CANADA 1930

A HANDBOOK
OF PRESENT CONDITIONS AND RECENT
PROGRESS IN THE DOMINION

Price, 25 cents

THE MONTHLY REVIEW OF BUSINESS STATISTICS

PUBLISHED BY THE

DOMINION BUREAU OF STATISTICS

PRICE $1.00 A YEAR

A comprehensive review of economic conditions throughout the Dominion, issued on the 25th of each month, with the object of assisting the business community to appraise the current trend.

For a summary list of the publications of the Dominion Bureau of Statistics, see inside back cover.

NOTE—ARMORIAL BEARINGS OF CANADA AND ITS PROVINCES

Canada.—The Armorial Bearings of the Dominion shown in the frontispiece were authorized November 21, 1921. Three considerations were kept in view in determining the combination of arms, crest, supporters, and motto: first, 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.

A description of the armorial ensigns of the several provinces shown overleaf 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 the 26th May, 1868. Description—"Or on a Fess wavy Azure between three Thistles proper a Salmon naiant Argent." (This coat of arms has been cancelled and the original Armorial Achievement granted by Charles I in 1625, the first granted to any overseas colony, restored: A cut was not available at the time of going to press.)

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."

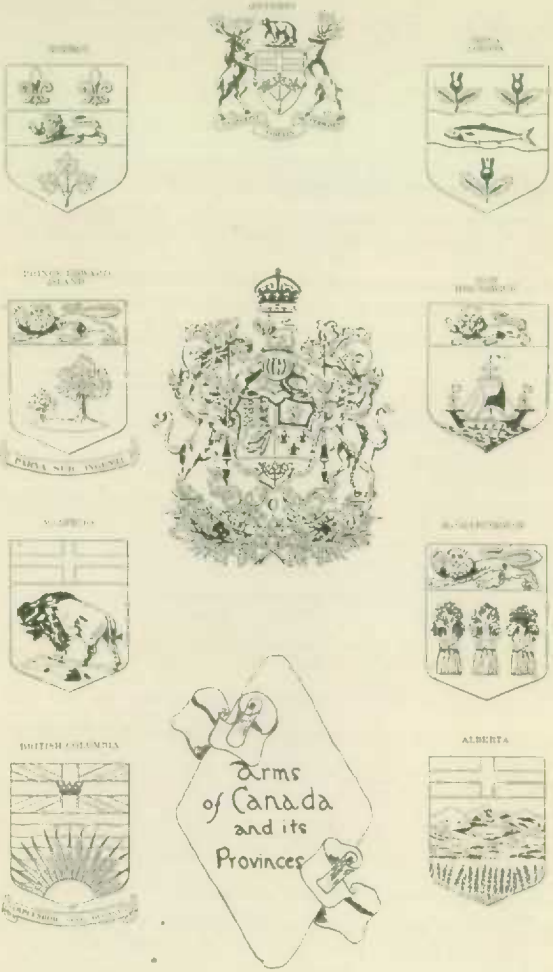
British Columbia.—Granted by Royal Warrant dated the 31st March, 1906. Description—"Argent three Bars wavy Azure issuant from the base of a demi-Sun in splendour proper, on a Chief of the Union Device charge in the centre Point with an Antique Crown Or."

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.
Fess—horizontal band across shield.
Garb—sheaf of wheat.
Guardant—looking full face at the spectator.
Gules—red.
Naiant—swimming.
Or—gold.
Passant—walking.
Rampant—leaping.
Sable—black.
Statant—standing.


PRINCE EDWARD ISLAND
BRITISH COLUMBIA
ALBERTA
Arms
of Canada
and its
Provinces

H.M.
KING GEORGE V

H.E.
VISCOUNT
WILLINGDON

CANADA 1930

A HANDBOOK

of PRESENT CONDITIONS
and RECENT PROGRESS
IN THE DOMINION

Published by authority of the Hon. James Malcolm, M.P., Minister of Trade and Commerce

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DOMINION BUREAU OF STATISTICS
OTTAWA

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FOREWORD

CANADA has now emerged from the confusion of the post-war period and is once more in the tide of that general expansion and development which the war interrupted.

For some time past the need has been felt for an official handbook of the Dominion, comprehensive in scope, yet at the same time succinct, up-to-date, and popular in form, that would throw into relief the outstanding facts of progress from year to year and thus assist in the understanding of current conditions and problems. In the Dominion Bureau of Statistics a numerous series of reports—annual, quarterly, monthly, and weekly—cover the important phases of such subjects as population, immigration, production, industry, transportation, trade, prices, finance, education, etc.—constituting in their entirety a detailed body of information on the various social and economic activities of the country. The Canada Year Book, based on these reports but supplementing them with data drawn from other departmental sources, has also been developed in the Bureau as a *précis* and compendium of the whole. These publications, however, are necessarily voluminous, being for permanent and detailed reference rather than for purposes of rapid and general review, a fact which, combined with their cost, militates against their distribution on a general scale.

The present handbook is an attempt to meet the demand for an annual selection of representative statistics, within measurable compass, in co-relation with each other, and in assimilable form as a whole. It follows somewhat the same lines as a booklet prepared in the Bureau on the occasion of the Diamond Jubilee of the Confederation of Canada in 1927, entitled "Sixty Years of Canadian Progress," which had a wide circulation at the time and attracted favourable attention.

The handbook has two immediate practical objects: Outside of Canada it will present a balanced picture of Canadian conditions, with sufficient historical and descriptive background to render them intelligible and interesting in a broad way, at a time when Canada is much in the eye of the world as a field for new enterprise. In Canada itself, appearing as it does immediately after the New Year, and taking the basic form of a review and interpretation of the years just passed, it will assist in that general discussion and appraisement of the situation usual to the season of stocktaking, thus helping, it is hoped, to lay foundations for still further national progress in 1930.

JAMES MALCOLM,
Minister of Trade and Commerce

OTTAWA, January 1, 1930.

CANADA 1930

INTRODUCTION

Economic Review of 1929

In entering upon 1930, and by way of general interpretation of the several chapters of this handbook, the leading economic developments of 1929 may be briefly reviewed, in the setting of the current business cycle.

The General Setting

Since the close of 1924, the economic trend in Canada has been strongly and consistently upward, assuming during the past two years the proportions of a pronounced and general expansion. The ultimate basis must be sought in world conditions, more particularly in credit enlargement in the United States, but conditions in Canada, in and by themselves, have materially contributed. Beginning with 1925, a succession of four exceptionally favourable harvests, each greater than the preceding, culminated in 1928 in yields which fixed new high records. Not since the stimulus of the war and immediately post-war period have similar conditions prevailed. In addition, the sharp recovery in agricultural prices, which in the liquidation of 1921 had receded further than those of most raw materials and of the great mass of manufactured articles, coinciding with improved European conditions, greatly increased the purchasing power of the agricultural community. The agricultural situation since 1925 has thus given exceptionally firm support to the Canadian economic structure, promoting in particular a succession of "favourable" trade balances which have successfully liquidated current Canadian obligations abroad, besides representing some export of Canadian capital.

On these foundations, a resumption set in of the process of developing the unexploited natural resources of the country as a source of raw materials, the necessary capital coming in large amounts from outside, but being also raised to an unprecedented extent within Canada itself. Development during the immediate past has taken a somewhat different direction than in former periods. Whereas previous large scale expansion, particularly during the early years of the century, had for basis the vacant agricultural lands of the West, the recent activity, despite a steady and material increase in crop acreages, has been largely in the forested and mineral regions of northern Quebec, Ontario, Manitoba, and Saskatchewan—the "pre-

Cambrian shield" outlined in the accompanying diagram and often regarded hitherto as a retarding rather than promoting factor in Canadian progress. As a vast increase in grain production was the major result of earlier expansion, so the present has borne fruit in increased hydro-electric power installation, increased pulp and paper production, and a record mineral output. Significantly, newsprint has become the second largest export of Canada, ranking next to wheat.

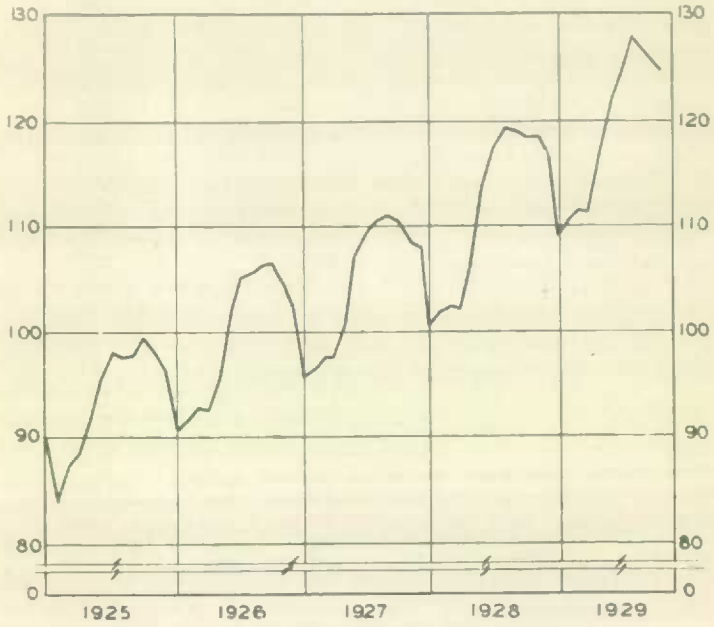
The Pre-Cambrian Shield

The reactions have been numerous and far-reaching. Since the period 1921-1923, an extraordinary advance has been indicated in almost every Canadian barometer. Of the general spirit of optimism engendered, it is sufficient to point out that within five years the volume of stock exchange transactions increased by over seven times, while the prices of Canadian common stocks at their peak advanced by over five times.

Expansion in 1929

The outstanding characteristic of 1929, especially during the first nine months, was the progressive advance to still higher levels of the expansion just mentioned. Throughout the industrial, commercial and financial field, records were established not only for the present cycle, but higher than at any previous time in the history of the Dominion. Significant instances are cited later; here, mention may be made of three which are general in scope:—(1) the volume of indus-

trial production as measured by a composite index of the Dominion Bureau of Statistics was nearly 14 p.c. higher in the first nine months of 1929 than in the corresponding period of the preceding year, which in its turn was a record; it may be added that the dollar volume of general business, as measured by bank debits, was 8·2 p.c. higher in the eleven months ended November, 1929 than in the corresponding period of 1928, (2) the general level of employment was higher in every



The Trend of Employment (Conditions in 1926=100)

month of the year than in 1928, which again had established a new high record (*see* diagram herewith); (3) the trend of speculation as measured by the prices of industrial common stocks went from an index of 237·3 in December, 1928, to one of 315·8 in September, 1929. In brief, no previous period in Canada has seen the economic activities of the country expand at a more rapid rate.

The Crops—Over-Speculation Checked

Into this accelerating movement two factors intervened during the autumn months, the exact effect of which was the chief subject of appraisement as the year closed:

(1) The first was a decline in the current crop yield, the year for the first time since 1924 showing a lower level than its predecessor. The wheat crop, which exceeded 560 million bushels in 1928, will market less than 300 millions for 1929, with oats similarly down, but with barley fairly well maintained. As offset, four circumstances may be adduced: (1) that it is by contrast with the record year of 1928 that the figures appear exceptionally low; they are considerably higher than those of the years 1916-1920 inclusive; (2) that the quality of the yield is the best in several years, being much superior to that of any of the three preceding years; (3) that prices have shown a firmer tendency, which with the higher quality will enable the crop to be marketed on a better basis than for some time; and (4) that in view of the heavy carry-over and the world wheat situation, the recurrence of a super-crop in Canada might possibly have overloaded the market. Nevertheless, the lessened volume of the crop was unfavourably felt in various directions. Joined to the marketing policy of the wheat pool it reacted immediately on railroad, steamship, and grain handlers' earnings; export trade declined; the Canadian dollar went more than fractionally below par in New York; and there was a slackening in branches of industry like flour-milling and agricultural implements.

(2) The second factor was the drastic deflation in security prices which followed the severe contraction of credit in the United States during October and November, and which brought the index number of Canadian common stocks from over 300 to around 200 in the closing month of the year. The occasion was the rise in call rates on the New York market and some decline in business activity in the United States. The bull market of which this marked the end, was of several years duration; its later stages had been based largely on future prospects rather than on present earnings of industry. Prices, however, it should be remarked, still remained more than double those prevailing when the movement began. Serious as some of the immediate repercussions were, the deflation has released capital for use in non-speculative fields to a degree that is distinctly ameliorating over a wide part of the world.

Other Features of 1929

For the examination in detail of the current economic situation, two series of statistics are given in Appendix II of the present handbook, Parts I and II, respectively. Part I illustrates the trend from the opening of the century up to the past year. Part II traces the trend month by month throughout 1929. Comprehensive analysis of these materials is impossible within the present survey, but the following notes on specific phases may be added:—

Iron and Steel.—As expansion implies a rapid addition to capital plant and equipment, it is of special significance that during the past

four years the iron and steel industries have been producing in greater volume than during any preceding period. Notwithstanding the high level of 1928, the output of pig iron was 10 p.c. greater in the first ten months of 1929 than in the same period of the preceding year. The production of steel ingots and castings similarly during the first ten months of 1929 was 1,203,625 long tons, an increase of 17 p.c. Imports of primary iron and steel products showed a gain in the year ending October of more than 28 p.c. These gains were handed on to subsidiary industries, which were more actively employed than in any other peace-time period of similar duration, with no material slackening at the time of going to press. Imports of manufactured iron and steel products nevertheless have been heavy during the same period.

Hydro-Electric Power.—Every important industrial centre throughout the Dominion is served with hydro-electric energy, and most centres have within practicable transmission distance substantial reserves for the future. It has been estimated that every dollar expended on the development and transmission of electric energy involves the expenditure of six dollars in applying the power to its ultimate uses. Hydro development work in progress is accordingly a barometer of marked significance. Among new developments commenced in 1929 may be mentioned the Beauharnois project, contemplating an expenditure of about $80,000,000. Extensive developments were also underway on the Gatineau and St. Maurice rivers in Quebec, on the Mersey in Nova Scotia, on the upper reaches of the St. John river in New Brunswick, and on the Winnipeg and Churchill rivers in the west. In British Columbia and Ontario increased demands for power from all sections led to an especially active program of construction. The output of electric energy in the first ten months of 1929 was 14,497,000,000 kilowatt hours, as compared with 13,049,000,000 kilowatt hours in the same period of 1928, an increase of 11·1 p.c.

Mining.—Though the Canadian mining industry attained successively new production records in each of the three years 1926, 1927, and 1928, still heavier yields were reported in 1929. For the first time the total value of the output exceeded $300 millions, new records being established for no less than 13 minerals. Copper, nickel, lead, zinc, petroleum, asbestos and structural materials saw gains aggregating over $28 millions. Of even greater promise was the current activity in prospecting and in the opening up of new ore bodies. Mine developments and the construction of new smelters and refineries in progress at the close of 1929 also point the way to enlarged outputs. As much of the new construction has not come into production, the high records of 1929 are to be attributed mainly to more efficient operation and greater demands upon existing equipment.

Construction.—The value of contracts awarded during the first eleven months of 1929 (additions to capital plant) was 20 p.c. greater than during the same period of the preceding year, reaching $544,103,000. In 1928 the total value for the year was $472,000,000, compared with $240,000,000 in 1921, the record having passed $400,000,000 in 1927 for the first time since the war. Building permits issued in sixty cities during the first ten months of 1929 were nearly 9 p.c. greater than in the same period of the preceding year.

Motor Cars.—The automobile industry reacts to much the same conditions as construction; a promising outlook and a high level of purchasing power are pre-requisites to expansion. Changes in models, with resulting fluctuations—of which the alteration by the Ford Motor Company in 1927 and 1928 was an example—must, of course, be taken into consideration when interpreting the current trend. The expansion in motor car use, one of the striking features of the post-war period, is well indicated by the increase in registrations from 400,000 in 1920 to more than one million cars in 1929. In current production, there was a greater rise during the first four months of 1929 than in any previous year, new monthly output records for all time being established in March and April. From May forward the output dropped sharply to lower levels, though at the end of October the cumulative figures stood at 248,376, as against 221,188 at the end of October, 1928, and the twelve months record total in 1928 of 242,054 cars. Exports of Canadian-made automobiles reached the peak for all time in April, when 15,561 cars were shipped out of Canada; for the ten months ending October the export shipments numbered 91,419 cars, as against 64,317 for the first ten months of 1928. Imports stood at 42,618 for the period, as compared with 45,005 to the end of October, 1928. Similar activity ensued in the manufacture of raw materials and accessories, the tire and oil industries operating at new high levels during the early months of 1929. Imports of crude rubber at 68,610,000 pounds were 22 p.c. greater than in the corresponding period of the preceding year, while imports of crude petroleum in the first nine months of 1929 were no less than 841,000,000 gallons, a gain of nearly 20 p.c. over the same period of 1928.

Pulp and Paper.—In the nine-year period ending with 1929, this industry has acquired first rank among the manufactures of Canada, heading the list for gross and net value of output, as well as for distribution of wages and salaries. It is today the chief industry depending upon the forest for raw material, and the export of the latter to United States mills has steadily declined. Newsprint output, which was 805,114 tons in 1921, was 2,414,393 in 1928. Though the rapid expansion in plant and equipment had by 1929 induced somewhat unsettled price conditions, Canadian mills produced 295,942 tons more

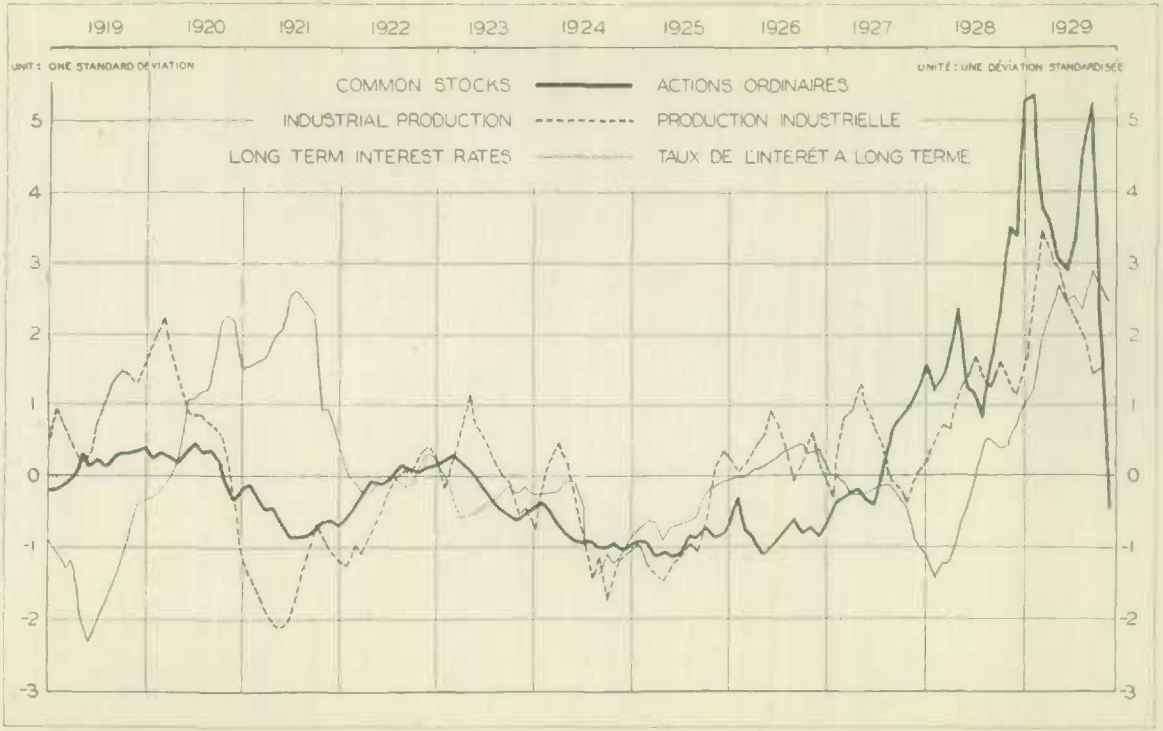
of newsprint in the first ten months of 1929 than in the same period of 1928, a gain of 15 p.c. Satisfactory progress was also shown in the production of book, writing and other papers, and paper board.

External Trade.—The first eleven months of 1929 showed a gain of $92,521,789 in imports over the corresponding period of 1928, but in exports there was a decline of $65,218,430. The "favourable" trade balance, which was $317 millions on November, 30 1926, and which had declined to half that figure in 1928, was an "unfavourable" balance of $58 millions in 1929. Movements of capital into Canada under expansion conditions explained much of the import side of this equation. The decline in exports has accumulated almost entirely since June, with the falling off in the movement of grain, particularly wheat—partly attribuable to lower yields but reflecting temporary marketing policies as well.

Banking and Credit.—Operations of the chartered banks have reflected the prosperity of trade and industry. Current loans at the end of October at $1,473,000,000 were $246,000,000 greater than at the same date in 1928. Call loans showed an increase of $19,000,000. Quick and liquid resources were more than maintained during the year. Loans and securities other than those of the Canadian Government gained $246,000,000. Liabilities to the public, including circulation and deposits, were up $233,000,000.

During the early months of 1929, steps were taken to strengthen reserves by accumulating cash and by reducing current loans elsewhere than in Canada. The purchase of government securities to the amount of nearly $36,000,000 in September and October was another step in the same direction. The crisis on the stock exchanges accordingly found the banks ready, warnings having been sounded in advance by the principal banks. The credit restriction is illustrated by the rise in bond yields (the factor of most immediate influence on bond values being current interest rate), that on Ontario government bonds being only 4·3 p.c. in January, 1928, compared with 4·95 p.c. in October last. The ensuing break in security prices, which, as already stated, amounted to 40 p.c. within a few weeks time, reacted unfavourably in the first instance on general business. Owing to the strong banking situation, however, there was no currency panic, and no marked difficulty ensued in obtaining credit for industrial or business operations, interest rates showing a decline in the principal money markets. The curbing of over-speculation is expected to encourage the expansion of productive operations.

Wholesale Prices.—A reassuring feature of the economic situation and one which characterizes the stock market break as a technical readjustment of values rather than a discounting of future business recession, is the level of wholesale prices. There has been no inflation


1919
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
UNIT: ONE STANDARD DEVIATION
UNITÉ: UNE DÉVIATION STANDARDISÉE
COMMON STOCKS
ACTIONS ORDINAIRES
INDUSTRIAL PRODUCTION
PRODUCTION INDUSTRIELLE
LONG TERM INTEREST RATES
TAUX DE L'INTERÉT A LONG TERME
5
4
3
2
1
0
-1
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-3

of commodity prices, the index numbers having varied only very slightly in the last three years and in a downward direction. No readjustment of commodity values with its concomitant of demoralized business conditions is therefore necessary. Incidentally it may be remarked that throughout the recent buoyancy the wages of labour and the cost of living have remained steady though firm.

Public Finance.—Revenue from taxation totalled $283,230,000 in the first eight months of the current fiscal year, as compared with $275,377,000 in the corresponding period of last year—an increase of $7,853,000. This increase was achieved in spite of reductions in taxation in the last budget, estimated to aggregate $25,000,000 per annum or at the rate of more than $2,000,000 per month. Grand total revenue reached $321,803,000, as compared with $311,340,000—an important factor being the increase of postal revenue from $18,329,000 to $19,811,000, indicating the increased volume of business done.

It may be of interest in conclusion to draw attention to the chart on the opposite page, which traces for the past decade (with adjustments for long term and seasonal trends) 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 (business activity); and money rates (credit). Though these movements must always be interpreted in the light of current influences they tend to move in the order named.

R. H. C.

DOMINION BUREAU OF STATISTICS, OTTAWA,
December 21, 1929.

CHAPTER I

OUTLINE OF POLITICAL HISTORY—CONFEDERATION—THE EXPANSION OF CANADA

Early History—The French Period.—Canadian recorded history commenced with the discovery of the eastern coast by John Cabot in 1497. Corte Real visited Newfoundland and Labrador in 1501 and Verrazano explored the coast of Nova Scotia in 1524, while Jacques Cartier's voyages (1534-1541) resulted in the exploration of the St. Lawrence as far as Montreal. Samuel de Champlain, however, was the real founder of Canada, as he was associated with de Monts in establishing Port Royal in 1605 and himself founded Quebec in 1608, later carrying on extensive explorations.

While religious and patriotic motives actuated many of those whose names are connected with the early history of New France, the fur trade, with its natural antagonism to settled agriculture, was the original mainstay of colonization. The monopolistic trading companies of the period, one after another, profited from this trade but systematically evaded the stipulations in their contracts for actual colonization and missionary work among the Indians.

In 1663 company rule was discarded and Canada came under the immediate government of the King of France with a local administration consisting of a governor, assisted by an advisory sovereign council, a bishop and an intendant—the latter an administrative and judicial officer whom we might call a "business manager." In a word, the full machinery of Royal Government as practised in the French provinces, including the feudal system, was transplanted to Canada, and this lasted until the end of the French period in 1760.

Champlain

Among the various governors, the name of Frontenac is outstanding, among the bishops, Laval, and among the intendants, Talon. In a recapitulation like the present, it is impossible even to suggest, much less to fill in, the romantic and picturesque background of the French *régime* in Canada—the

General Wolfe

heroism of the missionaries; the intrepidity of the explorers who, from their slender base along the St. Lawrence, traversed lake and river to the prairies on the west and to the Gulf of Mexico on the south—that succession of stirring incidents clustered about such names as Maisonneuve and La Mère de l'Incarnation, Dollard, d'Iberville and La Verendrye, Marquette and La Salle, which opened up what is now the Dominion of Canada to the civilized world and gave form to some of the most notable Canadian institutions of today.

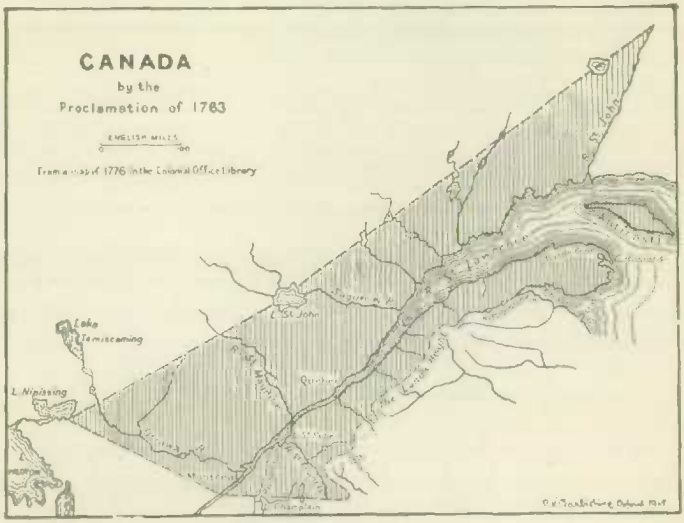
Almost incessant warfare grew out of the rivalry between the French colony in the St. Lawrence valley, sparsely settled, poor, but aristocratic, and the far more numerous, wealthy and democratic English colonies along the Atlantic seaboard. In the end Great Britain won. Nova Scotia or Acadia was surrendered to her by the Treaty of Utrecht in 1713, while the Seven Years War decided the issue for the St. Lawrence valley in the final struggle between Wolfe and Montcalm—a struggle which cost both leaders their lives at the battle of the Plains of Abraham in 1759.

The British Period.—Canada, including Cape Breton Island and what is now New Brunswick, became, after the Treaty of Paris in 1763, a British crown colony with limits as shown on the map overleaf. For several years thereafter the government was of a military character.

In 1774, when the American Revolution was visibly approaching, the boundaries of the province of Canada were extended by the Quebec Act south to the Ohio river and west to the Mississippi. The Act also established a council with limited legislative powers, sanctioned the

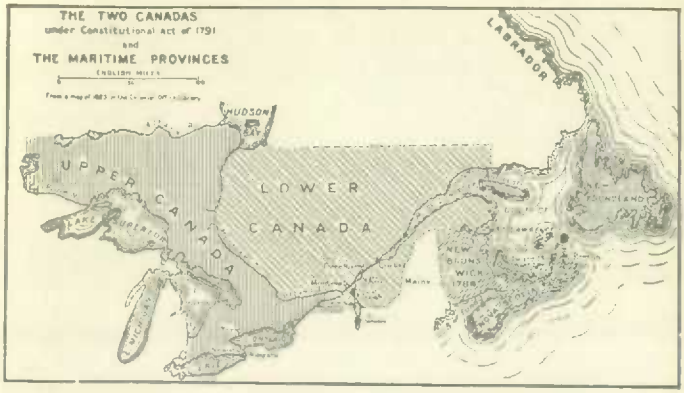
General Montcalm

use of French law in civil matters, and granted full freedom for the exercise of the Roman Catholic religion. Thus assured of their most valued rights, and with additional British privileges, the French resisted the separatist influence of the seceding American colonies, and Sir Guy Carleton, then governor, with the co-operation of the better elements of the population, repulsed the attacks of the American generals, Montgomery and Arnold. The Treaty of Versailles, however, surrendered the fertile but unpeopled territory south of the Great Lakes to the United States. Thereafter the coming of the United Empire Loyalists—the second great incident of Canadian settlement as the French occupation was the first—reinforced the English-speaking population of Nova Scotia, and peopled New Brunswick and Ontario.



Map of Canada in 1763

The Constitutional Act of 1791 endeavoured to solve some of the problems created by the juxtaposition of French and English settlers. It divided the English-speaking province of Ontario or Upper Canada from the mainly French-speaking province of Lower Canada or Quebec and gave to each Representative Government, which had existed in Nova Scotia since 1758, in Prince Edward Island since 1769 (first Legislature met, 1773), and in New Brunswick since 1784 (first Legislature met, 1786). The British North American provinces, as they existed at the end of the eighteenth century, are shown on the map overleaf.



Map of The Two Canadas and the Maritimes, 1791

In the early nineteenth century, there took place the war of 1812-15 with the United States, in which Sir Isaac Brock and Colonel de Salaberry were outstanding figures in the defence of Canada, not an acre of territory being lost by the Treaty of Ghent which closed the war. A peace of more than a century has followed, marked by steadily improving relations between the two countries.

The Representative Government granted in 1791, while it gave people a considerable voice in administration, went only part way, and resulted in bitter quarrels between the Legislative Assemblies and the Governors. These quarrels finally led in Upper and Lower Canada to the abortive rebellions of 1837-38, which, however, brought about the sending of Lord Durham to Canada, the union of the provinces and the decision to grant Responsible Government (1841). During the first seven years of the Union, the meaning and scope of Responsible Government were hotly debated, but after the formation of the Lafontaine-Baldwin government in 1848 it was definitely recognized that the Governor, like the King, did not govern, but the Government was entrusted to whichever of the political leaders of the moment could command the sup-

Sir Guy Carleton
(Lord Dorchester)

port of the majority in the Legislative Assembly. In the same year' 1848, when Lord Elgin was Governor-General, Responsible Government was given to Nova Scotia and New Brunswick, and in 1851 to Prince Edward Island.

Meanwhile, on the Pacific coast, a new settlement was being established on Vancouver island, where coal had been discovered in 1849, but to which the fur-trade had penetrated both by land and sea long before—Sir Alexander Mackenzie's heroic exploit in crossing the continent having taken place in 1793. Representative Government was conceded to this colony in 1856. A little later the discovery of gold on the mainland led to a great rush of miners, and the mainland was constituted a separate colony in 1858. In 1864 a Legislative Council was established. Two years later the provinces of British Columbia and Vancouver Island were united and the first Legislative Council of British Columbia met, being partly nominated and partly elected. In 1871, just prior to the entry of British Columbia into Confederation, this Council passed the Constitution Act, providing for a Legislative Assembly of 25 members, to be substituted for the Council itself.

The primitive struggle to subdue the wilderness, the patient, unromantic work of individual settlers, who with axe and rude plough hewed out farms, built mills and the other industries of a pioneer civilization, the founding of towns, townships and counties, etc., must here be passed over. Population, which at the time of the cession was about 90,000, had increased by 1860 to 3 millions. Economic progress had become rapid. Lumbering had replaced the fur trade; roads were built; canals were dug and deepened; the era of railway building had begun. Though Upper Canada's prosperity, founded on grain growing, was checked by the repeal of the corn laws in Great Britain, from 1854 to 1866 the United States market was open to the produce of the British American provinces by the Reciprocity Treaty. The Maritime provinces meanwhile had developed fishing, shipbuilding and the carrying trade.

The Story of Confederation

The project of uniting the British North American colonies was adumbrated as early as 1789 by William Smith, a former Chief Justice of Canada, and again proposed twenty-five years later by Chief Justice Sewell, but only with the introduction of railways and telegraphs did it come within the range of practical politics. Although advocated by the British American League in 1850, by the Honourable Henry Sherwood in 1851, and by Alexander Galt in 1858, it was not until deadlock occurred in the Canadian Legislative Assembly that the Government of Canada was induced to take the matter up. Other causes were the impending abrogation of the Reciprocity Treaty, which forced Canada

The Fathers of Confederation

to look for new channels of trade, and the intimation from the British Government that Canada must, to a large extent, provide for its own defence. Accordingly in 1864 a Coalition Government, of which Sir Etienne Taché was the head and including John A. Macdonald, George Etienne Cartier, George Brown, Oliver Mowat and William McDougall, was formed in Canada for the purpose of negotiating the confederation of the British North American Provinces, failing which they undertook to apply the federal principle as between Upper and Lower Canada.

Meanwhile a somewhat similar movement was taking place in the Maritime Provinces where there were three Governments and three Legislatures in an area smaller than either Upper or Lower Canada. A joint conference to discuss the expediency of a union of the three provinces under one Government and Legislature had met at Charlottetown on September 1, 1864. The Canadian Government received permission for its delegates to attend this conference and as a result the conference was adjourned to meet at Quebec to discuss the *federal union* of all the provinces rather than the *legislative union* of the Maritime provinces only. The resolutions adopted at the Quebec Conference, Oct. 10-29, 1864 (at which Newfoundland as well as Canada and the Maritime Provinces was represented) were approved by the Legislature of Canada at the following session, but unexpected opposition developed in the Maritimes. However, in April, 1866, the Nova Scotia Assembly authorized the appointment of delegates to arrange with the Imperial Government a scheme of union, and in June, 1866, a similar resolution was passed in New Brunswick.

The delegates of Canada, Nova Scotia, and New Brunswick met in London on December 4, 1866, Prince Edward Island and Newfoundland not being represented. The resolutions of the Quebec Conference were taken up, considered *seriatim*, amended in certain particulars and adopted anew, the amendments granting more favourable financial terms to the Maritime Provinces. The title desired for the new confederation by the Conference was the "Kingdom of Canada," but the name "Dominion" was subsequently substituted. The resolutions, as amended by the London Conference, were now passed by the Imperial Parliament as the British North America Act, receiving the Royal Assent on March 29, 1867. On May 22 was issued the Royal Proclamation, uniting the provinces of Canada, Nova Scotia and New Brunswick into one Dominion under the name of Canada, and on July 1, 1867, the Dominion commenced to exist.

The Expansion of Canada.—The early years of Confederation, under Sir John A. Macdonald as prime minister, were unsettled, owing to the agitation in Nova Scotia for the repeal of the union, and to the North West rebellion of 1870, arising out of the transfer of the enormous territories of the Hudson's Bay Company to the new Dominion. This

transfer, however, became effective on July 15, 1870, and Manitoba was admitted into Confederation as the fifth province of the Dominion. On July 20, 1871, British Columbia entered Confederation under an agreement stipulating for the construction of a Canadian Pacific railway. Prince Edward Island joined the Dominion on July 1, 1873. On September 1, 1880, all British possessions in North America and the adjacent islands, except Newfoundland and its dependencies, were annexed to Canada by Imperial Order of July 31, thus extending the Dominion of Canada far northward into the Arctic regions. In 1895 negotiations for the inclusion of Newfoundland in the Confederation proved abortive, and Newfoundland remains a separate govern-

The Expansion of Canada

(The darkly shaded portion of the map shows the extent of Canada at Confederation, 1867, since when the lightly shaded areas have been added).

ment; indeed, by decision of the Privy Council in 1927, in the Labrador boundary case, about 100,000 square miles previously claimed by Canada were granted to Newfoundland. In September, 1905, about the middle of the premiership of Sir Wilfrid Laurier, the new provinces of Alberta and Saskatchewan were formed from the old Hudson Bay Territory, and in 1912 the boundaries of Manitoba, Ontario and Quebec were extended northward to Hudson strait and Hudson bay, James bay and the 60th parallel of latitude. Canada, north of the 60th parallel, has been formed for administrative purposes into the territories of Yukon, Mackenzie, Keewatin and Franklin, the latter including the islands of the Arctic ocean.

(For a Chronology of Canada in the Twentieth Century, see Appendix I)

CHAPTER II

AREA—NATURAL RESOURCES—CLIMATE

Area

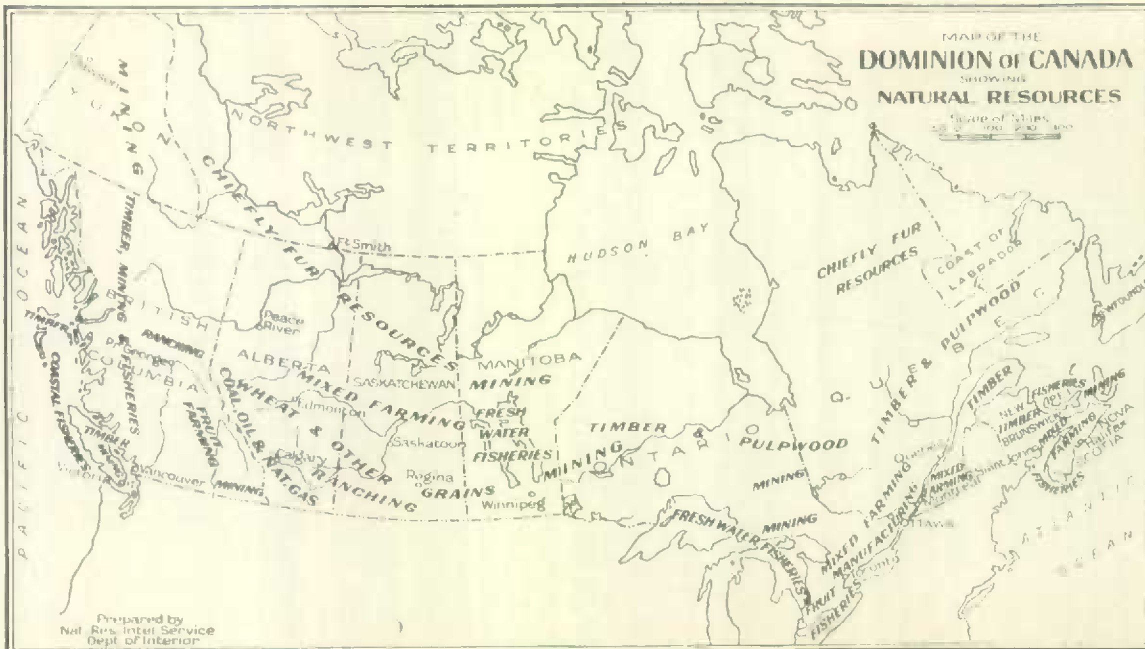
The four original provinces of Canada contained 350,188 square miles of land and inland waters, of which the original land area was 338,224 square miles. After purchase of the Hudson Bay Territory in 1870 and the admission of British Columbia in 1871 and of Prince Edward Island in 1873, the area of the Dominion was 3,470,392 square miles. Further exploration in the northern regions resulted in increasing this area to 3,797,123 square miles as estimated in 1926, but the decision of the Judicial Committee of the Privy Council in 1927 in the Labrador Boundary dispute reduced this to 3,684,723 square miles—which, however, is still more than ten times that of the original Confederation. The details of the present area are shown in the following table:—

Land and Water Area of Canada by Provinces and Territories as in 1929

Provinces and Territories	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	357,962	49,300	407,262
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
	3,504,688	180,035	3,684,723

Natural Resources

It follows from the above that 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 (probably $5,500 millions in all), in addition to the rapidly growing capital of the people of Canada itself.


MAP OF THE
DOMINION of CANADA
SHOWING
NATURAL RESOURCES
Scale of Miles
NORTHWEST TERRITORIES
YUKON
MINING
CHIEFLY FUR RESOURCES
TIMBER, MINING & FISHERIES
Ft. Smith
HUDSON BAY
CHIEFLY FUR RESOURCES
COAST OF LABRADOR
BRITISH COLUMBIA
Peace River
RANCHING
TIMBER
COASTAL FISHERIES
TIMBER
Victoria
Vancouver
MINING
FRUIT FARMING
COAL, OIL & NAT. GAS
ALBERTA
Edmonton
Calgary
WHEAT & OTHER GRAINS
MIXED FARMING
RANCHING
SASKATCHEWAN
Saskatoon
Regina
MANITOBA
MINING
FRESH WATER FISHERIES
Winnipeg
ONTARIO
TIMBER
MINING
PULPWOOD
FRESH WATER FISHERIES
MIXED FARMING
MANUFACTURING
FRUIT
FISHERIES
Toronto
Ottawa
QUEBEC
TIMBER & PULPWOOD
Quebec
Montreal
MIXED FARMING
NEW BRUNSWICK
TIMBER
FISHERIES
MINING
NOVA SCOTIA
Halifax
FISHERIES
ATLANTIC OCEAN
PACIFIC OCEAN
Prepared by
Nat. Res. Intel. Service
Dept. of Interior

The natural resources of Canada consist mainly of agricultural lands, forests, fisheries, minerals, water-powers, and fur-bearing animals. Though the later chapters of this booklet deal with the development of these resources, their natural background may be recapitulated in summary form:—

Agricultural Lands.—The breeding of new early-ripening varieties of grain, such as Garnet and Reward wheat, 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 1,306,320,000 acres of the land area of the nine provinces approximately 358,162,190 acres are available for use in agricultural production, being 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 of the 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

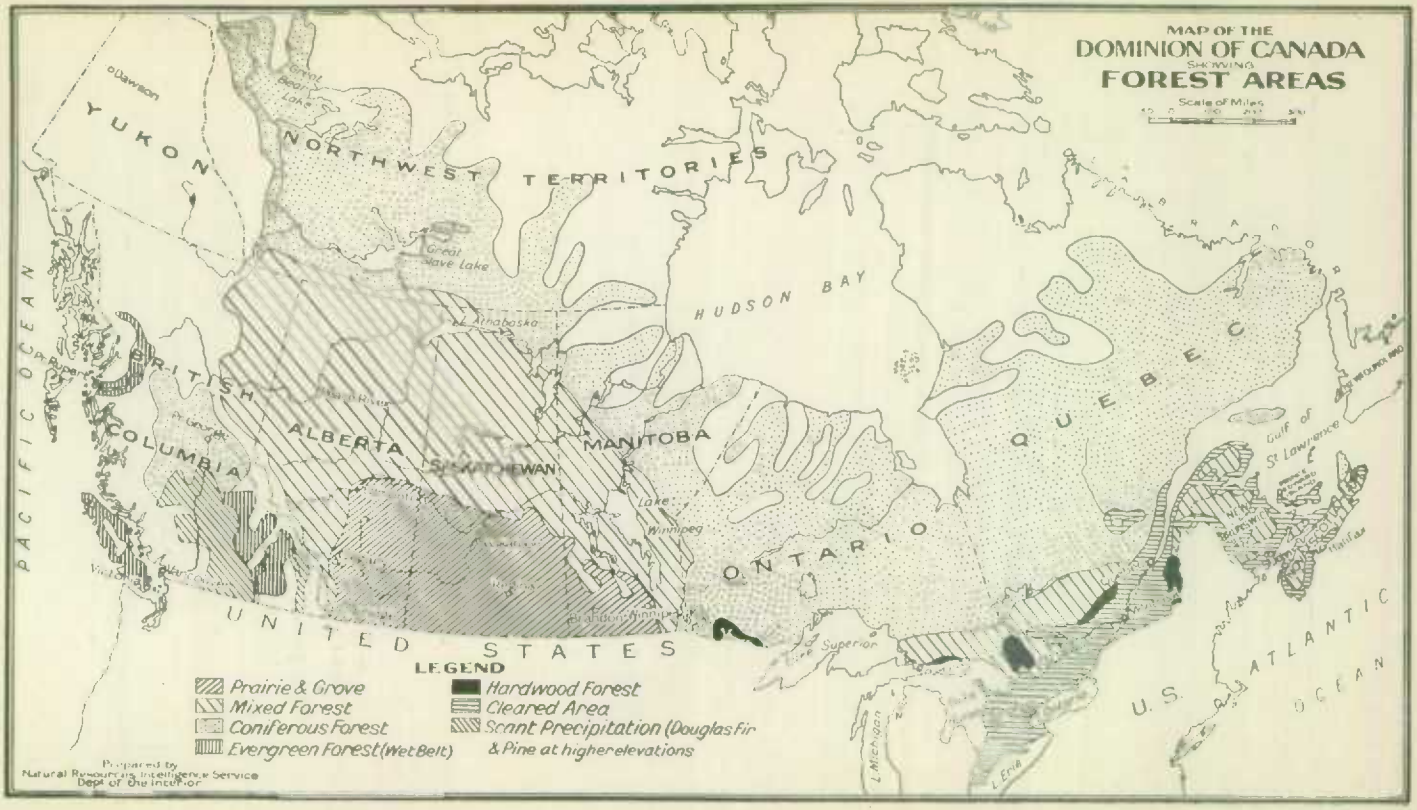
Vegetables Grown at Fort Vermilion, 350 miles north of Edmonton

Photo by Can. Govt. Motion Picture Bureau

communities, various districts specializing in dairying, tobacco, sheep, etc., while the Niagara peninsula has long been famous for its fruits of both large and small varieties. 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.

Of the larger areas of land still available for settlement, the clay belt of northern Ontario and Quebec, in which splendid crops are grown, is to a large extent undeveloped, as well as an even larger area in northern Saskatchewan and Alberta, including the Peace River district.

Forests.—Canada's forest areas include, (1) the great coniferous forest of the Rocky mountains and Pacific coast; (2) the northern


MAP OF THE
DOMINION OF CANADA
SHOWING
FOREST AREAS
Scale of Miles
YUKON
NORTHWEST TERRITORIES
HUDSON BAY
PACIFIC OCEAN
BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
QUEBEC
UNITED STATES
U.S.
ATLANTIC OCEAN
Great Slave Lake
L. Athabasca
Lake Winnipeg
Gulf of St Lawrence
Superior
L. Michigan
L. Erie
LEGEND
Prairie & Grove
Mixed Forest
Coniferous Forest
Evergreen Forest (Wet Belt)
Hardwood Forest
Cleared Area
Scant Precipitation (Douglas Fir & Pine at higher elevations)
Prepared by
Natural Resources Intelligence Service
Dept of the Interior

forest, stretching in a wide curve from the Yukon north of the Great Lakes to Labrador; and (3) the forest 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, some of which is agricultural land. This area contains 425,000,000,000 feet board measure of saw timber and 1,122,000,000 cords of pulpwood, etc., making a total equivalent to 224,000,000,000 cubic feet. These figures place Canada next to Asiatic Russia among the countries of the world with respect to forest resources. (*See* also Chapter VII.)

Fisheries.—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 pure cold sea water coming down from the Arctic region and containing an immense quantity of fish of the highest food value, including cod, halibut, haddock, herring and mackerel, while the inshore fisheries (15,000 square miles) number the lobster, oyster, salmon, gaspereau, smelt, trout and maskinongé. Other fishing grounds include the inshore expanses of the St. Lawrence river, the Great Lakes (14,000 square miles, producing whitefish, trout and herring), Hudson bay, with a shore line of 6,000 miles, and the Pacific coast, with its shore line of 7,000 miles and with its estuarian salmon fisheries contributing two-fifths of the fish products of the Dominion.

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 lesser metals. Only the southern ellipse of this area has developed mineral fields, though new discoveries annually push back the frontiers. With regard to coal, it is estimated that available reserves amount to 1,234,269 million metric tons, or about one-sixth of the total reserves of the world; 85 per cent of these are in Alberta. Extensive oil and gas fields exist in the western provinces, and smaller ones in Ontario and New Brunswick have been developed.

Water-Powers.—(*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 the Northwest Territories furnish subsistence for many of the most highly prized fur-bearing animals, such as the beaver, fisher, fox, marten and others. (*See* Chapter XI).

Game and Scenery.—Canada's position as one of the least settled countries of the English speaking world, close to the 120,000,000 people of the United States, and just across the sea from 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 is among 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 Rocky Mountain Park, also in Alberta, containing 5,380 and 2,751 square miles respectively, also Kootenay Park, Glacier Park and Yoho Park in British Columbia. Many Provincial Parks are also maintained. The tourist traffic is annually becoming larger and more valuable to the country, having been estimated at over $250,000,000, as described on a later page.

Cape Trinity, on the Saguenay River

Photo by Can. Govt. Motion Picture Bureau

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. (*See* the isothermal lines on the accompanying map.)

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) Ontario and Quebec; (4) 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.

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. 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.


NORMAL MEAN TEMPERATURE JANUARY
METEOROLOGICAL SERVICE OF CANADA
NORMAL PRECIPITATION JANUARY
UNITED STATES
HUDSON BAY
DAVIS STRAIT
MANITOBA
ATLANTIC OCEAN

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.

Canada's winter sports, representing the advantage now taken of what was once considered a disagreeable hardship, are annually attracting an increasing number of tourists.

Salmon Fishing on the Restigouche River, N.B.

Photo by Can. Govt. Motion Picture Bureau

CHAPTER III

THE CONSTITUTION AND GOVERNMENT OF CANADA—PUBLIC FINANCES (DOMINION, PROVINCIAL AND MUNICIPAL)

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 establishing 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 the creature of 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 so 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

The Victory Memorial Tower, Parliament Buildings, Ottawa

Drawing by N. R. I. Service

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. 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, in fact, 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 premier, 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, attended by Rt. Hon. W. L. Mackenzie King, Prime Minister, and

The Speaker's Chair, House of Commons, Ottawa
Presented by The House of Commons of England, 1918

Photo by Can. Govt. Motion Picture Bureau

Hon. Ernest Lapointe, Minister of Justice, on behalf of Canada. 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 appointed in 1926 the Hon. Charles V. Massey as Minister to the United States, which country reciprocated by appointing in 1927 the Hon. William Phillips as its first Minister to Canada. An interchange of Ministers with France and Japan has since been effected; the Hon. Philippe Roy being sent to France, and the Hon. Herbert Marler to Japan, while the Hon. Georges Jean Knight, and the Hon. I. Tokugawa have been appointed Ministers to Canada by France and Japan, respectively. Similar interchanges with other countries are contemplated.

In October-November of the past year 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.

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, as for provincial purposes by the Lieutenant-Governor. 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 30 years of age, British subjects, residents of the province for which they are appointed, and possess $4,000 over and above their liabilities. Members of the House of Commons (245 in 1929) are elected by the people for the duration of the Parliament, which may not be longer than five years.

The members of the Fourteenth Ministry, now in office are as follows:—

Fourteenth Dominion Ministry

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

Office	Occupant
Prime Minister, President of the Privy Council and Secretary of State for External Affairs	Right Hon. William Lyon Mackenzie King.
Member of the Administration as Minister without Portfolio	Hon. Raoul Dandurand.
Minister of Justice and Attorney-General	Hon. Ernest Lapointe.
Minister of Finance and Receiver-General	Hon. James A. Robb.*
	Hon. Charles A. Dunning.
Minister of the Interior, Minister of Mines and Superintendent-General of Indian Affairs	Hon. Charles Stewart.
Minister of Agriculture	Hon. William R. Motherwell.
Minister of Pensions and National Health	Hon. James H. King.
Minister of Marine and Fisheries	Hon. Pierre J. A. Cardin.
Minister of Railways and Canals (Acting)	Hon. Charles A. Dunning.
Minister of Public Works	Hon. John C. Elliott.
Solicitor-General	Hon. Lucien Cannon.
Minister of National Defence	Hon. J. L. Ralston.
Postmaster-General	Hon. Peter J. Veniot.
Minister of National Revenue	Hon. William D. Euler.
Secretary of State	Hon. Fernand Rinfret.
Minister of Trade and Commerce	Hon. James Malcolm.
Minister of Immigration and Colonization	Hon. Robert Forke.
Minister of Labour	Hon. Peter Heenan.

*Hon. Jas. A. Robb died Nov. 11, 1929.

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.

Public 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.

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 today some 42,000.

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

Dominion Finances, 1867-1929

Year	Estimated or census population	Revenue receipts	Total expenditure	Net debt at end of year
	No.	$	$	$
1868	3,372,000	13,687,928	14,071,689	75,757,135
1871	3,485,761	19,335,561	19,293,478	77,706,518
1881	4,324,810	29,035,298	33,796,643	155,395,780
1891	4,833,239	38,579,311	40,793,208	237,809,031
1901	5,371,315	52,514,701	57,982,866	268,480,004
1911	7,206,643	117,780,408	122,861,250	340,042,052
1921	8,788,483	434,386,537[1]	528,302,513[2]	2,340,878,984[3]
1926	9,390,300	380,745,506[1]	355,186,423[2]	2,389,731,099
1927	9,519,000	398,695,776[1]	358,556,751[2]	2,347,834,370
1928	9,658,000	422,717,983[1]	378,658,440[2]	2,296,850,233
1929	9,796,800	455,463,874[1]	378,806,313[2]	2,225,504,705

[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 and $4,687,967 in 1929.

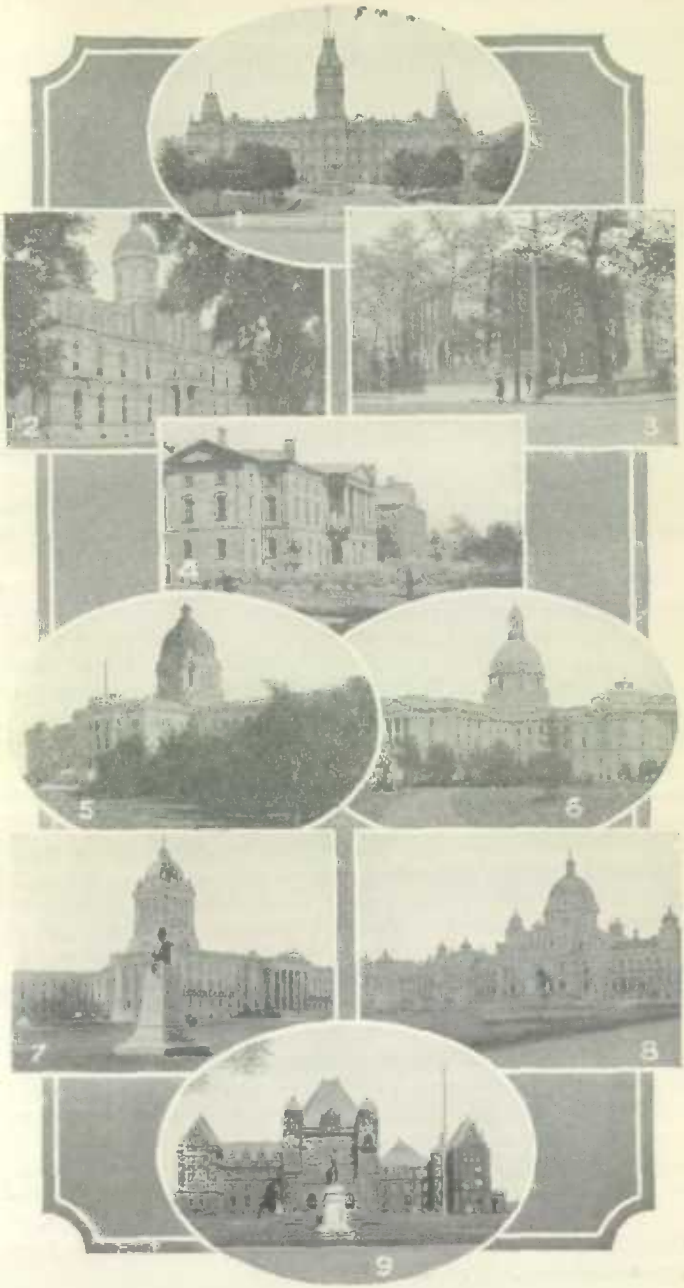
[2] Includes advances to railways, Canadian Government Merchant Marine, etc., of $110,662,655 in 1921, $11,205,910 in 1926, $11,569,413 in 1927, $18,493,509 in 1928 and $3,646,000 in 1929.

[3] The maximum net debt of Canada at the end of any fiscal year was $2,453,776,869 at Mar. 31, 1923.

For the first eight months of the current fiscal year ending November 30, 1929, total Dominion revenues were $321,803,497 compared with $311,340,397 for the similar period of the preceding fiscal year, customs revenues totalling $130,584,871, compared with $124,698,240. Total expenditures for the same periods were $269,649,992 and $244,369,788, respectively.

The Provincial Governments

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 uni-cameral, consisting of a Legislative Assembly elected by the people, except in Quebec, where there is a Legislative Council as well as a Legislative Assembly.



Provincial Parliament Buildings

1. Quebec; 2. Fredericton; 3. Halifax; 4. Charlottetown; 5. Regina; 6. Edmonton; 7. Winnipeg; 8. Victoria; 9. Toronto

Can. Govt. Motion Picture Bureau

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

Lieutenant-Governors of Provinces, 1929, and Present Premiers

Province	Lieutenant-Governor	Premier
Prince Edward Island	Hon. Frank R. Heartz	Hon. A. C. Saunders.
Nova Scotia	Hon. James C. Tory	Hon. E. N. Rhodes.
New Brunswick	Hon. Maj.-Gen. Hugh H. McLean	Hon. J. B. M. Baxter.
Quebec	Hon. H. G. Carroll	Hon. L. A. Taschereau.
Ontario	Hon. William Donald Ross	Hon. G. H. Ferguson.
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 licenses 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.

Provincial Public 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 which, by the voluntary action of their previously existing governments, entered Confederation, raise considerable revenues through land sales, sales of timber, mining royalties, leases of water-powers, etc., while the Prairie Provinces receive from the Dominion special grants in lieu of land revenues. Negotiations for the transfer of the lands and other natural resources of the Prairie Provinces to the Governments of the respective provinces are proceeding. 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.

While the *laisser faire* school of political thought was predominant throughout the country, provincial receipts and expenditures were generally very moderate. From the commencement of the twentieth century, however, the Canadian public, more especially in Ontario and the West, began to demand increased services from the government, particularly in respect of education, sanitation, and the ownership and operation of public utilities. The performance of these functions necessitated increased revenues, which had in the main to be raised by taxation. Among the chief methods of taxation to be employed has been the taxation of corporations and estates. Prominent among the objects of increased expenditure in this same period are education, public buildings, public works, labour protection, charities, hospitals and corrections.

The expansion in the ordinary revenues and expenditures of the provincial governments is shown by aggregated figures for all the provinces while a corresponding increase in direct liabilities is evidenced as follows:—

Aggregate Provincial Revenues and Expenditures, 1873-1928

Fiscal year ended	Ordinary revenue	Ordinary expenditure	Direct liabilities
	$	$	$
1873	6,960,922	6,868,884	.....
1881	7,858,668	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	102,568,515	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

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

Municipal Government and Finance.—Under the British North America Act, the municipalities are the creations of the Provincial Governments. Their basis 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.

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 $106,075,959 in 1927. In Quebec the aggregate ordinary expenditures of the municipalities increased from $19,139,465 in 1914 to $54,606,389 in 1927. In Manitoba, again, municipal taxation has increased from $9,922,537 in 1912 to $17,907,723 in 1928. Similar increases have occurred in most of the other provinces.

CHAPTER IV

POPULATION—GENERAL ECONOMIC PROGRESS —BIRTHS, DEATHS AND MARRIAGES— IMMIGRATION

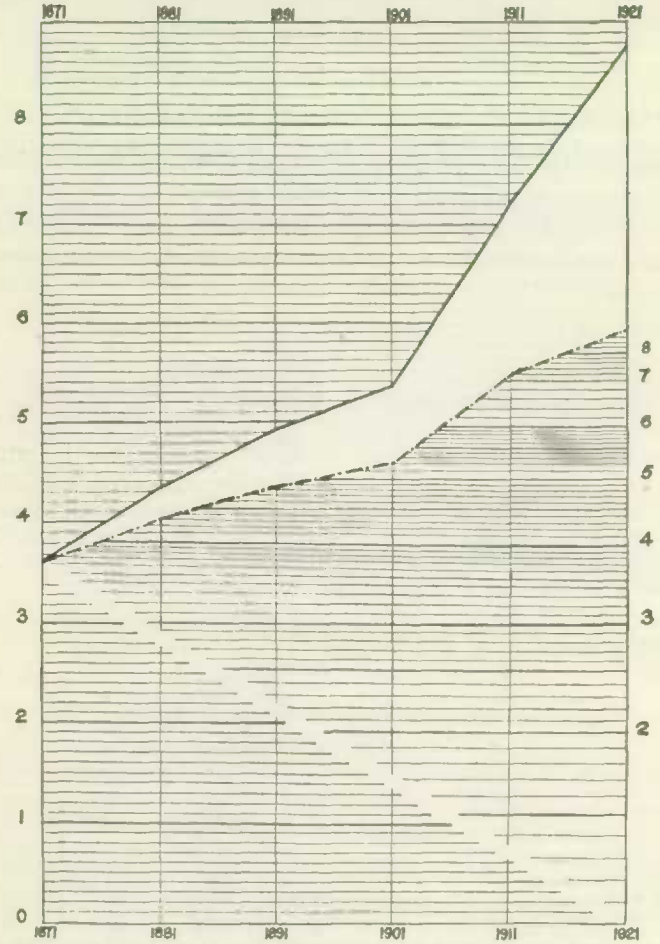
Population growth affords an excellent measure of general economic progress, and the present chapter is written from that standpoint, each of the more important fields of economic activity being given a chapter to itself in the remainder of the handbook.

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, 1867-1929

Provinces	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	[3]	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	[3]	[3]	[3]	[3]
Alberta	[3]	[3]	[3]	[3]
Yukon	[3]	[3]	[3]	[3]
North West Territories	[3]	48,000	56,446	98,967
Total	.....	3,689,257	4,324,810	4,833,239

POPULATION OF CANADA 1871-1921.



THE SOLID LINE IS ON AN ORDINARY SCALE REPRESENTING ACTUAL GROWTH; THE DOTTED IS ON A LOGARITHMIC SCALE REPRESENTING RELATIVE GROWTH, FROM DECADE TO DECADE. THE FIGURES OPPOSITE EACH LINE REPRESENT MILLIONS ON THEIR RESPECTIVE SCALES.

Growth of Population in Canada, 1867-1929—Concluded

Provinces	1901	1911	1921	1929
Ontario	2,182,947	2,527,292	2,933,662	3,271,300
Quebec	1,648,898	2,005,776	2,361,199	2,690,400
New Brunswick	331,120	351,889	387,876	419,300
Nova Scotia	459,574	492,338	523,837	550,400
British Columbia	178,657	392,480	524,582	591,000
Prince Edward Island	103,259	93,728	88,615	86,100
Manitoba	255,211	461,394	610,118	663,200
Saskatchewan	91,279	492,432	757,510	866,700
Alberta	73,022	374,295	588,454	646,000
Yukon	27,219	8,512	4,157	3,000
North West Territories	20,129	6,507	7,988	9,400
Total	5,371,315	7,206,643	8,788,483[4]	9,796,800

[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 for 1867.
[4] Includes 485 Canadian Navy.

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, 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 reflect these conditions. That of 1881 showed a gain of 635,553 or 17·23 per cent, but in neither of the next two decades was this record equalled, the gains in each being under 550,000 or 12 per cent. With the end of the century the population of Canada had reached but 5¼ 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 to Canada, which received a total of $2½ billions within a dozen years. The immigration movement, which had seldom previously exceeded 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 and there is reason to believe that Canada now stands on the threshold of an era of development that will eclipse the past.

The seal upon Canadian nationhood was in fact 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 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. From this great effort she emerged without permanent disability.

Analyses of Growth.—The general population increase in Canada in the opening decade of the present century was 34 per cent, the fastest rate of any country in the world. In the second decade we grew 22 per cent, again the fastest rate with the one exception of Australia, whose growth was greater by a fraction of one per cent. A century earlier the United States grew 35 per cent decade by decade until 1860, but with this exception there has been no example of more rapid national progress than that of Canada according to her last two censuses.

In 1871, only 2·96 per cent of the population dwelt west of the Lake of the Woods. In 1921 it was 28·37 per cent—2,500,000 people compared with 110,000 at Confederation.

Corner of Main St. and Portage Ave., Winnipeg, in 1872 and in 1929
Public Archives and Can. Govt. Motion Picture Bureau

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. There is a greater masculinity of the population from the same 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, 83 p.c. of the population were in 1921 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

Origins	1901	1921	Origins	1901	1921
	No.	No.		No.	No.
British	3,063,195	4,868,903	Indian	127,941	110,814
English	1,260,899	2,545,496	Italian	10,834	66,769
Irish	988,721	1,107,817	Negro	17,437	18,291
Scotch	800,154	1,173,637	Russian	28,612	100,064
Other	13,421	41,953	Scandinavian[1]	31,042	167,359
French	1,649,371	2,452,751	Swiss	3,865	12,837
Dutch	33,845	117,506	Various	47,002	431,108[2]
German	310,501	294,636	Unspecified	31,539	21,249
Hebrew	16,131	126,196	Total	5,371,315	8,788,483

Religions	1901	1921	Religions	1901	1921
	No.	No.		No.	No.
Anglicans	681,494	1,407,994	Lutherans	92,524	286,458
Baptists	318,005	421,731	Mennonites	31,797	58,797
Confucians	5,115	27,114	Methodists	916,886	1,159,458
Congregationalists	28,293	30,730	Presbyterians	842,442	1,409,407
Greek Church	15,630	169,832	Protestants	11,612	30,754
Jews	16,401	125,197	Roman Catholics	2,229,600	3,389,636
			Various Sects	186,516	271,375[3]

[1] Includes Danish, Icelandic, Norwegian and Swedish.
[2] Includes 107,671 Austrians, 39,587 Chinese, 15,868 Japanese, 53,403 Polish, 106,721 Ukrainians, etc.
[3] Having less than 25,000 adherents each.

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. can speak English, while 1,997,074, or 30 p.c., can speak French. Of the latter, 1,070,752 can also speak English. Some 196,619 speak German as mother tongue.

Birthplaces of the People in 1871, 1901, 1911 and 1921

Birthplaces	1901	1911	1921
TOTAL POPULATION	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
North West 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 per cent 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.

The change in *occupations*, from earlier years to the present time, has been significant; increasing specialization, with the increased use of machinery, has been in progress for fifty years, with the result that the finance, trade and transportation occupations now bulk many times larger, proportionately. The proportion of women employed in gainful occupations is probably twice as great as sixty years ago.

Persons Gainfully Employed 1891-1921

Occupational groups	Males 10 years and over		Females 10 years and over	
	1891	1921	1891	1921
	No.	No.	No.	No.
Agriculture	723,013	1,023,706	12,194	17,912
Building trades	185,599	284,052	–	627
Domestic and personal service	38,275	77,783	91,415	134,632
Civil and municipal government	17,500	81,959	767	12,582
Fishing and hunting	29,841	29,241	204	51
Forestry	12,812	39,808	–	7
Manufactures	174,829	449,348	62,490	106,410
Mining	16,124	50,860	3	203
Professional	42,572	103,479	20,051	118,670
Trade and merchandising	101,714	295,836	7,918	77,911
Transportation	68,100	246,947	948	21,145
Total employed	1,410,379	2,683,019	195,990	490,150
Population 10 years of age and over	1,841,005	3,461,238	1,770,877	3,209,998
Percentage employed	76·61	77·52	11·07	15·27

Occupational groups	Per cent of total workers in each group					
	1891			1921		
	Male	Female	Total	Male	Female	Total
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
TOTAL WORKERS	100·0	100·0	100·0	100·0	100·0	100·0
Agriculture	51·3	6·2	45·8	38·2	3·7	32·8
Building trades	13·2	–	11·6	10·6	0·1	9·0
Domestic and personal service	2·8	46·7	8·1	2·9	27·5	6·7
Civil and municipal government	1·2	0·4	1·1	3·1	2·6	3·0
Fishing and hunting	2·1	0·1	1·9	1·1	–	0·9
Forestry	0·9	–	0·8	1·5	–	1·3
Manufactures	12·3	31·9	14·7	16·7	21·7	17·5
Mining	1·1	–	1·0	1·9	–	1·6
Professional	3·0	10·2	3·9	3·8	24·2	7·0
Trade and merchandising	7·2	4·0	6·8	11·0	15·9	11·8
Transportation	4·9	0·5	4·3	9·2	4·3	8·4

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 have been somewhat lower in 1929, and death rates slightly higher as a result of the influenza epidemic in January.

Births, Deaths, and Marriages in Canada, 1921 and 1928

Provinces	Births		Deaths		Marriages	
	1921	1928	1921	1928	1921	1928
Number						
CANADA[1]	257,728	236,194	101,155	108,939	69,732	74,287
Prince Edward Island	2,156	1,806	1,209	952	518	466
Nova Scotia	13,021	10,899	6,420	6,195	3,550	3,256
New Brunswick	11,465	10,024	5,410	4,962	3,173	3,138
Quebec	88,749	83,621	33,433	36,632	18,659	19,126
Ontario	74,152	68,420	34,551	37,108	24,871	25,728
Manitoba	18,478	14,504	5,388	5,396	5,310	5,170
Saskatchewan	22,493	21,100	5,596	6,138	5,101	6,687
Alberta	16,561	15,568	4,940	5,655	4,661	5,776
British Columbia	10,653	10,312	4,208	5,901	3,889	4,940
Rate per 1,000 population						
CANADA[1]	29·4	24·5	11·5	11·3	8·0	7·7
Prince Edward Island	24·3	21·0	13·6	11·1	5·8	5·4
Nova Scotia	24·9	19·9	12·3	11·3	6·8	6·0
New Brunswick	30·2	24·2	14·2	12·0	8·4	7·6
Quebec	37·6	31·6	14·2	13·8	7·9	7·2
Ontario	25·3	21·2	11·8	11·5	8·5	8·0
Manitoba	30·3	22·1	8·8	8·2	8·7	7·9
Saskatchewan	29·7	24·8	7·4	7·2	6·7	7·9
Alberta	28·1	24·5	8·4	8·9	7·9	9·1
British Columbia	20·3	17·7	8·0	10·1	7·4	8·5

[1] Exclusive of Yukon and the Northwest Territories.

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

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 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' time.

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

Number of Immigrant Arrivals in Canada, fiscal years ended 1920-1929.

Fiscal years	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

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

Months	1928		1929	
	Immigrants	Returned Canadians*	Immigrants	Returned Canadians*
January	3,692	1,683	4,164	1,767
February	4,312	1,812	4,634	1,698
March	14,665	2,670	14,811	2,378
April	26,983	3,313	29,113	2,641
May	23,641	3,833	26,616	2,976
June	20,303	3,526	22,021	3,426
July	15,783	3,394	16,465	3,404
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	–	–
December	5,515	2,154	–	–

*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 V

GENERAL SURVEY OF CANADIAN WEALTH, PRODUCTION AND INCOME—FOREIGN CAPITAL INVESTMENTS IN CANADA

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 (1927), the tangible wealth of the Dominion, apart from undeveloped natural resources, amounts to about $27 billions. This represents an increase of about $5 billions since 1921. There is no earlier figure that is strictly comparable, but it is fairly certain that there has been a growth of four times since 1900. Agricultural values make up about $8 billions of the present total, urban real estate about $7 billions, and the railways about $3 billions. Ontario owns slightly more than one-third, Quebec about one-quarter, and Saskatchewan about one-ninth. (*See* tables herewith for complete statement by items and by provinces.)

An Estimate of the National Wealth of Canada, 1927

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)	6,227,021,000	22·51	654 17
Agricultural products in the possession of farmers and traders	1,780,927,000	6·44	187 09
Total Agricultural Wealth	8,007,948,000	28·95	841 26
Mines (capital employed)	714,073,000	2·58	75 02
Forests (estimated value of accessible raw materials, pulpwood, and capital invested in woods operations)	1,866,613,000	6·75	196 09
Fisheries (capital invested in boats, gear, etc., in primary operations)	31,852,000	0·12	3 35
Central electric stations (capital invested in equipment, materials, etc.)	457,772,000	1·65	48 09
Manufactures (machinery and tools and estimate for lands and buildings in rural districts; duplication excluded)	1,136,455,000	4·10	119 39
Manufactures (materials on hand and stocks in process)	729,107,000	2·63	76 60
Construction, custom and repair (capital invested in machinery and tools and materials on hand)	112,382,000	0·41	11 81
Trading establishments (furniture and fixtures, delivery equipment and materials and stocks on hand)	985,665,000	3·56	103 55
Steam railways (investment in road and equipment)	2,950,000,000	10·66	309 91
Electric railways (investment in road and equipment)	227,980,000	0·83	23 95
Canals (amount expended on construction to March 31, 1928)	218,808,000	0·79	22 99
Telephones (cost of property and equipment)	243,999,000	0·88	25 63

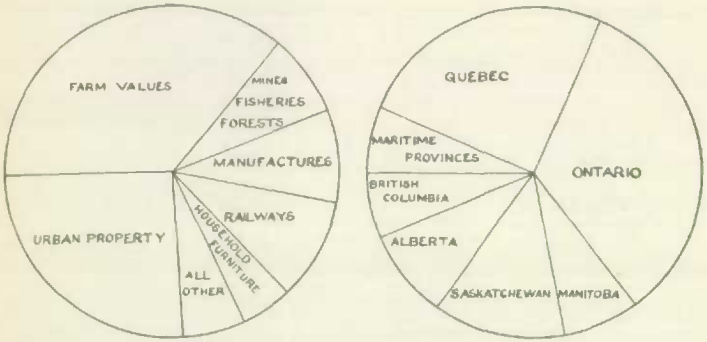
An Estimate of the National Wealth of Canada, 1927—Concluded

Classification of wealth	Aggregate amount	Percentage of total	Average amount per head of population
	$	p.c.	$ cts.
Urban real property (assessed valuations and exempted property and estimate for undervaluation by assessors and for roads, sewers, etc.)	7,238,688,000	26·16	760 45
Shipping (estimated from 1918 census)	106,500,000	0·39	11 19
Imported merchandise in store (one-half imports during 1927)	543,541,000	1·96	57 10
Automobiles (estimate of value of automobiles registered)	639,532,000	2·31	67 18
Household furnishings, clothing, etc. (estimated from production and trade statistics)	1,200,000,000	4·34	126 06
Specie, coin and other currency held by Government, chartered banks and general public	257,328,000	0·93	27 03
Total	27,668,243,000	100·00	2,906 65

Provincial Distribution of the National Wealth of Canada, 1927

Province	Estimated wealth	Percentage distribution of wealth	Estimated population June 1, 1927	Percentage distribution of population	Wealth per capita
	$	p.c.	No.	p.c.	$
Prince Edward Island	147,000,000	0·53	86,700	0·91	1,693
Nova Scotia	854,000,000	3·09	543,000	5·70	1,575
New Brunswick	749,000,000	2·71	411,000	4·32	1,822
Quebec	6,840,000,000	24·72	2,604,000	27·36	2,627
Ontario	9,544,000,000	34·49	3,187,000	33·48	2,995
Manitoba	1,887,000,000	6·82	647,000	6·80	2,916
Saskatchewan	3,003,000,000	10·85	836,000	8·78	3,592
Alberta	2,318,000,000	8·38	617,000	6·48	3,757
British Columbia	2,309,000,000	8·35	575,000	6·04	4,016
Yukon	17,000,000	0·06	3,470	0·04	[2]
Canada	27,668,000,000	100·00	9,519,000[1]	100·00[1]	2,907

[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.



NATIONAL WEALTH BY ITEMS AND BY PROVINCES

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 that consist in the creation of materials or their making over into new forms as constituting "production" in a special sense, and it is of this that a bird's eye view is given in the table, 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.

It will be seen that agriculture and manufactures rank as rivals for first place in net value of production for the whole of Canada. Forestry and mining are usually next in importance, but in 1927 construction operations relegated these to fourth and fifth places, respectively. By provinces, Ontario and Quebec occupy first place, largely because of their manufacturing preeminence, with Saskatchewan and Alberta following—the result of their large agricultural output.

As these industries engage only two-thirds of those gainfully employed in Canada it would be safe to add one-half to the 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 $5½ billions.

Summary by Industries of the Value of Production in Canada, 1927

Industry	Gross	Net [1]	Per cent of total net
	$	$	p.c.
Agriculture	1,878,093,214	1,483,043,000	38·1
Forestry	453,694,831	311,915,163	8·0
Fisheries	63,876,559	49,497,038	1·3
Trapping	17,640,781	17,640,781	0·4
Mining	279,873,382	247,356,695	6·3
Electric Power	134,818,567	104,033,297	2·7
Total Primary Production	2,827,997,334	2,213,485,974	56·8
Construction	488,439,727	317,944,127	8·2
Custom and Repair [2]	116,082,000	74,174,000	1·9
Manufactures [3]	3,425,498,540	1,635,923,936	33·1 [4]
Total Secondary Production [3]	4,030,020,267	2,028,042,063	43·2
Grand Total [3]	6,180,559,051	3,896,280,555	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 1927 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 $677,458,550 and a net of $345,247,482, is eliminated from the grand total.
[4] Manufactures not elsewhere stated.

Summary by Provinces of the Value of Production in Canada, 1927

Province	Gross	Net [1]	Per cent of total net
	$	$	p.c.
Prince Edward Island	29,324,024	23,419,044	0·6
Nova Scotia	190,663,835	132,846,100	3·4
New Brunswick	139,288,463	88,714,359	2·3
Quebec	1,515,224,487	918,354,991	23·6
Ontario	2,600,123,121	1,453,508,408	37·3
Manitoba	299,059,886	189,658,587	4·9
Saskatchewan	488,715,415	407,406,478	10·4
Alberta	468,991,168	381,543,218	9·8
British Columbia	443,929,088	295,603,020	7·6
Yukon	5,239,564	5,226,350	0·1
Canada	6,180,559,051	3,896,280,555	100·0

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

Foreign Capital in Canada.—A young nation like Canada is usually dependent to a considerable degree on foreign capital for the development of its resources. In the opening decade of the century the marked expansion through which Canada passed was largely based on capital imported from Great Britain (*see* page 42), at least $2½ 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; today 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. Foreign capital investments as a whole are not greatly in excess of 20 p.c. of the national wealth.

It must be pointed out in addition that Canadians have large amounts of capital invested abroad. The Bureau of Statistics estimate of this amount in 1928 was $1,579,074,000, divided as follows:—in Great Britain $131,915,000; in the United States, $874,626,000; and in other countries, $572,533,000.

Capital Investment by Other Countries in Canada, 1913 and 1929

—	1913 [1]	1929 [2]
	$	$
United States	650,000,000	3,400,000,000
Great Britain	2,500,000,000	2,210,000,000
Other Countries	175,000,000	250,000,000
Total	3,325,000,000	5,860,000,000

[1] Estimates of various authorities. [2] Estimates of Dominion Bureau of Statistics.

CHAPTER VI

AGRICULTURE

Historical.—The first cultivation of the soil in Canada was at Annapolis, N.S., under de Monts in 1605. In this year and at this spot was grown the first wheat ever raised in America, and here in the same year was erected the first water wheel to turn a millstone for the grinding of wheat on the North American continent. But the first real Canadian farmer was Louis Hébert, who landed in 1617 and began to clear land at a spot now in the middle of Upper Town, Quebec. His tools were an axe and a spade, but he planted both seed and apple trees. Three joined him in the following year. In another twenty years there were several hundreds. In half a century the "habitants" (as they were called from a very early date) had 11,000 acres under crop and 3,000 cattle. So in the other provinces, each had its small beginnings and early struggles.

Passing entirely over history (including such major incidents as the settlement of the Loyalists, the first opening of the West and the growth which followed Confederation), we may come at once to recent developments and present conditions in Canadian agriculture.

1. Field Crops

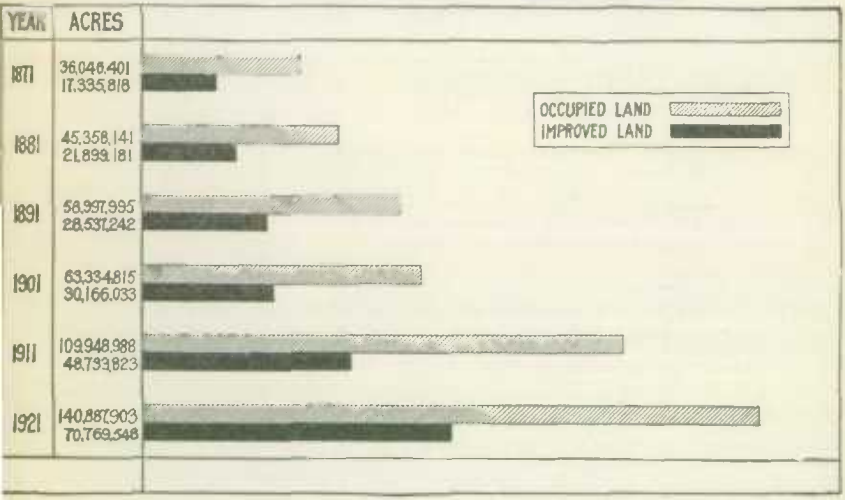
Acreages.—From 1890 to 1929 the area under field crops has grown from about 15·6 million acres to over 59 million acres, an increase of 282 p.c. during the last forty years. This was largely due to the opening of the West, but the war also caused a wonderful manifestation of farming energy, for within the period 1913 to 1919 alone, the area under field crops grew by about 50 per cent, notwithstanding the decline of immigration and the absence of a large proportion of Canadian manhood overseas.

Yields.—It is in respect of the principal grain crops, and especially of wheat, that agricultural progress has been most remarkable. For ten years after Confederation, the wheat crop rarely exceeded 25 million bushels and imports of wheat and flour exceeded exports by nearly 9 million bushels. The home production of wheat did not, in fact, suffice for domestic requirements. Afterwards, a gradual increase in production became apparent, and exports began to exceed imports; yet it was not until 1898 that the wheat yield exceeded 50 million bushels, and exports reached what was then the record total of 24½ million bushels.

In 1886 the completion of the Canadian Pacific Railway linked east and west, made the Dominion for the first time an economic unit, and opened up the great prairie lands of the middle West, with their soils of virginal fertility. The Prairie Provinces have since gradually come to produce nearly all the wheat of the Dominion. Thus in 1870, 85 p.c. of the wheat of Canada was grown in Ontario; this proportion was little more than 6 p.c. in 1929, whilst in Saskatchewan the proportion increased from 4 p.c. in 1890 to about 53 p.c. in 1929. A similar change is observable in the case of barley and oats. In 1929, for barley 78 p.c., and for oats about 49 p.c. of the total crop was grown in the Prairie Provinces. The first carload of western wheat left Winnipeg for Montreal by the new all-Canadian railway only in December, 1885.

Wheat.—Reverting to wheat, the first year in which 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 last seven years (1922-1928) the total of 1915 has been exceeded, *viz.*, in 1922 (nearly 400 million bushels); in 1923 (474 million bushels); in 1925 (395 million bushels); in 1926 (407 million

AREA OF OCCUPIED AND IMPROVED LANDS 1871-1921



bushels); in 1927 (479 million bushels); and in 1928 (566 million bushels). The 1929 crop was short, being only 294 million bushels. (*See* table below for the full record of Canada's major product).

Other Grains.—Whilst wheat stands supreme 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; whilst in 1928 the crop reached 452 million bushels, receding in 1929 to 280 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.

Population, Production, Imports, Exports and Apparent Home Consumption of Wheat for Canada, 1870-1929

Year	Estimated population	Production	Imports of wheat and flour	Exports of wheat and flour	Apparent home consumption
	000	000 bush.	bush.	bush.	000 bush.
*1870	3,454	16,724	5,756,977	5,276,898	22,451
*1880	4,215	32,350	468,272	7,541,165	26,949
*1890	4,793	42,223	953,345	940,220	30,885
*1900	5,322	55,572	255,228	20,301,379	36,765
1901	5,403	85,305	314,653	14,773,908	41,113
1902	5,532	93,569	360,470	31,007,446	54,658
1903	5,673	78,496	243,543	38,780,692	55,032
1904	5,825	89,029	220,992	23,923,228	54,794
1905	5,992	106,097	283,193	20,646,925	48,665
1906	6,171	125,505	253,531	47,293,465	59,057
1907	6,302	93,105	178,246	30,394,681	95,289
1908	6,491	112,434	285,398	52,486,998	40,903
1909	6,695	166,744	220,930	56,958,620	55,696
*1910	6,917	132,078	196,821	63,529,476	103,411
1911	7,207	230,924	388,717	59,522,822	72,944
1912	7,365	224,159	334,318	81,291,048	149,907
1913	7,527	231,717	882,250	113,311,203	111,730
1914	7,693	161,280	381,020	142,171,403	89,927
1915	7,862	393,543	2,116,347	94,198,902	69,197
1916	8,036	262,781	380,089	186,546,432	207,377
1917	8,180	233,743	287,533	223,059,600	40,009
1918	8,328	189,075	366,566	195,082,203	39,027
1919	8,479	103,260	328,478	83,233,372	106,170
*1920	8,631	226,508	163,192	117,861,843	75,561
1921	8,788	300,858	258,237	156,291,801	70,474
1922	8,940	399,786	551,206	169,853,507	131,556
1923	9,083	474,199	328,088	261,096,336	139,018
1924	9,227	262,097	440,376	309,587,418	165,052
1925	9,269	395,475	496,913	241,396,059	21,198
1926	9,390	407,136	555,700	295,061,853	100,969
1927	9,519	479,065	398,762	294,162,155	113,373
1928	9,658	566,726	474,878	309,144,918	170,965
1929	9,797	293,792	1,139,803	421,785,327	146,080

NOTE.—(1) For the above table, wheat flour has been converted into bushels of wheat at the uniform average rate of 4⅘ bushels to the barrel of 196 lb. of flour. (2) The exports and imports relate to the fiscal year ended June 30, 1868–1906, and March 31, 1907–29. For March 31, 1907, the fiscal period is nine months. (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 census.

Values of Field Crops.—Prices of agricultural products reached their peak during and just after the war in 1919. They slumped steeply thereafter, falling to a very low level in 1923, recovering however, considerably in later years. The value of the field crops of Canada, which in 1910 was $384,513,795 by 1914 had increased 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, $1,172,643,000 in 1927, $1,125,000,000 in 1928, and about $986,986,000 in 1929.

The Field Crops of Canada, 1929

Field crops	Area	Total yield	Total value
	acres	bush.	$
Wheat	25,255,002	293,899,000	345,840,000
Oats	12,479,477	280,276,000	169,951,000
Barley	5,925,542	100,467,000	62,448,000
Rye	991,944	12,919,000	11,135,000
Peas	125,194	2,195,600	4,277,000
Beans	86,290	1,364,000	4,754,000
Buckwheat	515,976	–	10,114,000
Mixed grains	1,118,649	33,820,000	26,858,000
Flaxseed	382,358	2,007,000	4,795,000
Corn for husking	152,055	5,053,000 cwt.	5,930,000
Potatoes	543,727	44,068,000	66,063,000
Turnips, mangolds, etc.	205,455	37,621,000 tons	24,919,000
Hay and clover	10,560,101	15,551,000	182,397,000
Alfalfa	798,951	1,626,000	20,595,000
Fodder corn	422,848	3,359,300	15,431,000
Sugar beets	43,464	334,000	2,292,000
Grain hay	1,600,000	2,099,000	25,287,000

Miles of Stooked Wheat in Western Canada

Photo by Can. Govt. Motion Picture Bureau

Improvement in Methods.—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, begun only 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 original 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 last 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 products are varieties called "Garnet" and "Reward". These are now being tried and

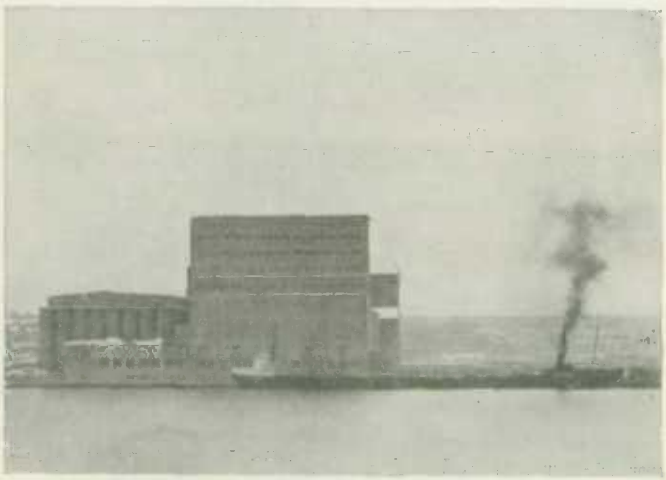
Fleet of Combine Harvesting Machines at Work, Alberta

Photo by Can. Govt. Motion Picture Bureau

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 market for which is distant about 5,000 miles of land and ocean from the points of production. It is indeed in the production of wheat for export that Canada has made the greatest progress during the period under review. The development of the Canadian grain trade, especially since the opening of 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 extensively 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



Government Terminal Elevator, Head of Lakes

Photo by Can. Govt. Motion Picture Bureau

wheat flour have grown from 5,276,898 bushels in 1870 to 309,587,418 bushels in 1924, and 421,885,327 bushels in 1929, counting by fiscal years. Canada, in brief, has become the world's second largest wheat-producing country (the United States being first), occupying the second place in five out of the last six crop years ended July 31, while as a wheat exporting country we have been first six times and second three times during the nine crop years ended July 31, 1929. 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 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.

Western Wheat Pools.—Important developments have occurred in Western Canada during the last five 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 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 and of an elevator 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 1928-29, shows that the Central Selling Agency of the three Pools handled 253,102,585 bushels of wheat and 35,694,057 bushels of coarse grains that year, involving a turn-over of $288,097,071. The Pools now operate over 1,600 country elevators and eleven terminals at

MOVEMENT OF
CANADIAN
WHEAT CROP
(IN BUSHELS)
1927 – 1928
DOMINION OF CANADA
SASKATCHEWAN
MANITOBA
ALBERTA
BRITISH COLUMBIA
ONTARIO
QUEBEC
PRINCE RUPERT
CROP
456,069,950
WESTERN DIVISION
A9,947,909
262,069,337
253,930,473
DIRECT TO EXPORT FROM W. OF LAKES
30,400
HALIFAX 1081,190
PORTLAND
CHICAGO
TOLEDO
DULUTH
WINNIPEG
UNITED STATES
PACIFIC OCEAN
ATLANTIC OCEAN

117,819 as compared with 28,151 in 1923-24 and 1,068 in 1922-23. Numerically, since the first census after Confederation (1871) horses have increased from 836,743 to 3,376,487 in the year 1929; cattle from 2,621,290 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. The highest number was 3,720,783 in 1920. At the present time sheep number 3,728,309.

Numbers of Farm Live Stock in Canada, 1929

Description	Number	Description	Number
Horses—			
Stallions	20,561	Goats in milking	4,764
Mares	1,605,825	Goats not milking	7,980
Geldings	1,447,239	Total	12,744
Colts and fillies	302,862		
Total	3,376,487	Swine—	
		Brood sows	537,253
Mules	5,587	Other live pigs	3,844,472
		Total	4,381,725
Cattle—			
Bulls	265,345		
Milch cows	3,778,277	Poultry—	
Calves	1,995,289	Hens	56,132,465
Other cattle	2,892,077	Turkeys	2,479,184
Total	8,930,988	Geese	1,175,764
		Ducks	1,112,389
Sheep	2,042,187	Total	60,899,782
Lambs	1,686,122		
Total	3,728,309	Rabbits	53,053

Dairy Farming in Eastern Canada

Photo by Can. Govt. Motion Picture Bureau

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. The quantity of flour exported has, therefore, increased over 30 times in the last sixty years while the value has increased nearly 35 times.

Flour produced from the crop of 1928 made a new record for the flour milling industry in Canada. 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 total daily capacity of flour mills in 1929 is nearly 150,000 barrels. Canada has today the largest flour mill in the British Empire, with a daily capacity of 24,500 barrels.

2. The Live Stock and Dairying Industries

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. The removal of the embargo against the introduction of store cattle into Great Britain was secured in 1923. As a result shipments of store cattle to this market for the fiscal year 1925-26 reached the total of

H.R.H. The Prince of Wales "E.P." **Ranch, High River, Alberta**

Photo by Can. Govt. Picture Motion Bureau

lb. in 1927; the yield in 1928 was 967,178 lb. The total estimated production of honey in Canada in 1928 was 22,489,909 lb., of the value of $2,785,467, whilst the production of clover and grass seed had an estimated value of $1,747,000.

Flour Mills in Canada.—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 1928 was 1,319 including over 1,000 country mills; the capital invested was $63,514,575, the cost of raw materials $165,032,821, while the value of products was $195,698,-124. The exports of wheat flour in the fiscal year 1868-69 were 375,219

The Maple Sugar Industry—Gathering the sap by gravity pipe-line system

Can. Govt. Motion Picture Bureau

Vancouver, Fort William-Port Arthur and Buffalo. Total membership in the Wheat Pools of Canada is well over 140,000, and reserve funds exceed $25,000,000.

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 29,786,100 lb. from 37,700 acres in 1929. Maple syrup and maple sugar are produced annually to the value of about $6,000,000, of which about 78 p.c. is 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 64,653,348 lb. in 1928. 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 1928 the value was $509,000. 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

A Field of Tobacco

Can. Govt. Motion Picture Bureau

The Dairying Industry.—The establishment of the dairying industry upon a co-operative factory basis has been one of the most significant of Canadian agricultural developments. Co-operative dairy farming may indeed be regarded as the sheet anchor of present-day farming in Eastern Canada.

The dairy factory system in Canada had its origin in the 1850's. Of the cheese factories operating in 1900, the oldest was in Oxford South, Ontario, dating back to 1855. The oldest factory in Quebec started at Mississquoi in 1866. The first Canadian creamery was started at Mississquoi in 1869, the second at Chateauguay in 1874, and the third in Waterloo North in the same year.

After Confederation the multiplication of cheese factories was fairly rapid, especially in Ontario, and production increased steadily until 1904, when a large increase in the consumption of milk and the diversion of milk to condenseries and milk powder factories resulted in some decrease in cheese production. The low point was reached in 1922.

The creamery system for the manufacture of butter has been of slower growth. Little progress was made until after 1882, when the first centrifugal cream separator used on the American continent was imported from Denmark and installed in a creamery at Ste. Marie, Beauce Co., Quebec. Another important development was the introduction about 1896 of mechanical refrigeration in cold storage warehouses, railway services and transatlantic steamers. The dairying industry in Eastern Canada has also owed much to the increasing use of fodder corn as a silage crop, which enabled the production of milk to be forced during the winter. Whilst dairying has been practised chiefly in Eastern Canada, very gratifying progress has recently been made in the Prairie Provinces, from which both cheese and butter are now being exported.

For 1928, the total value of dairy products is placed at $256,510,000, comprising butter, $94,540,000; cheese, $30,384,000; miscellaneous products, $20,300,000; and milk consumed fresh, $111,286,000. The number of milch cows in Canada has increased to 3,778,277 in 1929.

It is expected that the returns for 1929 will show a slight falling-off in total dairy production from 1928. There has been a decline in cheese production, the result, it is thought, of a drop in prices from 1928 levels, and probably also of a decrease in milk production due to the large export trade in dairy cattle. Butter production on the other hand, it is expected, will be shown to have equalled, if not exceeded, the 1928 output. During the past few years there has been a decrease in the number of dairy cattle in Canada, farmers taking advantage of the attractive returns obtained in foreign markets and exporting large numbers of cattle which would otherwise have been retained for milk production.

The sheep and wool industry has remained practically stationary. According to the census of 1870-1, 1,557,430 sheep were killed or sold off farms and 11,103,480 lb. of wool were sold. Corresponding figures from the census of 1920-1 show 1,217,987 and 11,338,268 lb. respectively. During the same period the number of cattle killed or sold off farms increased from 507,725 to 2,097,390, and the number of swine slaughtered from 1,216,097 to 2,972,331.

Slaughtering and Meat Packing.—After 1900 the separation between the farm and the manufacture and marketing of animal products became more and more pronounced, leading to the development of a large scale slaughtering and meat packing industry, 1928 returns showing only 75 establishments engaged in slaughtering and meat packing as compared with 193 in 1871, but with a capital of $66,198,507 as compared with $419,325 in 1871. The number of employees had increased from 841 to 11,244 and salaries and wages from $145,376 in 1871 to $14,242,362 in 1928. The cost of materials used in 1928 was $142,396,342, and the value of the products $174,096,419.

Exports of Live Stock and Their Products.—Total exports of cattle in the fiscal year 1929 numbered 240,916 head valued at $14,694,043, of which $61,770 worth went to the United Kingdom and $14,462,605 worth to the United States. Exports of swine numbered 9,298 in the fiscal year 1929 valued at $131,983, of which shipments to the value of $111,739 went to the United States. In the same year shipments of bacon and hams to other countries amounted to 366,582 cwt. valued at $7,874,026, of which exports to the United Kingdom were valued at $6,636,497.

Dairy products were also exported from Canada in large quantities. In the fiscal year 1928-29, 1,126,092 cwt. of cheese, valued at $25,181,853, were exported from Canada, while exports of butter amounted to 18,892 cwt., valued at $764,836.

Total exports of animals and animal products amounted in 1928-29 to $158,757,272, of which $84,993,501 went to the United States and $47,644,803 to the United Kingdom.

3. 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, 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 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 descriptions 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.

Fruit Trees in Blossom.

In 1928 the total value of Canadian commercial fruits was $19,824,333; including apples, $11,297,867; pears, $473,246; plums and prunes, $615,890; peaches, $1,200,345; cherries, $836,137; strawberries, $1,426,990; raspberries, $728,641; other berries, $390,617; apricots, $89,800; and grapes, $2,764,800.

Fruit and Vegetable Canning.—There are about 272 concerns engaged in the canning, drying, evaporating and preserving of fruits and vegetables, representing a capital investment of $33,912,232.

4. Grand Total of Agricultural Wealth and Production

The estimated gross agricultural wealth of Canada is $7,508,257,000. Annual estimates of the total gross value of agricultural production, made for the last ten years, show a total of over $1,600 millions

today as compared with $1,100 millions in 1915. The tables herewith may be consulted for details, while for future possibilities the reader may be referred back to Chapter II.

Estimated Gross Agricultural Wealth of Canada, by Provinces
("000" omitted)

Province	Lands	Buildings	Implements and machinery	Live stock
	$	$	$	$
Prince Edward Island	28,476	17,289	6,870	10,857
Nova Scotia	49,155	51,173	10,146	21,891
New Brunswick	61,112	45,158	13,545	18,353
Quebec	546,666	285,530	111,940	161,767
Ontario	808,124	491,330	169,954	280,743
Manitoba	315,245	113,005	67,848	70,578
Saskatchewan	877,042	216,398	176,676	146,386
Alberta	523,221	121,765	98,814	120,862
British Columbia	107,020	41,036	9,379	29,966
Canada	3,316,061	1,382,684	665,172	861,403

Province	Poultry	Animals on fur farms	Agricultural production	Total
	$	$	$	$
Prince Edward Island	997	3,512	21,750	89,751
Nova Scotia	978	757	40,162	174,262
New Brunswick	1,192	1,174	34,307	174,841
Quebec	9,835	2,305	277,050	1,395, 93
Ontario	23,253	2,610	500,821	2,276,835
Manitoba	4,465	813	148,867	720,821
Saskatchewan	7,178	496	406,321	1,830,497
Alberta	5,953	866	275,531	1,147,012
British Columbia	4,361	932	50,715	243,409
Canada	58,212	13,465	1,755,524	8,052,521

Recent Gross Annual Agricultural Revenue of Canada
("000" omitted)

Items	1924	1925	1926	1927	1928
	$	$	$	$	$
Field crops	995,236	1,098,304	1,104,983	1 172,643	1,125,003
Farm animals	148,324	177,031	178,383	183,927	197,880
Wool	3,771	3,958	4,140	4,108	5,099
Dairy products	217,974	241,069	246,319	250,343	250,000
Fruits and vegetables	44,848	48,897	43,075	46,025	47,220
Poultry and eggs	65,084	74,267	83,569	97,937	106,653
Fur farming	3,218	3,679	3,520	4,798	5,000
Maple products	5,991	5,288	4,896	4,935	5,583
Tobacco	4,359	7,004	7,380	9,112	6,834
Flax fibre	712	454	208	321	509
Clover and grass seed	3,300	3,598	5,097	3,841	2,958
Honey	2,013	2,472	1,921	2,937	2,785
Totals	1,494,830	1,166,021	1,683,491	1,780,927	1,755,524

CHAPTER VII

THE FOREST WEALTH OF CANADA—LUMBERING—PULP AND PAPER

Of the total land area of Canada, estimated at 3,542,049 square miles, about 15·8 p.c. is agricultural and 30·2 p.c. is more suitable for forest growth. The remaining 54 p.c. consists of all other land which under present conditions is unsuitable for either agriculture or forestry.

The total area covered by forests at present, including the forested agricultural land, has been estimated at 1,151,454 square miles, of which 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 total annual drain on the

A Log Drive on an Eastern River

Photo by Can. Govt. Motion Picture Bureau

forest including loss by fire, etc., has been estimated at 4,400 million cubic feet, but it does not follow that our capital will be exhausted in the fifty 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 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. Thirty-one of these species are coniferous, the wood of which forms 80 per cent of our standing timber, and 95 per cent of our sawn lumber. Merely to catalogue the merchantable woods of Canada is impossible here.

To present an adequate survey of this great national asset it is necessary first to give a general review of operations in the woods,

Lumbering in British Columbia

Photo by Can. Govt. Motion Picture Bureau

following this by surveys of saw-mill 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-consuming industries.

Operations in the Woods.—The value of forest production resulting from operations in the woods of Canada is now over $205 millions annually, being made up of logs and bolts for saw-mills valued at $74 millions; pulpwood for domestic use and export valued at $70 millions; firewood valued at $40 millions; hewn railway ties valued at $6 millions; poles and round mining timber valued together at over $5 millions; and other primary forest products, such as square timber, fence posts and rails and wood for distillation. It has been estimated that our total primary forest production involves the cutting of over 2,880 million cubic feet of standing timber annually.

The Lumber Industry

Lumbering first began in the Lower St. Lawrence area and the Maritimes; extended to the Ottawa; thence to Georgian Bay, Rainy River, and the spruce regions north of the Prairies; thence westward to British Columbia. British Columbia now furnishes over one-half of Canada's lumber; twenty years ago it furnished less than one-fifth. To the pioneer the forest was the central fact of existence, furnishing his house and fire but bitterly opposing his plough. Coming to the trading era; the first lumber shipped to Europe was during the French *régime* and consisted of masts and spars for the French navy. The historic square timber trade of which so much has been written centered in Quebec, reaching its height in 1864, when over 1,350 vessels entered that port, carrying away over 20 million cubic feet. When the sawn lumber trade and the deal trade developed the centre shifted to Montreal.

In the early days most of the work consisted in the felling of pine and the squaring of timber by hand in the woods, the timbers then being hauled by oxen or horses to the nearest stream, assembled in rafts and floated down to Quebec, where they were loaded on vessels for the United Kingdom. Today, with the increased costs of longer haulage as the more accessible forests become exhausted, many improvements have been introduced. 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.

Except in Nova Scotia, ninety per cent 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 produce annually some 4,098,081 M feet board measure of sawn lumber, valued at $97,508,786. 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 2,837,281 thousand shingles, valued at $8,716,085; 1,322,665 thousand lath, valued at $5,603,396; 1,108,812 cords of pulpwood, valued at $13,722,718; and 4,669,647 sawn railway ties, valued at $2,882,487; as well as large quantities of box shooks, veneer, pickets, staves, hoops, and heading, spoolwood and other miscellaneous products; bringing the total value of the products of the industry up to $133,620,554, over four times that of Confederation days.

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 past year has been characterized by a tendency toward the consolidation of companies especially in the matter of timber holdings. Although eastern Canada still possesses large quantities of white pine timber, a few of the large sawmills in Ontario and Quebec have found operations unprofitable at present prices and have closed down, in some cases permanently. Large areas of spruce and balsam timber in Eastern Canada, being no longer a profitable source of saw timber have been taken over by the pulp and paper industry. Preliminary estimates of lumber production for 1929 indicate a continuation of the decline in lumber production in Ontario, Quebec and the Maritime Provinces, which characterized operations in 1928. In the province of British Columbia which now produces over half the total cut or sawn lumber in Canada, the industry was fairly active during the first part of the year with a tendency toward a slackening off during the last few months. Production in the Prairie Provinces probably held its own during the year. It is fairly certain that final figures will show that lumber production in Canada as a whole in 1929 was slightly less than in the previous year.

The Pulp and Paper Industry

The pulp and paper industry today 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.

The first paper mill in Canada was established in 1803 at St. Andrews, Quebec. Upper Canada's first mill, which is still in operation, was built in 1813 at Crook's Hollow (now Greensville) near Hamilton, and the Maritime Provinces entered the industry in 1819 with a mill at Bedford Basin near Halifax.

At this time and until Confederation the industry was largely confined to the manufacture of paper from rags, no wood pulp being used or produced prior to 1860. The supply of rags, however, was limited, and the manufacturers were soon forced to experiment with other raw materials, but the small proportion of paper-making material recoverable from other sources soon led to experiments in the use of wood. Finally spruce, balsam, fir and hemlock were found to be the most suitable for the manufacture of paper of the average grades, although rags are still used for certain fine papers.

In 1866, Alexander Buntin installed at Valleyfield, Quebec, what is claimed as the first wood grinder in America and began the manufacture of wood pulp by the mechanical process. During the same year

Pulp and Paper Plant, Powell River, B.C.

Can. Govt. Motion Picture Bureau

Angus Logan and Company built the first chemical wood pulp mill in Canada at Windsor Mills in Quebec. During the next decade the use of wood pulp in paper-making was extensively developed, and in 1887 Charles Riordon installed the first sulphite mill in Canada at Merritton in the Niagara Peninsula; by the beginning of the century the output of the industry had exceeded $8 millions. In 1907 the Brompton Pulp and Paper Company at East Angus in Quebec, built the first mill in America to manufacture chemical pulp by the sulphate or kraft process.

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 $233,535,326, which exceeds the abnormally high total value reported in 1920.

There are today three classes of mills in the industry. These in 1928 numbered 33 mills making pulp only, 46 combined pulp and paper mills, and 31 mills making paper only. The present tendency is

CHAPTER VIII

MINING

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 per cent 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 Temiskaming, 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

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. Today, while the wood and paper group forms a smaller part of the total (about 21 p.c. in 1928), 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 53 p.c. and partly manufactured goods make up about 38 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 are 3,977 establishments, consisting of 2,049 depending on saw-mills, and 1,928 depending on the paper-mills for their raw materials. They employ 73,706 workers who are paid over $87 millions, and their products are valued at more than $276 millions.

The manufacture of silk of a quality in many respects superior to the product of the silk worm, from Canadian spruce wood; the production of linoleum, dynamite, and gramophone records from a flour made of wood; the operation of sawmills having a capacity of over half a million feet board measure in ten hours; the production of newsprint paper in a continuous sheet over twenty-two feet wide at the rate of over half an acre a minute from a single machine; these are a few of the developments of the forest industries of Canada that could hardly have been foreseen even a few years ago.

1929.—Volume production in the newsprint industry which forms such an important part of the pulp and paper industry has increased enormously during the last few years. New mills were projected, many were actually under construction and additions to equipment in existing mills, which were being planned and in some cases actually undertaken, were all leading to an increase in capacity which would have resulted inevitably in overproduction and a serious slump in prices. Conferences between the producers and provincial government officials, however, finally resulted in an agreement as to prices and rate of production.

During the period of uncertainty many mills closed down temporarily while others operated on curtailed time, but in spite of these disturbing influences the production of newsprint increased during the year and in July Canada's output was more than double that of the United States. However, the crisis had the result of retarding the unwise expansion of the industry and the building of new mills was postponed in many cases although many new machines came into production in existing mills. The demand for groundwood pulp continued to decline but that for the better grades of chemical fibre showed an improvement. The demand for the finer grades of paper, paper specialties and paper boards also improved during the year.

The opening in Montreal during 1929 of the Pulp and Paper Research Institute as a result of the combined contributions of the paper producers, the Federal Forest Service and McGill University marked an important step toward the higher development of the industry.

The preliminary figures of newsprint production for 1929, are as follows:—

	Tons		Tons
January	212,190	July	229,045
February	187,200	August	225,873
March	218,147	September	227,665
April	221,784	October	251,914
May	245,644	November	252,046
June	225,055		

Trade.—A striking reflection of the increased production of newsprint 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 1928-29, Canada exported 2,263,229 tons of newsprint valued at $142,343,064. 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.

toward the building of the larger combined mills of the type known as "self-contained newsprint mills", and also a tendency toward the merging of individual companies into a comparatively small number of large groups.

In 1928 the 79 mills making pulp produced 3,610,724 tons valued at $121,458,078, and of this, 73 p.c. was made in combined mills and used by them in paper-making. About 3 p.c. was made for sale in Canada and 24 p.c. was made for export. The manufacture of pulp is increasing in Canada both in quantity and value, particularly with regard to 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 1928, 59 p.c. was groundwood, 21 p.c. unbleached sulphite, 10 p.c. bleached sulphite, 8 p.c. sulphate or kraft and soda and the remainder, screenings and other wood fibre.

The total production of paper in 1928 was 2,849,687 tons, which with certain unspecified products was valued at $184,462,356. Newsprint and similar paper made up 2,414,393 tons, or 84 p.c. of the total, valued at $144,146,632. Of the remainder, paper boards made up 7 p.c., wrapping paper about 4 p.c., book and writing paper 3 p.c., and miscellaneous papers the remaining 2 p.c. 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 1928 was almost 70 p.c. greater than that of the United States, hitherto the world's chief producer, and this increase has continued during 1929, production being estimated at 2,743,465 tons, or almost double that of her nearest competitor in the world's markets. The transfer of the centre of production from the United States to Canada took place in February, 1926. 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 duplicate or exceed their previous production it seems reasonable to assume that the Canadian production will increase for some years to come with little or no increase in the United States.

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 rapid 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 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. Mines have since been opened up in Patricia district in Ontario, while copper, zinc and other metal-bearing deposits of commercial value have been found in Manitoba. Here large concentrating and smelting plants are in course of construction.

An important recent event in the mining industry is the merger of the two leading nickel producers, The Mond Nickel Company and The International Nickel Company of Canada in one strong unit under the latter name, controlling the world's principal nickel-copper deposits. Development of the Frood mine, underlying acreages owned by each of the two former companies, is being carried forward rapidly and it is anticipated that a further extension of industrial enterprise will take place at Sudbury as a result of the expansion in mining and smelting. At the moment Canada has every reason to believe that she is on the threshold of an era in which the contributions to national wealth from mining will be on a scale not known before, and this at a time when the metals play an increasing part in industry.

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 1928 Canada's mineral production was computed to be worth $274,989,487, or an average *per capita* of $28.47. This is the highest point recorded in

Canadian history for which we have final statistics though as will be seen by the paragraphs later on, this was surpassed in 1929. The year 1927 stands next at $247,356,695 (*see* table below).

In order of total values, the leading mineral products of Canada are: coal, copper, gold, nickel, cement, lead, asbestos, clay products, silver, zinc, stone, natural gas, sand and gravel, lime, petroleum, gypsum, cobalt, salt and platinum. This list of nineteen 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 fifty 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; 85 p.c. of the world's asbestos; 55 p.c. of the world's cobalt; 9 p.c. of the world's gold; 8·7 p.c. of the world's lead; 8·4 p.c. of the world's silver; 6·4 p.c. of the world's zinc; 4 p.c. of the world's copper.

The mining industry employs nearly 90,000 workpeople in the operations of mines, mills and smelters, quarries, gas and oil wells, and pays out about $116 millions annually in salaries and wages. Investment in mine plant and equipment and in working capital amounts to nearly $842 millions.

Mineral Production of Canada by Provinces, 1926-1928

Province	1926	1927	1928	
	$	$	$	p.c. of total
Nova Scotia[1]	28,873,792	30,111,221	30,524,392	11·10
New Brunswick	1,811,104	2,148,535	2,198,919	0·80
Quebec	25,956,193	28,870,403	37,037,420	13·47
Ontario	84,702,296	89,982,962	99,584,718	36·22
Manitoba	3,073,528	2,888,912	4,186,853	1·52
Saskatchewan	1,193,394	1,455,225	1,719,461	0·63
Alberta	26,977,027	29,309,223	32,531,416	11·83
British Columbia	65,622,976	60,801,170	64,486,351	23·45
Yukon	2,226,813	1,789,044	2,709,957	0·98
Total	240,437,123	247,356,695	274,989,487	100·00

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

Subsidiary Industries.—On the products of the mine as basis has been reared a most important superstructure of subsidiary industries. Coal and iron are well-known as the basis of industrialism; to these may now be added petroleum. Altogether these 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), now produce commodities to the value of approximately $1,069 millions in a year, the capital invested being over $1,210 millions and the number of employees about 182,000. Included in these manufactures are several of the best known in Canada, such as agricultural implements, machinery, automobiles, electrical apparatus, cement, miscellaneous chemicals, and many others.

Trade.—The exports of Canadian minerals are considerably under the imports, being $45 millions compared with $112 millions in the last fiscal year, this being accounted for by the heavy imports of coal from the United States. If the manufactures based on the mine are included, an import of $489 millions may be compared with an export of $191 millions.

Review of 1929

Prospecting and Development Work.—From east to west Canada's mining industry in 1929 presented several features of outstanding interest. In the eastern Maritime provinces, progress was made in developing copper-lead-zinc properties. Additions to concentrating and smelting capacity were made at Noranda, P.Q., and new finds of copper in the Chibougamau area were of great interest. In Ontario the

A Blast Furnace

Photo by Can. Govt. Motion Picture Bureau

enlargement of mining and smelting facilities and the construction of smelting, refining, acid-making and other chemical plants were evidence of advances in the extensive program of development in the nickel-copper properties of the Sudbury area. Lead-zinc mining was also further advanced. Promising gold finds in Patricia district were examined during the year, while in Manitoba completion of the railway to the Flin Flon area where very large mines are being developed, and a smelter and a refinery are being constructed, brought this section a step closer to production.

In the North, aerial and other prospecting parties carried out an extensive program of investigation. Lead-zinc deposits near Great Slave lake were especially studied. Alberta's oil fields are now fairly well understood so that production is advancing along more scientific lines than in former years and the increased outputs of gas and oil pay tribute to this study. In British Columbia new lead-zinc mines have been opened up. Further progress is being made at the great Trail plant where an extensive chemical industry is being established, mostly to use the by-products of the smelter; for example, sulphur fumes are being made into sulphuric acid, which in turn is used to convert phosphate rock into superphosphate of lime for use as a fertilizer.

Production.—Details of the output by minerals, with comparative figures for the preceding year, are given in the table opposite.

The Great Smelter at Trail, B.C.

Photo by N. R. I. Service

Official Estimate of the Mineral Production of Canada, 1929, with Comparative Figures for 1928

Item	1928		1929	
	Quantity	Value	Quantity	Value
METALLICS		$		$
Gold.....fine oz.	1,890,592	39,082,005	1,914,920	39,985,000
Silver.....fine oz.	21,936,407	12,761,725	22,368,115	11,870,000
Nickel.....lb.	96,755,578	22,318,907	109,200,000	25,700,000
Copper.....lb.	202,696,046	28,598,249	242,401,609	43,362,000
Lead.....lb.	337,946,688	15,553,231	327,062,151	16,551,000
Zinc.....lb.	184,647,374	19,143,050	204,621,300	11,009,000
Cobalt and platinum metals..	-	3,009,062	-	2,248,000
Other metals.....	-	546,225	-	1,002,000
Total.....	-	132,012,454	-	151,327,000
NON-METALLICS				
Fuels				
Coal.....ton	17,564,293	63,757,833	17,499,846	62,965,000
Natural gas.....M cu. ft.	22,582,586	8,614,182	24,514,200	9,202,000
Petroleum, crude.....brl.	624,184	2,035,300	1,132,800	3,945,000
Peat.....ton	1,497	5,845	-	-
Total.....	-	74,413,160	-	76,112,000
Other Non-Metallics				
Asbestos.....ton	273,033	11,238,360	305,575	13,337,000
Feldspar.....ton	31,897	284,942	35,000	325,000
Gypsum.....ton	1,246,368	3,743,648	1,256,000	3,666,000
Mica.....ton	3,660	87,168	4,000	120,000
Quartz.....ton	282,522	523,933	280,000	500,000
Salt.....ton	299,445	1,495,971	342,000	1,560,000
Talc and soapstone.....	-	219,358	-	225,000
Other non-metallics.....	-	1,233,312	-	1,476,000
Total.....	-	18,826,692	-	21,209,000
CLAY PRODUCTS AND OTHER STRUCTURAL MATERIALS				
Clay products (brick, tile, sewer pipe, pottery, etc.)...	-	12,381,718	-	13,055,000
Cement.....brl.	11,023,928	16,739,163	12,277,074	19,595,000
Lime.....ton	508,889	4,534,568	534,826	4,878,000
Stone, sand and gravel.ton	-	16,081,732	-	17,700,000
Total.....	-	49,737,181	-	55,228,000
Grand Total.....	-	274,989,487	-	303,876,000

Figures for the first six months of 1929, published by the Bureau of Statistics, indicated a greater rate of gain than prevailed during the first half of 1928; for metals and non-metals, the advance was 17·2 p.c. Preliminary figures for the whole year corroborated the half-year statement; metals gained 14·8 p.c.; non-metals advanced 4·4 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 gain of 11·0 p.c. over the totals for the

preceding calendar year. In comparison with the total value of mineral production in 1928 at $274,989,487, the official estimate for 1929 placed the aggregate at $303,876,000, a gain of 10·5 p.c.

Metals and non-metals from Canadian ores reached a value of $123,702,334 in the half-year ending June, 1929, as compared with $105,632,571 for the six months ending June, 1928. Greater outputs were reported for the first half of the year for all metals except arsenic, cobalt, lead and metals of the platinum group and in the case of cobalt and lead, higher total valuations were reported than for the half-year ending June, 1928. Silver production was higher but lower prices reduced the total value to slightly below the corresponding figures for the first half of the preceding year. Coal, natural gas and crude petroleum showed marked gains. Non-metallic minerals, with the exception of actinolite, barytes and gypsum, all showed higher output figures for the half-year.

Continued advances in the outputs of copper and zinc featured the record for the entire year, while figures for the other leading metals, including gold, silver, nickel and lead compared favourably with the totals for the preceding year. In the metals group, copper, gold and nickel were the leaders in point of value, followed by lead, silver, zinc, cobalt and a group of less important metals including cadmium, platinum and palladium, arsenic and bismuth. Cadmium, produced at Trail during 1928 and 1929, was a newcomer among Canada's mineral products. Production in the metals group during the year was valued at $151,327,000 as against $132,012,454 in 1928.

Turner Valley Oil Development, Province of Alberta
Can. Govt. Motion Picture Bureau

Fuels, comprising coal, natural gas and crude petroleum, gained nearly four million dollars in value during the half-year, in comparison with the totals for the first six months of 1928. Throughout the latter half of the year, production of natural gas was well maintained and the output of coal increased. Crude petroleum production was very greatly augmented due largely to the intensive work carried on in the Alberta fields throughout the year. For the whole year, production in the fuels group reached a value of $76,112,000 in comparison with the total in 1928 of $74,413,160.

Other non-metals, including a long list, of which the chief items were asbestos, feldspar, gypsum, magnesite, pyrites, quartz, salt, talc and soapstone, were valued at $9,521,512 for the first six months, or 20·3 p.c. higher than the corresponding total for the first half of 1928. For the twelve months the total value of these non-metals, other than fuels and structural materials, was $21,209,000 as against $18,826,692 in 1928. Increased tonnages of asbestos, feldspar and salt and steady progress in the output of gypsum were notable features of the year's record.

Advances in the production of cement, lime, clay products and other structural materials carried the total value for this group to $55,228,000 as against $49,737,181 in 1928.

Prices of mineral products, generally, during the year 1929 ranged between 2 and 3 p.c. higher than in 1928. Gains in the price of copper were noted while prices for lead and zinc showed little change. Quotations for silver and cobalt were slightly lower and nominal quotations for nickel remained unchanged. Improvement was general in prices of non-metallic minerals and structural materials.

Monthly records of *employment* in the mining industry showed an average gain in 1929 of nearly 5 p.c. over the figures for 1928. Indexes of employment indicated little change in the average number of workers at coal mines but substantial gains in the number of men working in the metal and non-metal mining fields. In comparison with the records for 1926, the base year for computing the employment index, figures for 1929 showed gains of 7 p.c. in coal mining, 35 p.c. in metal mining and 36 p.c. in the non-metal mining group.

Developments that led to the establishment of new output records in many minerals and in the aggregate for the Dominion in 1926, 1927 and 1928 so taxed the productive capacity of existing mines and mills, that very large programs of expansion were laid down in 1929. Prospecting, trenching, drilling, sinking, quarrying, building mills, smelters and refineries and chemical plants, the mineral industry of the Dominion carried on during 1929 with a vigour that betokened continued advances in the year to come.

CHAPTER IX

THE WATER POWERS OF CANADA

General Description.—Water power is among the chief natural resources of the Dominion. The physical reason lies in the fact that Canada is estimated to have 180,035 square miles of water area, an area larger than the whole of the United Kingdom—larger in fact than the fresh water area of any other country in the world. Many of the lakes are situated at a considerable height above sea level; it follows that the rivers generate abundant water power.

Altogether Canada has 20 million horse-power at ordinary minimum stream flow (*i.e.* throughout the year), rising to over 33 millions for at least six months of the year. Storage basins for regulating the flow would allow a turbine installation of 43 million horse-power. Of this only about 5½ millions have been installed, or less than 12½ p.c. Half of the latter development has taken place only during the past ten years, though in the early days the small streams of Ontario, Quebec and the Maritimes played an important part in furnishing power for the flour mills, carding and woollen mills, etc., that were so necessary to the life of a young community.

Compared with other countries, Canada stands second only to the United States in turbine horse-power installation. Canada also stands second in turbine horse-power installation per 1,000 of population, Norway alone being higher. On a *per capita* basis Canada has nearly five times the installation of the United States.

The economic importance of this "white coal" is emphasized when it is pointed out that the chief bituminous deposits of Canada are in the extreme east and west, Quebec and Ontario at present mining no coal, though they have 60 p.c. of the total population and 80 p.c. of the manufactures of Canada. The pulp and paper industry, which requires enormous quantities of power, is located for the most part in these provinces. Canada's power resources, unlike coal, are very evenly distributed.

Large hydro-electric development has been possible only since the improvements (around 1900) in long distance transmission of electricity. In 1900 there was only 170,000 horse-power developed in Canada. By 1905 the total had increased to 450,000, and by 1915 to 2,100,000 horse-power. During the next ten years this more than doubled, reaching 4,555,000 in 1926 and 5,350,000 in 1928. At Niagara Falls alone, 4½ billion kilowatt hours were produced on the Canadian side in 1928. The St. Lawrence with some 2¼ million potential horse-power on

the international section, and about as much again on the section below, has hardly been touched; and there are still thousands of potential horse-power in the waters flowing over the falls of the St. John, the Ottawa, the Gatineau, the Lièvre, the Nelson and numerous other great rivers.

The age of electricity, as just said, is not older than a quarter of a century, but already there is scarcely a village in Canada not enjoying its advantages. In British Columbia, for each 100 of the population, 18 families are using electricity for lighting their homes; for all Canada the average is 14·5. This means (reckoning 4·63 persons to a household) that over two-thirds of the homes in Canada (rural and urban both included) are using electricity for lighting and other domestic purposes. The investment in Canadian central electric power stations in 1927 was $867 millions, and in 1928, $951 millions, more than double that of ten years ago, and the largest total for any single branch of industry.

Expansion in 1929.—In the first half of 1929 new developments, together with additions to existing plants, added almost 200,000 h.p. to the total installation in the Dominion. Altogether, undertakings

Niagara Falls

Can. Govt. Motion Picture Bureau

were under way during the year which when completed to their designed capacity will involve a total installation in excess of 2 million h.p. Practically every province shared in this activity, but the larger developments were in the West.

Statistics for 1929.—A monthly record of power production is obtained by the Dominion Bureau of Statistics from all companies generating over 1,000,000 k.w. hours per year. The record for 1928 and 1929 is as below. It will be seen that an increase is shown in every month during the past year.

Output of Central Electric Stations in Canada

(Thousands of kilowatt hours)

Month	1928			1929		
	Water	Fuel	Total	Water	Fuel	Total
January	1,306,298	20,245	1,326,543	1,478,243	28,920	1,507,163
February	1,264,178	17,852	1,282,030	1,315,207	31,282	1,346,489
March	1,324,612	17,939	1,342,551	1,440,734	29,786	1,470,520
April	1,254,791	17,147	1,271,938	1,378,579	30,524	1,409,103
May	1,264,792	16,019	1,280,811	1,431,806	24,881	1,456,687
June	1,228,235	14,089	1,242,324	1,360,010	17,249	1,377,259
July	1,233,410	14,955	1,248,365	1,392,857	17,852	1,410,709
August	1,297,731	15,825	1,313,556	1,428,016	19,363	1,447,379
September	1,261,501	18,931	1,280,432	1,455,053	21,881	1,476,934
October	1,439,477	20,971	1,460,448	1,559,042	35,241	1,594,283
November	1,416,958	24,562	1,441,520	1,527,054	35,869	1,562,923
December	1,413,388	27,541	1,440,929	–	–	–

The latest final statistics of power generated are for 1928, when the central electric stations of Canada generated 16 billion kilowatt hours from water power, compared with 14½ billions in 1927. These figures will be considerably up for 1929. At the very conservative estimate of 1·75 pounds of coal per kilowatt hour, the figures are equivalent to 12¾ million tons of coal or as much coal as is imported annually. The pulp and paper and allied industries generate in the neighbourhood of ½ billion kilowatt hours or the equivalent of ½ million tons of coal in energy value. Thus the power now produced by developed water powers is nearly half that which would be yielded by the coal consumed in Canada for all purposes.

CHAPTER X

THE FISHERIES OF CANADA

The Canadian Fishing Grounds.—Canada's fishing grounds are perhaps the most extensive in the world. 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, 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. Hudson bay, with a shore 6,000 miles in length, is larger than the Mediterranean; the Pacific coast of the Dominion measures 7,180 miles in length and is exceptionally well sheltered; whilst 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.

Historical.—Fishing may be regarded as the first industry to be systematically prosecuted by Europeans in what is today the Canadian domain. From a date which precedes authentic record, the Normans, the Bretons and the Basques were on the cod-banks of Newfoundland. Cabot, in 1498, when he first sighted the mainland of North America, gave it the name of "Bacalaos", the Basque word for codfish, which he found already in use. Cape Breton, one of the oldest place-names in America, is another memorial of the early French fishermen. The voyages of the early explorers soon showed that the cod were as plentiful inshore as on the outer banks, and it became common for a crew to anchor in a bay, erect a hut on shore, and make daily excursions to the fishing grounds—the product being salted and dried on land and at the end of the season shipped to France. Soon the fishermen began to stay all winter and thus to erect permanent fishing settlements. Jacques Cartier, when he sailed up the St. Lawrence in 1534, found traces everywhere of these early "Captains Courageous" and of their rivalries in arms no less than in the capture of the teeming product which had

tempted them so far from home. Previous to the time of the Seven Years' War (1756-1763) all other fishing but cod had been neglected, but with the arrival of the Loyalists at the close of the American Revolutionary war commenced the greater development of the fisheries. For another hundred years, however, the inshore fisheries only were developed, and it was not until 1873 that the deep-sea fishing fleet put out from Lunenburg, now the chief centre of the deep-sea fishery.

The great part played by the fisheries in the early history of Canada was that of providing a much needed food supply for the settlers, and this has been repeated in more recent years by the lake fisheries of the West.

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 1911, $34 millions. The highest record was reached in 1918 with $60 millions. In 1928 the value was $55 millions and from records of the catch so far available it is estimated that the value of the fisheries in 1929 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.

A Salmon Cannery in British Columbia

Can. Govt. Motion Picture Bureau

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; today 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; today 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.

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 fish-

A Nova Scotia Fish Wharf

Can. Govt. Motion Picture Bureau

eries 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.

Growth of the Fisheries by Provinces, 1900, 1914 and 1928

	Value of Production			Per cent from each Province		
	1900	1914	1928	1900	1914	1928
	$	$	$	p.c.	p.c.	p.c.
Prince Edward Island	1,059,193	1,261,666	1,196,681	4·9	4·1	2·2
Nova Scotia	7,809,152	7,730,191	11,681,995	36·2	24·7	21·2
New Brunswick	3,760,742	4,940,083	5,001,641	17·5	15·8	9·1
Quebec	1,989,279	1,924,430	2,996,614	9·2	6·2	5·4
Ontario	1,333,294	2,755,291	4,030,753	6·2	8·8	7·3
Manitoba	455,749	849,422	2,240,314	2·1	2·7	4·1
Saskatchewan	262,410	132,017	563,533		0·4	1·0
Alberta		86,720	725,050	1·2	0·3	1·3
British Columbia	4,878,820	11,515,086	26,562,727	22·7	36·8	48·3
Yukon	not known	69,725	51,665	.....	0·2	0·1
Total	21,557,639	31,264,631	55,050,973	100·0	100·0	100·0

Fisheries Production by Principal Kinds, 1928
Each over $1,000,000 in value

Kind		Quantity	Value
			$
Salmon	cwt.	2,286,151	17,867,053
Cod	"	2,150,078	6,285,777
Lobsters	"	322,437	5,183,988
Halibut	"	329,923	3,812,321
Herring	"	2,396,054	3,104,911
Pilchards	"	1,610,252	2,563,137
Whitefish	"	180,695	2,192,567
Haddock	"	481,708	1,733,781
Pickerel or doré	"	142,610	1,616,442
Trout	"	91,694	1,420,602
Sardines	brl.	285,990	1,291,722
Smelts	cwt.	91,877	1,241,452

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, 1929, total exports amounted to $36,156,069, of which $15,513,738 went to the United States and $3,719,872 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; including Newfoundland it exceeds both. Canadian imports of fish in 1928-29 amounted to $3,685,037.

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, the fisheries of the three Prairie Provinces 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 24 main hatcheries, 7 subsidiary hatcheries, and 4 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 1929 was $2,100,221, and the revenue, $206,154.

Conditions in 1929.—Preliminary figures of the catch of sea fish for the nine months ended September 30, 1929, show the total catch at 7,882,607 cwt., with an estimated value to the fishermen of $20,658,309, compared with 7,878,074 cwt., valued at $18,690,144 for the corresponding period of 1928. The increase in value is due to the higher prices paid to the fishermen for nearly all kinds of fish. If this increase holds for the remainder of 1929 the value of fisheries production for 1929, as marketed, should show an increase of perhaps $4 millions.

CHAPTER XI

THE FUR TRADE

Historical.—The fur trade has played a most important part in the history of Canada. From the earliest times the fisherman upon the "banks" had traded in furs; as the demand increased, the French government granted monopolies of the trade on condition that a certain number of settlers should be brought out. Pont Gravé and Chauvin built Tadoussac in 1599 as a centre for the fur trade with the Indians of the Saguenay; when routes were discovered further inland the founding of Quebec and Montreal followed. The trade spread west and south, convoys bringing the furs yearly to Montreal and Quebec. "Beaver" became the Canadian currency—a significant fact.

The first expedition to Canada financed by English capital was in response to the lure of the fur trade; it voyaged to Hudson bay about the year 1662, led by Radisson and Groseilliers, two French *coureurs de bois*. The charter of the "Adventurers of England Trading into Hudson's Bay" followed in 1670, Prince Rupert becoming the first governor of "The Great Company."

After the Seven Years War, about 1771, a period of intense competition among the fur traders set in. Some years later (1783-4) several of these joined interests and formed a new company chartered as the "North West Company". In 1821, after many years of strife with the Hudson Bay Company, the two were finally joined under the name of the older company. In 1869 the Company surrendered its quasi-governmental functions in consideration of extensive grants, and became an ordinary trading concern. It may be said with truth that the fur trade held the great western domain of the Dominion till such time as settled government could take control, and for this it must always receive recognition.

The Modern Industry.—The fur trade is still one of Canada's notable assets, and a growing one, notwithstanding that the progress of settlement and improved methods of capture are driving the animals further afield and leading to the use of species once rejected. In 1880 the value of pelts taken was $987,555. In 1910 this had become $1,927,550; and in 1927-28, $18,758,177. Beaver, formerly the most valuable peltry, has been replaced by muskrat and fox, with mink and marten following closely. Canadian manufactures of fur goods

have increased from $5 millions in 1920 to over $20 millions in 1929 and the home consumption is annually increasing. When settlement has planted its furthest northern outpost in Canada, the area which will continue to yield the historic peltries will still have to be reckoned in hundreds of thousands of square miles. It is the function of the fur trade to turn this vast domain—so often hastily reckoned as waste—to perpetual economic use.

During the Great War the fur market of the world, long centered in London, changed to the United States. Recently, however, the English market is again taking a large proportion of Canada's exports of raw furs, the latest figures showing that of the undressed furs exported to England and the United States, $10,053,474 worth went to the former and $12,834,815 worth to the latter. One result or concomitant of the changed situation is that Montreal has become an international fur market, holding the first fur auction sale to take place in Canada in 1920. Auction sales are now also held at Winnipeg and Edmonton.

Conservation.—The conservation of the wild life of Canada became a special object of government policy through the organization in 1916 of the Advisory Board on Wild Life Protection, to co-ordinate the efforts of various branches of the Dominion Government. The Northwest Game Act and the Migratory Birds Convention Act are the most important legislation in the field in which it makes advisory recom-

"Donalda"—First Prize Dark Silver Fox

mendations. The Board also investigates all problems relating to the protection and better utilization of fur-bearing animals, "big game" mammals, and bird life.

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. There were in 1927 in Canada 3,067 fox farms with a total of 62,619 foxes, principally silver foxes, also 313 farms raising fur-bearing animals other than foxes, chief among which are mink, raccoon, skunk and muskrat. These numbers were up 30 p.c. in 1928, and the list for 1929 is around 5,000—an indication of the rapidity with which this industry is advancing. The value of fur-bearing animals sold from the farms in 1927 was $2,645,331, and the value of pelts sold, $2,154,350, making a total revenue to the fur farmer of $4,799,681. These figures will be up by at least 35 p.c. for 1929. The value of the pelts of ranch-bred animals represents probably 15 per cent of the total value of the raw fur production of Canada for the season 1927-28.

CHAPTER XII

THE MANUFACTURES OF CANADA

Historical.—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 invention of power-driven machinery and the cheapening of transportation (the so-called "Industrial Revolution") the factory system is born, and manufacturing becomes concentrated in large establishments situated usually in industrial centres of considerable size.

This last-mentioned stage of development was no more than well founded when Canada become 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.

It is the present century that has witnessed the chief forward movement in Canadian manufactures, the result of two great influences, first, the "boom" accompanying the opening up of the "last best 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 52) in the achieving of this striking result. The figures declined later, but the

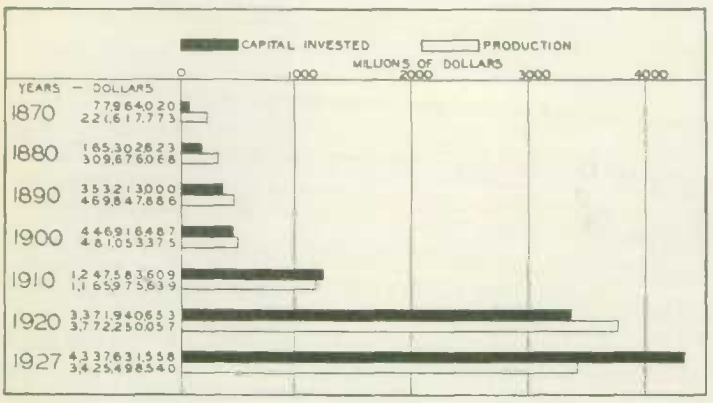
accompanying table will reveal the situation by provinces in the last year for which comprehensive data are available (1927). Subsequent gains in 1928 and 1929 have brought the figures back to even higher levels than 1920.

Census of Manufactures, 1927

Province	Number of establishments	Capital	Number of employees	Value of Products	
				Amount	Per cent of Total
		$		$	
Prince Edward Island	291	3,081,504	2,232	4,493,628	0·13
Nova Scotia	1,190	128,155,040	17,864	74,458,297	2·18
New Brunswick	872	99,087,327	18,970	72,666,665	2·12
Quebec	7,206	1,376,654,019	196,094	990,582,995	28·92
Ontario	9,512	2,134,181,377	296,034	1,758,004,575	51·32
Manitoba	859	151,373,047	23,031	142,089,678	4·15
Saskatchewan	721	38,387,248	5,083	52,180,681	1·52
Alberta	776	81,644,730	11,285	84,987,317	2·48
British Columbia	1,509	325,047,266	47,740	246,034,704	7·18
Yukon					
Canada	22,936	4,337,631,558	618,933	3,425,498,540	100·00

The Present Industry.—According to the latest census available, Canada possessed in 1927, 22,963 manufacturing establishments, whose capital investment in lands, buildings, equipment, etc., amounted to $4,337,631,558, which employed 618,933 persons with salaries and wages amounting to $693,932,228, consumed $1,789,574,604 worth of raw materials (not including fuel) and produced goods to the value of $3,425,498,540. As above stated, however, the preliminary figures for 1928 show gains of from 5 to 10 p.c.

GROWTH OF MANUFACTURES



The leading centres of manufactures today are Montreal and Toronto, with totals of $540 millions and $520 millions, respectively. After these come Hamilton with $152 millions, Winnipeg with $95 millions, Vancouver with $87 millions, Oshawa with $77 millions, and Ottawa with $63 millions. There are 43 other places having manufactures of $10 millions or over.

The twenty-five leading industries of today are also tabulated herewith, one of the most interesting of recent developments being the forging of pulp and paper to first place, a position long held by flour-milling, with slaughtering and meat-packing, central electric stations, and saw-milling next in order.

Statistics of Twenty-five Leading Industries of Canada

Industries	Number of employees	Capital	Value of products
	No.	$	$
Pulp and paper	32,876	579,853,552	219,329,753
Flour and gristmill products	6,384	62,002,013	191,741,470
Slaughtering and meatpacking	11,048	60,612,029	167,220,892
Central electric stations	14,708	866,825,285	134,818,567
Sawmills	44,598	169,378,939	133,620,554
Automobiles	11,063	88,831,668	128,700,514
Butter and cheese	11,126	43,375,302	122,523,882
Rubber goods, including footwear	15,065	66,266,064	91,413,730
Electrical apparatus and supplies	16,813	80,475,999	78,558,730
Non-ferrous metal smelting	7,671	85,366,662	77,996,265
Cotton yarn and cloth	21,383	84,927,745	75,818,870
Railway rolling stock	21,436	81,519,950	74,466,912
Castings and forgings	19,149	89,505,687	69,395,343
Bread and other bakery products	14,414	40,559,259	68,726,262
Petroleum	3,856	50,135,564	64,528,820
Printing and publishing	15,028	55,831,150	62,030,896
Sugar refineries	2,711	50,039,122	60,592,664
Clothing, women's factory	15,597	24,259,925	56,316,064
Cigars and cigarettes	6,247	34,371,252	55,801,338
Hosiery, knit goods and gloves	17,217	56,852,077	55,222,395
Biscuits, confectionery and chewing gum	12,486	46,448,311	53,128,888
Breweries	4,662	63,358,117	51,528,024
Planing mills, sash and door factories	11,436	50,861,269	47,955,548
Boots and shoes, leather	15,433	31,921,002	47,372,549
Rolled products, pig iron, steel products, etc.	7,396	96,295,734	45,571,264

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. In an allied category stand a number of industries such as tanning and leather, brewing and distilling, biscuits and confectionery, chemical, etc. But there are also a large number of industries based on imported raw materials which have attained to very considerable proportions; such as cotton and woollen textiles, rubber goods, sugar, automobiles, all of which are now playing a

substantial part in the industrial life of the Dominion, ranking among the leading manufacturing industries.

Conditions during 1929.—Though no comprehensive figures are available on going to press, several records indicate that the year just passed was on the whole one of the most active for general manufactures in the history of the Dominion. In Appendix II, Part 2, to this handbook, as well as on other pages, will be found monthly records of production in typical industries during 1929. Perhaps the best all-round barometer of conditions is afforded by the index 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, which employ close upon 600,000 workpeople, show much more active employment in 1929 in groups like iron and steel, textiles, lumbering, pulp and paper, building materials, food products and beverages, chemicals and the manufactures of non-ferrous metals and non-metallic minerals.

Indexes of Employment in Manufactures
(1926=100)

Month	1927	1928	1929	Month	1927	1928	1929
January 1	94·7	97·9	107·8	July 1	106·8	113·1	120·3
February 1	98·2	102·3	112·8	Aug. 1	107·0	115·2	121·6
March 1	99·8	104·7	115·7	September 1	106·8	115·9	119·8
April 1	101·5	106·6	116·5	October 1	106·4	115·7	120·2
May 1	103·9	109·0	119·8	November 1	104·9	115·1	117·2
June 1	106·9	112·6	121·2	Dec. 1	104·3	112·9	112·8

Assuming that manufacturing production increased in at least the same proportion as employment, the value of products for 1929 will be in excess of $3,900,000—the highest on record.

Trade in Manufactures.—The original objective of Canadian manufactures was the supply of the local or home market, though certain industries, such as flour and lumber, looked to the foreign market from a very early period. Gradually, however, the territory served by Canadian manufactures has expanded, until today we are sending manufactured goods to virtually every country in the world. Since the beginning of the present century alone the exports of Canadian manufactured goods have gone up from $99 millions to $648 millions. Since 1910 the percentage of imports of raw materials into Canada increased from 24·2 to 25·6 p.c. of the total imports, and exports of raw materials decreased from 51·2 to 47·2 p.c. of the total exports; while the percentage of imports of fully manufactured goods decreased from 65·8 to 64·8 p.c., and exports increased from 32·7 to 37·4 p.c. In recent years Canada's exports of manufactures have been larger than her imports.

CHAPTER XIII

CONSTRUCTION

In a country which, like Canada, is still in process of development, the building industry occupies a position of high relative importance, the new values thus created often ranking as one of the chief determining factors in current economic progress. Conditions in this respect vary, of course, from year to year; moreover, different phases tend to become specially prominent at different periods.

Railroad construction, for example, saw its period of greatest activity in Canada during the first decade and a half of the present century, when two entirely new transcontinental systems were built and placed in operation. But though incidents of this extraordinary kind occur only at wide intervals, a considerable mileage of new track is laid annually. In 1928 there were 483 miles of new railway lines opened, 631 miles completed but not opened for traffic, and 757 miles projected or under construction, the net increase in single track mileage being 452 miles. The expenditures of steam and electric railways on maintenance of way and structures and equipment accounts is also a constant item, amounting to from $170 to $190 millions. Altogether, investments on new railway lines and structures in 1928 were over $78 millions and in 1927 over $52 millions.

Second only to railway building has been the good roads program of the Dominion and Provincial Governments, undertaken largely since the war. Under the Canada Highways Act, 1919, there has been spent $20,000,000 by the Federal Government; as this was but 40 p.c. of the total, the entire expenditure on highways under this Act during the past eight years has been at least $50,000,000. In addition, there have been very heavy expenditures by the provinces, counties, townships and urban municipalities on roads not receiving Dominion aid. (*See* also Chapter XVI.)

A Canadian Agricultural Implement Factory

Courtesy of Royal Bank

On public utilities in general the annual expenditures on new construction account are often considerable. In this category are included new telegraph and telephone lines, canals, harbours, central electric stations, waterworks, etc.

On building proper, *i.e.*, for houses, factories, business premises, etc., a comprehensive record is difficult to obtain in view of the widespread nature of the operations. Partial light is afforded by the

Building Permits, 1920-1929

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*	220,152,532	196·3	99·2	197·5	129·7

*11 months.

official records of building permits issued in some 61 cities of Canada; in 1928 the value of buildings thus authorized was in the neighbourhood of $219 millions, while for 11 months of 1929 it was $220 millions. The accompanying tables show the general record back to 1920 and the record by cities for the past three years.

Building Permits, by Cities, 1927, 1928 and 1929*

Cities	1929*	1928	1927
	$	$	$
Prince Edward Island—Charlottetown	20,000	-	-
Nova Scotia	5,679,382	3,078,176	1,840,647
Halifax	5,145,315	2,808,357	1,537,899
New Glasgow	305,370	64,515	10,850
Sydney	228,697	205,304	291,898
New Brunswick	1,869,056	1,262,266	1,365,065
Fredericton	23,500	148,015	14,779
Moncton	743,958	270,813	736,110
Saint John	1,101,598	843,438	614,176
Quebec	55,479,531	49,933,504	58,320,532
Montreal—Maisonneuve	44,524,670	36,347,901	45,200,842
Quebec	5,503,608	5,710,144	6,360,165
Shawinigan Falls	724,813	1,163,581	347,835
Sherbrooke	753,040	1,128,233	689,930
Three Rivers	1,208,765	1,681,450	2,332,500
Westmount	2,764,635	3,902,195	3,389,260

Building Permits, by Cities, 1927, 1928, 1929*—Concluded

Cities	1929*	1928	1927
Ontario	88,048,094	104,777,566	79,883,344
Belleville	536,630	239,323	670,010
Brantford	460,263	802,528	571,599
Chatham	678,910	780,020	575,087
Fort William	1,756,150	2,062,000	1,209,450
Galt	526,573	378,581	181,023
Guelph	596,612	462,815	493,169
Hamilton	6,856,720	6,342,100	3,837,150
Kingston	907,310	678,203	420,467
Kitchener	1,621,998	1,524,625	1,272,632
London	2,370,185	2,561,705	2,814,950
Niagara Falls	878,660	2,056,415	1,517,510
Oshawa	1,417,830	3,015,070	5,255,188
Ottawa	3,382,033	5,421,085	6,446,045
Owen Sound	529,700	262,375	330,350
Peterborough	562,003	625,577	624,295
Port Arthur	554,545	5,292,545	3,473,736
Stratford	346,949	224,412	221,254
St. Catharines	1,424,832	1,249,141	1,147,286
St. Thomas	171,100	362,732	92,682
Sarnia	1,006,754	814,586	1,064,415
Sault Ste. Marie	764,132	402,419	329,461
Toronto	41,498,702	51,607,188	31,274,876
York and East York Townships	9,671,351	8,210,380	6,041,635
Welland	301,425	309,866	400,364
Windsor	5,525,999	4,518,723	4,930,832
East Windsor	560,707	758,315	1,054,531
Riverside	388,025	496,460	624,340
Sandwich	849,540	762,775	1,323,140
Walkerville	1,615,000	2,108,000	1,527,000
Woodstock	287,456	447,602	158,867
Manitoba	11,567,213	11,846,635	8,561,122
Brandon	397,663	428,130	230,252
St. Boniface	507,400	871,105	761,570
Winnipeg	10,662,150	10,547,400	7,569,300
Saskatchewan	16,464,048	13,449,826	7,928,574
Moose Jaw	1,021,633	1,074,078	1,230,489
Regina	9,596,607	6,619,206	3,482,090
Saskatoon	5,845,808	5,756,542	3,215,995
Alberta	16,086,948	10,292,579	5,398,691
Calgary	9,580,636	6,302,142	2,330,131
Edmonton	5,651,180	3,374,971	2,568,565
Lethbridge	550,657	498,590	438,684
Medicine Hat	304,475	116,876	61,311
British Columbia	24,938,260	24,465,163	21,315,787
Kamloops	225,041	128,781	252,488
Nanaimo	110,765	45,269	211,065
New Westminster	867,879	1,928,324	1,082,114
Prince Rupert	87,286	176,804	252,940
Vancouver	19,654,937	19,445,288	16,669,680
North Vancouver	289,915	912,780	322,739
Victoria	3,702,437	1,827,937	2,524,741
Total—61 cities	220,152,532	219,105,715	184,613,742

*11 months.

A record of total construction contracts awarded, as compiled by the MacLean Building Review, is as follows:—

Types of Construction	11 months 1929		11 months 1928	
	No.	Value	No.	Value
		$		$
Apartments	338	22,012,500	472	35,484,000
Residences	23,740	102,049,100	18,038	97,787,400
Total Residential	*24,078*	*124,061,600*	*18,510*	*133,271,400*
Churches	293	8,395,400	259	8,075,700
Public Garages	812	12,775,500	790	10,304,500
Hospitals	112	8,629,000	106	7,711,700
Hotels and Clubs	279	18,672,600	274	14,704,600
Office Buildings	484	35,477,400	235	33,726,700
Public Buildings	387	17,468,400	272	8,223,800
Schools	504	21,682,800	491	20,578,000
Stores	1,521	23,643,100	1,603	26,368,500
Theatres	62	3,055,200	31	2,973,000
Warehouses	510	29,306,400	582	29,639,800
Total Business	*4,964*	*179,105,800*	*4,648*	*162,306,300*
Total Industrial	*649*	*61,419,800*	*801*	*61,405,400*
Bridges	393	11,005,300	358	7,029,600
Dams and Wharves	265	23,917,900	223	7,888,200
Sewers and Watermains	516	16,563,900	415	9,239,300
Roads and Streets	943	40,878,500	922	28,621,200
General Engineering	188	87,150,200	237	43,366,000
Total Engineering	*2,305*	*179,515,800*	*2,155*	*96,144,300*
Grand Total	*31,996*	*544,103,000*	*25,909*	*453,127,400*

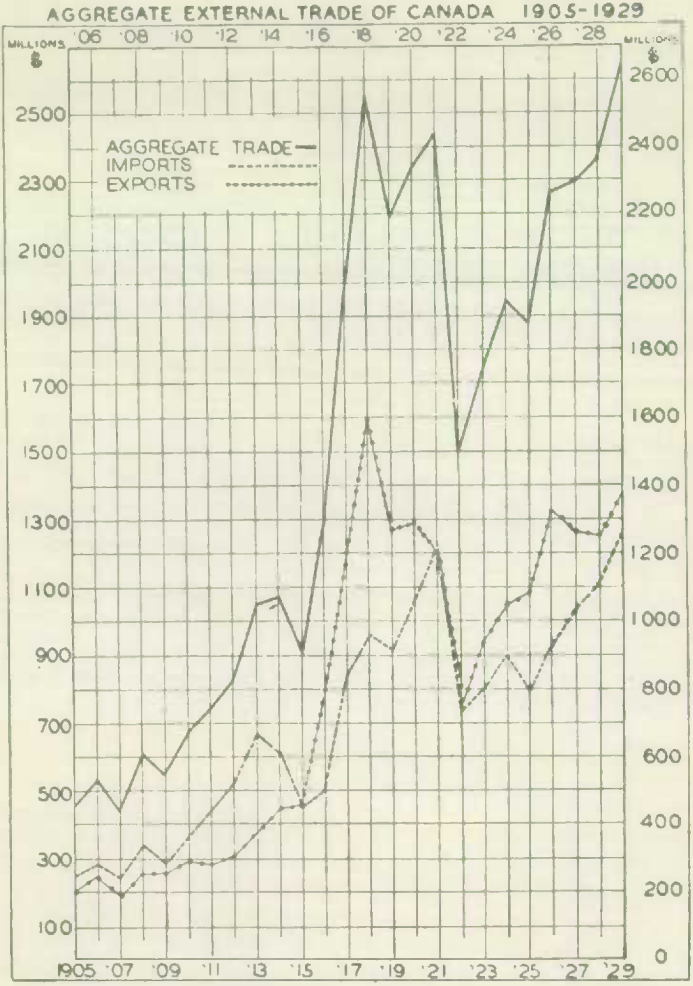
CHAPTER XIV

THE TRADE OF CANADA—EXPORTS AND IMPORTS—NON-COMMODITY EXCHANGES—TOURIST TRADE—TARIFF LEGISLATION

—	1900	1914	1929
	$	$	$
Total Trade	355,889,000	1,074,631,000	2,654,452,000
Total Imports	172,652,000	619,194,000	1,265,679,000
Total Exports	183,237,000	455,437,000	1,388,773,000

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 of the oldest and largest countries in trade standing. Canada leads the world in the exports of wheat, printing paper, nickel and asbestos; occupies second place in the exports of wheat flour and third place in the exports of wood pulp, as well as occupying a very high place in the exports of many other staple products such as lumber and timber, automobiles, 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 1928 she advanced from eighth position in imports, tenth in exports, and ninth in total trade to fifth position in imports, exports and total trade, being exceeded only by the United States, United Kingdom, Germany and France. In 1928 she occupied second place in exports and total trade *per capita*, being exceeded only by New Zealand; third place in favourable trade balance, and second place in favourable trade balance *per capita*. In no other field is the progress of Canada more significantly written than in her trade annals.

AGGREGATE EXTERNAL TRADE OF CANADA 1905-1929



Total Trade

Canada's total trade for the fiscal year 1929, amounting to $2,654,452,000, was about twenty-two times that at Confederation, while at the ushering in of the twentieth century it was only about three times as great, the total trade in 1900 amounting to only $355,889,000. From Confederation to 1900 the total trade of Canada increased 197 p.c., while from 1900 to 1929 it increased 646 p.c.

The Dominion's total trade with the United Kingdom in 1929 was $625,710,000, or eleven times as great as at Confederation, and four times as great as in 1900. Total trade with the United States from Confederation to 1929 increased from $48,010,000 to $1,389,827,000 or 29 times, while the total trade in 1900, amounting to $162,188,000, was only a trifle more than three times as great as in 1868. Since 1900 the increase has been 756 p.c. Canada's total trade with all other countries in 1868 was $16,259,000; in 1900, $41,685,000, and in 1929, $638,915,000. From 1868 to 1900 it increased about 156 p.c., and from 1900 to 1929, about 1,432 p.c.

An analysis of the physical volume of Canada's foreign trade shows that it was greater for both imports and exports in 1929 than for any other year in her history. Statistics have been compiled for the fiscal years 1921 to 1929, based on 1914 average values (*i.e.*, eliminating the effects of subsequent changes in prices), as follows:—

Fiscal Years	Imports		Exports (Canadian)	
	Declared values	Based on 1914 average values	Declared values	Based on 1914 average values
	$	$	$	$
1914	619,194,000	619,194,000	431,589,000	431,589,000
1921	1,240,159,000	611,286,000	1,189,163,000	543,224,000
1922	747,804,000	505,128,000	749,241,000	497,546,000
1923	802,579,000	592,952,000	931,451,000	692,871,000
1924	893,367,000	625,901,000	1,045,351,000	810,787,000
1925	796,933,000	586,723,000	1,069,067,000	780,041,000
1926	927,329,000	692,982,000	1,315,356,000	906,253,000
1927	1,030,893,000	821,210,000	1,252,158,000	885,500,000
1928	1,108,956,000	920,993,000	1,228,349,000	884,347,000
1929	1,265,679,000	1,107,671,000	1,363,710,000	1,085,221,000

The statistics in the foregoing table show that the total foreign trade of Canada, from 1921 to 1929, on the basis of declared values, has increased about 8 p.c., but that when allowance has been made for the fluctuation in import and export prices, the increase has been about 90 p.c. During the same period imports show an increase at current prices of about 2 p.c., and exports of about 14 p.c., but when

price changes have been eliminated, imports show an increase of about 80 p.c., and exports of about 100 p.c.

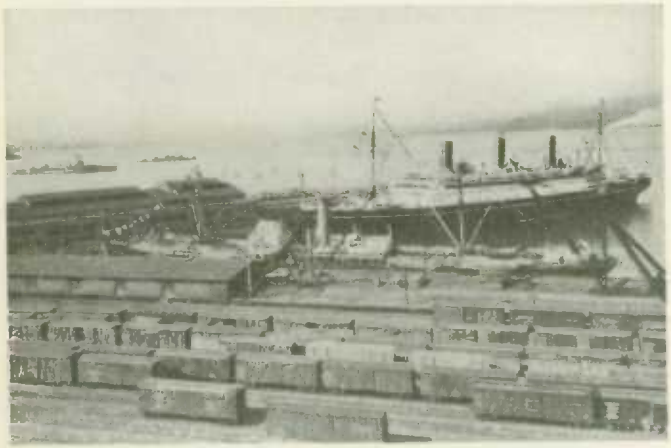
The development of a country industrially is illustrated in the character of the goods it imports and exports. In the early years Canada's imports consisted chiefly of manufactured products and the exports of raw or semi-manufactured products, but since the opening of the twentieth century the reverse 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.

Imports

The total increase in imports from Confederation to 1900 was $105,562,000 or 157 p.c.; while from 1900 to 1929 it was $1,093,027,000 or 633 p.c.

Imports from the United Kingdom in 1900 amounted to $44,280,000. From 1868 to 1900 they increased $6,663,000 or 18 p.c., and from 1900 to 1929, $149,761,000 or 338 p.c. Canada's imports from the United States were:—1868, $22,660,000; 1900, $102,225,000; and 1929, $868,012,000. From 1868 to 1929 they increased thirty-eight times, and from 1900 to 1929, $765,787,000 or 749 p.c.

The Dominion's imports from "Other Countries" in 1868 were $6,813,000; in 1900, $26,147,000; and in 1929, $203,626,000.



C.P.R. Pier, with Ocean Steamer, Vancouver

N. R. I. Service

In 1900, 84·9 p.c. of Canada's imports was obtained from the United Kingdom and the United States, the proportion from the United Kingdom being 25·7 p.c., while the proportion from the United States was 59·2 p.c. In 1929, 83·9 p.c. of Canada's total imports came from the United Kingdom and the United States, the proportion from the former falling to 15·3 p.c. and from the United States rising to 68·6 p.c. There has been a more gradual growth in the percentage of imports from "Other Countries" than from the United Kingdom and the United States, the proportion in 1868 amounting to 10·1 p.c.; in 1900 to 15·1 p.c.; and in 1929 to 16·1 p.c. In 1868 the 10·1 p.c. of imports from "Other Countries" represented a declared value of $6,813,000; in 1900 the 15·1 p.c. a declared value of $26,146,000, and in 1929 the 16·1 p.c. represented a declared value of $203,600,000. Of this amount Europe, except the United Kingdom, supplied $92,700,000; North America, except the United States, $26,200,000; South America, $26,500,000; Asia, $33,500,000; Oceania, $22,500,000; and Africa, $2,200,000. Canada today obtains her supplies from practically every country of the world. The list of this latter includes over 100 of which British countries number about 30 and foreign countries about 70.

An especially important feature of Canadian trade, as already hinted, is the constantly increasing import from year to year of raw and semi-manufactured materials, reflecting the ever increasing scope of our manufacturing processes. The following statistics of these

The Harbour of Montreal

Can. Govt. Motion Picture Bureau

imports are of significance as reflecting the expansion in Canadian manufacturing since 1900:—

Commodities		1900	1914	1929
Alumina and cryolite	lb.	45,700	31,225,900	344,791,100
Bituminous coal	ton	2,769,938	13,754,244	13,224,564
Cocoa, raw	lb.	779,050	6,887,800	15,801,300
Cotton, raw	"	54,912,849	76,993,026	151,126,982
Cotton seed oil, crude	"	5,062,300	26,578,880	29,521,600
Furs, raw	$	1,240,589	2,335,051	14,069,793
Grease for soap and leather	lb.	5,517,405	13,995,011	13,463,700
Hides, raw	$	4,214,412	8,777,694	12,429,221
Iron ore[1]	ton	72,519	1,972,207	2,272,130
Leather, unmanufactured	$	1,095,341	3,035,609	6,009,148
Lumber, rough sawn	M ft.	99,711	466,950	267,765
Manganese, oxide of	lb.	126,725	4,749,938	213,049,100
Manila and sisal grass	"	....	18,901,000	74,583,100
Oils for soap	gal.	212,247	393,862	3,241,587
Petroleum, crude	"	334,704	177,925,688	920,651,440
Rubber, raw	lb.	3,002,576	4,450,430	77,704,034
Silk, raw	"	69,832	101,669	1,279,849
Skelp iron for pipe	"	24,746,900	203,191,600	315,991,000
Sugar for refining	"	267,623,607	694,336,500	853,743,600
Sulphur	"	21,128,656	59,712,420	357,216,300
Tin in blocks	"	2,244,100	4,607,600	5,892,800
Tin plate	"	50,210,800	105,758,400	161,896,900
Tobacco, raw	"	7,928,382	17,598,449	18,726,618
Wire rods for wire	"	83,987,000	139,612,300	109,189,200
Wool, raw	"	8,054,699	7,252,119	14,021,917

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

Exports

Canada's export trade shows a greater expansion than her import trade. Total exports of domestic produce to all countries from 1868 to 1929 increased from $48,505,000 to $1,363,587,000, or about 28 times. From Confederation to 1900 domestic exports increased $120,467,000, or 248 p.c., while from 1900 to 1929 they increased $1,194,615,000, or 707 p.c.

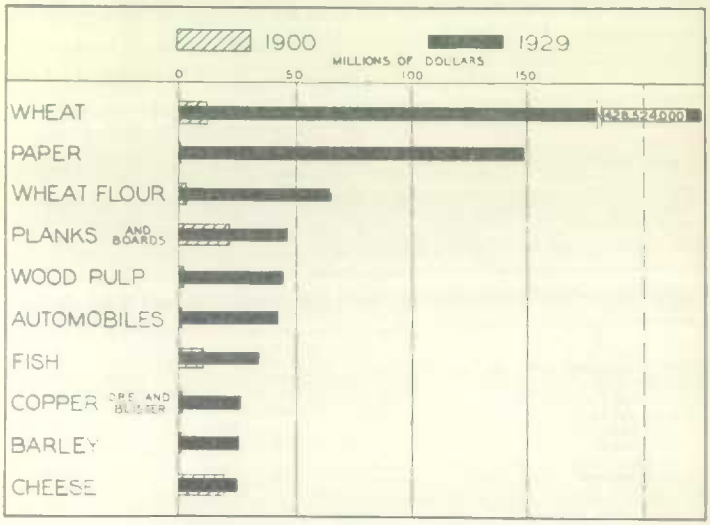
The exports of domestic produce to the United Kingdom were:— 1868, $17,906,000; 1900, $96,563,000; and in 1929, $429,730,000. The exports in 1900 were 5½ times greater than in 1868, while in 1929 they were 24 times greater. From 1868 to 1900 the domestic exports to the United Kingdom increased 439 p.c., and from 1900 to 1929, 345 p.c. It must be pointed out, however, that a large quantity of grain, especially wheat, shown as exported to the United Kingdom is diverted from its stated destination (the United Kingdom) to other countries. This diversion takes place, as a rule, in the movement of products from Canada to the United Kingdom *via* the United States, and on the high seas. As a result of this diversion, the stated exports to the United Kingdom would be reduced and those to other countries increased by a corresponding amount.

Canada's domestic exports to the United States were:—1868, $25,350,000; 1900, $57,996,000; and in 1929, $500,168,000. From 1868 to 1929 exports to the United States increased eighteen times and from 1868 to 1900 two and one-third times. From Confederation to 1900 exports to the United States increased $32,646,000 or 127 p.c., and from 1900 to 1929, $442,172,000 or 762 p.c.

The Dominion's domestic exports to "Other Countries" in 1868 amounted to $5,249,000 and in 1929 to $433,689,000, or eighty-two times as great as in 1868, while in 1900 they amounted to $14,413,000, or only two and two-thirds as great as in 1868. From 1868 to 1900 exports to "Other Countries" increased $9,164,000 or 174 p.c., while from 1900 to 1929 they increased $419,276,000 or 2,909 p.c.

In 1900 the exports to the United Kingdom and the United States combined were 91·3 p.c. of the total exports of domestic produce, the proportion for the United Kingdom being 57·1 p.c. and the United States 34·2 p.c.; while for the year 1929 the domestic exports from Canada to the United Kingdom and the United States were only 68·2 p.c., the proportion for the United Kingdom being 31·5 p.c., and for the United States 36·7 p.c. From 1900 to 1929 the proportion of Canada's domestic exports to the United Kingdom fell from 57·1 to 31·5 p.c., while the proportions to the United States and "Other

CANADA'S PRINCIPAL EXPORTS



Countries" rose from 34·2 to 36·7 p.c. and from 8·7 to 31·8 p.c., respectively. In 1900 the proportion of Canada's exports to "Other Countries" amounted to $14,413,000, while in 1929 the proportion of 31·8 p.c. represented a declared value of $433,689,000, which amount exceeds the Dominion's total domestic exports prior to 1916. The increase in Canada's domestic exports to "Other Countries" from 1900 to 1929 was $419,276,000 or 2,909 p.c. During 1929 the exports to "Other Countries", amounting to $433,700,000, were distributed by continents as follows:—Europe, except the United Kingdom, $213,100,000; North America, except the United States, $42,900,000; South America, $32,600,000; Asia, $87,200,000; Oceania, $37,600,000; and Africa, $20,300,000. While in 1868 Canadian products reached a very limited number of countries, today they find their way into every country of the world. Canada today sells to more than 113 countries; British countries buying goods from Canada number over 30, and foreign countries over 80.

Some significant records are appended showing Canada's expansion in export trade since 1900:—

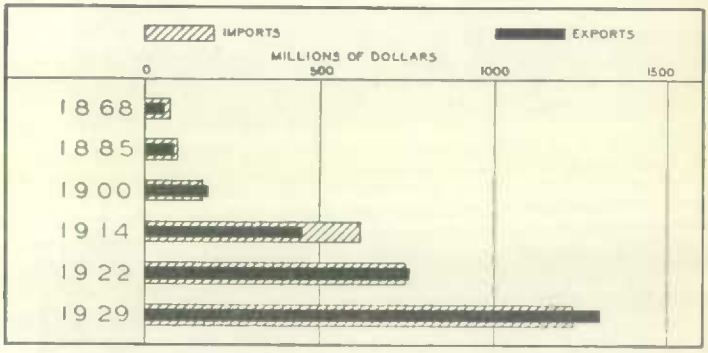
Commodities (in order of importance, 1929)	1900	1914	1929
	$	$	$
Wheat	11,995,000	117,719,000	428,524,000
Paper	30,000	12,675,000	148,395,000
Wheat flour	3,105,000	20,581,000	65,118,000
Planks and boards	22,016,000	29,048,000	47,664,000
Wood pulp	1,816,000	6,365,000	44,896,000
Automobiles	(1906) 63,000	3,572,000	43,060,000
Fish	10,563,000	20,078,000	34,982,000
Copper, ore and blister	1,387,000	9,490,000	26,904,000
Barley	1,010,000	6,514,000	25,744,000
Cheese	19,856,000	18,869,000	25,182,000
Furs, raw	2,265,000	5,603,000	24,250,000
Whiskey	397,000	1,038,000	24,123,000
Nickel	1,040,000	5,375,000	23,880,000
Meats	13,616,000	5,815,000	19,184,000
Rubber tires	–	(1917) 727,000	19,120,000
Farm implements	1,692,000	7,949,000	15,871,000
Cattle	9,081,000	7,907,000	14,694,000
Pulp wood	903,000	7,389,000	14,187,000
Gold, raw	14,149,000	13,327,000	12,396,000
Silver	1,354,000	20,972,000	11,840,000
Asbestos, raw	491,000	3,054,000	11,267,000
Lead	689,000	8,000	11,130,000
Rye	279,000	76,000	10,809,000
Oats	2,143,000	13,380,000	10,242,000
Leather, unmanufactured	1,535,000	3,068,000	9,592,000
Hides, raw	1,312,000	9,228,000	9,480,000
Aluminium in bars, etc	(1905) 535,000	1,885,000	8,608,000
Footwear, rubber	(1908) 156,000	171,000	8,590,000
Zinc	–	(1918) 431,000	8,306,000
Shingles (wood)	1,132,000	1,776,000	7,793,000
Machinery	446,000	748,000	7,337,000
Laths and pickets	532,000	1,926,000	6,413,000
Fertilizers	54,000	2,540,000	6,078,000
Milk and cream	(1911) 1,720,000	1,337,000	6,061,000

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

Months	Imports		Exports	
	1928	1929	1928	1929
	$	$	$	$
January	79,506	96,958	84,428	97,278
February	86,007	97,042	90,387	83,812
March	120,455	135,329	109,147	117,520
April	78,490	97,517	60,455	67,154
May	113,582	125,615	120,154	109,436
June	110,704	111,949	109,139	114,492
July	103,404	114,201	127,369	105,686
August	114,175	111,631	113,904	98,395
September	106,066	99,380	111,856	89,424
October	112,341	116,271	143,948	121,437
November	102,967	108,734	170,092	113,246
December	94,621	-	133,245	-

The decline in exports during 1929 is due largely to the falling off in the exports of wheat.

CANADA'S IMPORTS AND EXPORTS



The Canadian Trade Balance

Since Confederation, exports from Canada to all countries have exceeded imports in twenty-six years, while imports have exceeded exports in thirty-six years. The net excess of exports over imports during the sixty-two years totalled $1,839,357,000. 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 years, while an excess of imports has occurred in twelve years. The net excess of exports to the United Kingdom during the whole 62 years has amounted to $5,870,534,000. 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-two years Canada's trade balance with the United States has been unfavourable in fifty-six 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 $5,400,918,000. 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 position at the present time among the principal countries of the world with respect to trade balances is set forth in the following table:—

Saint John Harbour, N.B.

N. R. I. Service

Trade Balances of the Principal Countries of the World (Calendar Year 1928)

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

Rank	Countries	Amount	Per capita
		$	$ cts.
1	United States	(+) 1,037,600,000	(+) 8 65
2	British India	(+) 299,100,000	(+) 0 94
3	Canada	(+) 151,800,000	(+) 15 72
4	Argentina	(+) 111,900,000	(+) 10 52
5	New Zealand	(+) 49,800,000	(+) 34 50
6	Brazil	(+) 33,100,000	(+) 0 84
7	British South Africa	(−) 3,400,000	(−) 0 35
8	Australia	(−) 17,000,000	(−) 2 71
9	Denmark	(−) 21,800,000	(−) 6 27
10	Sweden	(−) 38,400,000	(−) 6 31
11	Belgium	(−) 39,500,000	(−) 4 98
12	France	(−) 82,400,000	(−) 2 02
13	Norway	(−) 88,300,000	(−) 31 58
14	Japan	(−) 103,000,000	(−) 1 63
15	Spain (1927)	(−) 117,600,000	(−) 5 32
16	Switzerland	(−) 117,600,000	(−) 29 50
17	Netherlands	(−) 280,900,000	(−) 36 39
18	Italy	(−) 394,800,000	(−) 9 67
19	Germany	(−) 633,000,000	(−) 10 01
20	United Kingdom	(−) 1,718,700,000	(−) 37 67

Non-Commodity Items of Foreign Exchange

A nation's commodity trade alone, however, cannot be taken as an 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 are set down and totalled the debit or credit difference will be a final invisible item representing an export or import of capital and this brings 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.

Estimated Balance of Canada's International Payments, 1927
("000" omitted)

Items	1927		
	Exports visible and invisible	Imports visible and invisible	Balance
1. Commodity Trade—	$	$	$
Recorded merchandise exports and imports	1,238,782	1,087,118	
Exports and imports of gold coin and bullion and subsidiary coin	49,359	44,220	
Unrecorded imports of ships	–	269	
Deductions for settlers' effects shown elsewhere and miscellaneous items	10,513	14,998	
Total	1,277,628	1,116,609	+ 161,019
2. Freight payments and receipts	109,292	110,241	– 949
3. Tourists' expenditures	242,754	103,782	+ 138,972
4. Interest payments and receipts	80,830	296,452	– 215,622
5. Immigrants' and emigrants' remittances	15,433	22,423	– 6,990
6. Expenditures of Governments	11,948	11,751	+ 197
7. Charitable and missionary contributions	873	1,766	– 893
8. Insurance transactions	25,234	24,716	+ 518
9. Advertising	5,228	–	+ 5,228
10. Motion picture royalties	–	3,500	– 3,500
11. Capital of immigrants and emigrants	10,132	11,521	– 1,389
12. Export and import of electrical energy	4,798	87	+ 4,711
13. Net capital export (indirect est.)	1,784,150	1,702,848 81,302	
14. Net capital export (direct est.)	1,784,150	1,784,150 18,680	

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 (1928) this was calculated to have brought at least $250 millions into the country and the total for 1929 will from every indication be considerably larger. The sum thus spent in Canada is considerably larger than the corresponding amounts spent by Canadian tourists abroad, *viz.*, $103 millions in 1928. 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 $167 millions in Canada in 1928, while Canadian tourists spent about $60 millions in the United States. Tourist expenditure is the income which Canada derives from her picturesque scenery, her fish and game preserves, her winter sports and other advantages and represents an "invisible" export which was surpassed in value only by the export of wheat among the leading commodities exported from Canada in the fiscal year 1928-29.

Tariff Legislation

Canada was the first of the British Dominions to grant a trade preference to the products and manufactures of the United Kingdom and reciprocating British Dominions and Possessions—of 12½ p.c. from

April 23, 1897, which was increased to 25 p.c. from June 30, 1898, and to 33⅓ p.c. from June 30, 1900. It was enacted in the Customs Tariff Act, 1907 (which provided for a tripartite tariff scale, *viz.*, the British Preference, the Intermediate and the General), that the Government may, 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 grants benefits satisfactory to the Governor in Council. Prior to 1907 Canada had no bargaining machinery of this kind. Since 1907 the British Preferential Tariff is practically 33⅓ p.c. less than the General Tariff, while the Intermediate Tariff is somewhat lower than the General.

The British Preferential Tariff is applicable to the products and manufactures of practically every British Dominion and Possession. For years, however, Canada has granted free trade to Newfoundland in fish and fish products. Today Canada has trade treaties and agreements with Australia and the British West India Colonies as well as the following foreign countries:—Belgium, Cuba, Czecho-Slovakia, Estonia, Finland, France, Hungary, Italy, Japan, Latvia, Lithuania, Netherlands, Portugal, Roumania, Serb-Croat-Slovene Kingdom and Spain.

Goods, the produce and manufacture of the following countries receive the benefits of the French Treaty when conveyed without trans-shipment from a port of said countries to a sea or river port of Canada or from a port of a country enjoying the benefits of the British Preferential or Intermediate Tariffs; or from any British country entitled to the benefits of the Convention or from any country accorded most-favoured-nation treatment in tariff matters by Canada:—

France
Colombia
Norway
Switzerland
The United Kingdom
Italy
British Colonies and Possessions
French Colonies, Possessions and Protectorates
Latvia
Spain
Italian Colonies and Possessions
Argentine Republic
Denmark
Japan
Cuba (benefits Intermediate Tariff)
Czecho-Slovakia
Sweden
Venezuela
Finland
Roumania
Lithuania

Economic Union of Belgium and Luxembourg, Colonies and Possessions.
The Netherlands, Netherlands Indies, Surinam and Curacao.
Hungary, Estonia, Serb-Croat-Slovene Kingdom.
Portugal including Azores, Madeira and Porto Santo.

When the British preference became effective in 1897 Canada's total imports from the United Kingdom amounted to only $29,401,000, compared with an import in 1887 valued at $44,741,000, and in 1873 at $67,997,000, the decrease in 1897 compared with 1887 amounting to $15,340,000, and with 1873 to $38,596,000. From 1873 to 1897 imports from the United Kingdom decreased $38,596,000 or 56·7 p.c., while from 1897 to 1929 they increased $164,620,000 or 559·9 p.c. By reference to the statistics in the following table giving "Trade of Canada with the British Empire and Foreign Countries", it will be noted that in the fiscal year 1914, imports from "Other British Empire", *i.e.*, British Empire except the United Kingdom, amounted to $22,456,000, in 1922 to $31,974,000, but in 1929 they had increased to $63,378,000; while imports from "Other Foreign Countries", *i.e.*, Foreign Countries except the United States, in 1914 totalled $68,365,000, in 1922 $82,737,000, and in 1929, $140,248,000. Exports, however, during the same years show a greater improvement. In 1914 exports to "Other British Empire" were valued at $23,388,000, in 1922 at $46,474,000, and in 1929 at $106,296,000, while exports to "Other Foreign Countries" were valued at $29,573,000 in 1914, at $101,817,000 in 1922, and at $327,393,000 in 1929.

From 1914 to 1929 imports from "Other British Empire" increased $40,922,000, or 182·2 p.c., and from "Other Foreign Countries" $71,883,000, or 105·1 p.c., while the exports to "Other British Empire" from 1914 to 1929 increased $82,908,000, or 354·5 p.c., and to "Other Foreign Countries" $297,820,000, or 1,007·0 p.c.

Trade of Canada with the British Empire and Foreign Countries

(Fiscal Years 1886, 1896, 1906, 1914, 1922 and 1929)

Fiscal Years	Canadian Trade with—			
	United Kingdom	United States	Other British Empire	Other Foreign Countries
	$000	$000	$000	$000
Imports				
1886	39,033	42,818	2,383	11,756
1896	32,824	53,529	2,388	16,618
1906	69,184	169,256	14,605	30,694
1914	132,070	396,302	22,456	68,365
1922	117,135	515,958	31,973	82,736
1929	194,041	868,012	63,377	140,247
Exports (Canadian)				
1886	36,694	34,284	3,262	3,515
1896	62,717	37,789	4,048	5,152
1906	127,456	83,546	10,964	13,516
1914	215,253	163,372	23,388	29,573
1922	299,361	292,588	46,473	101,816
1929	429,730	500,167	106,295	327,393

Commercial Intelligence Service.—As noted in the foregoing, 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. The Commercial Intelligence Journal is issued weekly by the service for the dissemination of periodical reports received from trade commissioners and other pertinent information relating to export trade.

CHAPTER XV

INTERNAL TRADE—TRADING ESTABLISHMENTS —STOCK MARKETS—PRICES AND THE COST OF LIVING

External trade, that is, export and import trade, is for obvious reasons subjected to more complete statistical measurements than internal trade. Nevertheless, even in a young country like Canada, internal trade is of first importance. In 1928 the combined money value of exports and imports was $2,596,400,000, while the grand total value of the productive activities of the gainfully occupied population was more than twice as great. If all internal transactions were included the total would be several times greater still. Certain aspects of the internal trade of Canada are dealt with in other sections of this handbook, as for example, the marketing of grains and livestock.

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 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 1929, of 132 chain store organizations, it was estimated that independent stores still do 85 p.c. or more of the retail business of the Dominion. In groceries, the most developed section of the chain store movement, they probably account for about 25 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 132 chain store systems mentioned above numbered 16,166, of which 1,656 were for groceries, 1,046 for bakery products, 960 for candy and confectionery, 716 for fresh fruit, 708 for dairy products, 650 for tobacco, 508 for meats, 439 for fish, 415 for ice cream and soft drinks, 394 for meals and so forth. Total sales were $190 millions. Grocery sales represented 30·7 p.c. of this, meats 7·3 p.c., meals 3·7 p.c., musical instruments and sheet music 3·5 p.c.; 53·6 p.c. of all sales were for foodstuffs, 16·3 p.c. for clothing, and 30·5 p.c. for miscellaneous items.

Internal Freight Movements

An important indicator of the volume of internal trade is found in the traffic reports of revenue freight carried by the railways. In 1928 this totalled 120,860,870 tons. The returns by provinces throw some light on interprovincial 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 36,000,000 tons, however, were unloaded at stations within the province and over 24,000,000 delivered to foreign connections, hence about 8,000,000 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 1929 with comparative figures for 1928.

Freight Originated for Eight Months, 1929

Provinces	Loaded at stations in Canada	Received from foreign connections	Total
	Tons	Tons	Tons
Prince Edward Island	150,398	31	150,429
Nova Scotia	5,428,191	88,286	5,516,477
New Brunswick	1,538,788	499,507	2,038,295
Quebec	8,633,136	3,118,883	11,752,019
Ontario	16,544,838	19,757,950	36,302,788
Manitoba	3,290,238	266,956	3,557,194
Saskatchewan	3,686,766	391,329	4,078,095
Alberta	5,884,328	168,063	6,052,391
British Columbia	4,797,158	376,937	5,174,095
Total for eight months, 1929	49,953,841	24,667,942	74,621,783
Total for eight months, 1928	48,626,409	21,888,508	70,514,917

Freight Terminated for Eight Months, 1929

Provinces	Unloaded at stations in Canada	Delivered to foreign connections	Total
	Tons	Tons	Tons
Prince Edward Island	175,697	3,378	179,075
Nova Scotia	4,895,931	387,846	5,283,777
New Brunswick	1,355,324	1,447,704	2,803,028
Quebec	9,192,236	4,698,790	13,891,026
Ontario	22,586,071	14,097,890	36,683,961
Manitoba	3,496,984	152,933	3,649,917
Saskatchewan	2,889,758	332,687	3,222,445
Alberta	3,057,078	1,618	3,058,696
British Columbia	3,670,900	2,627,824	6,298,724
Total for eight months, 1929	51,319,979	23,750,670	75,070,649
Total for eight months, 1928	48,188,538	23,546,085	71,734,623

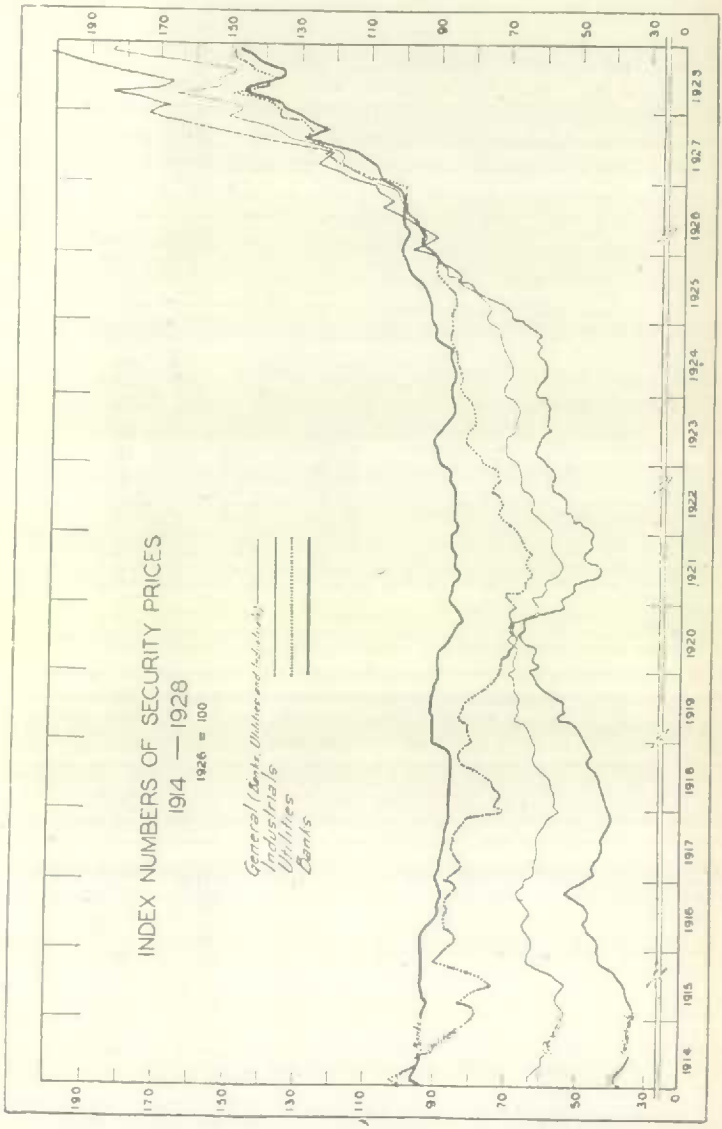
Stock Markets

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 has been in progress since 1924. The resulting advance of prices and the intense speculation, with its draft on credit which forced the money market to all but prohibitive rates, reached a climax in October and November of 1929, when a series of collapses occurred, forced liquidation being the heaviest experienced in the history of the markets.

The increasing 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

Months	1927	1928	1929
January	510,380	1,517,295	4,173,257
February	531,336	1,274,280	2,037,891
March	622,040	1,393,587	2,157,613
April	700,130	1,603,000	1,117,430
May	868,605	1,727,793	1,287,879
June	944,728	1,214,858	766,813
July	419,177	700,127	928,841
August	629,007	924,940	2,103,138
September	1,172,169	900,422	1,854,675
October	1,179,565	2,308,349	3,609,402
November	1,073,798	3,217,754	2,077,720
December	1,343,689	2,206,717	-


INDEX NUMBERS OF SECURITY PRICES
1914 — 1928
1926 = 100
General (Com., Utilities and Ind. Stocks)
Industrials
Utilities
Banks
190
170
150
130
110
90
70
50
30
0
1914
1915
1916
1917
1918
1919
1920
1921
1922
1923
1924
1925
1926
1927
1928

Security Prices, 1929.—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. They constitute an important barometer of trade and industry, though the recent slump is to be attributed to overspeculation rather than to a depression in fundamental business conditions. The accompanying chart shows the course of security prices from 1914 to 1928; the continuation of this series is shown in the table of investors' index numbers for 1929. Tables of index numbers of traders' activities and of mining stocks during the past three years are also appended.

Investors' Monthly Index Numbers of Common Stocks

(1926=100)

Months	Banks	Utilities	Industrials	Total
1929				
January	150·2	154·0	280·1	207·4
February	147·7	158·7	292·9	209·4
March	143·5	150·1	266·2	192·6
April	140·9	143·6	269·3	191·8
May	135·6	140·2	269·3	187·1
June	129·7	143·4	264·1	185·6
July	135·0	150·7	271·2	192·8
August	135·4	159·2	293·8	207·4
September	133·2	163·1	315·8	217·1
October	131·4	149·3	255·1	186·4
November	117·9	130·9	209·4	154·7

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)

Months	1927	1928	1929
January	111·7	317·7	1,039·5
February	123·0	322·0	1,125·8
March	132·3	338·5	1,057·3
April	146·2	379·5	962·4
May	161·0	417·1	955·1
June	177·3	388·0	968·0
July	174·0	391·2	1,032·1
August	187·8	391·3	1,170·1
September	211·3	470·6	1,230·4
October	236·4	553·2	1,125·8
November	251·7	714·1	769·2
December	281·4	809·7	-

NOTE.—The "Traders' 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.

Index Numbers of Seventeen Mining Stocks

(1926=100)

Months	1927	1928	1929
January	116·0	134·0	125·7
February	120·8	121·4	123·7
March	120·2	121·5	120·3
April	118·3	115·6	112·7
May	123·0	118·1	108·9
June	118·7	125·6	103·9
July	122·7	131·9	109·6
August	128·5	123·6	114·8
September	137·0	121·9	104·8
October	143·8	113·0	90·1
November	142·1	116·5	75·7
December	138·2	115·1	–

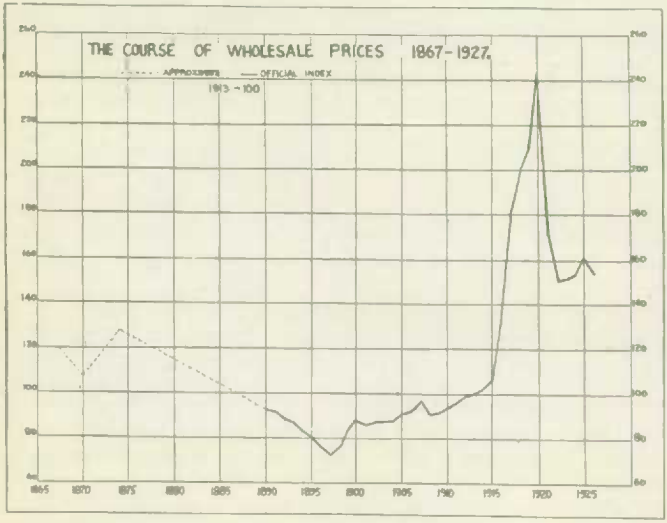
Taking the prices of stocks in 1926 as equal to 100 the monthly index number of industrials reached its peak in September when it was 315·8, that is to say they were on the average over three times the price prevailing in the year 1926. In the same month the index for public utility stocks had risen to 163·1 and that for all common stocks to 217·1. The drastic deflation of values which ensued thereafter is best seen in weekly index numbers. That for industrials was 311·0 the first week in September but had fallen to 195·2 for the week ending November 14th. Utilities in the same period fell from 163·6 to 125·2 and the index for all common stocks from 235·4 to 155·8. For the week ending December 12th the index for industrials was 210·8, that for utilities 132·9 and for all common stocks 169·9.

In contrast to the sudden and precipitate decline in industrial stocks that for mining stocks was a much lengthier and more gradual process. The peak of the bull market in the mining exchange was reached in October, 1927, when the index was 143·8. From that date it sagged, with temporary rallies, until in the week ending November 14th it stood at 73·5. For the week ending December 12th, the index was 76·1.

Prices of Commodities

Trade of all kinds is inseparably linked with price movements. Index numbers measuring the rise and fall of commodity prices are also an important indicator of business and of monetary conditions. The Dominion came into being at a time of falling prices but after 1870 prices rose. From 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 compar-



atively 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 and in 1928 were 150·6. During 1929 prices moved downward during the first half of the year being 147·6 in January and 144·6 in June. In the next three months, however, due largely to higher grain prices, they reached higher levels, being approximately 151 in October. Almost general declines occurred in November, the index being 149·7.

A favourable feature in recent years has been the removal of the disparity between prices of commodities produced by the farmer and those which he has to buy.

New Index Numbers of Wholesale Prices,* 1913-1929

(1926=100)

1913	64·0	1919	133·9	1924	99·4
1914	65·5	1920	155·9	1925	102·6
1915	70·4	1921	110·0	1926	100·0
1916	84·3	1922	97·3	1927	97·6
1917	114·3	1923	98·0	1928	96·4
1918	127·4				

1929

January	94·5	July	96·0
February	95·7	August	98·1
March	96·1	September	97·3
April	94·1	October	96·7
May	92·4	November	95·8
June	92·6		

*236 commodities to 1926, thereafter 502

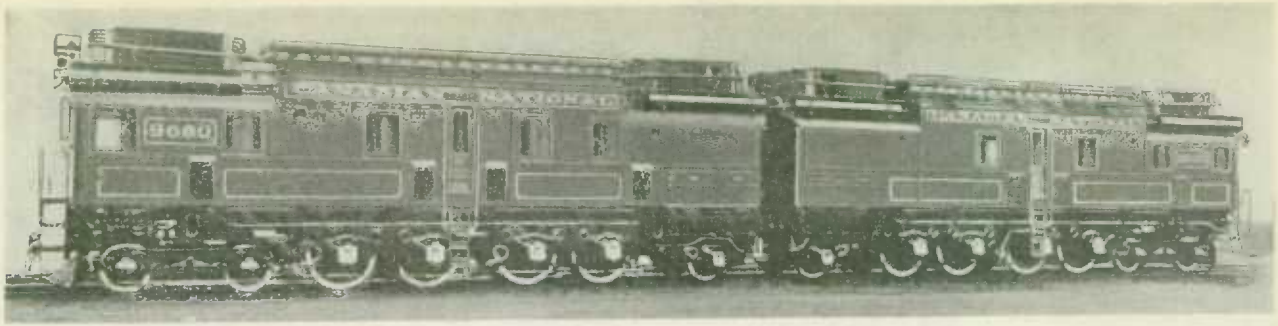
Cost of Living

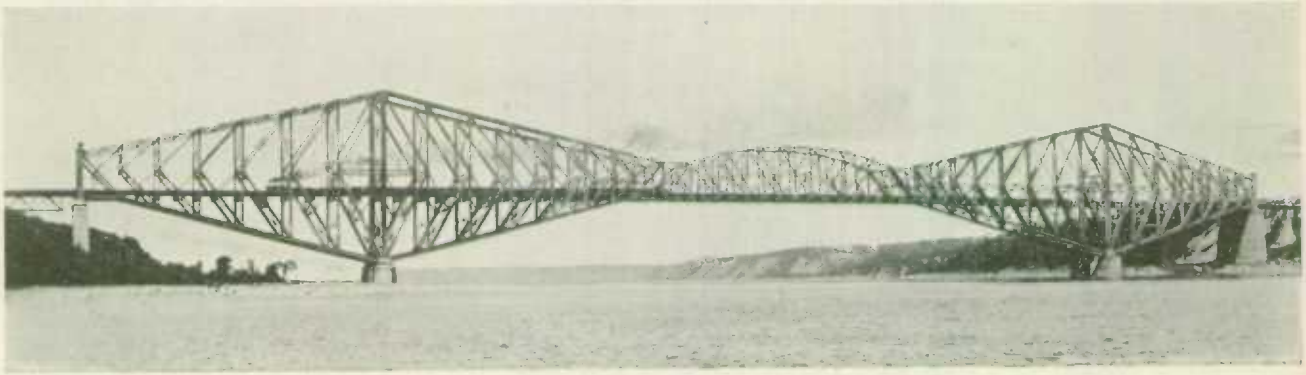
Statistics relating to the cost of living constitute a very important phase of price statistics. The Bureau's index numbers of the cost of living are designed to show changes relating to average conditions. On the basis of 1926 = 100, the index was 66·0 for the year 1913, 124·2 in 1920, and 99·1 in 1928. During 1929 there was a slight upward tendency due mainly to higher prices for foodstuffs and higher rentals.

Index Numbers of the Cost of Living Based on Average Conditions, 1914-1929

(Average prices in 1926=100)

Year	Total index	Food index	Fuel index	Rent index	Clothing index	Sundries index
1928						
January	99·6	100·4	97·4	101·2	97·2	99·7
February	99·2	99·1	97·4	101·2	97·2	99·7
March	98·8	97·7	97·5	101·2	97·2	99·7
April	98·7	97·5	97·3	101·2	97·2	99·7
May	98·4	96·4	96·7	101·2	97·3	99·7
June	98·2	95·9	96·0	101·2	97·3	99·7
July	98·4	96·6	95·9	101·2	97·3	99·7
August	99·2	98·9	96·3	101·2	97·6	99·7
September	99·3	99·2	96·3	101·2	97·6	99·7
October	99·9	101·1	97·1	101·2	97·6	99·7
November	99·8	100·7	97·1	101·2	97·6	99·7
December	99·7	100·5	97·1	101·2	97·6	99·7
1929						
January	99·6	100·2	97·1	101·2	97·6	99·7
February	99·4	99·4	97·2	101·2	97·6	99·7
March	99·5	100·0	97·4	101·2	97·3	99·7
April	99·0	98·2	97·5	101·2	97·3	99·7
May	99·3	98·0	96·7	103·6	96·9	99·7
June	99·2	97·8	96·1	103·6	96·9	99·7
July	99·4	98·6	96·0	103·6	96·9	99·7
August	101·1	104·2	96·2	103·6	96·7	99·7
September	100·9	103·6	96·3	103·6	96·7	99·7
October	101·1	103·2	96·4	105·5	96·7	99·6
November	101·6	104·5	97·1	105·5	96·7	99·6





Above—Oil-Electric Locomotive—A New Challenger of the Steam Locomotive, 1929
Below—The Quebec Bridge—a Link in the Canadian Government Railway System

Can. Govt. Motion Picture Bureau

CHAPTER XVI

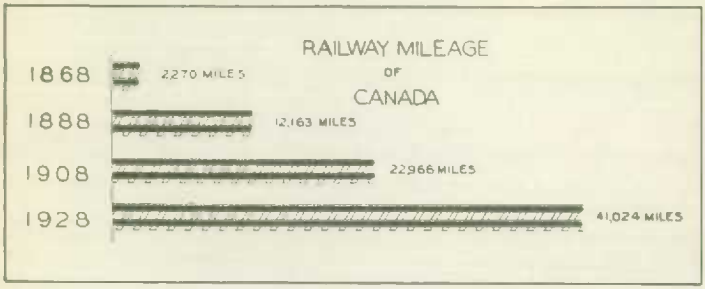
TRANSPORTATION AND COMMUNICATIONS

Historical.—The Dominion is a land of magnificent distances. From coast to coast it stretches over 3,500 miles in length, the population, being distributed in the main only 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 reaching 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 today 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.

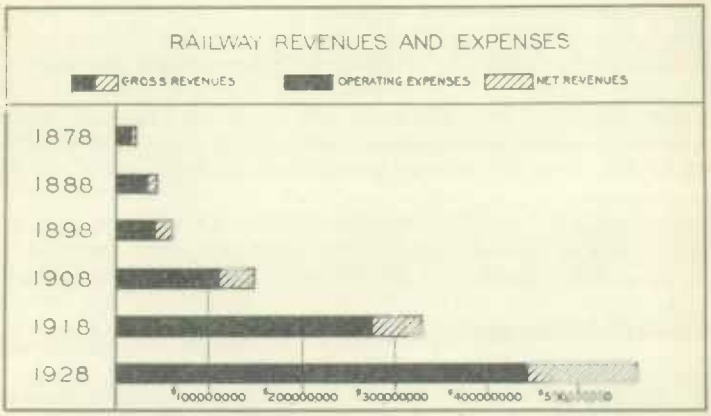
The railway era proper may be said to have begun in 1851 with the inauguration of the Grand Trunk system and several subsidiary lines throughout Ontario and Quebec. At Confederation these had grown to 2,278 miles. The Intercolonial, which joined the Maritimes to Quebec and Ontario, was, as already noted, 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 possesses the most extensive railway system of any country of its population, no other in the world exceeding us in mileage *per capita*. According to the latest returns the total steam railway mileage in operation was 41,024; the investment in Canadian railways was approximately $3 billions and the gross earnings were $564 millions. The number of employees in 1928 was 187,710 and the wages bill $288 millions. The Canadian railways carried about 41 million passengers and 119 million tons of freight in 1928; in 1875 the traffic was only 5,190,416 passengers and 5,670,837 tons of freight. Ton mileage of revenue freight was 11 billions in 1907 (the first year of record) and 41½ billions in 1928. The railways use 30 p.c. of all the coal consumed in Canada.



1929.—The freight tonnage handled by the railways up to the end of August, 1929, was over 5 p.c. heavier than in 1928, but the light grain crop affected the loadings after the harvest so that by the end of October the total loadings in the western provinces were 118,224 cars less than in 1928, which decrease included a decrease of 107,754 cars of grain and grain products. In Ontario, Quebec and the Maritime Provinces total car loadings to October 31 were heavier than in 1928 by 73,123 cars despite a decrease of 6,682 cars of grain due to the light western crop. Also decreases in the export of pulpwood have affected the loadings, the decrease being 25,595 cars. The shipments of pulp and paper, however, have increased by 12,926 cars.

The revenues of the railways have also shown the effect of the light harvest, which effect has been increased by a slow export movement, more grain being in elevators than ever before at this time of the year; the total stocks of Canadian grain at all Canadian elevators on November 1 were 42 p.c. or almost 71 million bushels greater than in 1928. The loss in gross revenues during August, September and



October, especially the last two months, more than offset the gains made earlier in the year and at October 31 the Canadian Pacific railway showed a decrease of over $5 million and the Canadian lines of the Canadian National system, a loss of over $3 million. The net revenues will, of course, not show such large decrease. The railway gross operating revenues and revenue car loadings, by months for 1928 and 1929 are shown in the table below.

Months	Railway gross operating revenues		Gross operating revenues, two large railways		Total revenue car loadings	
	1928	1929	1928	1929	1928	1929
	$000	$000	$000	$000	No.	No.
January	37,828	38,398	35,850	35,990	265,487	252,217
February	38,663	38,429	32,955	32,332	267,131	261,410
March	42,495	44,754	36,447	37,951	283,567	282,315
April	39,399	45,034	33,800	38,316	252,131	283,745
May	43,840	45,291	38,100	38,578	300,295	306,728
June	43,510	44,860	37,931	38,360	294,451	310,885
July	45,418	47,362	39,739	40,747	290,677	313,292
August	48,203	45,617	42,184	38,851	312,816	318,200
September	50,877	48,142	44,937	40,590	361,247	335,338
October	61,871	–	55,498	43,121	420,263	353,095
November	55,350	–	49,606	35,816	380,405	284,740
December	49,189	–	43,976	–	275,678	–

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 old 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 23,367 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 15,113 miles of road, its subsidiary steamship lines on the Atlantic and the Pacific, and its historic record in first joining the great west to the Confederation. 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. To date it has given formal hearings in over 9,000 cases.

Canals.—Canals, as above stated, were the earliest large transportation works in Canada. The first lock was a small one constructed by the Hudson Bay Company at Sault Ste. Marie and was destroyed by United States troops in 1814. The next 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. Today 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 $1\frac{1}{2}$ million tons in 1872 to $7\frac{3}{4}$ millions last year. Canal traffic in 1928 totalled over 18,700,000 tons. The light grain shipments have also affected the canal traffic, so that at the end of October the St. Lawrence and Welland

canals each showed a decrease of over 2 million tons, although heavy iron ore and coal shipments (United States traffic) produced a net increase in the traffic through the locks at Sault Ste. Marie of almost 10 million tons. Up to date the total capital cost of the Canadian canals is over $203,000,000. It is interesting to note that considerable traffic between the east and west coasts of Canada has in recent years sprung up *via* the Panama Canal.

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 today, 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 are now some 57 electric railway companies in operation, owning over 2,219 miles of track and about 4,000 cars with a capitalization of $221 millions. They carry over 808,000,000 fare passengers annually, pay wages of over $26 millions and have a gross revenue of about $56 millions.

Express Companies.—Express service has been defined as "an expedited freight service on passenger trains". The business began in a small way prior to Confederation, and assumed a well developed and permanent form in the 'seventies and 'eighties. There are now four systems in operation with a capital somewhat over $9 millions, operating on 60,841 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.—The highways in Canada are becoming increasingly important year by year in the economic structure of the country. Over them is carried a very heavy traffic, both passenger and freight, especially between the large cities and towns. Great improvements have taken place under the "Good Roads Movement" of the past few years, culminating in the Canada Highways Act (1920), which provided a system of grants to the extent of $20 millions by the Dominion to the provincial governments in proportion to their own expenditures. The total of this grant, representing about 40 p.c. of the expenditure on these subsidized highways was expended by the end of 1928. The table below shows the highway mileage in Canada open for traffic last year (according to class of highway), and the expenditures.

Highway Mileage Open for Traffic, 1929

Class of Highway	Mileage
Unimproved earth	157,563·5
Improved earth	160,294·0
Gravel	56,393·7
Waterbound Macadam	4,268·8
Bituminous Macadam	1,487·5
Bituminous concrete	892·6
Cement concrete	1,076·6
Total	381,976·7

Expenditures

	$
For construction	38,912,029
For maintenance	18,903,381

Motor Vehicles.—The motor car is, of course, an ultra-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, has developed a production of $163 millions worth on a capitalization of $97 millions, employing about 17,000 persons. Twenty years ago the number of motor vehicles registered in Canada was under 2,000. In 1928 the number was over one million while over 242,000 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 1928 there was one motor to every 16 of population, in New Brunswick 15, in Quebec 18, in Ontario 7, in Manitoba 9, in Saskatchewan 7, in Alberta 7, and in British Columbia 7. Canada has more motors proportionately (one per 9 people) than any other countries except the United States (one per 5), the Hawaiian Islands (one per 8), and New Zealand (one per 8).

Motor Vehicles Registered in Canada, by Provinces, Calendar Years 1920-28

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

Years	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	19,022	97,657	344,112
1928	5,430	35,256	28,072	148,473	491,140

Years	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
1928	71,163	121,615	89,249	86,244	1,076,819

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 2,728,414 in 1928, in which year 74,669 passengers, 2,404,682 pounds of freight or express, and 316,631 pounds of mail were carried.

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 89 million tons in 1928, as compared with an increase in sea-going and inland international tonnages from 13 millions in 1868 to 83 millions in 1928.

The vessels on the Canadian shipping registry in 1902 numbered 6,836 with 652,613 tons. From then on there was a fairly steady increase in the tonnage, the number of vessels reaching its maximum in 1919 with 8,573, since when there has been a decrease to 8,454, representing 1,368,000 tons.

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 programme of the Dominion Government. During 1927, the latest year for which complete statistics are available, 14 steel vessels of 23,843 tonnage, and 74 wooden vessels of 4,977 tonnage were built. Of the $16,407,127 representing the total value of production in 1927, however, only $4,430,674 was for vessels built or under construction, while $7,244,152 was for repairs and custom work, and $3,241,011 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. Today there are 338,000 miles of telegraph wire in Canada. They handle over 16,000,000 messages, from which the revenue is over $14 millions. In addition, six trans-oceanic cables have a terminus in Canada, five on the Atlantic and one on the Pacific, and handle nearly 8,000,000 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 269,581 in 1928.

Telephones.—The telephone was invented in Canada, and the first talk over any distance was conducted by Alexander Graham Bell and 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. Today the number of telephones is over 1½ 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.—There was a postal service between Montreal and Quebec as early as 1721, but the post-office was first placed on a regular footing in Canada by Benjamin Franklin, then Deputy Postmaster-General for the American Colonies, in 1763. The first exclusively Canadian postal service, however, dates from 1788, when a monthly courier route from Halifax to Quebec was established. By 1827 there were in the two Canada's, 114 offices. In 1851 the Post Office was transferred from the control of the Imperial Department to the several provinces, and at Confederation, the provincial systems were transferred to the Dominion, when the domestic rate on letters was reduced from 5 cents to 3 cents per half-ounce; in 1897 the rate was further reduced to 2 cents per ounce. Today 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 systems 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 12,478, the postal revenue being approximately $36 millions. The auxiliary money order system issues orders payable in Canada to the amount of $178 millions annually, and in other countries to the value of about $23 millions. In addition, postal notes to the value of $17 millions are issued. The issue of postage stamps in Canada is over $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, established at the time of the Diamond Jubilee of Queen Victoria, to Great Britain and other parts of the Empire 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.

CHAPTER XVII

FINANCE*

Currency and Banking

Historical.—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 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 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, since when there has been a considerable decline corresponding to the reduction in prices. Some 80 to 85 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.

*For a reference to Public Finances—Dominion, Provincial and Municipal—see Chapter III.

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, as the note holder has been made 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

[1] Circulation on June 30.

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.

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

The Bank of Montreal and the Royal Trust Co., Montreal

N. R. I. Service

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 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 1929 to 4,153.

In recent years the banks of Canada have extended their business outside of the country itself and at the close of 1928 had among them 187 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 are shown in the table below:—

Banks	Number of branches	Total assets Sept. 30, 1929	Liabilities to shareholders Sept. 30, 1929	Liabilities to the public Sept. 30, 1929	Total liabilities Sept. 30, 1929	Loans and discounts Sept. 30, 1929	Deposits Sept. 30, 1929
		$ 000,000	$ 000,000	$ 000,000	$ 000,000	$ 000,000	$ 000,000
Bank of Montreal	641	927	73	845	918	604	739
Bank of Nova Scotia	341	279	30	246	276	178	208
Bank of Toronto	195	138	14	121	135	93	105
Banque Provinciale du Canada	330	55	5	49	54	36	44
Canadian Bank of Commerce	809	761	58	691	749	519	553
Royal Bank of Canada	912	976	70	901	971	626	729
Dominion Bank	132	156	16	139	155	106	111
Banque Canadienne Nationale	569	160	13	144	157	93	122
Imperial Bank of Canada	194	153	15	136	151	101	117
Weyburn Security Bank	30	7	1	6	7	3	5
Barclay's Bank (Canada)†	.....	3	1	2	3	-	-
Total	4,153	3,615	296	3,280	3,576	2,359	2,733
Total 1910	2,621*	1,211	179	1,019	1,198	870	910
Total 1900	641	460	98	356	454	279	305

†Barclay's Bank has just commenced operations in Canada.
*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 1928 Montreal Bank debits increased from $7,502 millions to $13,962 millions, and the grand total of bank debits for Canada from $27,157 millions to $43,477 millions—an increase of nearly 60 p.c. in four years.

Bank Clearings and Bank Debits since 1924

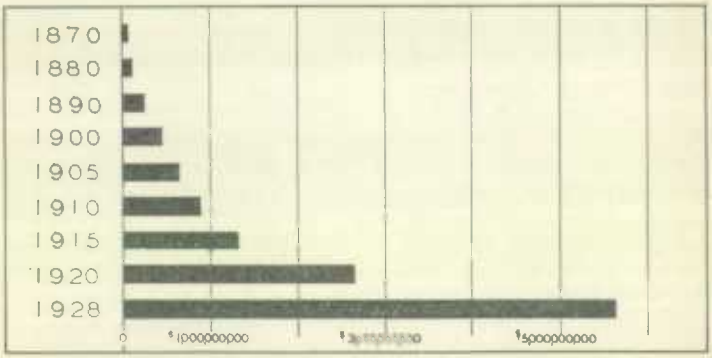
—	Exchanges of the clearing houses of chartered banks in Canada	Bank debits to individual accounts
	$000,000	$000,000
1924	17,008	27,157
1925	16,762	28,126
1926	17,715	30,358
1927	20,568	36,094
1928	24,555	43,477
1929—		
January	2,203	4,095
February	1,792	3,427
March	2,022	3,982
April	1,961	3,623
May	2,182	4,128
June	1,900	3,598
July	2,192	4,004
August	2,019	3,667
September	1,965	3,470
October	2,558	4,273
November	2,253	4,177

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 40 active companies licensed by the Dominion and a few provincial companies in 1928.

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

LIFE INSURANCE IN FORCE IN CANADA
1870 — 1928
(DOMINION COMPANIES)



premium or a substantial part thereof, each employee having 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 $5,609,032,167 at the end of 1928. The increase in the life insurance in force in Canada during the single year 1928 was greater than the total amount in force in Canada even so late as 1910.

The table below shows the growth of life insurance month by month in 1929 as compared with 1928. The statistics are not complete but represent approximately 85 p.c. of the total business transacted in Canada.

Sales of Life Insurance in Canada

Month	1928	1929	Month	1928	1929
	$000	$000		$000	$000
January	47,270	50,116	July	49,076	55,732
February	39,962	46,957	August	43,136	43,032
March	44,505	49,060	September	38,500	43,520
April	46,295	52,901	October	55,351	52,634
May	49,581	50,673	November	54,498	56,188
June	51,456	54,136	December	56,223	-

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 license. 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, 1928, shows that at that date there were 207 fire insurance companies doing business in Canada under Dominion licenses, of which 48 were Canadian, 65 were British and 94 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 American. 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 1928, besides the $8,762 millions of fire insurance in force in companies with Dominion licenses, there were also $1,298 millions in force in companies with provincial licenses, and over $583 millions in force with companies, associations, or underwriters not licensed to transact business in Canada, or a grand total of about $10,700 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	8,761,579,512

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 1928 by 196 companies, of which 42 were Canadian and 154 British and foreign.

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 1928 $9,771,308. Hail insurance companies came next, with a premium income in 1928 of $6,202,322. The premium income of accident and sickness insurance combined, however, totalled $11,297,225 in 1928, exceeding automobile insurance.

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 as to amounts of deposits.

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 capital stock paid up of loan companies according to the latest available statistics amounts to $37,920,465; reserve funds to $26,541,975; liabilities to the public $147,415,973; and to shareholders $67,188,875; a total of $214,604,848.

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 original main functions are 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 licenses, show an increase from $805 millions in 1922 (the earliest year for which this figure is available), to $1,232 millions in 1928. Of this enormous amount, $1,078 millions was in estates, trusts and agency funds.

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 four years are shown below:—

Yield of Ontario Bonds, 1926-1929

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

CHAPTER XVIII

THE LABOUR MOVEMENT

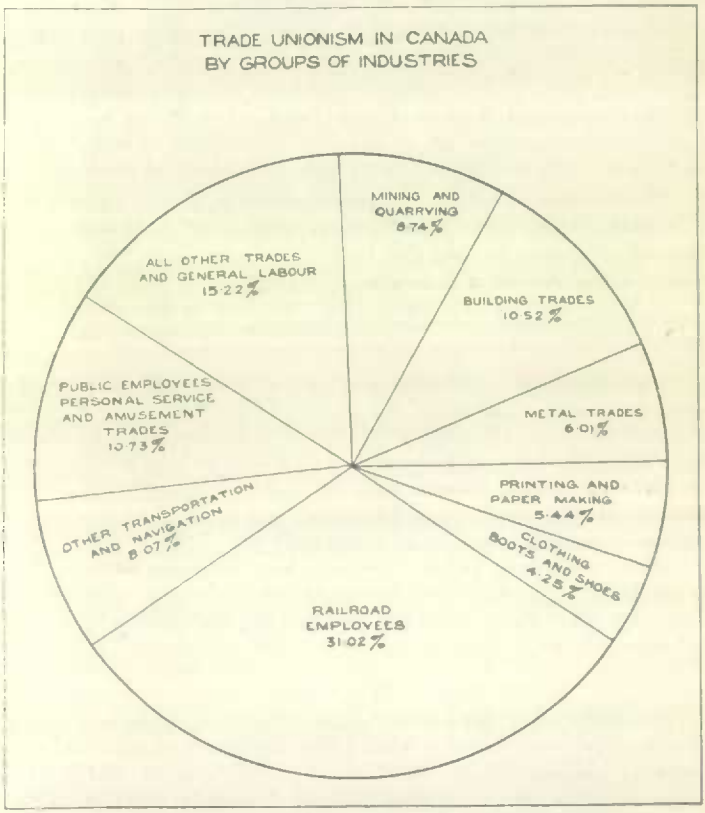
In Canada as in other new countries, the working population bears a larger proportion to the total than in the case of older civilizations. According to the last census, about 47·5 p.c. of the population (77·5 p.c. of the males and 15·2 p.c. of the females) were "gainfully employed".

Historical.—The trade union movement in Canada has developed in the past half century. There were sporadic unions as far back as the thirties, and certain of these, notably in Toronto and Montreal, later attained to considerable importance. But until the establishment of the factory system and the gathering of workers in industrial centres, trade unionism does not ordinarily arise, especially in a country of abundant unclaimed natural resources. Moreover, it was not until 1872 that liberty of association, the corner-stone of trade unionism, was won in Canada (after a famous trial in Toronto, and following the repeal of the Combination laws in England). This and current industrial activity gave a spur to organization, and in 1873 the first step was taken towards organizing a general association or congress of Canadian labour bodies. "The Canadian Labour Union", formed in that year, lapsed in the industrial depression of 1875, and though organization efforts on a local basis persisted, no permanent central organization again arose until 1886, when the "Trades and Labour Congress of Canada", destined to become the most powerful central representative of organized labour in Canada, was established. This body has never since gone out of existence, its annual sessions constituting the chief vehicle for the expression of labour opinion in Canada. Meanwhile, several other central bodies have arisen and given additional voice to the views of labour.

The "International" Unions.—The great majority of the local trade unions of Canada are branches of central craft organizations which embrace the whole continent, usually with headquarters in the United States. For that reason they are termed "international" unions. As the American Federation of Labour is the principal federal representative for purposes of legislative discussion of these central craft associations in the United States, so in Canada the "Trades and

Labour Congress" represents the unions affiliated with the "internationals". There are, however, certain large international unions, notably in railroad employment, which do not affiliate with the Federation or the Congress. Thus Canada, while deriving its labour organization machinery very largely from the continental system, maintains its legislative independence. The Trades and Labour Congress, it may be added, is a member of the International Federation of Trade Unions, commonly known as the "Amsterdam International", to which only one central body from each country is admitted.

There were in the past year in Canada some 1,873 local branches of the above-mentioned international unions, having a combined membership of 186,917, and representing 83 craft associations. A



list of those of the latter having a membership of 5,000 or over in Canada is as follows:—

Name of Organization	Number of Canadian Local Units	Reported Membership of Canadian Units
United Mine Workers of America	38	15,500
Brotherhood of Railroad Trainmen	96	15,172
Brotherhood of Railroad Carmen of America	116	14,052
Brotherhood of Maintenance-of-Way Employees	189	14,033
United Brotherhood of Carpenters and Joiners	84	9,090
International Association of Machinists	86	8,155
American Federation of Musicians	39	8,000
Order of Railroad Telegraphers	13	7,633
Brotherhood of Locomotive Firemen and Enginemen	105	7,589
Amalgamated Association of Street and Electric Railway Employees	26	7,500
Amalgamated Clothing Workers of America	14	6,300
Brotherhood of Locomotive Engineers	103	5,706

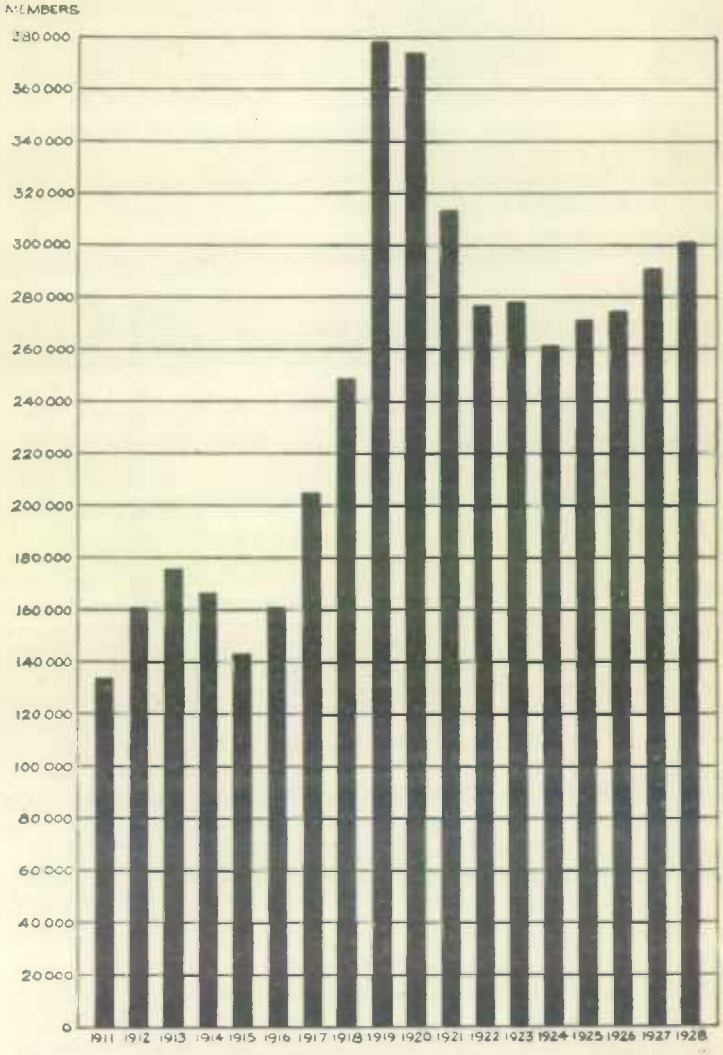
The "Industrial Workers of the World" (7 branches with 4,400 members in Canada) though international in scope is organized on an "industrial" basis and hence is not a part of the above movement.

The Trades and Labour Congress reported a paid up membership of 126,638 for the fiscal year 1929, an increase of 7,395 over 1928. An event of interest to Canadian Labour during the year 1929 was the holding of the American Federation of Labour's 49th annual meeting at Toronto, previous meetings having been held in Canada in 1909 and 1920.

National Unions.—In addition to the international unions there have always been a number of purely national unions in Canada, some of which, such as the Provincial Workmen's Association of Nova Scotia and the Canadian Federation of Labour, had long and interesting histories. At the present time, the leading exponents of national unionism are the "National and Catholic" unions of Quebec, numbering 105 branches, with a total membership of 26,000, and the "All-Canadian Congress of Labour" which in turn embraces the Canadian Brotherhood of Railroad Employees (17,656 members in 209 local divisions), the "One Big Union" (46 branches with 20,029 members) and some others. There are also some 36 independent Canadian labour units.

Summary.—Reviewing labour organization in Canada as a whole, there were reported last year some 2,653 local trade unions, having a combined membership of 300,602. How these are divided up by industries can be seen at a glance from the diagram, p. 149. As to the

EIGHTEEN YEARS OF TRADE UNIONISM IN CANADA



history and trend of the movement, this can best be reviewed from the diagram on page 151. In 1911, the earliest year for which there are records, there were but 1,741 local unions having a membership of 133,132. The "peak" year was 1919, when there were 378,047 organized trade unionists in Canada in 2,847 local branches.

The "Trades and Labour Councils" are important bodies in the Canadian scheme of labour organization. Altogether there are over 49 of these in Canada, each consisting of representatives from the local unions for the expression of views on questions of general public interest. There are also some 51 "District Councils" of labour, and some 55 labour "Federations".

Naturally, the larger cities are the chief homes of trade unionism, thirty-two cities of Canada having twenty or more local unions, Montreal ranking first with 200, Toronto second with 141, Winnipeg third with 107, Vancouver fourth with 99, Calgary fifth with 74, and Edmonton sixth with 69.

By provinces trade unionism ranks as follows: Ontario has 1,024 local unions; Quebec, 485; Alberta, 270; British Columbia, 262; Saskatchewan, 189; Manitoba, 175; Nova Scotia, 127; New Brunswick, 111; and Prince Edward Island, 10.

The percentage of organized workers to total population in Canada is lower than in most of the countries of Europe or in Australia or New Zealand. It is, however, practically the same as that of the United States (3·1 p.c. as compared with 3·2 p.c.). This low percentage doubtless reflects the preponderance of agriculture in our industrial structure, as well as the general stage of our economic development, including such factors as the proximity of free land and the relatively high rate of immigration.

Union Benefits.—Large sums on account of benefits are expended by labour organizations. For the international unions in both Canada and the United States these in 1928 amounted to the high total of over $24 millions. Canada's share in this is unknown, but apart from amounts received from headquarters of international organizations, expenditures in Canada on benefits for 1928 amounted to $406,041, the chief items being sick and accident benefits, death benefits and strike benefits.

In recent years labour organizations have tended to extend their scope far beyond the original field of wages, hours, and working conditions, to consider the broader problems of industry and even of society in general. The Trades and Labour Congress, for instance, at its 45th annual convention in August, 1929, adopted resolutions asking

that all the provinces adopt old age pensions, mothers' allowances and maternity benefits; that the Federal Government bring down a bill providing for sick and unemployment insurance; that workers' claims should rank first under the Bankruptcy Act; that the legal profession carry a blanket bond or other safeguards to protect the public; the abolition of capital punishment; the retention of trade within the Empire, etc.

Departments of Labour.—Labour Legislation.—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; over 706 threatened disputes have been referred under it to date 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 Bureaus of Labour have been set up. Under these are administered an increasing body of legislation of various kinds ("civil rights" pertaining to the provinces under the B.N.A. Act) in the form of factories, shops and mines acts, workmen's compensation acts (most of the provinces having special boards for the administration of the latter legislation), laws for the protection of women and children in industry, mechanics' lien acts and other legislation for the fixing and 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.

Strikes.—The final weapon of organized labour is the strike. Records of strikes in Canada go back to the beginning of the century, in which year 104 strikes were in existence, involving 28,086 employees and a time loss of 632,302 working days. In 1903 and again in 1911-1912-1913 the losses were heavy. The highest loss, however, occurred in 1919 when there were 298 strikes involving 138,988 employees with a time loss of 3,942,189 working days. In 1928 there were 101 strikes, involving about 18,000 working people and a time loss of 238,132 days. These figures show a decline for 1929. To the end of October there were 118 strikes, involving 14,764 employees and 131,023 working days lost, as compared with 149 strikes involving 21,068 employees and 186,968 working days lost in the similar period of 1928. Generally speaking, the time loss through strikes has been proportionately less in Canada than in other industrial countries.

Labour in Politics.—Labour plays a noteworthy part in Canadian politics. The first election of a Labour member to a provincial legislature occurred in 1873. From time to time this was repeated in other provinces and in the Dominion Parliament, but for many years, no definite policy was adopted by Labour. In 1917, however, the "Canadian Labour Party" was organized under the auspices of the Trades and Labour Congress; it has, in addition to Ontario, completed organization of provincial sections in Nova Scotia, Quebec, Alberta and British Columbia. There is also an Independent Labour Party in Ontario, Manitoba and British Columbia—also the "Communist Party of Canada," formed in 1922, representative of the Third (Communist) International. In the federal election held in September, 1926, eighteen straight Labour candidates appeared; there was also a Communist nominee and three Independent Labour, two Liberal-Labour-Progressive and two Liberal-Labour candidates. Three nominees of Labour political parties were elected; the Liberal-Labour member, the Hon. Mr. Peter Heenan, was later chosen Minister of Labour. Several of the Provincial Legislatures have Labour members. At the last municipal elections (1929), 64 Labour candidates in 17 localities appeared, of whom 41 were elected.

Employers' Associations.—Side by side with labour organization has been a strong movement in Canada towards the formation of employers' associations. These involve a wide variety of business enterprises, and aggregate statements are somewhat meaningless. The Department of Labour, however, issued records in 1929 of 691 main organizations and 716 branch associations, or a total of 1,407 organizations in industry, commerce and the professions, divided into 19 groups and reporting a membership of 888,820. Included among these were 89 agricultural associations, with a membership of

556,889; 268 professional associations (legal, medical, dental, etc.) with a membership of 91,890; as well as dairying, livestock breeders', manufacturing, wholesale and retail merchants' and other associations of various kinds.

Co-operative Associations.—Co-operative associations in Canada number 936, with a total membership of 512,835, which includes the grain growers of the prairies, the largest co-operative organization in Canada (for note on the Wheat Pools, *see* page 59), dairy farmers and fruit and vegetable growers of the eastern provinces. Apart from these there are some 26 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 "Peoples Banks" for the providing of short term credit for small farmers and industrial workers; there are over 180 of such banks in existence, their membership exceeding 40,000 and their aggregate loans amounting to nearly $5 millions annually.

CHAPTER XIX

EDUCATION—SCIENTIFIC RESEARCH—LIBRARIES—ART

Public education in Canada is under the jurisdiction of the Provincial Governments, each of which has a Department of Education. The Dominion Government has on occasion made grants in aid of specific forms of education, as under the "Agricultural Education Act" of 1913 and the "Technical Education Act" of 1919, but such action must be regarded as special and temporary.

How large a part is played by education in Canada may be gathered from the fact that in 1928 there were no less than 2,342,662 pupils and students in educational institutions, which with the teaching staff added approaches one-quarter of the entire population. Of course, the fact that the population of Canada has a comparatively larger proportion in the younger periods of life than the populations of many other countries, must be taken into account in such a statement. Total expenditures on education exceeded $150 millions in 1928.

To extend the above figures: In 1928, there were in all publicly controlled kindergarten, elementary and high schools, 2,112,809 pupils; in private schools of the same nature there were 14,111; in technical and night courses in schools publicly controlled, 113,873; in schools for teacher training, 9,296; in schools for the deaf and blind, 1,793; in private business colleges, 14,683; in Indian schools, 15,018; in classical colleges (Quebec), 10,547; in preparatory courses to universities and to other colleges, 4,202; in regular courses in other colleges and in universities, 36,959; and in correspondence and special courses in other colleges and in universities, 13,051.

In the elementary grades of education (mostly taught in common schools) there were 1,919,473 pupils, while in secondary and higher grades there were 340,839. These figures do not include night schools, schools for the blind, etc.

Of teachers, there were 71,891 in ordinary and technical schools; 4,078 professors in universities and their preparatory schools; 1,757 in colleges and their preparatory schools; and about 2,268 in private schools, Indian schools, schools for teacher training, schools for blind and deaf, and business colleges. Altogether the total number of the teaching profession in Canada may be set down at 79,994.

The table below sets out the current facts in a form convenient for reference:—

Education in Canada, 1928: Educational Institutions, Pupils, Teachers and Expenditures

Type of institution	Number of institutions	Number of pupils	Number of teachers	Expenditure
				$
Ordinary day schools under public control	36,115	2,112,809[1]	67,861	132,065,906[2]
Schools for teacher training	51	9,293	458	
Schools for blind and deaf	11	1,793	300[3]	
Technical and night schools	270	113,873	4,030	2,151,686
Private, elementary and secondary schools and business colleges	179	28,794[4]	1,215	.....
Indian schools	340	15,018	295	2,033,375
Universities and colleges	109	64,769	5,835	14,679,788
Total	37,035	2,346,342[5]	79,994	150,930,755

[1] Including independent schools in Quebec.
[2] Including $9,600,313 of subsidized independent schools in Quebec. This item is not entered under private schools as it does not represent all private schools.
[3] Approximate.
[4] Exclusive of Quebec independent schools.
[5] Exclusive of 3,680 duplicates.

Measures of Progress

How education has grown in Canada may be measured briefly by the following statements: at Confederation, there were only about 675,000 pupils and students in educational institutions and less than 14,000 teachers—or less than one-third the number of pupils of today and about one-sixth the number of teachers. How, in particular, the teaching profession has advanced relatively as well as absolutely is reflected in the fact that at the first census of Canada (1871) there were only 13 teachers and professors for each 1,000 of "gainfully employed" persons in Canada, whereas at the last census (1921) there were 20. This reflects the parallel fact that at Confederation there were 20 teachers and professors for each 1,000 pupils, whereas today there are 35.

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 new work for the mentally and physically subnormal; medical and nurse inspection of schools; the effective child labour and compulsory attendance laws recently 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 such subjects as 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

A Consolidated Rural School

Can. Govt. Motion Picture Bureau

was only 5. 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 280,000 persons in educational institutions today 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 today is a continuation of the elementary school, a means of extending education without reference to vocation. In 1928 there were over 200,000 pupils enrolled in high school grades,

80 per cent 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 today may be taken in almost any rural school of Canada, and if the pupil is thus qualified to write departmental examinations he receives certificate of his academic training.

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. Today about 35 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; further, practically all the pupils who go to school at all and are mentally capable of completing elementary work are today reaching a stage of education at which they are ready to do continuation work. The high schools are crowded. 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 seven, 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. Today, with about 70,000 ordinary teaching positions, there are over 10,000 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, while a regular system of conventions enables them to exchange ideas and solve their various problems. Teaching is no longer a stepping stone to something else, but is in itself a learned profession.

University Education.—There are 23 universities now in Canada, a list of which follows (Provincial Universities in italics), the figures in brackets being the total enrolment of students last year:—University of St. Dunstan's, Charlottetown, P.E.I. (163); University of King's College, Halifax, N.S. (76); Dalhousie University, Halifax, N.S. (823); Acadia University, Wolfville, N.S. (579); University of St.

Francis Xavier, Antigonish, N.B. (250); *University of New Brunswick, Fredericton, N.B.* (269); Mount Allison University, Sackville, N.B. (486); University of St. Joseph's College, St. Joseph, N.B. (364); McGill University, Montreal, Que. (3,726); University of Bishop's College, Lennoxville, Que. (157); Laval University, Quebec, Que. (10,069); University of Montreal, Montreal, Que. (11,029); *University of Toronto, Toronto, Ont.* (8,717); **Victoria University, Toronto, Ont.* (771); **University of Trinity College, Toronto, Ont.* (278); Western University, London, Ont. (1,491); Queen's University, Kingston, Ont. (3,558); University of Ottawa, Ottawa, Ont. (3,314); McMaster University, Toronto, Ont. (557); *University of Manitoba, Winnipeg, Man.* (3,917); *University of Saskatchewan, Saskatoon, Sask.* (2,557); *University of Alberta, Edmonton, Alta.* (1,536); *University of British Columbia, Vancouver, B.C.* (2,381).

Expenditures.—In 1928 the total expenditures in Canada on education of all kinds was about $150,930,755, but this included in some cases endowments of universities and colleges, and in most cases, debenture payments for debts incurred on building before and during the war. These and other facts, including the fact that the dollar of 1928 has only the purchasing power of 88 cents in 1867 must be remembered in making comparison of the expenditure on education in 1928 with that of an early date, except as demonstrating what the people of Canada are willing to pay for education.

Scientific and Industrial Research in Canada

Scientific research began in Canada in the '80's with the institution in the universities of courses in experimental and practical science which have been steadily expanded. Research has been promoted by scientific societies such as the Royal Canadian Institute and the Royal Society of Canada, and by the laboratories maintained by various Departments of the Dominion and Provincial Governments, though the research activities of the latter have been inadequate. In recent years, with the growing realization of the importance of scientific and industrial research, and aided by the growth of Canadian wealth, the scientific equipment of the leading universities has been greatly increased and the prosecution of research aided by numerous scholarships. An especially notable achievement was the discovery of insulin by Doctors Banting, Collip, and Mr. Best, working under Professor Macleod in the University of Toronto.

As Canada's part of a scheme designed to bring about co-operation of effort and co-ordination of research throughout the British Empire, there was appointed in 1916 the Honorary Advisory Council for

*Federated with University of Toronto.

Scientific and Industrial Research, commonly known as "The National Research Council". This Council, now operating under the Research Council Act of 1924 has charge of all questions of scientific and technological methods affecting the expansion of Canadian industries or the utilization of Canada's natural resources. Research laboratories are being built and will be completed before the end of 1930. Meanwhile the Council is continuing to render the maximum possible assistance in three directions, *(a)* the training of research workers, *(b)* the granting of financial assistance towards important approved researches, and *(c)* the co-ordination and stimulation of research work on problems of national importance. Three classes of scholarships have been established to enable university graduates of distinction to continue their post-graduate training in science, 476 having been awarded to 283 persons during the 12 years ending November 30, 1929. During the same period the Council has expended the total sum of $834,680 in grants in aid of research of which $182,934 was expended during the year ended November 30, 1929. About 46 p.c. of all moneys expended by the Council since it was established have been devoted to the co-ordination and stimulation of research work carried out in university, government and industrial laboratories throughout Canada, it being the policy of the Council to utilize to the fullest possible extent, all existing facilities, both in trained man power and equipment.

Libraries

There are various kinds of libraries in Canada; school, college, university, government, while free public libraries afford means of self education for all. The first public library in Canada was founded at Niagara in 1800; at the present time there is a network throughout the country, some form of public library legislation existing in all the provinces and the Yukon and assistance being given by money grants, special taxes, etc. Scattered settlers, mining camps, etc., are served by travelling libraries. This movement, starting in 1890, has grown steadily; in some of the provinces the work is carried on under government auspices, while several of the leading universities maintain travelling libraries. Several of the universities and the Ontario Department of Education have library schools giving courses of varying length. Library training is given also in the normal schools while several of the larger libraries conduct "apprentice classes" in order to have trained assistants in times of emergency.

Art

After passing through the inevitable stages of first complete and then partial dependence on the traditions of the older European countries, Canadian art today, particularly in painting is adding

something of its own to these traditions in the form of a dominating sense of decoration and a greater searching for and insistence upon the essentials of form and colour in the rendering of nature. Public appreciation of Canadian art is in its infancy but the opinion of many foreign critics is that Canada is developing something of a national and original school of painting.

The National Gallery of Canada, founded in 1880, has a collection of pictures, statuary and other works of art which is being constantly augmented by means of annual grants voted by the Dominion Parliament, by diploma works of the members of the Royal Canadian Academy and by gifts and loans from persons interested in art. An "Advisory Arts Council" of three members manages the Gallery, administers the annual grants and is responsible for the encouragement and cultivation of correct artistic taste and Canadian public interest in the fine arts. The Gallery contains paintings by many of the old masters and an excellent and representative exhibition of the work of Canadian artists. Loans of collections of paintings are made fo a year or shorter periods to any art body or society in Canada which possesses the necessary facilities. The present accommodation in the Victoria museum at Ottawa, will, it is hoped, be enlarged in the near future.

APPENDIX I

Chronology of Canada in the Twentieth Century

1900. Feb. 27, Battle of Paardeberg.
1901. Jan. 22, Death of Queen Victoria and accession of King Edward VII. Feb. 6, Opening of the ninth Dominion Parliament. April 1, Fourth Dominion census.
1902. May 31, End of South African War. June 30, Meeting of fourth Colonial Conference in London.
1903. Jan. 24, Signing of the Alaska Boundary Convention.
1904. Feb. 1, Dominion Railway Commission established. Dec. 10, Earl Grey takes office as Governor General.
1905. Jan. 11, Opening of the tenth Dominion Parliament. Sept. 1, Creation of the provinces of Alberta and Saskatchewan.
1906. University of Alberta founded. June 1, Census of Prairie Provinces.
1907. April 15-May 14, Fifth Colonial Conference in London. New customs tariff, including introduction of intermediate tariff. Sept. 19, New commercial convention with France signed at Paris. Oct. 17, First message by wireless telegraphy between Canada and the United Kingdom. University of Saskatchewan founded.
1908. Jan. 2, Establishment of Ottawa branch of Royal Mint. July 20-31, Quebec tercentenary celebrations: visit to Quebec of the Prince of Wales. University of British Columbia founded.
1909. Jan. 20, Opening of 11th Dominion Parliament. July 28, Conference on Imperial Defence in London.
1910. May 4, Passing of Naval Service Bill. May 6, Death of King Edward VII and accession of King George V. New trade agreement made with Germany, Belgium, Holland and Italy.
1911. May 23-June 20, Imperial Conference in London. June 1, Fifth Dominion census. Sept. 21, General election. Oct. 10 (Sir) R. L. Borden, premier. Oct. 11, Inauguration at Kitchener of Ontario hydro-electric power transmission system. Oct. 13, His Royal Highness the Duke of Connaught takes office as Governor-General.
1912. May 15, Extension of the boundaries of Quebec, Ontario and Manitoba.
1913. June 2, Trade agreement with West Indies came into force.
1914. Aug. 4, War with Germany; Aug. 12, with Austria-Hungary; Nov. 5, with Turkey. Aug. 18-22, Special war session of Canadian Parliament. Oct. 16, First Canadian contingent lands at Plymouth.
1915. Feb., First Canadian contingent lands in France and proceeds to Flanders. April 22, Second battle of Ypres. April 24, Battle of St. Julien. May 20-26, Battle of Festubert. June 15, Battle of Givenchy.
1916. Jan. 12, Order in Council authorizing increase in number of Canadian troops to 500,000. Feb. 3, Destruction of Houses of Parliament at Ottawa by fire. April 3-20, Battle of St. Eloi. June 1, Census of Prairie Provinces. June 1-3, Battle of Sanctuary Wood. Nov. 11, The Duke of Devonshire takes office as Governor General.
1917. Feb. 12-May 15, Imperial Conference. Mar. 21-April 27, Imperial War Conference. April 5, United States declares war against Germany. April 9, Capture of Vimy Ridge. Aug. 15, Battle of Loos, capture of Hill 70. Sept. 20, Parliamentary franchise extended to women. Oct. 26-Nov. 10, Battle of Passchendaele. Dec. 6, Disastrous explosion at Halifax, N.S. Dec. 17, General election.
1918. Mar. 18, Opening of first session of 13th Parliament. Mar.-April, Second battle of the Somme. July 18, Allies assume successful offensive on west front. Aug. 12, Battle of Amiens. Aug. 26-28, Capture of Monchy le Preux. Sept. 2-4, Breaking of Drocourt-Quéant line. Sept. 16, Austrian peace note. Sept. 27-29, Capture of Bourlon Wood. Sept. 30, Bulgaria surrenders and signs armistice. Oct. 1-9, Capture of Cambrai. Oct. 6, First German peace note. Oct. 20, Capture of Denain. Oct. 25-Nov. 2, Capture of Valenciennes. Oct. 31, Turkey surrenders and signs armistice. Nov. 4, Austria-Hungary surrenders and signs armistice. Nov. 10, Flight of German Emperor into Holland. Capture of Mons. Nov. 11, Germany surrenders and signs armistice.

1919. Feb. 17, Death of Sir Wilfrid Laurier. May 1-June 15, Great strike at Winnipeg and other western cities. June 28, Signing at Versailles of Peace Treaty and Protocol. Aug. 15, Arrival of H.R.H. the Prince of Wales for official tour in Canada. Aug. 22, Formal opening of Quebec Bridge by H.R.H. the Prince of Wales. Sept. 1, H.R.H. the Prince of Wales lays foundation stone of tower of new Parliament Buildings at Ottawa. Dec. 20, Organization of "Canadian National Railways".

1920. Jan. 10, Ratifications of the Treaty of Versailles. May 31-June 18, Trade Conference at Ottawa between Dominion and West Indian Governments. July 10, Sir Robert Borden is succeeded by Right Hon. Arthur Meighen as Premier. Nov. 15, First meeting of League of Nations Assembly begins at Geneva, Switzerland.

1921. June 20-Aug. 5, Imperial Conference. Aug. 11, Lord Byng of Vimy takes office as Governor General. Nov. 11, Opening of conference on limitation of armament at Washington. Dec. 6, Dominion general election. Dec. 29, New ministry (Liberal), with Right Hon. W. L. Mackenzie King as premier, is sworn in.

1922. Feb. 1, Arms Conference at Washington approves 5-power treaty limiting capital fighting ships and pledging against unrestricted submarine warfare and use of poison gas. Mar. 8, Opening Dominion Parliament.

1923. Sept. 3, Fourth session of League of Nations at Geneva. Oct. 1, Imperial Conference and Imperial Economic Conference at London.

1924. April 23, British Empire Exhibition opened by King George at Wembley, England, with the Prince of Wales as President. Sept. 1, Opening of fifth Session of League of Nations at Geneva, Switzerland.

1925. June 10, Inauguration of the United Church of Canada. July 6, Signing at Ottawa of trade agreement between Canada and the British West Indies. Oct. 29, Dominion general elections.

1926. April 15, Budget Speech; reductions of taxation announced. June 28, resignation of Twelfth Ministry of Right Hon. W. L. Mackenzie King. June 29, Right Hon. Arthur Meighen becomes Prime Minister. Sept. 14, Dominion general elections. Sept. 25, Right Hon. W. L. Mackenzie King again becomes Prime Minister. Oct. 2, Lord Willingdon of Ratton takes office as Governor General. Oct. 19-Nov. 23, Imperial Conference in London, England. Nov. 26, Hon. C. Vincent Massey appointed as Minister to the United States.

1927. Feb. 17, Budget speech; reductions of income tax, sales tax and stamp tax on cheques announced. May 16, General election in Quebec; the Liberal Government sustained. June 1, Hon. Wm. Phillips, first U.S. Minister to Canada reaches Ottawa. June 25, General election in Prince Edward Island; the Conservative Government defeated. June 28, General election in Manitoba; the Progressive Government sustained. July 1-3, Diamond Jubilee of Confederation celebrated. July 30, The Prince of Wales, Prince George, the Rt. Hon. Stanley Baldwin and party, arrive at Quebec on a visit to Canada. Sept., Canada elected as a non-permanent member of the Council of the League of Nations. Nov., Dominion-Provincial Conference.

1928. Jan. 26-June 11, Second session of the sixteenth Parliament of Canada. Jan. 30, President Cosgrove of the Irish Free State visits Ottawa. Feb. 10, Fire in Hollinger mine. Feb. 16, Budget speech announces reductions in taxation. April 25, Sir Wm. H. Clark appointed first British High Commissioner to Canada. May 31, Legislative Council of Nova Scotia ceases to exist. July 18, General elections in British Columbia; Conservatives successful. Aug. 24-Oct. 5, Empire Parliamentary Association visits Canada. Oct. 1, General elections, Nova Scotia.

1929. Feb. 7-June 14, Third session of the sixteenth Parliament of Canada. Mar. 29, Death of Sir Lomer Gouin. June 5, General election in Saskatchewan. Sept. 9, Dr. J. T. M. Anderson becomes Premier of Saskatchewan. Oct. 15-25, The Rt. Hon. J. Ramsay Macdonald, Prime Minister of Great Britain, visits Canada. Oct. 30, General elections in Ontario; Oct.-Nov., Representatives of British Governments assemble in London to discuss constitutional questions.

APPENDIX II

Statistical Summary of the Progress of Canada

Part I.—Progress Since 1900

Items		1901	1911	1921	1929*
Population—					
Prince Edward Island	No.	103,259	93,728	88,615	86,100
Nova Scotia	"	459,574	492,338	523,837	550,400
New Brunswick	"	331,120	351,889	387,876	419,300
Quebec	"	1,648,898	2,005,776	2,361,199	2,690,400
Ontario	"	2,182,947	2,527,292	2,933,662	3,271,300
Manitoba	"	255,211	461,394	610,118	663,200
Saskatchewan	"	91,279	492,432	757,510	866,700
Alberta	"	73,022	374,295	588,454	646,000
British Columbia	"	178,657	392,480	524,582	591,000
Yukon Territory	"	27,219	8,512	4,157	3,000
Northwest Territories	"	20,129	6,507	7,988	9,400
Canada	"	5,371,315	7,206,643	8,788,483[1]	9,796,800
Immigration—					
From United Kingdom	No.	11,810	123,013	74,262	58,880
" United States	"	17,987	121,451	48,059	30,560
" Other Countries	"	19,352	66,620	26,156	78,282
Total	"	49,149	311,084	148,477	167,722
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	25,255,002
	bush.	55,572,368	132,077,547	300,858,100	293,899,000
	$	36,122,039	104,816,925	242,936,000	345,845,000
Oats	acre	5,367,655	8,656,179	16,949,029	12,479,477
	bush.	151,497,407	245,393,425	426,232,900	280,270,000
	$	51,509,118	86,796,130	146,305,300	169,951,000
Barley	acre	871,800	1,283,094	2,795,665	5,925,542
	bush.	22,224,366	28,848,310	59,709,100	100,467,000
	$	8,889,746	14,653,697	28,254,150	62,448,000
Corn	acre	360,758	293,951	296,866	152,055
	bush.	25,875,919	14,417,599	14,904,000	5,053,000
	$	11,902,923	5,774,039	12,317,000	5,930,000
Potatoes	acre	448,743	464,504	701,912	543,727
	bush.	55,362,635	55,461,478	64,407,600[2]	44,668,000[2]
	$	13,842,658	27,426,765	82,147,600	69,963,000
Hay and Clover	acre	6,543,423	8,289,407	10,614,951	10,560,101
	ton	7,852,731	10,406,367	11,366,100	15,551,000
	$	85,625,315	90,115,531	267,764,200	182,397,000
Total area Field Crops	acre	19,763,740	30,556,168	59,635,346	58,635,791
Total Value Field Crops	$	237,682,285	384,513,795	931,863,670	986,986,000
Live Stock—					
Horses	No.	1,577,493	2,598,958	3,813,921	3,376,394
	$	118,279,419	381,915,505	314,764,000	255,469,000
Milch cows	No.	2,408,677	2,595,255	3,736,832	3,792,522
	$	69,237,970	109,575,526	190,157,000	272,109,000
Other Cattle	No.	3,167,174	3,930,828	6,469,373	5,006,750
	$	54,197,341	86,278,490	183,649,000	231,700,000
Sheep	No.	2,510,239	2,174,300	3,675,860	3,415,788
	$	10,490,594	10,701,691	23,308,000	35,530,000
Swine	No.	2,353,828	3,634,778	3,904,895	4,497,367
	$	16,445,702	26,986,621	54,842,000	66,595,000
Total value	$	268,651,026	615,457,833	766,720,000	861,403,000

*Or latest.
[1] Includes Canadian Navy.
[2] Cwt.

APPENDIX II—Continued

Statistical Summary of the Progress of Canada—Continued

Part I—Progress Since 1900—Continued

Items		1901	1911	1921	1929*
Dairying—					
Cheese, factory	lb.	220,833,269	199,904,205	162,117,494	144,584,610
	$	22,221,430	21,587,124	28,710,030	30,494,463
Cheese, home-made	lb.	-	1,371,092	533,561	435,059
	$	-	154,088	123,383	82,000
Butter, creamery	lb.	36,066,739	64,489,398	128,744,610	168,027,939
	$	7,240,972	15,597,807	48,135,439	64,702,538
Butter, home-made	lb.	105,343,076	137,110,200	100,000,000	90,000,000
	$	21,384,644	30,269,497	29,840,000	29,103,000
Miscellaneous dairy products	$	15,623,907	35,862,437	98,627,598	131,867,541
Total value of dairy products	$	66,470,953	103,381,854	205,436,350	256,249,542
Forestry—					
Exports of Wood, Wood Products and Paper	$	33,099,915	56,334,695	284,561,478	288,621,745
Fisheries	$	25,737,153	34,667,872	34,931,935	55,050,973
Raw Furs	$	899,645	1,927,550	10,151,594	18,758,177
Minerals—					
Gold	oz.	1,167,216	473,159	926,329	1,914,920
	$	24,128,503	9,781,077	19,148,920	39,585,000
Silver	oz.	5,539,192	32,559,044	13,543,198	22,368,115
	$	3,265,354	17,355,272	8,485,355	11,870,000
Copper	lb.	37,827,019	55,648,011	47,620,820	242,401,609
	$	6,096,581	6,886,998	5,953,555	43,382,000
Lead	lb.	51,900,958	23,784,969	66,679,592	327,062,151
	$	2,249,387	827,717	3,828,742	16,551,000
Nickel	lb.	9,189,047	34,098,744	19,293,000	109,200,000
	$	4,594,523	10,229,623	6,752,571	25,700,000
Pig iron	ton	274,376	917,535	665,676	1,094,128
	$	3,512,923	12,307,125	15,511,828	24,070,816[5]
Coal	ton	6,486,325	11,323,388	15,057,495	17,499,846
	$	12,699,243	26,467,646	72,451,656	62,965,000
Cement	brl.	450,394	5,692,915	5,752,885	12,277,074
	$	660,030	7,644,537	14,195,143	19,594,613
Total value	$	65,797,911	103,220,994	171,923,342	303,876,000
Electric Statistics—					
Power houses	No.	58	266	510	629
Capital invested	$	11,891,025	110,838,746	484,669,451	951,000,000
Kilowatt hours generated[1]	No.	.....	.....	5,614,132	16,000,000
Customers	No.	.....	.....	973,212	1,381,968
Turbine H.P. installed	No.	235,946	1,358,333	2,706,738	5,349,232
Manufactures[2]—					
Employees	No.	339,173	515,203	439,889	621,872
Capital	$	446,916,487	1,247,583,609	3,052,818,103	4,337,631,558
Salaries and wages	$	113,249,350	241,008,416	498,430,750	694,382,285
Products	$	481,053,375	1,165,975,639	2,516,977,811	3,425,498,540
External Trade—					
Exports[3]	$	177,431,386	274,316,553	1,189,163,701	1,363,586,672
Imports[4]	$	177,930,919	452,724,603	1,240,158,882	1,265,679,091
Total	$	355,362,305	727,041,156	2,429,322,583	2,629,265,763
Exports to and Imports from U.K. and U.S.—					
Exports to United Kingdom	$	92,857,525	132,156,924	312,844,871	429,730,485
Imports from United Kingdom	$	42,820,334	109,934,753	213,973,562	194,020,573
Exports to United States	$	67,983,673	104,115,823	542,322,967	500,167,599
Imports from United States	$	107,377,906	275,824,265	856,176,820	868,055,897

*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. The figures in each case are for the preceding years. For 1928 statistics are exclusive of construction, hand trades, repair and custom work. [3] Exports of domestic merchandise only. [4] Imports of merchandise for home consumption. [5] Estimated, $22 per ton.

APPENDIX II—Continued

Statistical Summary of the Progress of Canada—Continued

Part I—Progress Since 1900—Continued

Items		1901	1911	1921	1929*
Exports, domestic, by chief items—					
Wheat	bush.	9,739,758	45,802,115	129,215,157	370,459,551
	$	6,871,939	45,521,134	310,952,138	428,524,326
Wheat flour	brl.	1,118,700	3,049,046	6,017,032	11,405,728
	$	4,015,226	13,854,790	66,520,490	65,117,779
Oats	bush.	8,155,063	5,431,662	14,321,048	15,657,348
	$	2,490,521	2,144,846	14,152,033	10,241,938
Hay	ton	252,977	326,132	179,398	113,763
	$	2,097,882	2,723,291	4,210,594	1,127,270
Bacon and hams, shoulders and sides.	cwt.	1,055,495	598,745	982,338	366,582
	$	11,778,446	8,526,332	31,492,407	7,874,026
Butter	lb.	16,335,528	3,142,682	9,739,414	1,889,200
	$	3,295,663	744,288	5,128,831	764,836
Cheese	lb.	195,926,697	181,895,724	133,620,340	112,609,200
	$	20,696,951	20,739,507	37,146,722	25,181,853
Gold	$	24,445,156	5,344,465	3,038,779	12,396,444
Silver	oz.	4,022,019	33,731,010	13,331,050	20,555,214
	$	2,420,750	17,269,168	11,127,432	11,839,928
Copper	lb.	26,345,776	55,005,342	36,167,900	85,590,600
	$	2,659,261	5,575,033	4,336,972	7,936,179
Nickel	lb.	9,537,558	34,767,523	47,018,300	107,482,200
	$	958,365	3,842,332	9,405,291	23,880,492
Coal	ton	1,888,538	2,315,171	2,277,202	841,493
	$	5,307,060	6,014,095	16,501,478	4,402,028
Asbestos	ton	26,715	69,829	191,299	268,879
	$	864,573	2,076,477	12,633,389	11,267,188
Wood pulp	cwt.	–	6,588,655	14,363,006	16,950,165
	$	1,937,207	5,715,532	71,552,037	44,895,717
Newsprint paper	cwt.	–	–	15,112,586	45,264,586
	$	–	3,092,437	78,922,137	142,343,064
Exports, domestic, by classes—					
Vegetable products (except chemicals, fibres and wood)	$	25,541,567	84,556,886	484,924,672	646,514,058
Animals and their products (except chemicals and fibres)	$	68,405,332	69,693,263	188,359,937	158,757,272
Fibres, textiles and textile products	$	1,880,539	1,818,931	18,783,884	9,678,519
Wood, wood products and paper	$	33,099,915	56,334,695	284,561,478	288,621,745
Iron and its products	$	3,778,897	9,884,346	76,500,741	82,256,717
Non-ferrous metals and their products	$	33,395,096	34,000,996	45,939,377	112,655,194
Non-metallic minerals and their products	$	7,356,324	10,038,493	40,121,892	27,401,790
Chemicals and allied products	$	791,975	2,900,379	19,582,051	19,438,064
All other commodities	$	3,121,741	5,088,564	32,389,669	18,263,813
Total exports, domestic	$	177,431,386	274,316,553	1,189,163,701	1,363,586,672
Imports for Consumption—					
Vegetable products (except chemicals, fibres and wood)	$	38,036,757	79,214,342	261,081,364	233,130,244
Animals and their products (except chemicals and fibres)	$	14,022,896	30,671,908	61,722,390	71,661,754
Fibres, textiles and textile products	$	37,284,752	87,916,282	243,608,342	206,444,044
Wood, wood products and paper	$	8,196,901	28,851,936	57,449,384	59,214,818
Iron and its products	$	29,955,936	91,968,180	245,625,703	346,610,939

* Or latest.

APPENDIX II—Continued

Statistical Summary of the Progress of Canada—Continued

Part I—Progress Since 1900—Continued

Items		1901	1911	1921	1929*
Non-ferrous metals and their products	$	7,159,142	27,655,874	55,553,902	75,438,431
Non-metallic minerals and their products (except chemicals)	$	21,255,403	53,335,826	206,095,113	166,964,231
Chemicals and allied products	$	5,692,564	12,489,776	36,334,612	37,723,046
All other commodities	$	16,326,568	42,620,479	72,688,072	68,491,581
Total imports	$	177,930,919	452,724,603	1,240,158,882	1,265,679,091
Steam Railways—					
Miles in operation	No.	18,140	25,400	39,363	41,024
Capital	$	816,110,837	1,528,689,201	2,164,687,636	3,722,476,250
Passengers	No.	18,385,722	37,097,718	46,793,251	40,592,792
Freight	ton	36,999,371	79,884,282	103,131,132	118,652,989
Earnings	$	72,898,749	188,733,494	458,008,891	563,732,260
Expenses	$	50,368,726	131,034,785	422,581,205	442,701,270
Electric Railways—					
Miles in operation	No.	675	1,224	1,687	1,653
Capital	$	–	111,532,347	177,187,436	221,302,237
Passengers	No.	120,934,656	426,296,792	719,305,441	808,023,615
Freight	ton	287,926	1,228,362	2,285,886	3,892,114
Earnings	$	5,768,283	20,356,952	44,536,833	55,682,761
Expense	$	3,435,162	12,096,134	35,945,316	38,782,719
Canals—					
Passengers carried	No.	190,428	304,904	230,129	188,146
Freight	ton	5,665,259	38,030,353	9,407,021	18,720,441
Shipping (Sea-going)—					
Entered	ton	7,514,732	11,919,339	12,516,503	24,240,847
Cleared	"	7,028,330	10,377,847	12,400,226	23,973,787
Total	"	14,543,062	22,297,186	24,916,729	48,214,634
Shipping (Inland International)—					
Entered	ton	5,720,575	13,286,102	14,828,454	16,745,632
Cleared	"	5,766,171	11,846,257	14,903,447	18,843,531
Total	"	11,486,746	25,132,359	29,731,901	35,589,163
Shipping (Coastwise)—					
Entered	ton	17,927,959	34,280,669	28,567,545	45,381,586
Cleared	"	16,516,832	32,347,265	27,773,668	44,146,030
Total	"	34,444,796	66,627,934	56,341,213	89,527,616
Telegraphs, Government, miles of line		5,744	8,446	11,207	10,765
Telegraphs, other, miles of line		30,194	33,905	41,577	43,012
Telephones	No.	63,192	302,759	902,090	1,259,987
Motor vehicles	"	–	21,519	465,378	1,076,819
Post Office—					
Revenue	$	3,421,192	9,146,952	26,331,119	30,611,964
Expenditure	$	3,837,376	7,954,223	24,661,262	33,483,059
Money orders issued	$	17,956,258	70,614,862	173,523,322	203,129,237
Dominion Finance—					
Customs Revenue	$	28,293,930	71,838,089	163,266,804	187,206,332
Excise Revenue	$	10,318,206	16,869,837	37,118,367	63,684,954
Total Ordinary Revenue	$	52,514,701	117,780,409	434,386,537	455,463,874
Revenue per head	$	9·72	16·34	49·64	46·49
Total Ordinary Expenditure	$	46,866,368	87,774,198	361,118,145	350,952,924
Expenditure per head	$	8·67	12·18	41·09	35·82
Total Disbursements	$	57,982,866	122,861,250	528,283,199	378,375,479
Disbursements per head	$	10·73	17·04	60·11	38·62
Gross debt	$	354,732,433	474,941,487	2,902,482,117	2,647,033,973
Assets	$	86,252,429	134,899,435	561,603,133[1]	421,529,268
Net debt	$	268,480,004	340,042,052	2,340,878,984	2,225,504,705

*Or latest. [1] Active assets only.

APPENDIX II—Continued

Statistical Summary of the Progress of Canada—Continued

Part I—Progress Since 1900—Concluded

Items		1901	1911	1921	1929*
Provincial Finance—					
Revenue, Ordinary, Total	$	14,074,991	40,706,948	102,030,458	168,109,505
Expenditure, Ordinary, Total	$	14,146,059	38,144,511	102,569,515	165,538,910
Note Circulation—					
Bank Notes	$	50,610,205	89,982,223	194,621,710	176,716,979
Dominion Notes	$	27,898,509	99,921,354	271,531,162	201,171,816
Chartered Banks—					
Capital paid-up	$	67,035,615	103,009,256	129,096,339	122,839,879
Assets	$	531,829,324	1,303,131,260	2,841,782,079	3,323,163,195
Liabilities (excluding capital and reserves)	$	420, 03,743	1,097,661,393	2,556,454,190	3,044,742,165
Deposits payable on demand	$	95,169,631	304,801,755	551,914,643	677,467,295
Deposits payable after notice	$	221,624,664	568,976,209	1,289,347,063	1,496,608,451
Total deposits[1]	$	349,573,327	980,433,788	2,264,586,736	2,610,594,865
Savings Banks—					
Deposits in Post Office	$	39,950,813	43,330,579	29,010,619	24,724,712
Government	$	16,098,144	14,673,752	10,150,189	3,718,860
Special	$	19,125,097	34,770,386	58,576,775	70,809,603
Loan Companies[2]—					
Assets	$	158,523,307	389,701,988	96,608,810	134,793,527
Liabilities to shareholders and public	$	158,523,307	389,701,988	95,281,122	134,633,354
Deposits	$	20,756,910	33,742,513	15,868,926	30,671,257
Trust Companies—					
Shareholders' assets	$	–	–	10,237,930	14,766,284
Trust funds, liabilities	$	–	–	87,811,965	226,760,909
Dominion Fire Insurance—					
Amount at risk, Dec. 31	$	1,038,687,619	2,279,868,346	6,020,513,832	8,773,828,173
Premium income for year	$	9,650,348	20,575,255	47,312,564	54,868,529
Dominion Life Insurance—					
Amount at risk, Dec. 31	$	463,769,034	950,220,771	2,934,843,848	5,609,032,167
Premium income for year	$	15,189,854	31,019,626	99,015,081	192,944,917
Business Transacted—					
Bank clearings Thousands of	$	1,871,062	7,346,381	16,811,287	21,554,988
Bank debits Thousands of	$	–	–	–	43,476,959
Education in Day Schools—					
Enrolment	No.	1,083,000	1,356,879	1,869,643	2,342,662
Average daily attendance	"	669,000	870,801	1,335,454	1,614,915
No. of Teachers	"	27,126	40,516	56,607	67,861
Total Public Expenditure	$	11,044,925	37,971,374	112,976,543	128,890,836

*Or latest.

[1]Including amounts deposited elsewhere than in Canada from 1901-1928.

[2]Including Building Societies and Trust Companies (1901-1911).

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.

APPENDIX II—Continued

Statistical Summary of the Progress of Canada—Continued

Part II—Progress During 1929

Items	1928		1929										
	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.
Physical Volume of Business[1]— (1919-1924=100)													
Forestry	194·4	181·8	193·3	179·7	193·4	206·0	219·7	198·7	201·7	196·5	201·2	212·6	213·6
Mining	169·9	162·7	179·1	163·1	181·1	137·6	168·4	170·0	154·2	165·5	151·5	177·1	166·6
Construction	167·0	107·6	457·0	223·0	176·5	160·3	211·5	250·5	243·0	243·1	211·0	272·1	268·9
Manufacturing	173·6	170·2	180·9	179·8	208·0	209·7	199·1	181·6	193·7	189·7	166·2	186·0	185·0
Total Production	175·9	165·3	209·0	203·1	200·1	197·5	199·9	189·9	192·2	193·6	174·5	197·5	195·8
Wholesale and Retail Trade	132·0	138·5	131·7	128·6	135·0	136·5	138·5	141·6	139·0	139·5	138·7	136·2	139·5
Imports	148·5	153·5	181·0	180·0	182·5	182·0	194·5	166·1	183·0	164·0	151·1	171·0	157·0
Exports	162·0	132·4	145·7	151·4	174·0	165·3	176·5	165·3	142·9	127·4	127·0	131·5	107·1
Transportation	133·5	124·4	126·0	139·0	130·4	151·0	147·0	142·9	146·0	143·1	126·6	109·5	100·0
Stock Markets	1,271·0	872·0	1,649·0	804·0	852·0	441·5	508·0	302·9	367·0	830·0	732·0	1,425·0	820·0
Banking	160·1	146·5	193·1	188·1	196·0	173·5	176·1	161·1	181·0	177·0	162·4	160·6	148·4
Total Volume of Business	183·8	165·4	211·6	183·7	194·0	184·7	188·3	175·1	182·3	188·6	171·7	196·9	179·4
Agriculture—													
Grain Marketings, etc.—													
Receipts at country elevators and platform loadings—													
Wheat.....000 bush.	106,991	43,942	17,469	16,474	21,023	8,984	5,453	8,152	4,071	14,170	109,563	56,556	19,454
Oats..... "	9,082	4,969	3,597	4,755	5,646	2,209	1,048	1,706	1,061	823	4,286	4,931	3,278
Barley..... "	10,798	3,525	1,536	1,646	2,270	958	615	917	408	1,456	10,791	5,564	2,730
Flax..... "	824	378	129	69	100	57	33	41	20	28	640	716	112
Rye..... "	1,518	740	420	295	479	188	67	135	111	875	2,257	1,457	534
Receipts at Head of Lakes and Pacific Coast Ports—													
Wheat.....000 bush.	87,521	65,263	24,891	12,179	20,684	17,002	17,749	17,722	17,900	3,111	32,590	36,240	23,198
Oats..... "	6,331	3,811	921	709	1,947	2,908	5,007	2,449	3,102	519	692	467	509
Barley..... "	10,066	4,313	690	532	1,010	1,743	3,454	1,530	2,012	826	6,127	3,689	2,182

Flax	"	787	442	87	18	18	32	121	97	183	18	51	227	284
Rye	"	1,367	771	252	142	284	395	645	289	389	228	1,252	653	619
Visible Supply—														
Wheat	000 bush.	184,291	227,282	215,701	202,334	188,208	165,898	139,088	117,562	107,019	98,374	155,593	205,856	222,916
Oats	"	15,856	21,998	21,822	22,909	24,595	21,168	18,468	16,485	15,612	15,480	15,860	20,206	21,666
Barley	"	18,221	23,302	21,408	21,018	20,288	16,663	14,279	10,748	8,894	9,518	18,153	23,607	27,664
Flax	"	1,636	1,846	1,724	1,622	1,293	1,126	932	1,619	419	346	531	1,230	1,275
Rye	"	3,620	4,857	4,804	4,830	4,529	4,153	3,933	2,206	3,504	4,013	5,812	7,433	8,436
Exports—														
Wheat	000 bush.	75,417	49,089	20,831	15,220	21,207	7,314	27,073	25,588	17,019	10,156	7,410	20,722	22,445
Wheat flour	000 bbls.	1,159	923	933	998	1,413	720	907	935	836	643	492	554	538
Wheat and wheat flour	000 bush.	80,633	53,242	25,031	19,719	27,565	10,554	31,153	29,794	20,779	13,051	9,620	23,215	24,866
Oats	"	1,000	1,348	546	639	293	382	945	2,760	1,110	358	261	162	132
Barley	"	9,793	6,151	934	918	508	641	4,348	3,833	3,800	411	17	578	695
Flax	"	214	209	32	40	9	1	244	307	–	2	–	94	–
Rye	"	856	639	167	196	82	87	173	569	487	50	103	19	19
Average cash prices, Fort William and Port Arthur—	$ per													
Wheat, No. 1 Nor.	bush.	1·209	1·171	1·209	1·279	1·270	1·228	1·133	1·183	1·599	1·580	1·495	1·414	1·332
Oats, No. 2 C.W.	"	0·564	0·582	0·682	0·731	0·642	0·579	0·50	0·511	0·631	0·681	0·685	0·68	0·656
Barley, No. 3 C.W.	"	0·684	0·664	0·728	0·778	0·748	0·717	0·672	0·697	0·834	0·790	0·747	0·698	0·649
Flax, No. 1 N.W.C.	"	1·959	1·907	1·919	2·047	2·075	2·025	2·056	2·128	2·544	2·607	2·837	2·91	2·719
Rye, No. 1 C.W.	"	1·041	1·015	1·032	1·124	1·09	0·996	0·865	0·874	1·105	1·115	1·081	1·021	0·94
Live Stock Marketings, etc.—														
Sales on Stockyards—														
Cattle	No.	93,700	58,202	57,391	40,123	46,219	59,157	52,072	45,972	78,205	73,653	81,051	109,590	105,500
Calves	"	22,685	13,795	13,085	12,963	19,793	42,880	45,084	44,702	48,577	35,893	33,588	38,970	29,375
Hogs	"	82,083	102,595	119,084	91,007	82,954	93,007	77,466	77,001	81,249	71,042	59,903	91,978	110,233
Sheep and Lambs	"	79,908	36,797	21,213	10,127	10,341	6,174	6,612	16,872	45,417	58,218	79,178	164,680	91,587
Inspected Slaughterings—														
Cattle	No.	84,676	57,965	57,175	43,370	44,848	50,942	49,635	42,499	57,201	60,453	66,159	88,797	88,386
Calves	"	21,321	13,784	14,004	13,974	28,758	54,359	60,552	50,993	47,683	38,448	31,371	33,875	25,489
Sheep	"	12,841	6,851	5,939	3,596	3,234	14,047	14,116	10,435	9,771	10,185	7,882	13,561	14,033
Lambs	"	122,081	42,701	29,123	17,002	18,033	4,764	2,741	14,527	45,047	66,517	84,673	164,033	121,217
Swine	"	232,234	239,092	248,855	207,871	215,290	207,929	187,493	160,886	158,824	16,845	142,360	207,192	234,319
Cold Storage Holdings—														
Eggs	000 doz.	13,181	8,384	4,648	3,007	1,843	2,118	7,583	15,163	19,621	19,981	18,811	16,520	12,620

[1] The indexes under this heading are for the purpose of measuring the trend from month to month of the volume of production and business in terms of physical units, the monthly average from 1919 to 1924 being regarded as equivalent to 100 and adjustment made for seasonal tendencies. In the group indexes, the relative numbers for single items are weighted according to values during the base period. A description of the method of compilation is given in the Monthly Review of Business Statistics for June, 1927, pp. 8-9.

APPENDIX II—Continued

Statistical Summary of the Progress of Canada—Continued

Part II—Progress During 1929—Continued

Items	1928		1929										
	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.
Agriculture—Con.													
Cold Storage Holdings—*Con.*													
Butter.....000 lbs.	25,996	17,824	13,784	11,130	8,331	4,064	2,619	3,191	11,435	21,210	26,186	26,823	24,013
Cheese..... "	24,383	19,532	18,461	16,681	14,360	13,286	11,545	10,510	17,976	28,319	34,176	30,531	24,398
Beef, fresh..... "	13,493	19,309	19,934	17,226	14,775	13,243	11,811	8,835	6,617	8,390	8,570	9,715	15,923
Beef, cured..... "	157	354	109	230	285	290	428	369	293	330	394	265	250
Beef in process of cure.. "	247	102	333	314	236	206	172	149	198	185	208	199	198
Veal..... "	1,795	1,971	1,827	1,229	1,073	957	1,216	1,764	1,993	1,949	2,159	2,342	3,222
Pork, fresh..... "	9,129	10,110	16,091	21,871	27,486	26,556	26,541	23,304	19,097	13,234	10,627	6,713	6,096
Pork, cured..... "	8,628	8,855	8,396	7,466	10,432	10,042	9,761	11,605	10,920	9,806	8,861	7,717	7,915
Pork in process of cure. "	5,848	5,841	6,424	8,205	7,936	8,145	10,566	9,166	8,402	8,818	7,937	7,403	6,151
Lard..... "	2,696	2,007	2,749	3,505	4,130	4,358	5,070	5,343	5,973	5,729	4,814	3,311	2,824
Mutton and lamb..... "	3,761	5,761	5,952	4,602	4,134	3,883	2,973	1,598	837	689	822	1,200	4,714
Poultry..... "	2,042	4,671	9,280	7,746	7,590	6,109	4,924	3,833	3,051	2,529	2,261	2,222	3,682
Indexes of Marketings[1] 1919-1924=100													
Grain Marketings—Total.....	182·8	171·0	199·7	171·6	286·6	237·8	179·7	154·3	195·1	63·8	54·0	74·6	48·3
Wheat.....	187·8	181·2	224·6	182·5	320·0	249·1	136·1	161·6	208·0	66·2	46·5	76·2	49·7
Oats.....	98·0	77·2	43·6	73·6	91·1	183·0	113·5	68·8	100·4	29·0	48·2	10·5	7·9
Barley.....	332·1	202·9	73·8	99·9	135·6	191·6	775·0	257·0	181·5	128·2	281·0	187·9	71·9
Flax.....	98·5	74·4	34·6	16·2	15·9	20·2	90·3	32·4	57·8	12·7	34·5	59·9	35·5
Rye.....	163·5	138·4	101·1	134·2	151·0	170·0	210·9	175·5	186·5	62·0	105·1	71·2	74·1
Live Stock Marketings[1]—Total	90·3	89·3	111·3	105·9	101·6	106·0	107·9	107·6	127·8	145·2	94·0	100·5	100·2
Cattle.....	82·2	75·8	96·4	94·8	94·1	104·9	103·9	103·0	125·6	147·6	84·4	89·6	86·4
Calves.....	113·5	122·9	169·0	164·4	107·0	117·3	156·9	162·3	208·7	175·5	140·4	137·5	136·5
Hogs.....	101·9	113·5	126·5	127·6	115·8	112·9	114·1	112·8	119·7	145·5	110·1	110·5	125·5
Sheep.....	102·0	83·8	72·6	72·5	105·5	78·5	82·0	87·8	122·5	96·0	79·3	129·4	92·6
Indexes of Inspected Slaughterings[1]—Total.....	104·7	110·3	129·9	131·3	118·8	137·2	112·0	117·4	138·5	128·7	112·9	115·2	108·4
Cattle.....	107·0	115·4	142·5	148·2	126·3	144·0	140·4	144·5	179·6	145·6	127·7	132·0	115·0
Sheep.....	122·5	107·9	141·6	160·1	220·1	327·3	176·5	115·3	148·0	116·4	92·1	124·9	123·0

Hogs	101·4	107·0	120·0	116·8	121·7	114·0	104·2	99·6	109·4	118·2	104·5	111·0	102·3
Indexes of Cold Storage Holdings[1]—Total	106·5	101·8	112·1	132·6	157·7	162·7	171·5	137·9	118·3	117·1	113·3	104·4	106·0
Eggs	134·5	136·9	147·9	201·1	278·0	221·2	192·2	154·1	147·1	135·3	125·6	117·8	128·8
Butter	105·0	96·2	99·6	107·1	128·0	129·7	175·9	111·5	101·9	100·4	97·6	97·8	97·2
Cheese	133·9	135·4	155·4	215·9	262·1	330·9	324·0	265·4	179·3	188·5	170·2	139·0	134·1
Beef	66·0	62·1	58·4	56·0	61·0	57·7	63·9	62·0	70·0	85·9	74·0	67·1	77·7
Pork	96·7	88·6	104·6	113·5	115·3	117·7	122·3	112·9	101·5	91·0	90·0	85·5	82·6
Mutton	86·6	81·8	88·9	76·0	84·3	106·2	135·0	97·7	77·3	68·3	75·2	69·6	108·5
Poultry	151·7	137·3	172·5	156·2	171·1	172·9	185·2	193·7	202·4	247·7	306·4	295·9	273·5
Mining Production—													
Fuels—													
Coal 000 tons	.....	.....	1,585	1,650	1,388	1,394	1,405	1,361	1,316	1,363	1,408	1,560	.....
Petroleum bbls.	.....	.....	55,198	53,338	70,102	84,035	101,374	108,466	109,677	112,050	101,391	114,703	.....
Natural gas 000 M. cu. ft.	.....	.....	3,049	3,023	2,485	2,307	1,944	1,312	1,229	1,268	1,465	1,897	.....
Metals—													
Gold ozs.	.....	.....	149,928	145,403	155,315	152,862	164,485	169,775	158,551	163,871	160,928	181,427	.....
Silver 000 ozs.	.....	.....	1,664	982	1,517	1,298	2,077	3,573	2,357	2,162	1,562	1,865	.....
Nickel tons	.....	.....	4,853	4,198	4,393	4,737	4,669	4,050	4,038	3,721	3,349	3,655	.....
Copper "	.....	.....	9,889	9,225	9,354	9,110	9,580	10,308	10,351	10,692	10,167	10,315	.....
Lead "	.....	.....	12,329	10,315	11,923	13,546	13,779	15,531	15,625	13,333	12,466	15,519	.....
Zinc "	.....	.....	7,977	8,087	9,490	8,873	8,750	8,287	7,143	8,016	8,413	6,997	.....
Non-metals—													
Asbestos tons	.....	.....	17,882	22,421	22,109	24,770	28,458	27,140	28,368	29,254	27,891	30,120	.....
Gypsum "	.....	.....	31,708	32,130	42,815	89,502	111,973	162,535	172,250	152,502	162,942	149,170	.....
Feldspar "	.....	.....	1,914	6,392	4,305	767	1,616	2,417	1,697	5,167	2,617	2,109	.....
Salt "	.....	.....	23,500	24,340	30,147	21,145	27,857	30,323	30,662	30,352	28,811	31,117	.....
Structural Materials—													.....
Cement 000 bbls.	.....	.....	391	436	590	807	1,250	1,600	1,692	1,720	1,467	1,443	.....
Clay products $ 000	.....	.....	494	493	668	964	1,418	1,526	1,627	1,611	1,376	1,345	.....
Lime tons	.....	.....	43,272	41,017	47,432	46,522	47,514	53,467	55,392	55,082	51,313	53,217	.....
Manufacturing—													
Flour 000 bbls.	2,175	1,672	1,698	1,600	1,631	1,606	1,749	1,548	1,603	1,607	1,283	1,528	.....
Newsprint short tons	223,046	208,484	212,191	187,200	218,147	221,784	245,644	225,055	229,045	225,873	227,665	251,914	252,046
Sugar 000 lbs.	96,937	148,895	17,740	44,463	54,461	61,618	74,778	78,880	79,960	100,092	69,217	89,145	105,160
Crude rubber imports "	6,270	5,865	8,420	6,514	11,112	7,117	6,579	6,888	7,178	6,449	4,274	4,079	6,062
Raw cotton imports "	16,955	17,487	18,485	13,089	16,671	12,201	11,219	6,402	6,447	5,233	3,550	11,812	18,159
Raw wool imports "	661	2,533	1,471	1,341	1,854	939	963	826	837	840	593	854	752

[1] See note on page 171.

APPENDIX II—Continued

Statistical Summary of the Progress of Canada—Continuund

Part II - Progress During 1929—Continued

Items	1928		1929										
	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.
Manufacturing—Con.													
Pig iron.....long tons	95,426	103,450	87,764	93,939	86,176	79,341	81,464	89,873	99,786	112,528	98,816	91,409	86,516
Steel ingots and castings "	108,463	103,054	116,261	117,445	137,158	122,102	126,372	119,505	129,827	120,282	99,000	115,674	93,648
Passenger automobiles.... No.	8,154	6,734	17,164	25,584	32,833	34,392	25,129	16,511	13,600	11,037	10,710	8,975	7,176
Trucks..... "	3,615	2,691	4,337	5,703	7,788	7,509	6,430	4,981	3,861	3,177	3,107	5,548	2,270
Boots and shoes..... 000	1,290	1,075	1,252	1,467	1,578	1,493	1,521	1,402	1,484	1,660	1,521	1,695	.....
Crude petroleum imports 000 gal.	82,711	71,914	57,449	45,483	73,025	65,658	51,347	113,028	114,783	117,097	79,580	122,600	149,750
Lumber exports.....M f.d. ft.	157,527	124,316	111,240	93,843	149,807	108,918	167,538	157,947	172,191	185,691	165,077	193,148	152,172
Indexes of Manufactures[1].....	173·6	170·2	180·9	179·8	208·0	209·7	199·1	181·6	193·7	189·7	166·2	186·0	185·0
Flour.....	132·1	120·0	114·5	139·0	135·2	153·5	155·8	138·0	157·6	205·0	110·9	90·0	.....
Newsprint.....	258·0	249·1	245·9	229·0	246·0	255·0	281·1	264·1	268·0	257·9	271·0	284·0	291·0
Sugar.....	164·8	165·9	47·2	70·0	62·3	84·2	97·8	108·1	87·7	109·0	99·8	160·5	178·6
Rubber.....	311·3	298·0	377·2	297·9	386·0	288·1	302·5	323·0	472·0	470·1	236·0	223·0	301·1
Cotton.....	161·0	140·1	140·1	127·5	159·0	173·3	162·0	101·5	110·6	84·8	71·5	182·8	172·6
Wool.....	50·8	187·5	120·1	98·5	124·0	72·1	81·4	74·2	103·5	113·5	67·5	66·6	57·8
Pig iron.....	162·0	175·5	149·0	159·4	146·1	134·6	138·4	152·6	169·4	191·0	167·9	155·2	146·9
Steel ingots and castings.....	165·5	157·5	177·6	179·2	209·8	186·5	193·0	182·5	198·4	184·0	151·4	176·9	143·1
Automobiles.....	156·9	120·6	274·0	359·0	405·5	398·0	302·6	224·7	202·9	177·5	164·8	185·6	125·9
Petroleum.....	252·1	241·9	195·8	184·5	230·0	339·0	217·5	280·0	344·1	353·0	254·9	337·0	457·0
Lumber exports.....	88·7	83·2	106·8	97·7	106·1	125·0	117·5	89·7	92·1	94·7	85·7	94·4	85·4
Construction—													
Contracts awarded..... $000	19,038	18,905	41,963	28,426	27,125	43,328	64,680	72,420	57,941	58,622	46,959	57,084	45,376
Index of construction[1].....	167·0	107·6	457·0	223·0	176·5	160·3	211·5	250·5	243·0	243·1	211·0	272·1	268·9
Building permits..... $000	15,831	16,695	8,365	10,473	24,057	29,621	24,007	27,637	22,826	21,560	17,115	18,004	16,166
Index of building permits[1].....	170·4	200·6	253·9	237·9	293·0	207·8	161·5	201·9	183·0	180·0	144·0	165·0	174·0
Electric Power.....000,000 K.W.	1,442	1,441	1,507	1,346	1,471	1,409	1,457	1,377	1,411	1,447	1,477	1,594	1,533

Indexes of Employment[1]— 1926=100													
All Industries	118·9	116·7	109·1	110·5	111·4	110·4	116·2	122·2	124·7	127·8	126·8	125·6	124·6
Logging	139·3	178·1	171·0	178·3	167·8	83·1	75·8	92·7	80·1	74·0	83·6	117·1	173·3
Mining	121·2	121·0	116·2	117·8	115·9	112·9	115·6	115·8	119·5	122·1	123·8	126·6	128·0
Transportation—Railways, Tramways, Shipping	113·4	112·2	102·6	101·6	99·8	101·8	108·1	113·9	117·5	117·2	117·2	114·3	113·8
Construction—Building, Railway, Highway	137·4	113·2	87·4	79·3	80·0	85·4	112·0	144·6	164·5	180·8	181·3	162·4	153·6
Services—Hotels, Professional, Laundries	120·8	117·2	118·0	117·3	119·1	121·1	121·6	131·1	145·4	146·6	146·6	141·0	131·6
Trading Establishments—Wholesale and Retail	121·3	127·4	128·5	119·7	117·8	122·5	124·0	126·0	127·7	126·1	127·8	128·2	130·7
Manufacturing—Total	115·1	113·4	107·8	112·8	115·7	116·5	119·8	121·2	120·3	121·6	119·8	120·2	117·2
Food industries, vegetable	120·1	125·6	113·5	127·3	121·9	121·2	124·0	125·2	125·6	128·1	120·0	128·2	130·0
Food industries, animal	116·1	112·2	109·8	105·1	104·7	106·7	110·0	119·5	122·3	123·6	121·0	117·1	115·2
Rubber	145·6	145·3	142·2	138·9	138·5	133·3	139·7	143·6	143·4	145·2	140·6	137·2	136·3
Leather	97·1	93·9	85·8	92·3	93·3	91·9	91·4	91·0	92·8	94·4	96·4	97·7	95·5
Textiles and clothing	105·2	107·9	108·8	102·4	107·5	110·5	110·3	108·8	105·8	105·7	104·8	106·9	107·4
Lumber	105·2	84·9	70·6	71·0	81·1	81·9	100·8	119·6	122·6	125·8	122·0	114·7	97·1
Pulp and paper	108·1	106·1	100·1	104·7	103·2	104·4	105·6	108·7	110·5	113·2	110·9	111·9	110·2
Printing and publishing	112·2	113·7	114·6	116·3	114·3	113·3	115·0	116·0	116·1	118·1	115·3	116·3	118·6
Iron and steel, total	117·5	118·2	114·9	126·5	132·1	134·2	137·6	133·2	126·8	126·3	122·3	120·9	117·1
Locomotives and car shops and other vehicles	109·1	108·8	113·3	126·9	124·8	138·7	140·0	131·5	119·9	117·6	114·6	112·8	106·2
Non-ferrous metals	123·6	126·1	121·7	128·0	135·3	131·7	134·3	136·5	134·8	136·7	133·6	132·9	135·7
Clay, glass and stone	118·4	120·1	108·3	109·6	107·7	114·4	125·1	131·3	137·8	141·2	139·9	136·7	133·8
Labour Statistics—													
Strikes and Lockouts—													
Number of disputes..... No.	12	8	8	9	11	12	24	15	9	10	9	11	8
Number of employees involved..... "	1,712	449	754	1,480	1,363	2,310	5,054	647	427	1,094	864	771	823
Time loss in working days.....	21,953	8,628	5,724	28,946	3,079	24,201	39,590	6,625	3,139	3,712	9,788	6,219	12,871
Percentage of unemployment in Trade Unions... p.c.	4·2	6·6	6·3	6·8	6·0	5·5	4·0	2·9	3·0	3·5	3·7	6·0	.....
Employment Office Reports—													
Applications..... No.	40,924	31,926	38,328	31,932	37,104	48,523	50,395	44,365	40,183	61,317	55,521	51,678	42,685
Vacancies..... "	28,056	23,708	24,865	21,899	27,695	41,557	42,793	36,744	36,852	55,254	46,099	38,523	26,984
Placements..... "	27,318	22,529	22,800	20,184	25,044	38,118	39,542	34,010	34,447	51,313	43,056	36,066	25,976

[1] See note on page 171.

*Based on monthly returns from 7,000 employers, *i.e.*, the employers of 15 hands or over.

APPENDIX II—Continued

Statistical Summary of the Progress of Canada—Continued

Part II—Progress During 1929—Continued

Items	1928		1929										
	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.
Indexes of Wholesale Prices—(1926=100)—													
All Commodities	94·9	94·6	93·7	94·9	95·3	93·5	92·4	92·4	96·0	98·1	97·3	96·7	95·8
(a) Classified by Component Material—													
Vegetable products	87·3	86·3	87·3	90·1	88·9	84·3	81·6	82·4	96·0	99·3	97·6	95·7	93·7
Animal products	110·3	109·4	106·6	107·9	109·8	108·6	108·4	107·6	108·3	108·3	108·7	109·9	108·6
Textiles	92·2	93·2	93·2	93·2	92·8	92·4	91·8	91·6	91·5	91·1	91·2	90·4	89·8
Wood and paper	98·6	98·3	93·6	93·9	94·8	94·6	94·1	93·9	94·0	94·0	93·7	93·3	93·6
Iron and its products	92·8	93·0	93·3	93·3	93·4	93·9	94·5	93·9	93·9	93·9	93·9	93·8	93·6
Non-ferrous metals	94·1	95·1	96·9	99·7	107·1	103·5	99·2	98·7	98·5	98·5	98·2	97·5	96·7
Non-metallic minerals	92·8	93·4	93·4	92·5	92·6	91·9	92·3	92·9	93·4	93·6	93·1	92·2	92·7
Chemicals and allied products	94·3	94·2	94·4	94·4	94·5	94·9	95·4	95·5	95·7	96·0	96·2	96·1	95·4
(b) Classified by Use or Purpose—													
Consumers' Goods (all)	95·1	94·5	94·2	94·4	94·7	93·6	93·3	93·4	94·4	95·9	95·6	95·4	95·3
Foods	99·1	97·4	96·9	98·2	99·2	97·6	97·1	96·6	99·0	103·2	102·9	103·7	102·7
Clothing	92·4	92·5	92·4	91·9	91·7	91·0	90·7	91·2	91·3	91·1	90·5	89·9	90·3
Producers' Goods (all)	93·4	93·4	91·6	93·4	93·9	92·9	93·1	93·3	100·6	100·3	99·0	97·3	95·3
Producers' equipment	92·8	94·5	93·6	93·3	93·4	93·3	94·1	94·1	94·9	94·9	94·8	94·4	94·6
Producers' materials	93·5	93·3	91·4	93·4	93·9	92·8	93·0	93·0	101·2	100·9	99·5	97·6	95·5
Building	98·3	98·1	98·0	98·8	100·6	100·2	99·2	98·6	99·1	99·8	100·2	98·8	98·5
Manufacturers' materials	92·4	92·3	90·0	92·2	92·5	91·2	91·6	91·8	101·7	101·2	99·3	97·3	94·8
(c) Classified by Origin—													
Farm Products—													
Field	86·5	86·0	86·7	89·4	88·4	86·4	84·9	84·2	94·4	96·6	95·7	93·6	91·3
Animal	107·5	106·5	105·0	105·7	107·2	105·9	104·9	103·6	104·5	105·2	105·1	106·3	105·2
Canadian farm products	96·1	95·5	95·7	98·4	98·3	96·0	93·5	93·1	107·1	108·0	106·9	105·2	101·0
Marine	109·6	107·7	107·1	106·7	105·4	99·5	101·4	102·0	102·1	102·0	104·6	107·5	110·5
Forest	98·6	98·3	93·5	93·7	94·7	94·4	94·0	93·8	93·8	93·8	93·5	93·2	93·4
Mineral	91·7	92·3	92·8	92·6	93·6	92·6	92·6	93·0	93·2	93·3	93·1	92·4	92·3

All raw materials		94·4	94·0	94·2	96·6	97·0	94·7	93·3	92·9	101·2	101·7	101·4	100·2	97·2
All manufactured articles		94·2	93·8	93·5	93·0	93·0	92·3	91·2	91·1	93·1	94·8	94·2	93·7	92·9
External Trade—														
Total Trade	$000	273,058	227,866	194,237	180,854	252,849	164,671	235,051	226,442	219,887	210,026	188,803	237,709	221,980
Total Imports (mdse.)	"	102,967	94,621	96,959	97,042	135,329	97,517	125,615	111,949	114,201	111,631	99,380	116,271	108,734
Vegetable products	"	21,665	19,839	16,490	15,933	21,928	15,587	21,743	19,584	19,589	19,529	18,188	22,682	23,173
Animal products	"	5,477	4,830	7,446	7,186	8,097	4,296	5,753	4,807	4,738	5,049	5,372	5,627	5,752
Textile products	"	16,397	16,215	19,709	18,451	25,522	14,846	16,348	15,159	16,941	17,385	14,412	16,410	15,147
Wood and paper	"	5,028	4,664	4,644	4,503	6,170	4,495	5,897	5,426	5,581	5,374	5,093	5,804	5,448
Iron and its products	"	21,539	20,268	23,593	26,619	44,255	33,464	42,235	32,925	30,427	27,436	22,050	23,806	19,380
Non-ferrous metals	"	7,045	6,604	5,844	6,751	8,629	6,748	7,855	6,899	7,924	7,630	7,906	9,618	8,583
Non-metallic minerals	"	16,236	14,226	11,897	11,081	13,444	9,775	14,710	17,226	18,125	18,566	16,393	20,442	20,980
Chemicals and allied products	"	3,630	2,561	2,331	2,437	3,991	3,170	4,299	3,740	3,376	3,152	3,424	3,771	3,828
Miscellaneous commodities	"	5,948	5,414	5,037	4,026	6,292	5,137	6,775	6,183	7,500	7,510	6,542	8,111	6,441
Total Exports (mdse.)	$000	170,092	133,245	97,278	83,812	117,520	67,154	109,436	114,492	105,686	98,395	89,424	121,437	113,246
Exports of Canadian produce	"	167,014	130,847	94,924	82,259	114,763	65,728	107,473	112,176	102,219	96,265	87,751	119,266	111,068
Vegetable products	"	104,092	70,235	37,210	30,397	42,625	18,211	45,188	45,582	36,094	27,245	22,136	45,813	45,831
Animal products	"	15,377	13,238	12,315	9,048	11,355	7,587	9,913	11,319	13,388	13,199	15,035	14,856	13,310
Textiles	"	750	978	812	586	661	414	664	1,203	1,015	1,149	803	848	661
Wood and paper	"	25,176	24,550	21,873	19,843	28,080	18,959	24,807	26,524	24,929	27,815	24,718	27,644	24,875
Iron and its products	"	6,953	6,478	7,191	8,103	11,388	6,323	8,143	7,142	7,463	7,713	6,822	8,185	6,389
Non-ferrous metals	"	8,667	9,937	10,252	9,425	14,108	10,025	12,237	14,206	13,319	12,671	11,970	14,500	13,558
Non-metallic minerals	"	2,484	2,406	2,166	1,951	2,591	1,770	2,705	2,806	2,507	2,833	2,420	3,048	2,774
Chemicals and allied products	"	1,859	1,667	1,765	1,809	2,233	1,152	1,708	1,598	1,717	1,846	1,810	2,393	2,064
Miscellaneous commodities	"	1,654	1,359	1,341	1,097	1,722	1,286	2,107	1,798	1,786	1,793	2,037	1,978	1,597
Trade with United Kingdom—														
Imports	"	17,558	16,387	15,443	14,233	17,400	12,210	17,648	16,276	17,750	17,947	16,328	17,806	17,230
Exports	"	77,530	44,093	18,579	14,194	20,590	9,122	35,943	26,749	23,166	21,944	22,958	38,618	34,864
Trade with United States—														
Imports	"	65,512	63,755	67,341	67,902	100,491	72,700	89,312	76,315	77,039	74,522	66,007	77,368	70,044
Exports	"	46,122	46,587	41,196	36,090	52,383	34,844	46,343	48,823	47,878	50,231	45,526	51,297	51,751

APPENDIX II—Continued

Statistical Summary of the Progress of Canada—Continued

Part II—Progress During 1929—Continued

Items	1928		1929										
	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.
Railway Transportation—All Railways—													
Gross operating revenues $000	55,350	49,189	38,398	38,429	44,754	45,034	45,291	44,860	47,362	45,617	48,142	.....	.....
Operating expenses..... "	39,131	39,086	33,755	32,665	34,251	36,151	39,036	39,730	39,533	37,265	36,643	.....	.....
Revenue freight carried.000 tons	14,491	11,670	9,920	10,638	11,113	10,422	10,919	10,875	11,198	11,112	13,241	.....	.....
Car loadings..... No.	380,405	275,678	252,217	261,410	282,315	283,745	306,728	310,885	313,292	318,200	335,338	353,095	284,740
Canadian National Railways—Exclusive of Eastern Lines—													
Gross operating revenues. $000	23,070	20,173	14,948	16,113	18,186	18,610	18,592	18,270	19,451	18,820	19,845	20,516	17,543
Operating expenses..... "	16,953	16,203	13,710	13,835	14,279	15,215	16,439	16,888	16,866	15,489	15,621	15,450	.....
Canadian Pacific Railway—													
Gross operating revenues. "	24,492	20,987	15,988	14,609	17,665	17,691	18,148	18,851	19,357	17,883	19,793	20,281	15,814
Operating expenses..... "	16,078	16,865	13,828	12,549	13,479	14,246	15,313	15,292	15,182	14,779	14,498	12,719	.....
Public Finance—													
Dominion revenues, total... $000	35,659	36,498	32,347	31,408	32,865	111,837		32,815	37,648	32,060	36,403	36,603	34,437
Customs..... "	14,874	14,690	13,121	14,823	17,352	34,704		15,365	16,294	15,453	15,936	16,917	15,916
Excise..... "	5,779	5,919	5,204	4,064	4,424	9,984		5,346	6,518	6,045	6,051	6,409	8,985
Post office..... "	2,428	5,007	2,400	2,300	2,576	4,700		2,860	2,300	2,300	2,300	2,952	2,400
Excise taxes..... "	7,622	7,382	6,634	4,064	5,399	4,899		5,633	5,998	5,638	5,777	6,076	5,521
Income tax..... "	1,617	910	605	976	1,005	55,472		1,125	3,010	713	2,717	720	2,151
Dominion expenditures, total..... "	53,612	25,222	27,656	23,987	25,503	52,114		28,556	30,319	36,569	28,042	33,397	60,654
Ordinary expenditures.... "	50,431	23,457	25,782	22,806	22,496	50,346		25,137	27,684	32,472	25,802	21,245	57,198
Dominion net debt.....$000,000	2,230	2,219	2,214	2,206	2,199	-		2,152	2,144	2,149	2,140	2,137	2,163
Banking and Currency—													
Demand deposits.....$000,000	726·2	715·0	674·4	647·5	649·3	688·8	663·5	670·8	692·8	666·0	759·5	785 8	.....
Notice deposits..... "	1,523·5	1,520·3	1,526·0	1,518·5	1,512·1	1,508·4	1,486·5	1,466·1	1,453·2	1,459·7	1,470·5	1,470·0	.....

Current loans	"	1,238·0	1,231·0	1,221·0	1,248·5	1,294·1	1,320·5	1,311·2	1,319·8	1,326·9	1,346·5	1,404·4	1,473·4	.....
Investment holdings	"	488·3	524·6	529·7	530·2	523·5	526·1	523·2	525·2	469·6	461·9	487·5	487·5	.....
Call loans, Canada	"	249·8	265·8	268·0	268·4	267·5	262·7	272·3	261·0	272·1	273·6	280·8	268·3	.....
Call loans, elsewhere	"	276·7	292·7	326·8	328·1	292·5	301·8	322·2	333·3	305·4	310·5	313·4	252·3	.....
Issues of Dominion Notes	"	.....	133·3	105·7	104·8	105·0	105·2	105·3	105·3	105·2	95·3	95·3	105·4	.....
Gold held by Finance Dept. against notes in circulation	"	109·3	90·4	59·1	58·8	58·1	58·8	59·0	58·9	59·1	59·6	59·9	60·1	.....
Notes in circulation	"	202·7	193·2	173·4	177·5	198·5	182·3	184·0	199·1	183·8	203·0	205·4	200·5	.....
Indexes of Banking and currency—														
Demand deposits		133·0	130·1	135·5	132·0	130·5	135·2	131·4	128·9	136·6	127·6	147·9	145·0	.....
Notice deposits		125·0	130·1	125·0	124·5	123·5	122·8	122·0	121·4	120·5	121·2	122·7	122·7	.....
Current loans		119·5	120·5	123·5	125·4	127·4	128·7	129·1	130·9	132·7	134·6	138·0	142·2	.....
Investment holdings		113·6	118·0	122·4	118·1	116·0	116·5	114·9	114·5	102·5	101·4	105·0	107·8	.....
Call loans in Canada		217·0	224·9	252·1	256·5	253·4	247·1	263·1	250·0	267·1	264·1	264·5	241·1	.....
Call loans elsewhere		130·6	144·9	177·5	171·6	150·7	152·6	162·6	167·5	158·5	160·6	162·6	133·1	.....
Aggregate issues of Dominion Notes		94·8	89·4	84·2	83·6	91·4	91·3	89·7	94·9	88·2	89·6	89·2	93·0	.....
Gold held by Finance Dept against notes		94·6	73·6	50·8	51·4	55·2	56·7	56·6	56·8	56·4	56·6	57·6	54·8	.....
Notes in circulation		106·6	101·2	98·6	100·5	111·5	103·9	107·9	114·5	106·5	118·7	117·6	108·0	.....
Indexes of Security Prices—The Stock Market—														
Common Stocks, total (112)		184·2	183·6	207·4	209·4	192·6	191·8	187·1	185·6	192·8	207·4	217·1	186·2	154·7
Industrials, total (79)		229·2	227·3	286·1	292·9	266·2	269·3	269·3	264·1	271·2	293·8	315·8	255·1	209·4
Iron and steel (9)		317·3	328·6	374·6	377·5	346·9	338·5	325·6	319·7	321·6	325·4	322·4	248·8	212·9
Pulp and paper (9)		101·1	97·1	101·6	103·0	94·8	94·8	93·8	92·3	96·8	109·2	108·2	92·6	77·4
Milling (5)		197·3	208·3	217·2	247·6	235·2	235·4	236·8	234·4	249·1	256·8	267·0	244·6	206·1
Oils (3)		261·1	246·5	276·8	261·5	250·7	298·8	304·7	294·9	315·2	359·3	417·8	346·3	296·4
Textiles and clothing (9)		114·2	114·1	110·9	108·4	100·5	99·6	101·3	99·4	96·6	91·2	99·5	84·8	79·2
Foods and allied products (21		166·4	182·4	196·7	196·2	180·3	182·8	176·9	173·8	178·8	181·3	178·3	155·8	138·9
Beverages (7)		195·1	184·3	189·1	201·3	175·1	175·9	155·6	148·2	138·4	136·7	129·0	102·4	88·0
Miscellaneous (16)		295·4	336·6	468·8	501·6	441·4	402·1	406·5	403·6	406·4	433·6	457·4	351·7	267·6
Utilities, total (16)		149·2	149·7	154·0	158·7	150·1	143·6	140·2	143·4	150·7	159·2	163·1	149·3	130·9
Transportation (2)		149·6	149·2	153·7	161·2	156·5	149·9	144·5	144·2	150·8	145·8	144·7	135·0	128·3
Telephone and Telegraph (2)		119·2	120·3	122·3	122·3	121·8	117·0	117·7	117·9	120·1	128·0	123·3	121·5	114·8
Power and traction (12)		157·3	158·8	164·9	168·1	153·9	146·9	144·6	152·1	161·3	184·0	194·8	174·3	141·1

APPENDIX II—Continued

Statistical Summary of the Progress of Canada—Concluded

Part II—Progress During 1929—Concluded

Items	1928		1929										
	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.
Indexes of Security Prices—The Stock Market—Con.													
Banks (9)	144·6	147·4	150·2	147·7	143·5	140·9	135·6	129·7	135·0	135·4	133·2	131·4	117·9
Companies abroad, total (8)	189·1	185·5	210·5	198·9	176·8	180·3	164·2	162·8	171·9	192·6	197·2	172·7	129·5
Industrial (1)	195·5	151·5	183·3	173·0	161·5	172·6	157·2	144·7	155·1	168·5	172·7	151·8	125·9
Utilities (7)	234·2	235·6	253·5	239·5	204·5	200·0	182·4	192·9	201·1	231·2	236·2	206·2	141·4
Mining stocks (17)	116·5	115·1	125·7	123·7	120·3	112·6	108·9	103·6	109·3	114·9	104·8	99·1	75·7
Gold (11)	82·0	76·8	85·4	84·4	84·8	82·7	77·4	72·1	72·9	74·1	63·6	59·3	54·2
Copper (2)	300·8	315·0	334·7	323·6	301·5	267·6	272·4	267·5	296·9	325·9	317·0	247·8	185·2
Silver miscellaneous (4)	68·6	72·2	79·9	85·4	82·5	75·4	72·8	69·8	69·4	70·5	65·3	59·8	55·0
Preferred stocks (22)	104·0	107·9	107·4	108·1	106·8	104·3	104·3	104·8	104·8	105·6	105·1	102·9	99·5
Interest rates	95·0	96·0	97·1	98·1	101·2	103·3	104·4	103·3	103·3	102·3	104·4	103·3	103·3
Yield on bonds p.c.	4·55	4·60	4·65	4·70	4·85	4·95	5·00	4·95	4·95	4·90	5·00	4·95	4·95
Shares traded, Montreal 000	3,218	2,207	4,173	2,038	2,158	1,117	1,288	767	929	2,103	1,855	3,609	2,078
General Finance—													
Bank debits $000,000	4,432	3,866	4,095	3,427	3,982	3,623	4,128	3,580	4,004	3,667	3,470	4,713	4,177
Sales of Ordinary Life Insurance $000	54,498	56,223	50,116	46,957	49,060	52,901	50,673	54,136	55,709	43,032	43,520	52,634	56,188
Commerical failures No.	193	230	269	197	180	174	185	148	149	137	150	176	164
Defaulted liabilities $000	3,978	4,178	4,111	5,716	2,960	2,523	2,295	2,957	2,139	1,744	1,710	2,050	.....
Call loan renewal rate, New York p.c.	6·07	8·60	7·05	7·06	9·10	8·89	8·91	7·70	9·23	8·23	8·50	8·00	5·44
Rate on prime commercial paper, 4-6 months, New York p.c.	5·38	5·38	5·38	5·50	5·88	6·00	6·00	6·00	6·00	6·13	6·25	6·25	5·75
Exchange, New York, rate per American dollar	1·000	0·998	0·998	0·996	0·994	0·992	0·993	0·992	0·995	0·994	0·992	0·988	0·984

Population Movements—													
Immigration—Total	No.	6,844	5,515	4,104	4,634	14,811	29,113	26,616	22,021	16,465	15,022	11,101	8,817	.....
From United Kingdom	"	2,059	1,476	1,133	1,691	5,131	12,047	13,053	9,867	6,087	6,181	4,546	3,386	.....
From United States	"	1,955	1,544	1,573	1,415	2,699	3,576	3,731	3,983	3,483	3,414	2,522	2,329	.....
From Other Countries	"	2,830	2,495	1,458	1,528	6,981	13,490	9,832	8,171	6,895	5,427	4,033	3,102	.....
Returned Canadians	"	2,258	2,154	1,767	1,698	2,378	2,641	2,976	3,426	3,404	2,660	2,569	2,407	.....
Emigration from Canada to United States*	"	5,591	3,501	4,427	3,722	4,469	5,914	5,197	5,718	5,670	7,408	9,302	.....	.....

*U.S. Bureau of Immigration.

	1928							1929					
	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June
Vital Statistics—													
Births	19,245	19,285	19,203	19,075	18,300	17,577	18,721	18,780	17,272	19,985	19,300	20,302	19,416
Deaths	8,301	7,759	7,978	8,449	8,518	8,227	11,662	14,390	9,246	10,002	9,548	9,611	8,071
Marriages	9,218	6,866	6,393	8,139	7,275	6,666	5,802	4,443	4,074	3,500	5,530	4,701	10,079

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