tremendously in popularity, enrolment in day courses having increased about four-fold in the past eight years. For every four pupils in ordinary high schools in the Dominion there is now one in day technical school. Evening technical classes enrol 50 p.c. more than day.

Photo, courtesy W. W. Nichol, Ottawa

qualifications of the teacher permit; and the pupil may be thus qualified to pass the same Departmental examinations as the pupil of the standard high school.

The proportion entering high school has increased enormously since the beginning of the present century. Until that date only the exceptional pupil completed elementary work and entered upon high school work. To-day about 40 p.c. of those who go to school at all do some high school work—either ordinary, technical or agricultural high school. Further, owing to regular attendance and better methods of teaching, the pupil is ready for continuation work a year or two earlier than at the beginning of the century, so that to meet the requirements of compulsory attendance and child labour laws he must stay at school and do continuation work. The technical day school pupil who was almost non-existent a few years ago is now to the ordinary high school pupil in the proportion of one to four, but at the present rate of increase of those ready for continuation work the enrolment in the technical schools may eventually exceed that of the high schools. Continuation work has increased at an unparalleled rate but the demand for it has increased at a much greater rate.

A still more important feature, but one which cannot be briefly described, is the raising of the status of the teacher. In earlier times the trained teacher was the exception. To-day, with about 70,000 ordinary teaching positions,



Indian Education.—View of the new residential school near Brandon, Manitoba. There is accommodation for 160 pupils in addition to the teaching staff.

Engraving, courtesy Dept. of the Interior

there are 12,000 in schools for teacher-training if we include university and departmental summer schools. It is becoming not unusual to find university graduates teaching in the elementary schools. The universities now give short courses for teachers during the summer, elementary teachers spending a part of their vacation thereat to improve their standing.

Indian Education.—No country has done more than Canada for the education of its native wards, and the Canadian system of Indian schools has been studied and commented favourably upon by officers of the United States and other countries faced with similar problems. The Dominion Government is responsible for the work and acts through the Department of Indian Affairs. In addition to 242 day schools, 78 residential schools are provided in order that many Indian children, whose families are engaged in occupations which oblige them to wander afield, may secure the advantages offered. The residential schools are conducted by the Anglican, Roman Catholic, Presbyterian and United Churches, which receive appropriations from the Dominion Government for the purpose. The curricula provide academic instruction up to the equivalent of second year in high school. In addition the girls are given training in domestic science, and the boys a course in agriculture together with elementary training in carpentry, blacksmithing, and the operation of internal combustion engines. In the past ten years, while the increase in enrolment in Indian schools has been 28 p.c., the increase in average attendance has been 48 p.c.

Libraries

Supplementing the work of the various educational institutions of the Dominion are hundreds of libraries in different parts of the country. In a list of 1,025 for which statistics have been collected, 623 are free public and Association Libraries, 126 are university, college or normal school, 52 are Dominion or Provincial Government libraries, and 224 (including law libraries and the parish libraries of Quebec) are otherwise classified. Legislation making some provision for public library accommodation exists in each of the provinces as well as in the Yukon; and all of the larger centres of population have libraries gratuitously accessible to all. Smaller settlements, especially those in frontier places, such as mining and lumber camps, are reached by travelling libraries under the management of the Provincial Governments, or universities. For the blind in Canada, one of the largest libraries of its kind in existence is under the management of the Canadian National Institute for the Blind; the books are carried post-free in the mails, while similar smaller libraries are to be found in the several schools for the blind. In each of the provinces legislation is in existence to facilitate the establishment or expansion of libraries in the public schools, and many of these institutions have very considerable collections.

Regular courses of one year's duration for the training of librarians are conducted at the Ontario College of Education in the University of Toronto, and at McGill University. Several of the normal schools give some training in library science, while some of the larger public libraries hold what are known as apprentice classes, in order to have a group of skilled assistants to draw upon as needed.

Art

Study of the fine arts in Canada, in the years since the war, has been making rapid headway. A series of schools now reaches from coast to coast and the enrolment has been growing apace. The Nova Scotia College of Art at Halifax, for instance, reports an increase from 105 students in 1920 to 200 in 1929. In the Quebec School of Fine Arts there were 40 students in the architectural course and 271 in other courses in 1929. The corresponding numbers in the Montreal School of Fine Arts were 42 and 372. The Ontario College of Art at Toronto had 782 students in its various courses; the Winnipeg School of Art, 234; the Art section of the Provincial Institute of Technology and Art at Calgary, 62; the Vancouver School of Decorative and Applied Arts, 421. The work in these schools is arranged to provide a thorough training for the individual student in the fundamentals of art; and while the cultural or aesthetic element of artistic expression is kept in view, close connection is maintained with the practical aspects of art as developed in commerce and industry. Some of the schools provide special courses for school teachers, usually during the summer vacation or in the evenings of the regular session.

Public appreciation of the work of Canadian artists is only beginning to be aroused, but in the opinion of many overseas critics there is evidence of the growth in Canada of a distinctly national and original school of painting. Galleries exhibiting collections of pictorial, statuary and other types of art are to be found in a number of cities, the most representative collection of Canadian art being housed in the National Gallery of Canada at Ottawa. The number of specimens is being annually augmented by means of grants voted by the Dominion Parliament, by diploma works of the members of the Royal Canadian Academy, and by gifts and loans from individuals interested in art. An "Advisory Arts Council" of three members manages the Gallery and administers the annual grants. Loans of collections of paintings are made for a year or shorter periods to any art body or society in the country possessing the necessary facilities.

Research Councils

A pronounced stimulus has been given in recent years to the prosecution of scientific and industrial research in Canada through the formation of appropriate bodies by the Dominion and several Provincial Governments. It is now about 50 years since courses in the experimental and practical sciences were definitely introduced in the curricula of Canadian universities. On account of the rapidly growing demand in industry, government service, and elsewhere for men with scientific training, these courses have steadily increased in popularity, and the scientific equipment of the leading universities has been correspondingly augmented. It was foreseen, however, that a connecting link between industry and the universities might be of very great practical value. It is primarily for the purpose of facilitating the employment of trained scientists and the application of scientific methods in the industrial and general development of the Dominion, that the several public research bodies have been constituted.

"The National Research Council", first appointed during the Great War to direct Canada's part in a scheme for bringing about co-operation of effort and co-ordination of research throughout the Empire, now operates under the Research Council Act of 1924. Its activities up to the present have been in four main channels: (1) The training of research workers. Up to Mar. 31, 1929, the Council had awarded 422 scholarships, ranging in value from $750 to $1,200, to 254 persons. Each scholarship required that the grantee engage in research for one academic year under the direction of a member of the staff of a Canadian university. (2) The granting of financial assistance to approved researches. During the year ended Mar. 31, 1929, there were 91 specific investigations being conducted, with the assistance of $196,510 in grants from the Council, in 11 universities and 14 government and industrial laboratories. (3) The co-ordination and stimulation of research work on problems of national importance by means of the establishment of Associate Committees to advise the Council on scientific questions, and to direct researches on certain major problems or groups of problems. (4) At the headquarters of the Council in Ottawa, chemical and physical laboratories have been equipped in a temporary building, and the nucleus of a scientific staff engaged. Construction of a more commodious building, at a contract price of $2,777,400, was begun in February, 1930, and will be completed in 1931.

"The Research Council of Alberta" (formerly known as "The Scientific and Industrial Research Council of Alberta") was first appointed in 1921 "to supervise and direct research work, to engage specialists to perform such work and to define the duties of each". The Council has, from the outset, been closely associated with the University of Alberta, and several rooms at the university have been used as the research laboratories of the Council. The President of the University is Director of Research. The four major departments of investigation have been: (1) Fuels, (2) Road Materials, (3) Geological Survey, (4) Soil Survey. Numerous reports on their findings have been issued by these divisions, while the Annual Report of the Council gives a general outline of the work that is being done.

The Ontario Research Foundation was established by Acts of the Legislature in 1928 and 1929. The main objects in view were the improvement of methods and processes in the manufacturing, agricultural, and other industries of the province, and the further discovery and fuller development of provincial natural resources. An Advisory Council of 25 members representing the scientific, agricultural and industrial interests of the province was appointed under the Research Foundation Act of 1929 which also provides that for any amount up to $2,500,000 subscribed in support of the Foundation by industries and private subscribers, an equal amount may be provided by the Provincial Government. Laboratories were fitted in temporary quarters in Toronto and the erection of a permanent building commenced in the summer of 1929 in close proximity to the University of Toronto. In addition to a Director of the Foundation, directors of metallurgical research, chemical engineering, and veterinary research were appointed and investigations commenced in the temporary quarters.

The Research Council Act, 1930 (Sask. c. 88, 1929-30) provides for the constitution of a "Research Council of Saskatchewan" for the purpose of promoting the application of scientific methods to industry, and the development of natural resources within the province. It will consist of not more than ten members designated by the Government, and will include two members of the Executive Council with the President of the University of Saskatchewan as Director of Research.

CHAPTER XX

MISCELLANEOUS ADMINISTRATION

National Defence

The National Defence Act, which came into force January 1, 1923, provides for a Department of National Defence presided over by the Minister of National Defence.

Military Forces.—Before the outbreak of the war, the Canadian Militia consisted of a Permanent Force, which on March 31, 1914, numbered 3,000 officers, non-commissioned officers and men, and an Active Militia, which at the same date numbered 5,615 officers and 68,991 non-commissioned officers and men. After the outbreak of the war on August 4, 1914, successive contingents of troops of all arms were recruited, equipped, trained and despatched by the Canadian Government to Great Britain for active service. When hostilities ceased on November 11, 1918, there had been sent overseas, for active service in the Canadian Expeditionary Force, about 418,000 officers, non-commissioned officers and men.

Under the Militia Act, Canada is organized into 11 Military Districts each under a Commander and District Staff. The Militia is classified as "active" and "reserve", the Active Militia being sub-divided into "permanent" and "non-permanent". The Permanent Force consists of 11 units of all arms of the Service with an authorized establishment of 10,000; the actual strength in July, 1930, was 3,629. The Non-Permanent Active Militia is also made up of all arms, and the total establishment in July, 1930, was 8,971 officers and 114,580 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 above organization is supplemented by numerous cadet corps, and rifle associations. The Royal Military College at Kingston, Ont., provides a military and general education for about 200 cadets. The appropriation for the Militia for the fiscal year 1930-31, was $11,061,800.

Naval Forces.—The Royal Canadian Navy was established in 1910. Its authorized complements are (July, 1930) 104 officers and 792 men of the Royal Canadian Navy, 70 officers and 430 men of the Royal Canadian Naval Reserve, and 70 officers and 930 men of the Royal Canadian Naval Volunteer Reserve. The vessels at present maintained in commission are the destroyer *Champlain*, and the mine-sweeping trawlers *Festubert* and *Ypres*, based on Halifax, N.S.; and the destroyer *Vancouver* and the mine-sweeping trawlers *Armentières* and *Thiepval*[1], based on Esquimalt, B.C.

Two modern destroyers, of 1,320 tons each, the *Saguenay* and the *Skeena*, have been ordered, to replace the *Champlain* and *Vancouver*. The appropriation for the Naval forces for the fiscal year 1930-31 was $3,600,000.

[1] H.M.C.S. *Thiepval* is no longer carried on the strength, having been recently lost on the Pacific coast.

Air Services.—Both civil and military air forces come under the control of the Department of National Defence, and in consequence there are four separate branches of the Air Services, *viz:* (1) the Royal Canadian Air Force; (2) the Directorate of Civil Government Air Operations; (3) the Controller of Civil Aviation; (4) the Aeronautical Engineering Division. The total personnel of the above four branches as at August 1, 1930, was 177 officers and 681 airmen. The Royal Canadian Air Force administers and controls all military air operations.

The total personnel, as given, does not include about 110 cadets and boys who undergo flying training and artisan training each summer at Camp Borden. The appropriation for the R.C.A.F. for the fiscal year 1930-31 was $2,510,000.

Pensions Division, Department of Pensions and National Health, and Board of Pension Commissioners for Canada

Canada's work for returned soldiers was commenced on the 1st July, 1915, by the formation of the Military Hospitals Commission. On June 3, 1916, the Board of Pension Commissioners for Canada was formed by Order in Council pursuant to a resolution by Parliament. On February 21, 1918, the Department of Soldiers' Civil Re-establishment was created for the purpose of taking over the activities of the Military Hospitals Commission. In 1919 the Pension Act was passed and was followed in 1920 by the Returned Soldiers Insurance Act. In December, 1927, the Department of Soldiers' Civil Re-establishment was merged with the Department of Health. It is now known as the Department of Pensions and National Health. In 1930 the War Veterans Allowance Act received the sanction of Parliament.

The medical services of the Department include the operation of eight hospitals (situated at Halifax, N.S., Saint John, N.B., Ste. Anne de Bellevue, P.Q., Toronto, Ont., London, Ont., Winnipeg, Man., Calgary, Alta., and Vancouver, B.C.), the treatment of patients in contract hospitals, the operation of out-patient medical departments, the maintenance of a special staff dealing particularly with tubercular, neuropsychiatric and surgical cases, the after care of tubercular cases, the care of out-patients, and dental treatment.

Immediately succeeding the war, the Department operated a large number of hospitals but these have now been closed or turned over to civilian authorities. This applies particularly to sanatoria for the treatment of tuberculosis. At the present time none of these institutions is being operated by the Department. In centres where there is no Departmental hospital patients are treated in civilian institutions.

Treatment is given with compensation to any returned soldier who is suffering from a service disability and free hospitalisation may be given to any pensioner in need of the same for a non-service disability who would otherwise become a public charge. In the latter case compensation is not granted but an allowance for comforts and clothing is made. In view of the increasing number of cases in which the disease from which the returned

soldier is suffering is obscure, the Department has established a diagnostic centre at Christie Street Hospital, Toronto, to which patients may be sent from all parts of Canada for observation by specialists, and where the latest scientific treatment with modern apparatus may be applied. Care and maintenance are provided for what are known as "Veterans Care Cases". These are pensioners who are practically receiving the care of an old soldiers' home and on November 22, 1930, there were 170 such cases.

The Government through the Department of Pensions and National Health also operates a central factory for the manufacture of artificial arms, legs, eyes, etc., at Toronto, and nine fitting shops in the various districts. Orthopædic boots, braces, belts and other minor appliances are made and repaired. For years intensive research has been conducted into types of limbs and methods of manufacture.

In the non-medical field the Department still provides vocational training, in cases where the disability has increased if the returned soldier is otherwise eligible. It renders assistance in securing employment, conducts sheltered employment workshops, known as Vetcraft Shops, for the benefit of those who are unable to obtain a living in the open labour market and who require that some provision of this nature be made. Relief is issued in the form of provisions, rent, coal, etc., to pensioners who are out of employment; through the Canadian National Institute for the Blind, an organization is maintained for the after care of blinded soldiers; and employers are relieved of liability for accidents to pensioners who are in receipt of 25 p.c. pension or upwards; and many other activities.

The Board of Pension Commissioners for Canada.—The Board of Pension Commissioners is a separate organization from the Department of Pensions and National Health, but the work of these two bodies is closely related. Decisions are made by the Board and are implemented by the Department, which pays pensions, maintains records, etc.

The number of pensions in force on October 31, 1930, was 79,944, consisting of 60,308 disability and 19,636 dependents pensions. The annual liability in respect of these pensions was $38,959,199.

By the amendments to the Pension Act passed in 1930, the Federal Appeal Board, which had been in existence for several years, was abolished and in place thereof a Pension Tribunal and a Pension Appeal Court were constituted. The legislation in respect of these bodies became effective October 1, 1930. From that date the Board of Pension Commissioners is required to pass for consideration by the Tribunal any applications not granted. The Tribunal is divided into four sections, each consisting of two members, and there is a chairman over all. Sittings are held in the principal and some of the lesser centres through the Dominion. The Pension Appeal Court, to which appeals from decisions of the Tribunal can be made, with certain limitations, consists of three members, and is stationed at Ottawa.

Veterans' Bureau.—The 1930 amendments to the Pension Act provided for the creation of a new branch of the Department being known as the Veterans' Bureau, consisting of Pensions Advocates and staff, charged with the duty of preparing cases for presentation to the various bodies which control the award of pension.

Returned Soldiers' Insurance.—The Returned Soldiers Insurance Act has been extended from time to time and applications can be received thereunder until August 31, 1933. The number of policies in force on October 31, 1930, was 29,483, representing insurance of $65,985,366.

War Veterans' Allowance.—The War Veterans Allowance Act was passed in 1930 and was placed in charge of a Committee independent of the Department. Decisions of the Committee are carried out by the Department and all investigations, payments, records, etc., are dealt with by the Department. Under this legislation an ex-member of the forces who is sixty years of age and permanently unemployable may, if he is a pensioner or if he saw service in a theatre of actual war, be granted an allowance not exceeding twenty dollars per month, if single, or forty dollars per month, if married, to bring up his income to one dollar per day, if single, or two dollars per day, if married. The Act came into operation in September, 1930, and on October 31, 767 awards had been made, representing an annual expenditure of $264,615.

Judicial Statistics

The progress of a community, from the moral point of view, is often judged by the number of convictions for "major" offences, as these are less affected than "minor" offences by extraneous circumstances and the varying methods of law enforcement in different areas and in different years. However, in the study of such statistics it is important to have comparable figures over a period of years, and even then it is essential that the limitations of such figures be recognized for just as regard for law, or morality, is not measured by the number of people who remain out of our gaols and penitentiaries so disregard for law is not fully shown by the number of convictions made. Nevertheless judicial and criminal statistics are important and valuable, when comparable figures are given, in drawing attention to a trend or tendency, and when interpreted in this way they serve a very necessary purpose.

Before Confederation each Province had its own system of criminal jurisprudence founded on the criminal law of England and introduced by the Royal Proclamation of 1763. At Confederation, criminal law was assigned by sec. 91 of the British North America Act to the Dominion. In 1869 a number of Acts were passed establishing a uniform system of criminal legislation. These Acts were known as "The Criminal Law Consolidation and Amendment Acts of 1869".

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 in annual reports 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), which provides for the receipt of an annual return by the Bureau from every court or tribunal administering criminal justice. In consideration of what has been said above 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 the past year, convictions for criminal offences having risen from 277 per 100,000 population in 1924 to 359 per 100,000 population in 1929 and convictions for minor offences from 1,535 per 100,000 in 1924 to 2,927 per 100,000 in 1929.

It should be understood that the classification of offences in the following 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 1920.

Convictions for Criminal Offences, by Groups, and Total Convictions for Minor Offences, years ended Sept. 30, 1920-1929, with Proportions to Population

Year	Criminal Offences							Minor Offences		
	Offences against—				Total of Criminal Offences					
	The Person	Property with Violence	Property without Violence	Other Felonies and Misdemeanours						
	No.	No.	No.	No.	No.	P.c. of all offences	Per 100,000 pop.	No.	P.c. of all offences	Per 100,000 pop.
1920....	8,281	2,310	11,634	2,059	24,284	14·9	281	138,424	85·1	1,604
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

Of the total convictions for criminal and minor offences for 1929, *viz.*, 321,966, the sentences imposed were gaol or fine, 263,749; penitentiary, 2,164; reformatory, 979; death, 26; and other sentences, 55,048. Death sentences, which numbered 28 in 1919 and 26 in 1920, fell to 15 in 1923, rose to 22 in 1924, dropped to 18 in 1925, 15 in 1926, 12 in 1927, and rose again to 19 in 1928 and 26 in 1929.

Police

Police statistics are collected by the Bureau of Statistics from cities and towns having a population of 4,000 and over. In 1929 there were 138 such municipalities from which returns were received. The following table gives, by provinces, the number of the cities and towns, aggregate urban population, strength of police force, and number of arrests.

Police Statistics, by Provinces, calendar year 1929

Province	Number of—					Number of the Population to each Policeman	Number of Arrests per Policeman
	Cities and Towns	Population	Police	Arrests	Summons		
Prince Edward Island	1	12,347	9	463	443	1,372	52
Nova Scotia	13	167,601	141	6,702	3,747	1,190	47
New Brunswick	5	81,219	87	2,701	383	934	31
Quebec	30	1,004,694	1,924	39,130	22,884	552	20
Ontario	64	1,396,634	1,839	41,993	93,867	759	23
Manitoba	7	241,665	261	6,677	21,947	926	26
Saskatchewan	6	100,966	132	3,219	4,152	765	24
Alberta	4	150,725	184	5,465	7,108	818	29
British Columbia	8	203,852	427	21,277	14,401	477	50
Canada	138	3,359,703	5,004	127,627	168,932	671	25

Offences reported to the police numbered 329,496; there were 263,532 prosecutions, resulting in 213,324 convictions. The number of automobiles reported stolen was 11,160 and 11,150 were reported recovered. The value of other goods stolen was $2,290,972, and the value of goods recovered was $1,525,089.

Royal Canadian Mounted Police.—The Royal Canadian Mounted Police is an armed police force organized in 11 divisions under a Commissioner whose headquarters is at Ottawa; on July 31, 1930, its strength was 56 officers, 1,065 other ranks, and 123 special constables.

The duties of the Police are to enforce Dominion Statutes (except the Criminal Code, which is enforced by the provincial authorities); to assist the other Departments of the Dominion Government, and to enforce the observance of law in the Yukon, in the Northwest Territories, in the islands of the Arctic Ocean, and in Indian Reserves and the National Parks. By an agreement which came into effect on July 1, 1928, the Force enforces criminal and provincial laws in the province of Saskatchewan under the direction of the Attorney General of the province. Assistance from time to time is rendered in certain circumstances to other provincial authorities.

The Arctic work is becoming increasingly important; there are now in the Arctic and sub-Arctic regions (exclusive of the Yukon) 33 detachments with 91 all ranks, or about 9 p.c. of the entire strength. These detachments include posts on Ellesmere, North Devon, Baffin and Victoria islands, as well as along the coasts of the Arctic ocean and Hudson bay.

The Aboriginal Races

Indians.—The Indians of Canada who are wards of the Department of Indian Affairs number about 108,012, their numbers varying slightly from year to year. A small yearly increase is evident, however, and the popular notion that the race is disappearing is not in accordance with facts. Before they were subjected to the influences of European civilization (which affected this hardy race adversely) and the devastating results of the many colonial wars, the numbers of the Indians were undoubtedly larger, but any reliable

information as to the aboriginal population during either the French or the early British *régime* is non-existent, and there is no adequate basis for a comparison between the past and present aboriginal populations. An interesting sketch of the progress of the Indians of Canada since Confederation will be found in the Report of the Department of Indian Affairs, 1927.

Indians are minors under the law, and their affairs are administered by the Department of Indian Affairs 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, 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, as 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 but on August 31 of that year the Government transferred the care of the Eskimos to the North West Territories and Yukon Branch of the Department of the Interior. This transfer was largely influenced by the fact that the administration of the Territories and natural resources (which had long been under the Department of the Interior) and of the Eskimo inhabitants were closely allied and could be more efficiently carried on together.

Officers of the North West Territories and Yukon Branch and the Royal Canadian Mounted Police made a careful estimate in 1927 of the numbers and locations of all Eskimos in Canada. The result placed the total at 7,103, located as follows:—Baffin island, 1,513; vicinity of Hudson bay and strait, 3,202; Central Arctic, 438; Western Arctic, 1,650; Yukon Territory, 300.

The Department of the Interior has accomplished much in the way of providing medical care and regular inspection of the Eskimos, the setting aside of wild-life preserves for native use, and the establishment of permanent stations in the Arctic Archipelago from which regular patrols are made by the Royal Canadian Mounted Police.

It is generally realized that the help of the Eskimos will be invaluable to the development of whatever resources the far north holds.

Public Lands

Dominion Public Lands.—The area of the Crown lands of the Dominion Government has undergone a wholesale diminution as a result of the individual agreements, made in 1930, between the Dominion Government on the one hand and the Provincial Governments of Manitoba, Saskatchewan, Alberta and British Columbia on the other. By these agreements the provinces concerned have acquired full control of those lands and natural resources within their boundaries which were formerly administered by the Dominion Government. In the case of Manitoba such control dates from July 15, 1930; in British Columbia, from August 1, 1930; and, in the cases of the other two provinces, from October 1, 1930.

Actual Dominion lands, therefore, now comprise the Northwest Territories, including the Arctic islands; the Yukon Territory; the National Park areas, Indian reserves, and historic sites in the different provinces throughout Canada; certain small and widely scattered parcels of Ordnance and Admiralty lands which have been held by the Dominion Government since Confederation and are rented, disposed of, or otherwise administered with a view to bringing as many properties as possible to a state of revenue production; and, finally, public lands, at one time alienated, but which have been revested in the Crown in the right of the Dominion for various reasons, and upon which public monies have been spent.

Provincial Public Lands.—All Crown lands within provincial boundaries are now administered by the Provincial Governments. In Prince Edward Island all the land is settled, but each of the other provinces holds Crown lands in its own right and has passed legislation regarding conditions of homestead entry, sale, the acquisition of timber rights, mineral claims, etc. The regulations governing the acquisition of rights to the provincial Crown lands differ, therefore, in each province and the interested reader is referred to the Provincial Government concerned for details.

The Civil Service of Canada

Prior to 1882, appointments to the Civil Service of Canada were made directly by the Government of the day. In that year, a Board of Civil Service Examiners was appointed to examine candidates and issue certificates of qualification to those successful at examinations. Appointments, however, were still made by the Government.

The Royal Commission of 1907, appointed to inquire into the Civil Service Act and its operation, reported in favour of the creation of a Civil Service Commission. In 1908 this body was appointed, consisting of two

members appointed by the Governor in Council and holding office during good behaviour. This Commission made appointments to the Inside Service (at Ottawa), some after open competition and others after qualifying tests. Qualifying examinations were also held for the Outside Service (service apart from Ottawa) and lists established from which the Departments selected names.

In 1918 a third member of the Civil Service Commission was appointed, and by the Civil Service Act of that year the principle of appointment after open competition was applied to the Outside as well as the Inside Service. The Act also provided for the organization by the Commission of the various Government Departments, for the establishing of new rates of compensation, and for the principle of promotion by merit whenever consistent with the best interests of the Service. Provision was also made for preference in the matter of appointment to the Service to be given to qualified applicants who had served in the Great War.

From April, 1924, a monthly return of personnel and salaries has been made by each Department to the Dominion Bureau of Statistics, according to a plan that ensures comparability between Departments and continuity in point of time. The institution of this system was preceded by an investigation back to 1912.

During the war years the number of employees increased very rapidly, as a result of the enlargement of the functions of government and the imposition of new taxes, necessitating additional officials as collectors. Such new services as the Department of Pensions and National Health and the Soldier Settlement Board were also created. The maximum was reached in January, 1920, when 47,133 persons were employed, a number which has since decreased to 43,525 in January, 1930. It may be added that, out of 44,175 in March, 1930, 1,161 in the Income Tax Branch and 2,145 in the Department of Pensions and National Health, or 3,306 in all, were engaged in services of outstanding importance which had no existence before the war. Further, an additional 11,739 persons were, in March, 1930, employed in the Post Office Department, performing services of an industrial rather than of a governmental type, and receiving their salaries out of the payments of the public for services immediately rendered, rather than out of taxation. This postal service alone accounted for $2,727,756 of the $7,443,404 paid in salaries in March, 1930, or 36·65 p.c. of the total.

APPENDIX I

Statistical Summary of the Progress of Canada since 1900

Item		1901	1911	1921	1930*
Population—					
Prince Edward Island	No.	103,259	93,728	88,615	85,800
Nova Scotia	"	459,574	492,338	523,837	553,900
New Brunswick	"	331,120	351,889	387,876	423,400
Quebec	"	1,648,898	2,005,776	2,361,199	2,734,600
Ontario	"	2,182,947	2,527,292	2,933,662	3,313,000
Manitoba	"	255,211	461,394	610,118	671,500
Saskatchewan	"	91,279	492,432	757,510	882,000
Alberta	"	73,022	374,295	588,454	660,000
British Columbia	"	178,657	392,480	524,582	597,000
Yukon Territory	"	27,219	8,512	4,157	3,700
Northwest Territories	"	20,129	6,507	7,988	9,600
Canada	"	5,371,315	7,206,643	8,788,483	9,934,500
Immigration—					
From United Kingdom	No.	11,810	123,013	74,262	64,082
" United States	"	17,987	121,451	48,059	30,727
" Other Countries	"	19,352	66,620	26,156	68,479
Totals, Immigration	"	49,149	311,084	148,477	163,288
Agriculture—					
Area of occupied farms	acre	63,422,338	108,968,715	140,887,943	-
Improved lands	"	30,166,033	48,733,823	70,769,548	-
Field Crops—					
Wheat	acre	4,224,542	8,864,154	23,261,224	24,897,200
	bush.	55,572,368	132,077,547	300,858,100	395,854,000
	$	36,122,039	104,816,825	242,936,000	173,589,000
Oats	acre	5,367,655	8,656,179	16,949,029	13,221,900
	bush.	151,497,407	245,393,425	426,232,900	429,156,000
	$	51,509,118	86,796,130	146,395,300	105,019,000
Barley	acre	871,800	1,283,094	2,795,665	5,558,000
	bush.	22,224,366	28,848,310	59,709,100	137,963,000
	$	8,889,746	14,653,697	28,254,150	27,784,000
Corn	acre	360,758	293,951	296,866	162,000
	bush.	25,875,919	14,417,599	14,904,000	4,801,000
	$	11,902,923	5,774,039	12,317,000	3,790,000
Potatoes	acre	448,743	464,504	701,912	574,500
	bush.	55,362,635	55,461,478	64,407,600[1]	49,160,000[1]
	$	13,842,658	27,426,765	82,147,600	38,949,000
Hay and Clover	acre	6,543,423	8,289,407	10,614,951	10,511,200
	ton	7,852,731	10,406,367	11,366,100	15,866,000
	$	85,625,315	90,115,531	267,764,200	156,210,000
Total Areas, Field Crops	acre	19,763,740	30,556,168	59,635,346	60,464,670
Total Values, Field Crops	$	237,682,285	384,513,795	931,863,670	629,146,000
Live Stock—					
Horses	No.	1,577,493	2,598,958	3,813,921	3,295,028
	$	118,279,419	381,915,505	314,764,000	[2]
Milch cows	No.	2,408,677	2,595,255	3,736,832	3,683,453
	$	69,237,970	109,575,526	190,157,000	[2]
Other Cattle	No.	3,167,174	3,930,828	6,469,373	5,253,680
	$	54,197,341	86,278,490	183,648,000	[2]
Sheep	No.	2,510,239	2,174,300	3,675,860	2,014,786
	$	10,490,594	10,701,691	23,308,000	[2]
Swine	No.	2,353,828	3,634,778	3,904,895	3,999,934
	$	16,445,702	26,986,621	54,842,000	[2]
Total Values, Live Stock	$	268,651,026	615,457,833	766,720,000	[2]

* Or latest.
[1] Cwt.
[2] Values for 1930 not available at time of going to press.

APPENDIX I—continued

Statistical Summary of the Progress of Canada since 1900—continued

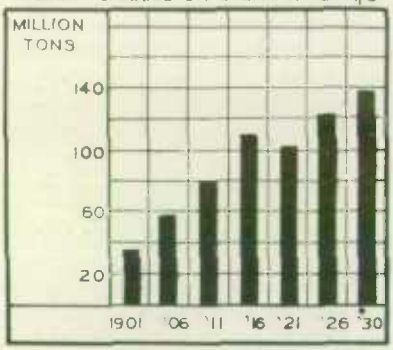
Item		1901	1911	1921	1930*
Dairying—					
Cheese, factory	lb.	220,833,269	199,904,205	162,117,494	118,746,286
	$	22,221,430	21,587,124	28,710,030	21,471,330
Cheese, home-made	lb.	–	1,371,092	533,561	490,000
	$	–	154,088	123,383	82,800
Butter, creamery	lb.	36,066,739	64,489,398	128,744,610	170,810,230
	$	7,240,972	15,597,807	48,135,439	65,929,782
Butter, home-made	lb.	105,343,076	137,110,200	100,000,000	88,000,000
	$	21,384,644	30,269,497	29,840,000	28,929,000
Miscellaneous dairy products	$	15,623,907	35,862,437	98,627,598	175,329,945
Total Values, Dairy Products	$	66,470,953	103,381,854	205,436,350	291,742,857
Forestry—					
Exports of Wood, Wood Products and Paper	$	33,099,915	56,334,695	284,561,478	289,566,675
Fisheries	$	25,737,153	34,667,872	34,931,935	53,518,521
Raw Furs	$	899,645	1,927,550	10,151,594	18,745,753
Minerals—					
Gold	oz.	1,167,216	473,159	926,329	2,089,766
	$	24,128,503	9,781,077	19,148,920	43,199,000
Silver	oz.	5,539,192	32,559,044	13,543,198	26,171,651
	$	3,265,354	17,355,272	8,485,355	10,057,000
Copper	lb.	37,827,019	55,648,011	47,620,820	301,017,167
	$	6,096,581	6,886,998	5,953,555	38,687,000
Lead	lb.	51,900,958	23,784,969	66,679,592	329,033,531
	$	2,249,387	827,717	3,828,742	12,922,000
Nickel	lb.	9,189,047	34,098,744	19,293,000	103,782,009
	$	4,594,523	10,229,623	6,752,571	24,449,000
Pig iron	long ton	274,376	917,535	665,676	753,079[5]
	$	3,512,923	12,307,125	15,511,828	15,062,000[6]
Coal	ton	6,486,325	11,323,388	15,057,495	14,925,000
	$	12,699,243	26,467,646	72,451,656	53,000,000
Cement	brl.	450,394	5,692,915	5,752,885	10,857,000
	$	660,030	7,644,537	14,195,143	17,686,000
Total Values, Minerals	$	65,797,911	103,220,994	171,923,342	276,865,000
Electric Statistics—					
Capital invested	$	11,891,025	110,838,746	484,669,451	1,099,000,000
Kilowatt hours generated[1]	No.	–	–	5,614,132	18,000,000
Customers	No.	–	–	973,212	1,524,900
Water Power—					
Turbine H.P. installed	No.	238,902	1,363,134	2,754,157	5,727,162
Manufactures[2]*—*					
Employees	No.	339,173	515,203	609,586	658,023
Capital	$	446,916,487	1,247,583,609	3,371,940,650	4,780,296,049
Salaries and wages	$	113,249,350	241,008,416	732,120,585	755,365,772
Products	$	481,053,375	1,165,975,639	3,772,250,057	3,769,847,364
External Trade—					
Exports[3]	$	177,431,386	274,316,553	1,189,163,701	1,120,258,302
Imports[4]	$	177,930,919	452,724,603	1,240,158,882	1,248,273,582
Totals, External Trade	$	355,362,305	727,041,156	2,429,322,583	2,368,531,884
Exports to and Imports from U.K. and U.S.					
Exports to United Kingdom[3]	$	92,857,525	132,156,924	312,844,871	281,838,175
Imports from United Kingdom[4]	$	42,820,334	109,934,753	213,973,562	189,179,738
Exports to United States[3]	$	67,983,673	104,115,823	542,322,967	514,957,553
Imports from United States[4]	$	107,377,906	275,824,265	856,176,820	847,450,311

*Or latest.

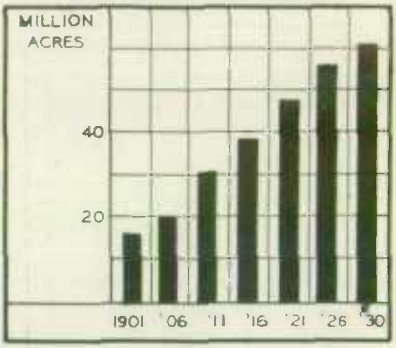
[1] 000's omitted. [2] The statistics of manufactures are for works employing 5 hands or over, except in the case of butter and cheese factories, flour and grist mills, electric light plants, lumber, lath and shingle mills, lime kilns, brick and tile works and fish canneries in the 1901 and 1911 columns. The figures in each case are for the preceding years. In the 1921 and 1930 columns statistics include all establishments exclusive of construction, hand trades, repair and custom work. [3] Exports of domestic merchandise only. [4] Imports of merchandise for home consumption. [5] Provisional. [6] Estimated, $20 per ton.

SIX FACTORS OF CANADIAN PROGRESS

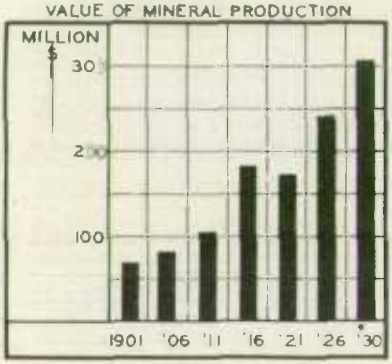
FREIGHT CARRIED ON STEAM RAILWAYS



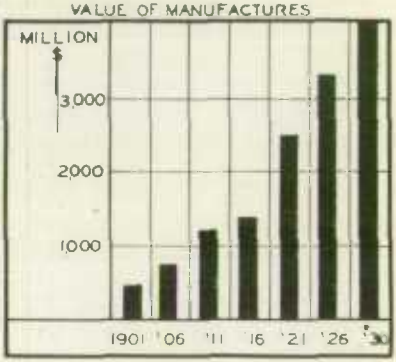
AREA UNDER FIELD CROPS



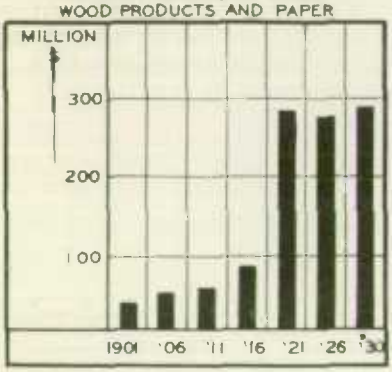
VALUE OF MINERAL PRODUCTION



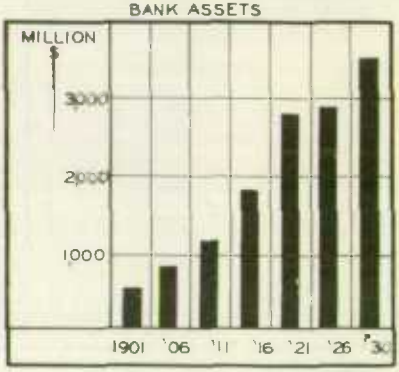
VALUE OF MANUFACTURES



FOREST EXPORTS OF WOOD WOOD PRODUCTS AND PAPER



BANK ASSETS



* OR LATEST

APPENDIX I—continued

Statistical Summary of the Progress of Canada since 1900—continued

Item		1901	1911	1921	1930*
Exports, domestic—					
Wheat	bush.	9,739,758	45,802,115	129,215,157	177,006,369
	$	6,871,939	45,521,134	310,952,138	215,753,475
Wheat flour	brl.	1,118,700	3,049,046	6,017,032	7,893,960
	$	4,015,226	13,854,790	66,520,490	45,457,195
Oats	bush.	8,155,063	5,431,662	14,321,048	6,406,181
	$	2,490,521	2,144,846	14,152,033	4,055,855
Hay	ton	252,977	326,132	179,398	162,188
	$	2,097,882	2,723,291	4,210,594	2,007,944
Bacon and hams, shoulders and sides	cwt.	1,055,495	598,745	982,338	267,026
	$	11,778,446	8,526,332	31,492,407	6,579,726
Butter	lb.	16,335,528	3,142,682	9,739,414	1,309,400
	$	3,295,663	744,288	5,128,831	543,851
Cheese	lb.	195,926,697	181,895,724	133,620,340	92,293,700
	$	20,696,951	20,739,507	37,146,722	18,278,004
Gold	$	24,445,156	5,344,465	3,038,779	34,375,003
Silver	oz.	4,022,019	33,731,010	13,331,050	22,576,768
	$	2,420,750	17,269,168	11,127,432	11,569,855
Copper	lb.	26,345,776	55,005,342	36,167,900	82,084,600
	$	2,659,261	5,575,033	4,336,972	8,769,586
Nickel	lb.	9,537,558	34,767,523	47,018,300	106,517,500
	$	968,365	3,842,332	9,405,291	25,034,975
Coal	ton	1,888,538	2,315,171	2,277,202	728,267
	$	5,307,060	6,014,095	16,501,478	3,917,650
Asbestos	ton	26,715	69,829	191,299	286,497
	$	864,573	2,076,477	12,633,389	12,074,065
Wood pulp	cwt.	–	6,588,655	14,363,006	17,359,190
	$	1,937,207	5,715,532	71,552,037	44,913,995
Newsprint paper	cwt.	–	–	15,112,586	49,703,585
	$	–	3,092,437	78,922,137	145,401,482
Exports, domestic, by classes—					
Vegetable products (except chemicals, fibres and wood)	$	25,541,567	84,556,886	484,924,672	384,635,751
Animals and their products (except chemicals and fibres)	$	68,465,332	69,693,263	188,359,937	133,009,145
Fibres, textiles and textile products	$	1,880,539	1,818,931	18,783,884	9,066,226
Wood, wood products and paper	$	33,099,915	56,334,695	284,561,478	289,566,675
Iron and its products	$	3,778,897	9,884,346	76,500,741	78,589,580
Non-ferrous metals and their products	$	33,395,096	34,000,996	45,939,377	154,319,429
Non-metallic minerals and their products	$	7,356,324	10,038,493	40,121,892	28,545,096
Chemicals and allied products	$	791,975	2,900,379	19,582,051	22,468,462
All other commodities	$	3,121,741	5,088,564	32,389,669	20,057,938
Total Exports, Domestic	$	177,431,386	274,316,553	1,189,163,701	1,120,258,302
Imports for Consumption—					
Vegetable products (except chemicals, fibres and wood)	$	38,036,757	79,214,342	261,081,364	227,048,817
Animals and their products (except chemicals and fibres)	$	14,022,896	30,671,908	61,722,390	69,853,833
Fibres, textiles and textile products	$	37,284,752	87,916,282	243,608,342	185,241,252
Wood, wood products and paper	$	8,196,901	26,851,936	57,449,384	60,951,077
Iron and its products	$	29,955,930	91,968,180	245,625,703	316,878,627
Non-ferrous metals and their products	$	7,159,142	27,655,874	55,553,902	87,950,252
Non-metallic minerals and their products (except chemicals)	$	21,255,403	53,335,826	206,095,113	186,496,388
Chemicals and allied products	$	5,692,564	12,489,776	36,334,612	39,907,503
All other commodities	$	16,326,568	42,620,479	72,688,072	73,945,833
Total Imports	$	177,930,919	452,724,603	1,240,158,882	1,248,273,582

*Or latest.

APPENDIX I—continued

Statistical Summary of the Progress of Canada since 1900—continued

Item		1901	1911	1921	1930*
Steam Railways—					
Miles in operation	No.	18,140	25,400	39,363	41,410
Capital	$	816,110,837	1,528,689,201	2,164,687,636	3,966,357,355
Passengers	No.	18,385,722	37,097,718	46,793,251	39,070,893
Freight	ton	36,999,371	79,884,282	103,131,132	115,218,039
Earnings	$	72,898,749	188,733,494	458,008,891	534,106,045
Expenses	$	50,368,726	131,034,785	422,581,205	433,077,113
Electric Railways—					
Miles in operation	No.	675	1,224	1,687	1,637
Capital	$	-	111,532,347	177,187,436	222,422,815
Passengers	No.	120,934,656	426,296,792	719,305,441	836,729,851
Freight	ton	287,926	1,228,362	2,285,886	3,662,765
Earnings	$	5,768,283	20,356,952	44,536,833	58,268,980
Expense	$	3,435,162	12,096,134	35,945,316	40,085,140
Canals—					
Passengers carried	No.	190,428	304,904	230,129	164,552
Freight	ton	5,665,259	38,030,353	9,407,021	13,699,647
Shipping (Sea-going)—					
Entered	ton	7,514,732	11,919,339	12,516,503	27,464,158
Cleared	"	7,028,330	10,377,847	12,400,226	26,994,369
Totals	"	14,543,062	22,297,186	24,916,729	54,408,527
Shipping (Inland International)—					
Entered	ton	5,720,575	13,286,102	14,828,454	18,987,751
Cleared	"	5,766,171	11,846,257	14,903,447	20,338,949
Totals	"	11,486,746	25,132,359	29,731,901	39,326,700
Shipping (Coastwise)—					
Entered	ton	17,927,959	34,280,669	28,567,545	49,046,588
Cleared	"	16,516,832	32,347,265	27,773,668	48,007,097
Totals	"	34,444,796	66,627,934	56,341,213	97,053,685
Telegraphs and Telephones—					
Telegraphs, Government, miles of line		5,744	8,446	11,207	9,848
Telegraphs, other, miles of line		30,194	33,905	41,577	42,987
Telephones	No.	63,192	302,759	902,090	1,399,986
Motor vehicles	"	-	21,519	465,378	1,195,600
Post Office—					
Revenue	$	3,421,192	9,146,952	26,331,119	32,969,293
Expenditure	$	3,837,376	7,954,223	24,661,262	35,036,629
Money orders issued	$	17,956,258	70,614,862	173,523,322	17,525,979
Dominion Finance—					
Customs Revenues	$	28,293,930	71,838,089	163,266,804	179,429,920
Excise Revenue	$	10,318,266	16,869,837	37,118,367	65,035,701
Total Ordinary Revenue	$	52,514,701	117,780,409	434,386,537	441,411,806
Revenue per head	$	9·72	16·34	49·64	45·05
Total Ordinary Expenditure	$	46,866,368	87,774,198	361,118,145	357,779,794
Expenditure per head	$	8·67	12·18	41·09	36·52
Total Disbursements	$	57,982,866	122,861,250	528,283,199	398,211,539
Disbursements per head	$	10·73	17·04	60·11	40·64
Gross debt	$	354,732,433	474,941,487	2,902,482,117	2,544,586,411
Assets	$	86,252,429	134,899,435	561,603,133[1]	366,822,452[1]
Net Debt	$	268,480,004	340,042,052	2,340,878,984	2,177,763,959
Provincial Finance—					
Revenue, Ordinary, Total	$	14,074,991	40,706,948	102,030,458	184,598,024
Expenditure, Ordinary, Total	$	14,146,059	38,144,511	102,569,515	177,542,192
Note Circulation—					
Bank Notes	$	50,610,205	89,982,223	194,621,710	178,291,030
Dominion Notes	$	27,898,509	99,921,354	271,531,162	204,381,409

*Or latest. [1] Active assets only.

APPENDIX I—concluded

Statistical Summary of the Progress of Canada since 1900—concluded

Item		1901	1911	1921	1930*
Chartered Banks—					
Capital paid-up	$	67,035,615	103,009,256	129,096,339	137,269,085
Assets	$	531,829,324	1,303,131,260	2,841,782,079	3,528,468,027
Liabilities (excluding capital and reserves)	$	42,003,743	1,097,661,393	2,556,454,190	3,215,503,098
Deposits payable on demand	$	95,169,631	304,801,755	551,914,643	696,387,381
Deposits payable after notice	$	221,624,664	568,976,209	1,289,347,063	1,479,870,058
Total Deposits[1]	$	349,573,327	980,433,788	2,264,586,736	2,696,747,857
Savings Banks—					
Deposits in Post Office	$	39,950,813	43,330,579	29,010,619	26,086,036
Government	$	16,098,144	14,673,752	10,150,189	[3]
Special	$	19,125,097	34,770,380	58,576,775	68,8.6,366
Loan Companies[2]—					
Assets	$	158,523,307	389,701,988	96,698,810	256,140,537
Liabilities to shareholders and public	$	158,523,307	389,701,988	95,281,122	253,617,242
Deposits	$	20,756,910	33,742,513	15,868,926	30,232,851
Trust Companies—					
Shareholders' assets	$	–	–	10,237,930	14,669,497
Trust funds, liabilities	$	–	–	87,811,965	234,470,989
Dominion Fire Insurance—					
Net amount at risk, Dec. 31	$	1,038,687,619	2,279,868,346	6,020,513,832	9,431,169,952
Premium income for year	$	9,650,348	20,575,255	47,312,564	56,110,573
Dominion Life Insurance—					
Amount at risk, Dec. 31	$	463,769,034	950,220,771	2,934,843,848	6,157,308,010
Premium income for year	$	15,189,854	31,619,626	99,015,081	210,730,802
Business Transacted—					
Bank clearings.....000	$	1,871,062	7,346,381	16,811,287	25,105,188
Bank debits.....000	$	–	–	–	46,670,482
Education in Day Schools—					
Enrolment	No.	1,083,000	1,356,879	1,869,643	2,387,057
Average daily attendance	"	669,000	870,801	1,335,454	1,6?7,871
Number of Teachers	"	27,126	40,516	56,607	81,786
Total Public Expenditure	$	11,044,925	37,971,374	112,976,543	153,691,029

*Or latest.
[1] Including amounts deposited elsewhere than in Canada from 1901-1928.
[2] Including Building Societies and Trust Companies (1901-1911).
[3] Included with Post Office banks since 1929.

NOTE

In the foregoing Summary, the statistics of immigration, fisheries, (1901-11), trade, shipping, the Post Office, the public debt, revenue and expenditure and the Post Office and Government Savings Banks relate to the fiscal years ended June 30 for 1901, and from that on to the years ended March 31. Agricultural, dairying, fisheries (1921-29), mineral, manufacturing, banking, insurance, loan and trust companies statistics relate to the calendar years and railway statistics to the years ended June 30, 1901-1911, and to the calendar years 1921-1929. Canal statistics are those of the navigation seasons. The telegraph statistics relate to the fiscal years for Government lines and to the calendar years for other lines.

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APPENDIX II

Senators and Members of the House of Commons

Representation in the Senate, by Provinces, as at Dec. 1, 1930

Province Represented and Name of Senator	Post Office Address
Prince Edward Island (4 senators)—	
The Honourable—	
John McLean	Souris.
James Joseph Hughes	Souris.
Creelman MacArthur	Summerside.
John Ewen Sinclair, P.C.	Emerald.
Nova Scotia (10 senators)—	
The Honourable—	
Edward M. Farrell	Liverpool.
Nathaniel Curry	Amherst.
Edward L. Girroir	Antigonish.
John S. McLennan	Sydney.
Charles E. Tanner	Pictou.
John Stanfield	Truro.
John McCormick	Sydney Mines.
Peter Martin	Halifax.
Paul L. Hatfield	Yarmouth.
Hance J. Logan	Parrsboro.
New Brunswick (10 senators)—	
The Honourable—	
Pascal Poirier	Shediac.
John W. Daniel	Saint John.
Thomas Jean Bourque	Richibucto.
Irving R. Todd	Milltown.
John Anthony McDonald	Shediac.
Frank B. Black	Sackville.
Onésiphore Turgeon	Bathurst.
Clifford W. Robinson	Moncton.
Arthur Bliss Copp, P.C.	Sackville.
Walter E. Foster, P.C.	Saint John.
Quebec (24 senators)—	
The Honourable—	
Raoul Dandurand, P.C.	Montreal.
Joseph P. B. Casgrain	Montreal.
Frederick L. Béique, P.C.	Montreal.
Joseph H. Legris	Louiseville.
Jules Tessier	Quebec.
Joseph M. Wilson	Montreal.
Rufus H. Pope	Cookshire.
Charles Philippe Beaubien	Montreal.
David Ovide L'Espérance	Quebec.
George Green Foster	Montreal.
Richard Smeaton White	Montreal.
Pierre Edouard Blondin, P.C. (Speaker)	Montreal.
Thomas Chapais	Quebec.
Lorne C. Webster	Montreal.
Henri Sévérin Béland, P.C.	St. Joseph de Beauce.
Jacques Bureau, P.C.	Three Rivers.
Wilfred Laurier McDougald	Montreal.
Donat Raymond	Montreal.
Philippe J. Paradis	Quebec.
Rudolphe Lemieux, P.C.	Ottawa, Ont.
Edmund W. Tobin	Bromptonville.
George Parent	Quebec.
Jules-Edouard Prevost	St. Jerome.
Wilson, L. A.	Cotean du Lac.
Ontario (24 senators)—	
The Honourable—	
Napoléon A. Belcourt, P.C.	Ottawa, Ont.
George Gordon	North Bay.
Ernest D. Smith	Winona.
James J. Donnelly	Pinkerton.
George Lynch-Staunton	Hamilton.
Gideon D. Robertson, P.C.	Welland.
John Henry Fisher	Paris.
Gerald Verner White	Pembroke.
Rt. Hon. Sir. Geo. E. Foster, P.C., G.C.M.G.	Ottawa.
Archibald H. Macdonell, C.M.G.	Toronto.
Arthur C. Hardy	Brockville.
Sir Allen Bristol Aylesworth, P.C., K.C.M.G.	Toronto.
Andrew Haydon	Ottawa.
Charles Murphy, P.C.	Ottawa.
John Lewis	Toronto.
James Palmer Rankin	Stratford.
Rt. Hon. George P. Graham, P.C.	Brockville.
William H. McGuire	Toronto.
James H. Spence	Toronto.
Edgar S. Little	London.
Gustave Lacasse	Tecumseh.
Henry H. Horsey	Cressy.
Cairine R. Wilson	Ottawa.
James Murdock, P.C.	Ottawa.
Manitoba (6 senators)—	
The Honourable—	
William H. Sharpe	Manitou.
Lendrum McMeans	Winnipeg.
Aimé Bénard	Winnipeg.
Frederick L. Schaffner	Winnipeg.
John Patrick Molloy	Morris.
Robert Forke, P.C.	Pipestone.
Saskatchewan (6 senators)[1]—	
The Honourable—	
James H. Ross	Moose Jaw.
Henry W. Laird	Regina.
Wellington B. Willoughby	Moose Jaw.
James A. Calder, P.C.	Regina.
Archibald B. Gillis	Whitewood.
Alberta (6 senators)—	
The Honourable—	
Edward Michener	Red Deer.
William James Harmer	Edmonton.
William A. Griesbach, C.B., C.M.G.	Edmonton.
Prosper Edmond Lessard	Edmonton.
William Ashbury Buchanan	Lethbridge.
Daniel E. Riley	High River.
British Columbia (6 senators)—	
The Honourable—	
Albert E. Planta	Nanaimo.
George Henry Barnard	Victoria.
James Davis Taylor	New Westminster.
Robert F. Green	Victoria.
Sanford J. Crowe	Vancouver.
James H. King, P.C.	Ottawa, Ont.

[1] One vacancy.

APPENDIX II—continued

Electoral Districts, Voters on Lists and Votes Polled, Names and Addresses of Members of the House of Commons, as Elected at the Seventeenth General Election, July 28, 1930.

Province and Electoral District	Population, 1921	Voters on List	Votes Polled	Name of Member	P.O. Address
Prince Edward Island—					
Kings	20,445	10,253	9,159	Macdonald, Hon J.A.	Cardigan, P.E.I.
Prince	31,520	16,350	14,584	Maclean, A. E.	Summerside, P.E.I.
Queens	36,650	20,382	35,776*	McLure, W. C. S.	Charlottetown, P.E.I.
				Myers, J. H.	Hampton, P.E.I.
Nova Scotia—					
Antigonish-Guysboro	27,098	14,877	12,215	Duff, W.	Lunenburg, N.S.
Cape Breton North-Victoria	31,325	14,646	12,315	Johnstone, L. W.	Sydney Mines, N.S.
Cape Breton South	58,716	30,961	25,265	MacDonald, F.	Sydney, N.S.
Colchester	25,196	13,656	11,918	Urquhart, M. L.	Truro, N.S.
Cumberland	41,191	19,738	16,328	Smith, R. K.	Amherst, N.S.
Digby-Annapolis	37,765	19,934	16,729	Short, H. B.	Digby, N.S.
Halifax	97,228	53,154	81,662*	Black, W. A.	Halifax, N.S.
				Quinn, F. P.	Halifax, N.S.
Hants-Kings	43,462	24,171	21,125	Ilsley, J. L.	Kentville, N.S.
Inverness	23,808	10,847	9,656	MacDougall, I. D.	Port Hood, N.S.
Pictou	40,851	21,783	18,933	Cantley, T.	New Glasgow, N.S.
Queens-Lunenburg	43,686	24,713	19,969	Ernst, W. G.	Bridgewater, N.S.
Richmond-West-Cape-Breton	17,646	9,608	7,542	MacDonald, J. A.†	St. Peters, N.S.
Shelburne-Yarmouth	35,865	17,674	15,070	Ralston, Hon. J. L.	Yarmouth, N.S.
New Brunswick— (11 members)					
Charlotte	21,435	12,627	9,757	Ganong, A. D.	St. Stephen, N.B.
Gloucester	38,684	18,204	15,276	Veniot, Hon. P. J.	Bathurst, N.B.
Kent	23,916	11,019	9,439	Arsenault, T.	Richibucto, N.B.
Northumberland	33,985	16,056	13,804	McDade, G. M.	Chatham, N.B.
Restigouche-Madawaska	42,977	23,032	19,771	Cormier, M. D.	Edmundston, N.B.
Royal	32,078	17,469	14,550	Jones, Hon. G. B.	Apohaqui, N.B.
St. John-Albert	69,093	37,067	50,121*	MacLaren, M.	St. John, N.B.
				Bell, T.	St. John, N.B.
Victoria-Carleton	33,900	18,635	14,480	Smith, B. F.	East Florenceville, N.B.
Westmoreland	53,387	29,668	24,286	Price, O. B.	Moncton, N.B.
York-Sunbury	38,421	22,329	14,793	Hanson, R. B.	Fredericton, N.B.
Quebec— (65 members)					
Argenteuil	17,165	9,649	8,703	Perley, Hon. Sir Geo. H.	Ottawa, Ont.
Bagot	18,035	7,917	7,174	Dumaine, C.	Upton, P.Q.
Beauce	52,701	23,745	18,784	Lacroix, E.	St. George de Beauce, P.Q.
Beauharnois	19,888	11,238	9,797	Raymond, M.	Outremont, P.Q.
Bellechasse	21,190	9,308	7,617	Boulanger, O. L.	Québec, P.Q.
Berthier-Maskinongé	36,762	17,546	14,132	Barrette, J. A.	St. Barthélémi, P.Q.
Bonaventure	29,092	14,051	11,822	Marcil, Hon. C.	Ottawa, Ont.
Brome-Missisquoi	31,180	16,916	14,732	Pickel, F. H.	Sweetsburg, P.Q.
Chambly-Verchères	34,643	20,267	17,014	Duranleau, A.	Montreal, P.Q.
Champlain	47,852	22,460	19,199	Baribeau, J. L.	Ste. Geneviève de Batiscan, P.Q.
Charlevoix-Saguenay	46,366	23,028	19,063	Casgrain, P. F.	Westmount, P.Q.
Chateauguay-Huntingdon	26,731	13,212	11,446	Moore, J. C.	Huntingdon, P.Q.
Chicoutimi	37,578	23,622	20,539	Dubuc, J. E. A.	Chicoutimi, P.Q.
Compton	32,816	15,263	13,153	Gobeil, S.	La Patrie, P.Q.
Dorchester	29,563	13,270	11,266	Gagnon, O.	Québec, P.Q.
Drummond-Arthabaska	44,372	23,166	19,123	Girouard, W.	Arthabaska, P.Q.
Gaspé	40,375	19,456	16,327	Brasset, M.	Percé, P.Q.

*Each voter could vote for two candidates.

†Mr. J. A. MacDonald having accepted an office of emolument under the Crown, Hon. E. N. Rhodes was elected by acclamation Sept. 2, 1930.

APPENDIX II—continued

Electoral Districts, Voters on Lists and Votes Polled, Names and Addresses of Members of the House of Commons, as Elected at the Seventeenth General Election, July 28, 1930—continued

Province and Electoral District	Population, 1921	Voters on List	Votes Polled	Name of Member	P.O. Address
Quebec—concluded					
Hull	39,180	22,790	18,586	Fournier, A.	Hull, P.Q.
Joliette	25,913	12,721	10,964	Ferland, C. E.	Joliette, P.Q.
Kamouraska	22,014	10,790	8,713	Bouchard, G.	Ste. Anne de la Pocatière, P.Q.
Labelle	35,927	*	*	Bourassa, H.	Outremont, P.Q.
Lake St. John	35,539	19,181	16,664	Duguay, J. L.	St. Joseph d'Alma, P.Q.
Laprairie-Napierville	20,065	9,152	8,345	Dupuis, V.	Laprairie, P.Q.
L'Assomption-Montcalm	28,318	14,061	11,299	Séguin, P. A.	L'Assomption, P.Q.
Laval-Two Mountains	28,314	13,733	12,345	Sauvé, A.	Saint Eustache, P.Q.
Lévis	33,323	16,677	14,074	Fortin, E.	Lévis, P.Q.
L'Islet	17,859	8,535	6,804	Fafard, J. F.	L'Islet, P.Q.
Lotbinière	21,837	10,381	8,989	Verville, J. A.	St. Flavien, P.Q.
Matane	36,303	18,249	14,805	LaRue, J. E. H.	Amqui, P.Q.
Mégantic	33,633	15,889	13,461	Roberge, E.	Laurierville, P.Q.
Montmagny	21,997	9,405	7,550	Lavergne, A.	Québec, P.Q.
Nicolet	29,695	13,680	11,487	Dubois, L.	Gentilly, P.Q.
Pontiac	45,682	29,732	21,918	Belec, C.	Fort Coulonge, P.Q.
Portneuf	34,452	18,418	15,175	Desrochers, J.	St. Raymond, P.Q.
Quebec-Montmorency	31,000	16,673	14,592	Dorion, C. N.	Courville, P.Q.
Quebec East	40,772	27,049	21,611	Lapointe, Hon. E.	Ottawa, Ont.
Quebec South	25,875	19,820	14,881	Power, C. G.	Québec, P.Q.
Quebec West	37,562	23,891	20,101	Dupré, M.	Québec, P.Q.
Richelieu	19,548	10,608	8,938	Cardin, Hon. P. J. A.	Sorel, P.Q.
Richmond-Wolfe	42,248	19,391	16,998	Laflèche, J. F.	Windsor Mills, P.Q.
Rimouski	27,520	13,564	11,043	Fiset, Sir E.	Rimouski, P.Q.
St. Hyacinthe-Rouville	36,754	20,492	16,187	Fontaine, J. T. A.	St. Hyacinthe, P.Q.
St. Johns-Iberville	23,518	14,346	12,099	Rhéaume, M.	St. John, P.Q.
Shefford	25,644	14,013	12,648	Tétreault, J. E.	Granby, P.Q.
Sherbrooke	30,786	19,865	16,700	Howard, C. B.	Sherbrooke, P.Q.
Stanstead	23,380	12,998	11,351	Hackett, J. T.	Stanstead, P.Q.
Témiscouata	44,310	20,737	17,584	Pouliot, J. F.	Rivière-du-Loup, P.Q.
Terrebonne	33,908	18,308	15,454	Parent, E.	Ste. Agathe des Monts, P.Q.
Three Rivers-St. Maurice	50,845	32,978	26,110	Bettez, A.	Three Rivers, P.Q.
Vaudreuil-Soulanges	21,620	10,429	8,500	Thauvette, J.	Vaudreuil, P.Q.
Wright	25,867	12,927	11,020	Perras, F. W.	Gracefield, P.Q.
Yamaska	18,507	7,926	7,068	Boucher, A.	Pierreville, P.Q.
Montreal Island—					
Cartier	48,869	25,442	12,262	Jacobs, S. W.	Montreal, P.Q.
Hochelaga	67,836	43,728	28,652	St. Père, E. C.	Montreal, P.Q.
Jacques Cartier	70,856	61,453	44,801	Laurin, J. G. P.	Montreal, P.Q.
Laurier-Outremont	67,682	45,968	27,310	Mercier, J. A.	Montreal, P.Q.
Maisonneuve	65,646	50,593	34,196	Robitaille, C.	Montreal, P.Q.
Mount Royal	39,487	48,515	26,590	White, R. S.	Montreal, P.Q.
St. Ann	54,834	31,256	22,770	Sullivan, J. A.	Montreal, P.Q.
St. Antoine	33,338	19,956	12,639	Bell, L. G.	Montreal, P.Q.
St. Denis	75,475	69,249	45,396	Denis, J. A.	Montreal, P.Q.
St. Henri	44,372	23,718	17,722	Mercier, P.	Montreal, P.Q.
St. James	54,741	32,776	19,721	Rinfret, Hon. F.	Montreal, P.Q.
St. Lawrence-St. George	37,688	19,646	10,479	Cahan, C. H.	Montreal, P.Q.
St. Mary	63,381	35,762	22,957	Deslauriers, H.	Montreal, P.Q.
Ontario (82 members)—					
Algoma East	37,054	17,879	14,251	Nicholson, G. B.	Chapleau, Ont.
Algoma West	35,509	17,893	13,702	Simpson, T. E.	Sault Ste. Marie, Ont.
Brant	20,085	11,538	9,497	Smoke, F.	Paris, Ont.
Brantford City	33,292	19,018	15,309	Ryerson, R. E.	Brantford, Ont.
Bruce North	20,872	12,554	11,185	Malcolm, Hon. J.	Kincardine, Ont.
Bruce South	23,413	13,339	10,602	Hall, W. A.	Walkerton, Ont.

*Acclamation.

APPENDIX II—continued

Electoral Districts, Voters on Lists and Votes Polled, Names and Addresses of Members of the House of Commons, as Elected at the Seventeenth General Election, July 28, 1930—continued

Province and Electoral District	Population, 1921	Voters on List	Votes Polled	Name of Member	P.O. Address
Ontario—continued					
Carleton	32,673	20,493	16,793	Garland, W. F.	Ottawa, Ont.
Dufferin-Simcoe	40,225	20,372	13,790	Rowe, W. E.	Newton Robinson, Ont.
Durham	24,629	16,338	12,068	Bowen, F. W.	Newcastle, Ont.
Elgin West	35,413	21,896	18,680	Hepburn, M. F.	St. Thomas, Ont.
Essex East	25,283	21,097	16,453	Morand, Hon. R. D.	Windsor, Ont.
Essex South	29,375	17,996	14,609	Gott, E. J.	Amherstburg, Ont.
Essex West	49,418	43,231	27,993	Robinson, S. C.	Walkerville, Ont.
Fort William	27,851	14,412	10,861	Manion, Hon. R. J.	Fort William, Ont.
Frontenac-Addington	30,347	17,058	11,537	Spankie, W.	Wolfe Island, Ont.
Glengarry	20,518	10,615	8,948	McGillis, A.	Williamstown, Ont.
Grenville-Dundas	33,953	20,645	14,612	Casselman, A. C.	Prescott, Ont.
Grey North	30,667	18,899	15,068	Porteous, V. C.	Owen Sound, Ont.
Grey Southeast	28,384	16,912	13,028	Macphail, Agnes C.	Ceylon, Ont.
Haldimand	21,287	12,835	11,064	Senn, M. C.	Caledonia, Ont.
Halton	24,899	16,035	12,826	Anderson, R. K.	Milton, Ont.
Hamilton East	54,233	36,829	21,475	Rennie, G. S.	Hamilton, Ont.
Hamilton West	53,254	30,928	17,335	Bell, C. W.	Hamilton, Ont.
Hastings-Peterborough	28,999	14,804	10,034	Embury, A. T.	Bancroft, Ont.
Hastings South	37,504	22,563	18,548	Tummon, W. E.	Tweed, Ont.
Huron North	23,540	14,488	12,116	Spotton, Geo.	Wingham, Ont.
Huron South	23,548	14,146	12,035	McMillan, T.	Seaforth, Ont.
Kenora-Rainy River	26,315	15,661	12,178	Heenan, Hon. P.	Kenora, Ont.
Kent	50,638	29,006	23,051	Rutherford, J. W.	Chatham, Ont.
Kingston City	24,104	14,569	11,164	Ross, A. E.	Kingston, Ont.
Lambton East	28,271	16,391	12,622	Sproule, J. T.	Oil Springs, Ont.
Lambton West	30,418	18,957	15,236	Gray, R. W.	Sarnia, Ont.
Lanark	32,993	20,816	16,815	Thompson, T. A.	Almonte, Ont.
Leeds	34,909	20,987	15,699	Stewart, H. A.	Brockville, Ont
Lincoln	48,625	30,802	21,076	Chaplin, Hon. J. D.	St. Catharines, Ont.
London	53,838	37,465	23,810	White, J. F.	London, Ont.
Middlesex East	27,994	19,170	14,188	Boyes, F.	Dorchester Station, Ont.
Middlesex West	25,033	14,138	11,204	Elliott, Hon. J. C.	Strathroy, Ont.
Muskoka-Ontario	34,859	20,447	14,740	McGibbon, P.	Bracebridge, Ont.
Nipissing	49,965	32,193	23,683	Hurtubise, J. R.	Sudbury, Ont.
Norfolk-Elgin	35,937	23,134	18,902	Taylor, W. H.	Scotland, Ont.
Northumberland	30,512	18,290	16,175	Fraser, W. A.	Trenton, Ont.
Ontario	31,074	24,952	19,843	Moore, W. H.	Dunbarton, Ont.
Ottawa	93,740	61,535	97,369*	Chevrier, E. R. E.	Ottawa, Ont.
				Ahearn, T. F.	Ottawa, Ont.
Oxford North	24,527	15,405	13,428	Sutherland, D. M.	Woodstock, Ont.
Oxford South	22,235	13,660	11,388	Cayley, T. M.	Norwich, Ont.
Parkdale	59,545	37,242	17,566	Spence, D.	Toronto, Ont.
Parry Sound	27,022	13,169	9,918	Arthurs, J.	Parry Sound, Ont.
Peel	23,896	17,077	13,995	Charters, S.	Brampton, Ont.
Perth North	32,461	20,249	16,610	Wright, D. M.	Stratford, Ont.
Perth South	18,382	11,099	9,428	Sanderson, F. G.	St. Marys, Ont.
Peterborough West	34,054	21,575	17,608	Peck, E. A.	Peterborough, Ont.
Port Arthur-Thunder Bay	27,158	14,364	10,859	Cowan, D. J.	Port Arthur, Ont.
Prescott	26,478	12,498	8,927	Bertrand, E. O.	L'Orignal, Ont.
Prince Edward-Lennox	25,843	15,786	12,414	Weese, J. A.	Belleville, Ont.
Renfrew North	27,079	14,571	11,086	Cotnam, I. D.	Pembroke, Ont.
Renfrew South	27,061	14,534	12,595	Maloney, M. J.	Eganville, Ont.
Russell	43,413	21,807	17,591	Goulet, A.	Bourget, Ont.
Simcoe East	37,122	19,442	15,669	Thompson, A. B.	Penetanguishene, Ont.
Simcoe North	22,100	16,125	13,791	Simpson, J. T.	Barrie, Ont.
Stormont	25,134	17,694	15,318	Shaver, F. T.	Aultsville, Ont.
Timiskaming North	26,028	24,879	16,773	Bradette, J. A.	Cochrane, Ont.
Timiskaming South	31,747	21,892	16,024	Gordon, W. A.	Haileybury, Ont.
Toronto East	67,735	40,630	19,835	Ryckman, Hon. E. B.	Toronto, Ont.

*Each voter could vote for two candidates.

APPENDIX II—continued

Electoral Districts, Voters on Lists and Votes Polled, Names and Addresses of Members of the House of Commons, as Elected at the Seventeenth General Election, July 28, 1930—continued

Province and Electoral District	Population, 1921	Voters on List	Votes Polled	Name of Member	P.O. Address
Ontario—concluded					
Toronto East Centre	69,717	37,971	16,514	Matthews, R. C.	Toronto, Ont.
Toronto High Park	50,856	36,245	17,661	Anderson, A. J.	Toronto, Ont.
Toronto Northeast	58,319	63,635	27,742	Baker, R. L.	Toronto, Ont.
Toronto Northwest	61,484	42,875	19,902	MacNicol, J. R.	Toronto, Ont.
Toronto Scarborough	49,749	50,372	23,321	Harris, J. H.	Toronto, Ont.
Toronto South	49,291	18,005	7,681	Geary, G. R.	Toronto, Ont.
Toronto West Centre	59,197	31,136	17,261	Factor, S.	Toronto, Ont.
Victoria	33,995	19,725	15,342	Stinson, T. H.	Lindsay, Ont.
Waterloo North	41,698	28,094	22,580	Euler, Hon. W. D.	Kitchener, Ont.
Waterloo South	33,568	20,922	13,984	Edwards, A. McKay	Galt, Ont.
Welland	66,668	41,568	28,831	Pettit, G. H.	Welland, Ont.
Wellington North	19,833	11,826	9,365	Blair, J. K.	Arthur, Ont.
Wellington South	34,327	22,515	16,818	Guthrie, Hon. H.	Guelph, Ont.
Wentworth	46,080	34,655	24,782	Wilson, G. C.	Dundas, Ont.
York North	36,222	23,801	20,583	Lennox, T. H.	Toronto, Ont.
York South	27,895	31,010	17,296	McGregor, R. H.	Toronto, Ont.
York West	61,655	62,645	32,300	Lawson, J. E.	Toronto, Ont.
Manitoba (17 members)—					
Brandon	38,500	20,438	16,451	Beaubier, D. W.	Brandon, Man.
Dauphin	38,607	16,842	13,621	Bowman, J. L.	Dauphin, Man.
Lisgar	30,604	13,217	10,200	Brown, J. L.	Pilot Mound, Man.
Macdonald	31,877	15,152	11,784	Weir, W. G.	Rosebank, Man.
Marquette	34,482	18,051	14,742	Mullins, H. A.	Winnipeg, Man.
Neepawa	29,941	13,249	10,855	Murphy, T. G.	Neepawa, Man.
Nelson	20,868	11,050	8,873	Stitt, B. M.	The Pas, Man.
Portage la Prairie	35,461	15,738	12,641	Burns, W. H.	Portage la Prairie, Man.
Provencher	29,439	11,879	7,905	Beaubien, A. L.	St. Jean Baptiste, Man.
Selkirk	41,265	19,287	14,454	Stitt, J. H.	Winnipeg, Man.
Souris	24,439	14,296	12,102	Willis, E. F.	Boissevain, Man.
Springfield	30,836	16,614	11,082	Hay, T.	Gonor, Man.
St. Boniface	35,429	20,775	13,738	Howden, J. P.	St. Boniface, Man.
Winnipeg North	52,473	24,781	14,313	Heaps, A. A.	Winnipeg, Man.
Winnipeg North Centre	39,142	22,649	10,955	Woodsworth, J. S.	Winnipeg, Man.
Winnipeg South	32,943	27,959	20,275	Rogers, Hon. R.	Winnipeg, Man.
Winnipeg South Centre	63,812	46,112	31,201	Kennedy, W. W.	Winnipeg, Man.
Saskatchewan (21 members)—					
Assiniboia	34,789	18,867	15,723	McKenzie, R.	Stoughton, Sask.
Humboldt	37,128	18,060	14,079	Totzke, A. F.	Vonda, Sask.
Kindersley	28,997	16,465	12,570	Carmichael, A. M.	Kindersley, Sask.
Last Mountain	34,054	15,215	12,946	Butcher, H.	Punnichy, Sask.
Long Lake	32,308	14,640	12,514	Cowan, W. D.	Regina, Sask.
Mackenzie	34,669	17,652	13,592	Campbell, M. N.	Pelly, Sask.
Maple Creek	38,586	20,709	17,449	Swanston, J. B.	Shaunavon, Sask.
Melfort	30,716	22,914	17,587	Weir, Robert	Weldon, Sask.
Melville	36,842	16,677	14,273	Motherwell, Hon. W. R.	Abernethy, Sask.
Moose Jaw	42,243	21,825	17,704	Beynon, W. A.	Moose Jaw, Sask.
North Battleford	34,451	20,811	15,566	McIntosh, C. R.	North Battleford, Sask.
Prince Albert	39,126	20,876	17,464	Mackenzie King, Rt. Hon. W. L.	Ottawa, Ont.
Qu'Appelle	33,003	17,397	14,851	Perley, E. D.	Wolseley, Sask.
Regina	40,625	30,707	25,430	Turnbull, F. W.	Regina, Sask.
Rosetown	29,341	15,286	12,448	Loucks, W. J.	Delisle, Sask.
Saskatoon	40,712	28,850	21,566	MacMillan, F. R.	Saskatoon, Sask.
South Battleford	35,070	20,026	16,223	Vallance, J.	Onward, Sask.
Swift Current	40,305	17,775	14,010	Bothwell, C. E.	Swift Current, Sask.
Weyburn	37,431	17,523	14,474	Young, E. J.	Dummer, Sask.
Willow Bunch	39,257	22,638	18,799	Donnelly, T. F.	Kincaid, Sask.
Yorkton	37,857	15,388	12,384	McPhee, G. W.	Yorkton, Sask.

APPENDIX II—concluded

Electoral Districts, Voters on Lists and Votes Polled, Names and Addresses of Members of the House of Commons, as Elected at the Seventeenth General Election, July 28, 1930—concluded.

Province and Electoral District	Population, 1921	Voters on List	Votes Polled	Name of Member	P.O. Address
Alberta (16 members)—					
Acadia	39,974	*	*	Gardiner, R.	Excel, Alta.
Athabaska	37,214	19,617	11,989	Buckley, J. F.	St. Paul, Alta.
Battle River	36,737	19,054	10,900	Spencer, H. E.	Edgerton, Alta.
Bow River	34,323	14,483	10,523	Garland, E. D.	Rowley, Alta.
Calgary East	38,076	25,355	17,442	Stanley, G. D.	Calgary, Alta.
Calgary West	40,122	27,669	19,879	Bennett, Hon. R. B.	Calgary, Alta.
Camrose	38,274	17,462	10,970	Lucas, W. T.	Lougheed, Alta.
Edmonton East	36,263	22,466	15,007	Bury, A. U. G.	Edmonton, Alta.
Edmonton West	38,748	25,365	18,275	Stewart, Hon. C.	Edmonton, Alta.
Lethbridge	38,079	17,555	12,579	Stewart, J. S.	Lethbridge, Alta.
Macleod	33,826	18,844	13,093	Coote, G. G.	Nanton, Alta.
Medicine Hat	36,395	14,071	9,205	Gershaw, F. W.	Medicine Hat, Alta
Peace River	39,727	31,741	18,732	Kennedy, D. McB.	Waterhole, Alta.
Red Deer	35,318	18,182	10,901	Speakman, A.	Red Deer, Alta.
Vegreville	30,593	15,001	10,137	Luchkovich, M.	Vegreville, Alta.
Wetaskiwin	34,785	17,610	12,003	Irvine, W.	Bentley, Alta.
British Columbia (14 members)—					
Cariboo	39,834	22,197	16,889	Fraser, J. A.	Quesnel, B.C.
Comox-Alberni	21,378	10,751	8,9-3	Neill, A. W.	Alberni, B.C.
Fraser Valley	28,811	15,802	13,385	Barber, H. J.	Chilliwack, B.C.
Kootenay East	19,137	10,834	9,212	McLean, M. D.†	Michel, B.C.
Kootenay West	30,502	17,911	14,150	Esling, W. K.	Rossland, B.C.
Nanaimo	48,010	28,593	20,598	Dickie, C. H.	Duncan, B.C.
New Westminster	45,982	32,647	23,970	Reid, T.	Newton (Surrey Municipality), B.C.
Skeena	28,934	11,770	9,733	Hanson, O.	Prince Rupert, B.C.
Vancouver-Burrard	56,338	45,220	31,878	Hanbury, W.	Vancouver, B.C.
Vancouver Centre	60,879	33,483	22,244	Mackenzie, Hon. I.	Vancouver, B.C.
Vancouver North	24,215	16,737	12,661	Munn, A. E.	Vancouver, B.C.
Vancouver South	46,137	47,226	31,728	MacInnis, A.	Vancouver, B.C.
Victoria, B.C.	38,727	22,151	14,740	Plunkett, D'A. B.	Victoria, B.C.
Yale	35,698	18,004	13,480	Stirling, G.	Kelowna, B.C.
Yukon Territory (1 member)—					
Yukon	4,157	1,719	1,408	Black, G.	Dawson, Yukon.

*Acclamation.

†Mr. M. D. McLean having accepted an office of emolument under the Crown, Hon. H. H Stevens was elected by acclamation, August 25, 1930.

APPENDIX III

Official Sources of Information Relating to Canada

The official statistics of Canada are centralized under the Dominion Bureau of Statistics, which was established by special legislation in 1918 and has a universal mandate in statistics. Statistics that originate in, or are of special interest to, particular Departments are collected and published under a series of agreements between the Bureau and the Departments in question. The same method is followed in statistics originating under Provincial Governments, which in accordance with the Canadian constitution have the primary jurisdiction in certain important social and economic fields. The organization of statistics on a national scale, however, devolved upon the Dominion Government under the British North America Act.

The statistical work at present under the Bureau covers the following fields: (1) population or demography, which includes (*a*) the census, (*b*) vital statistics, and (*c*) the statistics of migration; (2) social statistics, which includes such subjects as criminology and education; (3) production, which includes (*a*) agriculture, (*b*) the fisheries, (*c*) forestry and forest industries, (*d*) mining and metallurgy, (*e*) water powers and central electric stations, (*f*) general manufactures, and (*g*) construction; (4) external trade, or the statistics of imports and exports; (5) internal trade, which includes statistics relating to the marketing of grain, livestock and animal products, wholesale and retail trading establishments, the stock markets, prices, etc.; (6) transportation and communications, which includes railways, tramways, express companies, shipping, telegraphs and telephones; (7) finance, Dominion, provincial and municipal public finance, also currency, banking, interest and exchange.

There is, in addition, a General Statistical Branch in the Bureau which brings out several publications of an *omnibus* character, the most important being the *Canada Year Book*, a precis or compendium of all statistical data relating to the Dominion; also the *Monthly Review of Business Statistics*, which re-issues the more important "barometric" figures collected in the several branches of the Bureau in succinct form and by the application of methods that assist the business community in judging of current economic trends and their probable course in the future; and the handbook of Canada, *Canada, 1931*.

The various Departments of the Dominion Government publish valuable information, which is on the whole descriptive or technical in nature and which deals with the progress made in administration, research work of a highly scientific character or progress in their own specific fields. A brief summary of their reports follows. This is intended to direct the inquirer to the proper source from which he or she may obtain detailed information concerning a particular field of interest. Complete lists of publications may be obtained on application to the Departments concerned.

Agriculture.—Reports, bulletins and pamphlets on field crops, live stock, dairying, poultry, orchard and garden insects, plant diseases and miscellaneous topics.

Auditor-General.—Annual Report.

Board of Railway Commissioners for Canada.—Annual Report. Pamphlets on judgments, orders, regulations, etc.

Civil Service Commission.—Appointments, promotions, transfers, classification, regulations, examinations.

Dominion Fuel Board.—Reports on various fuels, methods of heating, etc.

External Affairs.—Annual Report.

Finance.—Reports on the public accounts, chartered banks, estimates.

Health.—Pamphlets on various diseases, sanitation, hygiene, etc.

APPENDIX III—concluded

Immigration and Colonization.—Information for immigrants, land settlement, farm opportunities, citizenship, various atlases, etc.

Indian Affairs.—Annual Report, etc.

Insurance.—Reports on the various kinds of insurance, loan and trust companies, etc.

Interior.—Pamphlets, reports and bulletins respecting land surveys, Canadian national parks, forestry, water powers and reclamation, Northwest Territories and the Yukon, the work of the National Development Bureau, Dominion observatories, etc.

International Boundary Commission.—Reports, maps, etc.

Justice.—Annual Report on penitentiaries.

King's Printer and Controller of Stationery.—The *Canada Gazette*, judgments of the Board of Railway Commissioners, law reports, statutes, acts, Canadian Postal Guide, Hansard, etc.

Labour.—Information relating to labour, wages, employment, industrial disputes, combines, old age pensions, technical education, government annuities, labour organization, labour legislation, etc.

Marine.—Marine Annual Report. Lists of shipping, ports, lights, information on tides, currents, navigation, charts of coast lines, lakes, bays, harbours, etc. Radiotelegraph.

Fisheries.—Annual Report, monthly bulletin, etc.

Mines.—The Department's principal branches—Geological Survey, Mines Branch, National Museum and Explosives Division—publish reports, pamphlets, etc., covering all phases of mining from preliminary explorations and surveys of territory through the mining, milling, smelting and refining of ores to the marketing and utilization of the finished product.

National Defence.—Reports on militia and defence, Naval Service and civil aviation.

National Research Council.—Reports, bulletins, etc., on various researches.

National Revenue.—Annual Report on imports, exports, excise and income.

Post Office.—Annual Report. Postal guide, regulations, information.

Public Works.—Annual Report.

Railways and Canals.—Annual Report.

Secretary of State.—Annual Report. The Arms of Canada.

Trade and Commerce.—Annual Report. Reports of the Board of Grain Commissioners. Reports on weights and measures inspection service, gas and electricity inspection service, conferences and trade agreements. The Commercial Intelligence Service publishes a weekly Journal and various bulletins, etc., relative to trade and commerce.

Information relating to the different provinces is contained also in various publications issued by the respective Provincial Governments.

Dominion Bureau of Statistics.—*Census*—Reports of decennial and quinquennial censuses of population and agriculture, showing population by provinces, electoral districts, cities, towns, etc., sex, age, conjugal condition, birthplaces, citizenship, year of immigration, naturalization, language, origins, religions, literacy, school attendance, dwellings, occupations, blindness, etc.—Farm holdings, farm tenures, field crops, live stock, fruits, etc.—Intercensal estimates of population. *Vital Statistics*—Births, deaths, marriages, divorces. *Production*—General summary, differentiating primary and secondary production, gross and net. Agriculture: The Monthly Bulletin of Agricultural Statistics—Monthly and annual reports on field crops, live stock, poultry, dairying, tobacco, fruit, honey, maple products, etc.—Weekly, monthly and annual reports on the marketing of grain, live stock and their products. Forestry: Reports on logging, lumber, pulp and paper, and the various wood and paper-using industries. Fisheries: Annual reports on fish caught, marketed, prepared, etc. Furs: Reports on trapping and fur farming. Mines: Monthly, semi-annual and annual reports on the various metals, non-metallic minerals, coal, structural materials, and the numerous industries based thereon. Manufactures: Reports on various manufactures classified under the following heads food and animal products textile and allied industries, wood products, iron and steel and their products, non-ferrous metal products, non-metallic mineral products chemicals and allied products, miscellaneous. Construction: Railway, telephone and telegraph construction, government and municipal construction, ship-building, building permits, etc. *External Trade*—Monthly, quarterly and annual reports on imports and exports. *Internal Trade*—Wholesale and retail prices and the cost of living, security prices, census of trading establishments, capital movements, balances of international payments, etc. *Transportation, Communications and Public Utilities*—Railways, tramways, express, telegraphs, telephones, highways and motor vehicles, canals, central electric stations. *Public Finance*—Dominion, provincial and municipal finance. *Justice*—Criminal statistics, juvenile delinquency. *Education*—Elementary and secondary schools, universities, business colleges, private schools illiteracy, playgrounds, public libraries, etc. *General*—Estimates of national wealth and income—Monthly and annual reports on employment, commercial failures, bank debits—*The Monthly Review of Business Statistics*—*The Canada Year Book*, being the official statistical annual of the physiography, resources, history, institutions and social and economic conditions of the Dominion, with a statistical summary of the progress of Canada, maps, diagrams, etc.—*Canada 1931.*—*Administration*—Annual Report of Dominion Statistician.

N.B.—The publications of Provincial Governments are also listed in the Bureau.

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