CANADIAN PACIFIC FACTS AND FIGURES

REVISED EDITION

CANADIAN PACIFIC
FACTS AND FIGURES



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Canadian Pacific Facts and Figures

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CONTENTS

FRONTISPIECE
Portrait of D. C. Coleman, LL.D., D.C.L., Chairman and President.

TITLE PAGE

Page

THE CANADIAN PACIFIC IN PEACE AND WAR 1
By *Mr. Coleman.*

65 YEARS OF PROGRESS 8
A summary of the building of the railroad and the growth of the Company.

WHAT THE BALANCE SHEET SHOWS 30
An examination of assets and liabilities against a background of Company history.
(Big Land Sale in 1882: page 35)

THE PRESIDENTS 36
Biographical sketches and picture page showing the diversity of Company services with inset portraits of Lord Mount Stephen, Sir William Van Horne, Lord Shaughnessy, Sir Edward Beatty and Mr. Coleman.
(No Skim Milk for Van Horne: page 45)

THE DIRECTORATE 46
A review of the careers of the present directors, a record of the first Board meeting and a list of all directors of the Company and their period of service.

THE COMPANY CREST 62

LAND GRANTS 63
By *George A. Walker*, K.C., Vice-President and General Counsel.
(Giant Cornucopia: page 66)

Page

ORGANIZATION CHARTS 67

GOVERNMENT LOANS 71
From Published Records.
(58,000,000 Railway Ties: page 75)

THE GENERAL OFFICERS—THEIR FIRST JOBS 76

NUMBER OF EMPLOYEES 78

INSURANCE DEPARTMENT 80
By *F. Palin*, Insurance Commissioner.

RESEARCH 83

CROP REPORT 85
By *Miss C. L. K. Holmes*, Press Relations Officer, Women's Division.

INVESTIGATION DEPARTMENT 86
By *Major-General E. de B. Panet, C.M.G., D.S.O., V.D.*, Chief, Department of Investigation.
(Daffodils for Easter: page 88)

PERSONNEL DEPARTMENT 89
By *William Manson*, Vice-President of Personnel.
(First Quebec Conference: page 90)

MEN AGAINST THE STORM 91
By *Marc T. McNeil*, Press Relations Officer, Ottawa.
(1,679,687 Passengers on Electric Lines: page 98)

FREIGHT TRAFFIC 99
By *C. E. Jefferson*, Freight Traffic Manager.
(How Revelstoke Was Named: page 104)

PASSENGER TRAFFIC 105
By *R. G. McNeillie*, Passenger Traffic Manager.
(Priest Was President for an Hour: page 115)

OCEAN STEAMSHIPS 116
By *Pat Donovan*, Assistant Press Relations Officer, Vancouver.
Signed First Agreement: page 122)

Page

EUROPEAN ORGANIZATION 123
By *H. T. Penny*, Chief Assistant to European General Manager.
(Lumber for 2,300 Bungalows: page 130)

SERVICE IN THE ORIENT 131
By *H. B. Beaumont*, Acting Steamships Passenger Traffic Manager.

SOUTH PACIFIC INTERESTS 141
By *Ian Warren*, Assistant Passenger Traffic Manager.
(Back to Beginnings: page 143)

BRITISH COLUMBIA COAST STEAMSHIPS 144
By *John R. Sturdy*, Press Relations Officer, Vancouver.

GREAT LAKES SERVICE 148
By *Charlotte Kyle*, Assistant Press Relations Officer, Toronto.
(No Cashed Cheque—No Watch: page 151)
(R. B. Angus, a Bathgate Scot: page 151)

BAY OF FUNDY SERVICE 152
By *J. W. A. Merkel*, Press Relations Officer, Saint John
(Sardines Are a Whale of an Industry: page 154)
(Red River Petition of 1863: page 154)

B.C. LAKE AND RIVER SERVICE 155
By *John R. Sturdy*.
(Last Spike Souvenirs: page 158)

AIR LINES 159
By *W. M. Neal, C.B.E.*, President and Chief Executive Officer, Canadian Pacific Air Lines, Limited.
('Low Gear' out of Field: page 162)

HOTEL DEPARTMENT 163
By *H. F. Mathews*, General Manager of Hotels.
(Fire-Fighting System: page 172)

SLEEPERS, DINERS AND NEWS SERVICE 173
By *T. M. McKeown*, Manager of Sleeping and Dining Cars.
(Duncan McIntyre from Aberdeen: page 180)

Page

MAIL, BAGGAGE AND AUTOMOBILES 181
By *W. E. Allison*, Manager of Mail and Baggage Traffic.
(These Buses and Trucks 'Get Along': page 189)

EXPRESS COMPANY 190
By *P. T. Cole*, Press Relations Officer, Toronto.
('Sweet' Business for Lethbridge: page 204)

COMMUNICATIONS DEPARTMENT 205
By *W. D. Neil*, General Manager of Communications.
(Train on Wooden Rails: page 207)

TYPES OF LOCOMOTIVES 208
By *H. B. Bowen*, Chief of Motive Power and Rolling Stock.

RECONDITIONING OF LOCOMOTIVES 214
By *J. R. Macken*, Supervisor of Costs, Office of Chief of Motive Power and Rolling Stock.

SHOP SYSTEM 218
By *H. B. Bowen.*
(Castle Mountain Renamed Mount Eisenhower: page 221)

RECONDITIONING OF PASSENGER CARS 222
By *H. H. Boyd*, Assistant Chief of Motive Power and Rolling Stock.
(Started in the Ranks: page 225)
(Real Kicking Horse: page 225)

APPRENTICE SYSTEM 226
By *H. B. Bowen.*

LAW DEPARTMENT 229
By *George A. Walker, K.C.*
(First Through Passenger Train: page 231)

IMMIGRATION AND COLONIZATION 232
By *H. C. P. Cresswell*, Chief Commissioner, Department of Immigration and Colonization.

DEPARTMENT OF NATURAL RESOURCES 237
By *S. G. Porter*, Chairman, Advisory Committee, Department of Natural Resources.
(Post Office to Order: page 244)

Page

DEVELOPING CANADA'S RESOURCES 245
By *Gordon M. Hutt*, Development Commissioner.
(Well Named the 'Scotland': page 249)

CHIEF ENGINEER'S OFFICE 250
By *John E. Armstrong*, Chief Engineer.
(First Western Excursion: page 251)

AID TO AGRICULTURE 252
By *L. C. McOuat*, General Agricultural Agent.

AUDITING FREIGHT RECEIPTS 258
By *E. F. Lawson*, Auditor of Freight Receipts.
('Opening the Throttle': page 261)

PASSENGER REVENUE ACCOUNTING 262
By *C. B. Gordon*, Auditor of Passenger Receipts.
(Ready-Made Farms: page 266)
(Troops to Northwest Rebellion: page 266)

PENSIONS 267
By *F. J. Curtis*, Superintendent of Pensions and Staff Registrar.
(Donald Smith Helped the West: page 268)

WINDSOR STREET HEADQUARTERS 269
By *A. S. Piers*, Manager, Real Estate Department.

WORLD SERVICE FOR WORLD WAR 273
By *Jack Maunder*, Press Relations Officer, Montreal.
(Mr. Coleman's Tribute: page 287)

SAFETY 288
(Jim Hill in St. Paul: page 289)

BOOKS FOR FURTHER READING 290

INDEX 291

MAPS ..... Back Cover
North American service and world service.

The Canadian Pacific in Peace and War

By D. C. Coleman, LL.D., D.C.L., *Chairman and President*

The early history of the Canadian Pacific Railway is so well known that there is no necessity to undertake here a detailed recital of the events which led to the organization of the Company, and the construction of its original main line across Canada.

However, there is one aspect of the question which is so important that it cannot be stressed too often or too strongly. It is the fact that the Canadian Pacific Railway was not a mere adventure of private capitalists in search of fortune. Construction of the system was commenced as a Government undertaking, and it was only after experience had demonstrated that this was a slow method to follow, and that the load imposed on the young nation would be very heavy that the Government turned to private capitalists and urged them to pledge their resources to the execution of a vital national policy—one on which depended the creation of a nation out of the then Colonies of British North America.

The men who thus risked their fortunes did so on the clear understanding that they might lose them. While they received what now looks like minor assistance from the public treasury, they were given no guarantee of profit. They contracted to furnish the newly born nation with its essential transportation system on conditions which meant that, should they fail to execute their contract, they would be impoverished, while, should they succeed, they would be permitted to earn such returns on their investment as fortune might give them, subject always to the necessary condition that national policy must override private interest in the conduct of the Company's affairs.

An early incident in the Company's history showed that this was no empty theory, and that there must be an entire willingness to subordinate the interests of private property to the interest of the new nation.

The very existence of the Company was made possible by the confidence which a group of Canadian investors had in James J. Hill, a Canadian by birth, who had long before this migrated to the United States, and had become a great figure in the railway history of that nation.

Early in the period of construction, owing to opposition from the friends of the Grand Trunk Railway in England and opponents of the Government in Canada, the syndicate reached such a point of financial stress that, to take a single case, the late Lord Mount

Stephen not only pledged his cash and securities but his household furniture, his linen, china and silverware. Mr. Hill came to the conclusion that it would be unprofitable to build the original line around the north shore of Lake Superior. He suggested, in place of this, that the line should be built through Sault Ste. Marie, and the states of Michigan and Minnesota, on its way to the great plains of Western Canada. He stressed the fact that this would give the new railway access to an established and productive territory, in place of having it build a costly line through a wilderness of non-productive land.

It was impossible for the Canadian Government to accede to this request. The original proposals of the Grand Trunk Railway had been to build the new line through the city of Chicago, and this had been rejected by the Government of Canada, since it was a specific necessity of the Dominion Government that the railway should be built on Canadian territory. For this reason, Mr. Hill's proposal was rejected by the syndicate and by the Government, although it would, in all probability, have greatly eased the financial difficulties which the syndicate were meeting. As a result, Mr. Hill left the syndicate.

Later, as is well known, the Company's contract with the Government was altered on various occasions, always in the direction of surrendering special rights whenever this was deemed necessary in the general interest of Canada.

In short, it is important to keep in mind that the construction of the Canadian Pacific Railway was a part of the public policy of Canada. The railway was conceived as a national undertaking, not merely as a profit-making enterprise. This constitutes the sole case in history of the creation of a nation by the construction of a railway. All its history has to be read with this fact in view.

It is not too much to say that, at the insistence of the Government of Canada, and under the supervision of that Government, the Company in its early days carried a responsibility for developmental policies in Western Canada which fell to it because of the lack of existing Governmental machinery. In the execution of those policies the Company engaged in activities which, as Governmental machinery to carry them out was created, have passed, by easy degrees, first into the hands of the Dominion Government, and then into the control of the Dominion Government and the Provincial Governments in collaboration.

The contract with the Company was ratified in 1881, construction was started that year, and the line between Montreal

and the Pacific Coast was completed in 1885. The first through transcontinental passenger train left Montreal on June 28th of the following year.

The Company now operates 17,106 miles of railway. It has operating control of 3,796 additional miles in the United States. Before the outbreak of war, it owned an ocean fleet of 18 vessels, with a gross tonnage of 324,738. It also had half ownership of two vessels plying between Vancouver, Victoria, the Hawaiian Islands, Fiji, New Zealand and Australia. It operated its own coastal fleet in British Columbia and Alaskan waters, provided steamship service across the Bay of Fundy on the lakes and rivers of southern British Columbia and on the Great Lakes. Its air lines provided services to the Yukon, along the route of the Alaska Highway, down the Mackenzie River to the Arctic, to the mouth of the Coppermine River, to the remote fishing waters, trapping areas and mining camps in northern Alberta and British Columbia, in the Barren Lands, in northern Saskatchewan, Manitoba, Ontario, Quebec and Labrador, along the north shore of the St. Lawrence and between Vancouver and Vancouver Island.

It operates its own hotel, communication, express, sleeping and dining car services.

It founded, financed and still controls a mining and metallurgical company which has made history in its field and is one of the largest producers of non-precious metals in the world.

The Company's expenditures for immigration, colonization, land settlement, irrigation and other similar works up to the end of 1945 totalled more than $130,000,000. In the course of its effort, it built or acquired vast irrigation works, operated experimental farms, and lent financial aid to settlers until they were firmly established and on the way to prosperity.

For its services to Canada and to the British Commonwealth in the 1914-1918 War, it was commended by the King and by the Governments of Canada and of the United Kingdom, but its work for the cause during World War II was incomparably greater.

At the beginning of the conflict the entire resources of the Company were placed unreservedly at the service of the Dominion in its war effort. The record of the Canadian Pacific throughout these years is studded with notable achievements in many fields.

In its main task, that of providing the nation with transportation, the Company's rail facilities handled since the commencement of the war until V-J Day, more than 138 billion ton miles of freight and 12 billion passenger miles, figures which in their immensity it

is almost impossible to comprehend. Peak traffic loads four or five times normal volume were not uncommon. Express, telegraph and hotel facilities, similarly, had all handled record-breaking business volumes. Our railway shops, in addition to keeping the hard-pressed motive power and rolling stock in serviceable condition, turned out 1,420 Valentine army tanks, 75 main engines for corvettes, frigates and heavy armament landing craft, more than 600 other important articles of power equipment required by naval vessels, 3,000 naval guns, 1,650 naval gun mounts, more than 2,000 intricate anti-submarine devices and 120 units of gunnery range-finding and fire control equipment. High tribute to the quality of workmanship was paid by both military and naval authorities. The adaptation of the Company's shop facilities set an enviable standard of armament production, using existing buildings and plants. The achievement in this respect undoubtedly saved the Canadian taxpayer considerable money and the country much valuable time and material.

Another noteworthy chapter in the Canadian Pacific's war story was the record of the part played by the Company's steamships and the gallant seamen who served in them. These vessels were engaged in practically all major operations, including those of Singapore, North Africa, the Eastern Mediterranean, the expedition to Spitzbergen, the capture of the island of Madagascar and the landings on the Coast of Normandy.

Shortly after the outbreak of hostilities all Canadian Pacific vessels of British registry were taken over by the British Government under the provisions of the Liner Requisition Scheme. Also taken over, under charter arrangements, were the Empress of Asia, the Empress of Russia, the Princess Kathleen, and the Princess Marguerite of Canadian registry. In due course, therefore, all vessels of both our Atlantic and Pacific fleets and two of our coastal steamships, comprising a gross tonnage of 336,488, were engaged in war service.

The Battle of the Atlantic and actions elsewhere took heavy toll of these ships and their personnel. The Company's loss in ships was one of the heaviest suffered by an individual company during the war. Altogether, thirteen of them, representing 209,871 gross tons were lost, and in addition two vessels, the Montcalm and the Montclare, were taken over permanently by the Admiralty.

The Company's flagship, the Empress of Britain, after putting up an epic defence against attacks by enemy aircraft, was set afire, torpedoed and sunk. The Empress of Asia, when engaged in

carrying troops into Singapore, was heavily bombed by Japanese planes, set afire and sunk. Many of the crew made their escape in small boats to ports in Java and ultimately reached Canada. The Duchess of York was also the victim of an air attack, being struck by a stick of bombs from a German plane flying at an estimated height of 15,000 feet. The vessel was quickly in flames from end to end and was abandoned. The discipline and efficiency of the ship's personnel under such trying circumstances was particularly lauded by high-ranking military and naval officers. The Empress of Canada, carrying many Italian prisoners, was attacked in the South Atlantic and was struck by a torpedo amidships, the explosion blowing a great hole in the hull. Preparations to "abandon ship" commenced immediately and many were killed when the Italian submarine closed in and fired a second torpedo into the sinking vessel. Other famous passenger liners which formerly flew the Canadian Pacific house flag, and which were torpedoed and sunk, were the Duchess of Atholl and the Montrose. The Princess Marguerite met a similar fate in Mediterranean waters. All five of the well-known Beaver freighters are gone—the Beaverbrae, Beaverburn, Beaverdale, Beaverhill and Beaverford. The last-named was lost with all hands when attacked by the heavily-armed German pocket battleship Admiral Scheer.

The Niagara of the Canadian Australasian Line, in which the Company has a one-half interest, while proceeding on her lawful occasions in June, 1940, was treacherously sunk in the Tasmanian Sea.

The Company was signally honoured in having its Chateau Frontenac selected to house the delegates to two Inter-Allied conferences. The visits of the President of the United States and the Prime Minister of Great Britain, with their staffs, to Quebec for their deliberations are eloquent tribute to the service and appointments of that renowned Canadian Pacific hotel.

This brief recital would be incomplete without reference to the valuable work performed by the Company, at the request of Government authorities, in the initiation at an early stage of the war of the trans-Atlantic bomber delivery system, now so justly famous for the timely assistance it provided beleaguered Britain. Then, too, there was the contribution made by the Canadian Pacific Air Lines to the forging of the vital defence chain throughout western and northern Canada and the important part its training schools and overhaul plants played in the British Commonwealth Air Training Plan.

Officers and employees continue to demonstrate a fine public spirit in their generous response to patriotic appeals and campaigns. In the nine Canadian Victory Loans to date, the Company and its employees have subscribed a total of $204,719,100. Of this amount $138,792,000 has been taken by the Company and its Pension Fund, and by the Pension Fund of the Canadian Pacific Express Company. At the end of 1945 more than 24,000 officers and employees were purchasing War Savings Certificates under the payroll deduction plan.

Above all, there was the contribution made by the thousands of employees who joined the Armed Forces or engaged in special war services under the direction of the British Admiralty. A number were decorated by the British or Canadian Governments for conspicuous service. Many, unfortunately, contributed their lives in the common cause. Others were made available on loan to the Canadian and British Governments for special services.

It is anticipated that within a reasonably short period the great majority of Canadian Pacific employees will be released from the armed forces. A warm welcome is assured for all who wish to resume work with the Company. Careful planning has been done to insure that the progress of such employees will not be hampered as a result of their service to their country. It is recognized that many employees will have gained valuable training, added skills and broader experience and that these can be effectively utilized by a Company whose activities are as widespread and varied as are those of the Canadian Pacific. The Company also is anxious to place its physically handicapped war veterans in positions which will do justice to their abilities and thus provide them with a sense of genuine accomplishment, so essential in the process of readjustment.

It can be deduced from this recital that all employees and officers of the Canadian Pacific, those wearing the King's uniform, and those who were held to their tasks at home, displayed that fine spirit and that devotion to duty for which they are renowned. The late Lord Northcliffe speaking to the writer in Winnipeg, some twenty-five years ago, made this remark: "Mr. Coleman, I want you to explain to me why it is that the employees of the Canadian Pacific are different to the railway employees in any other country. They have a manner and an air of their own and you will hear that feature of your system discussed all the way from Shanghai to London."

Regardless of the strain imposed on all by wartime activities, the Company has been looking ahead to meeting the demands of

the future. Preparations have been made for the absorption and rehabilitation of employees who return to the organization after their war service is concluded. Provision has been made for picking up maintenance deferred because of shortage of labour during the past six years. Every effort has been made, with a considerable degree of success, to keep the equipment in first class condition, and necessary replacements have not been neglected. Since September, 1939, there have been put in service 189 new locomotives, including 28 diesel switching engines, and more than 8,000 freight cars. Replacement of passenger equipment retired has had to be postponed because of the demand for steel and lumber for other purposes, but a programme has been prepared and will be undertaken at the earliest possible moment.

The Company's steamship fleet, so heavily depleted by war casualties, is being replaced just as quickly as conditions will permit. The Beaverdell, the first of our post-war fleet, made her maiden voyage in March, 1946, followed by the Beaverglen in May, 1946. Two more vessels, the Beaverlake and the Beavercove, will follow later in the year.

Arrangements have also been made to purchase two vessels, the Empire Kitchener and the Empire Captain, from the British Government. These vessels, both of which were built in 1944, have a speed of 15 knots and accommodation for about 30 passengers. Each has a gross registered tonnage of approximately 9,900. They will be renamed the Beaverford and the Beaverburn and will be placed on the trans-Pacific service as soon as traffic conditions warrant.

The future of the transportation industry in Canada will depend on the support given by the people of the country to policies that will take due account of the value—the indispensability—of railways in the national economy, and that will ensure a fair return to investors in such enterprises as the Canadian Pacific.

It is our hope and belief that there is before the world a long period in which international trade will fructify and expand. In that period, industry, which on this continent and in the United Kingdom rose so magnificently to the demands of warfare, will be given the opportunity to apply the same inventive genius and power of organization to the supply of comforts and conveniences that will raise the standard of living and brighten the daily pathway of all mankind. To carry its full share of the burden and to take its due place in that development, the Canadian Pacific will be equipped and ready.

65 YEARS OF PROGRESS

(October 21, 1880 to December 31, 1945)

Conceived in 1880 to save confederation in Canada, the Canadian Pacific has grown to be the world's greatest travel system.

An unique and distinctively Canadian enterprise, its original role was that of the wedding ring in national unity.

Thus did D. C. Coleman, fourth chairman and fifth president, brilliantly put it during the 50th anniversary celebration for the first through passenger train which went from Montreal to the Pacific in 1886.

That train made effective "the physical and economic union of eastern and western Canada", said Mr. Coleman, at a ceremony in Montreal in 1936.

The Company was a railroad only in 1886, with express, Great Lakes boats and commercial telegraph branches as its chief auxiliaries. Since then it has added ocean steamships, hotels, air lines and full-fledged organizations in Europe and the Orient to earn world leadership.

Its combination of Atlantic steamers, transcontinental rail line and Pacific vessels made it the first Northwest Passage of the 20th century, the route from England to the Far East, in the vain quest for which many brave mariners died.

It has played a leading role in agriculture, mining, lumbering and manufacturing as a transportation agent, and sometimes, as an active participant, while its immigration policies have helped to fill some of the spaces in Canada's "great lone land."

20,902 Miles of Railway

As of December 31, 1945, it owned and controlled 20,902.2 miles of railway serving all the important industrial, commercial and agricultural sections of Canada with lines entering important areas in the United States.

It owns and operates more sleeping cars than any other railway in the world and maintains in Canada 3,000 stations and some 200 outside offices.

In the mechanical field three huge main shops and a network of smaller ones have been developed for locomotive and car work and many advances in the art of railroading have been fostered in them since their beginnings in 1882, when "an official memorandum on the position and prospects of the C.P.R." listed shops at Montreal for the manufacture of locomotives and passenger cars, at Perth for the manufacture of freight cars and at Winnipeg and Carleton Place for general repairs.

At the outbreak of World War II it had in service 49 steamships, gross tonnage of 399,517 tons, on the Atlantic and Pacific

oceans, the Great Lakes, the British Columbia coast and lakes and rivers, the Bay of Fundy and for cruises to the West Indies, Scandinavia and the Baltic and round the world, and held a half-interest in a line to the South Pacific (Australia and New Zealand). Physical operation of its ocean services proper is the work of Canadian Pacific Steamships Limited.

Its 14 splendid hotels in Canadian cities and Summer resorts, together with six bungalow camps in the Canadian Rockies and in Ontario, are known the world over for the utmost in service and comfort.

191,373 Miles of Telegraph Wire

Over its vast communications system of 191,373 miles of telegraph wire messages go to all parts of Canada, with connections to the United States and to every part of the world. **Provision of the overland link for the first "All Red Route" for Empire cables from Great Britain to Australia was one of the major contributions by the communications department.**

World-wide transportation and financial service is offered by Canadian Pacific Express Company, which operates over land and sea for 33,250 miles. Its organization includes 8,828 offices and correspondents here and abroad with Canadian Pacific travellers' cheques being honored in the remotest parts of the globe.

Its air arm provided one of the bright chapters in Canada's war effort during World War II in the Far North, the British Commonwealth Air Training Plan and ferrying of bombers overseas. The north-south routes of Canadian Pacific Air Lines, Limited, provided the transportation service needed for the emergence of the Alaska Highway, the Northwest Joint Defence Air Route, the oil wells and the pipe line in the Far North and freighted vital minerals from there. For the air training plan the air lines at one time operated seven schools and managed five aircraft repair and engine overhaul plants, and in 1944 a total of 56,394,000 training miles was flown by six air observer schools. **In the flying of the giant bombers to beleaguered Britain for use against the Reich it was a Company organization which pioneered the work,** later taken over by the Royal Air Force, first in the ferry command and then in the transport command.

Canada, Canadian Pacific Synonymous

The important defence role undertaken by the air lines, incorporated early in 1942 with the Company having had a Dominion charter for owning and operating aircraft within and without Canada since 1919, is the latest example of the Company's anticipation of the country's needs.

All down the years Canada and the Canadian Pacific have marched ahead together. Indeed, to the world at large, the two have become synonymous and nowhere was this better illustrated than in peacetime when the Company's proud liners flew their red and white checkered house flags in foreign ports. There, for all the world to see, was a little bit of Canada, and a most comforting sight it was, for Canadians sated with travel in strange lands.

The Company serves a country in which the population has grown from the close to 4,325,000 persons revealed as resident in the Dominion by the census of 1881, when the original Canadian Pacific Syndicate assumed the monumental task of connecting the Atlantic and the Pacific, to the more than 12,119,000 resident in Canada in 1945.

An even truer guide to progress than a comparison of population comes from setting operating and financial figures for 1886, when the main line was opened, and earlier, side by side with those for 1945 in the following table:

	1886	1945
Total Assets:	**$161,485,798.65**	**$1,605,895,632.00**
Transcontinental train time:	**5½ days: Montreal to Port Moody**	**In 1945 — 3-2/3 days: Montreal to Vancouver**
Line mileage of railway:	**4,406: Built-acquired (In 1881 — 713 miles, taken over from Govt. and completed by C.P.R.)**	**20,902.2: Owned and controlled.**
Locomotives, other rolling stock:	**751 (in 1882)**	**85,566**
Weight of rails:	**56 lbs. per yd.**	**102 lbs. per yd., main line; 130 lbs. per yd., Revelstoke to Field.**

Great National Work

Montreal was Canada's largest city in the early days of the Company (155,238 population in 1881), just as it is now (1,362,305

in 1945), but, elsewhere along the transcontinental line, amazing changes show what a great national work the Canadian Pacific was.

Winnipeg, now Canada's fourth largest city, with a population of 229,000, was a boom town of 25,000 in those days, with the first C.P.R. train running into that city over the Louise Bridge on July 26 of 1881. **There was no Vancouver, now third for the Dominion with over 300,000 residents.**

Sudbury and the thriving Nickel Belt, wherein operates the modern colossus of International Nickel, was just bush country in which a curious construction gang foreman, Tom Flanagan, two years later, in March of 1883, was to investigate an outcrop of rock and find copper sulphide before the cutting of a grade on the right of way exposed the ore deposit which led eventually to the nickel empire.

Equally wild was the head of the Great Lakes, where the skyline of Port Arthur and Fort William now is pierced by towering grain elevators, and, farther on, Kenora (then Rat Portage), which now boasts a gigantic flour mill.

Cities like Regina, first named Pile o'Bones, because buffalo bones was the only freight it had to offer, know what the Canadian Pacific has meant in making it the queen city of the great granary of the prairies.

First Move Into Consolidated in 1897

Or, symbols of the development the Company has nurtured could be the coal mines and sugar beet fields in the Lethbridge district, and the giant smelter of the Consolidated Mining and Smelting Company at Trail, the first edition of which was mentioned in the annual report of 1897. That official record states "the smelting works at Trail Creek," built by F. Augustus Heinze, was amongst the undertakings of the Columbia and Western Railway Company which the Company was buying in 1897.

All of this growth is part of the story of the Canadian Pacific—a story of courage, honesty and steadfastness and one which has contributed much to the drama which has colored Canada's way of life. An epic of personal sacrifice and effort, the saga of the Canadian Pacific can stand with anything in the Dominion's past from the days of French Canada's fur traders and Indian fighters down to the present day.

First Contract in 1880

The story started on October 21, 1880, when the Government of the day, headed by Sir John A. Macdonald, signed a contract with the original Canadian Pacific Syndicate, which contract was ratified February 15, 1881, and then taken over by the incorporated

Canadian Pacific Railway Company, calling for the transcontinental line to be completed 10 years later. The line was in operation four years and six months later to save five and one-half years on the contract, after one of the great engineering feats of history, **and by July 1, 1886, all loans made to the Canadian Pacific during construction were paid in full.**

Summarized, the construction period was as follows:

Date set by contract for completion of transcontinental line—May 1, 1891

Date of actual completion—Nov. 7, 1885

Time allowed by contract for completion of transcontinental line—10 years.

Actual time taken by Company for completion—4 years, 6 months

Time saved from contract time—5 years, 6 months.

Under the contract the Company undertook to build from Callander (now Bonfield) to Port Arthur and from Winnipeg (Selkirk) to Kamloops via Yellowhead Pass (the line actually was built through Kicking Horse Pass, shorter but in more difficult ground). The Government undertook to build or complete for the Company from Port Arthur to Winnipeg and from Port Moody to Kamloops. All was to be completed, equipped and in running order on or before the first day of May, 1891. Under its charter the Company was given wide powers to acquire other railroads by amalgamation, purchase or lease.

In payment for the desperately needed link with the Pacific, the Government contract called for the syndicate to receive partially constructed railways to the cost of $27,700,000, a cash grant of $25,000,000 and 25,000,000 acres of land. **Terms of the bargain were favorable to the Government as compared with the assistance given to similar projects in the United States.**

Actually when measured against the terrific cost in men, money, brains and courage required to put the line through such difficult terrain as Lake Superior's north shore and the Canadian Rockies, the sums granted were pitiful drops in the bucket.

$700,000 for Mile of Track

The difficulties which had to be overcome were staggering. For instance a mile of the track around Jackfish Bay off Lake Superior cost $700,000 and $500,000 was not an unusual cost per mile at many points in the Rockies.

Problems entirely new to railway construction up to that time had to be met and vanquished, with those primarily responsible for completion of the railway in less than half the specified time being George Stephen, William C. Van Horne and Thomas G. Shaughnessy. All three later received in peerage or knighthood

recognition of their services to Canada and the British Empire—Stephen being made first Sir George and then Lord Mount Stephen, Van Horne being created a Knight Commander of the Order of St. Michael and St. George, and Shaughnessy first becoming a knight and then being raised to the peerage with the title of Baron Shaughnessy.

As told in the records of the right of way and lease department the story of construction on the Company's end of the contract is:

Western Lines—This was the original central section extending from Stephen street in Winnipeg to Savonas Ferry, B.C., 25 miles west of Kamloops. Work was commenced in 1881 westward from Winnipeg and the points which the lines had reached in succeeding years were: 1882—To 94 miles west of Swift Current; 1883—To Stephen, 122 miles west of Calgary; 1884—To Rogers Pass (summit of the Selkirks) from Stephen (summit of the Rockies); 1885—To Savonas Ferry. (**The Last Spike was driven on November 7, 1885, at Craigellachie,** 290 miles west of Calgary and high in the Selkirks, by Donald A. Smith, later Lord Strathcona and High Commissioner for Canada in London, marking completion of the line from Montreal to Port Moody, B.C.)

Eastern Lines—This was the section from Callander (Bonfield) to Port Arthur. Construction was started in 1881 and points reached in succeeding years follow: 1882—To Sturgeon River (40 miles from Callander); 1883—To 167 miles west of Sturgeon River; 1884—Track laying completed to Port Arthur. (**The rails connecting Montreal and Winnipeg were linked at Noslo, Ont., west of Jackfish, on May 16, 1885,** with the last spike being driven by Colonel Oswald of the Montreal Light Infantry enroute to the Northwest Rebellion.)

That the construction of the C.P.R. was a service of nation building may be proved by a review of conditions prior to the start of operations in forging the bond required before confederation could work in a country as widespread as the Dominion.

There had been some growth in the population of Canada in the decade prior to 1880 due to immigration and it was then, perhaps, that Canada came to be looked upon, by British people and Europeans alike, as a country in which they could establish homes on land of their own with the freedom of thought and action and the chance to prosper to which all naturally aspire.

Confederation of Ontario, Quebec, Nova Scotia and New Brunswick had been effected in 1867. On the pledge that it would very soon be connected with eastern Canada by a railway, British Columbia had entered in 1871, twenty years after Joseph Howe, the great Nova Scotian, had made the remarkable prophecy which the C.P.R. was to realize.

Joseph Howe's Vision

In that vision of what was to come Howe said at Halifax in 1851: "I am neither a prophet, nor the son of a prophet, but I believe that **many in this room will live to hear the whistle of the steam engine in the passes of the Rocky Mountains and to make the journey from Halifax to the Pacific in five or six days.**"

Politically established with the entry of British Columbia, a year after Manitoba had come in, in 1870 and two years before Prince Edward Island made its move in 1873, and with its feet upon the path of economic progress, the new Dominion could never reach full development without some such nation-building agency as the Canadian Pacific later proved to be.

West Isolated from East

The older portions of Canada had some railway service with the Grand Trunk and the Intercolonial linking up Halifax and southwestern Ontario. But the western territory lately transferred from the Hudson's Bay Company and the Pacific Coast was absolutely isolated from the East.

No time could be lost. Manitoba, growing slowly but steadily, was looking to United States railways as an outlet for its wheat crop. British Columbia, sickened of continued postponement of a start on conquering the mountains separating it from the rest of the Dominion, began to talk of secession.

The urgent necessity of railway construction as a means of holding the West was understood as early as 1870 by Sir John A. Macdonald who wrote in a letter, now in the Dominion Archives in Ottawa, that "it is quite evident to me not only from this conversation but from advices from Washington, that **the United States Government are resolved to do all they can, short of war, to get possession of the western territory,** and we must take immediate and vigorous steps to counteract them. One of the first things to be done is to show unmistakably our resolve to build the Pacific Railway . . . it must be taken up, by a body of capitalists and not constructed by the government directly."

However, in 1873, the government changed and Alexander Mackenzie succeeded Sir John as premier and he had different ideas regarding the Pacific road.

He evolved a less costly plan, building a line that would cross the country partly by rail and partly by water, using the Great Lakes to avoid formidable engineering difficulties on the north shore of Lake Superior. He let contracts for construction of the easier parts of this route, one of the first to be started being a line from a point east of the Red River in Manitoba to the present site

of Fort William—then Prince Arthur's Landing. The Government limited its expenditures in British Columbia and the Rockies to surveys of the various possible routes and passes.

Typical of Government Building

But progress was slow for the four or five years that followed and the Government found itself handicapped in every direction by those evils which later experience has shown to be the common lot of all governments when they invade the field that properly belongs to private enterprise. The country became dissatisfied and when **Sir John Macdonald came out in 1878 with proposals for what he called the "National Policy" and vigorous action in building the transcontinental line, the voters swept him back into power with a clear mandate to go forward.**

Sir John's government, however, found itself beset by the same difficulties that had harassed his predecessor, but in 1880, Sir Charles Tupper, minister of railways, let a contract for construction of a line eastward through the mountains, doing this in the face of much political and other opposition. Pieces of the line constructed had both their ends in the air and nowhere was there any confidence in the ultimate success of the venture.

The turning point, it seemed, was not far off. Heartily sick of government railway building, the opinion was fast growing that the line should be turned over to private enterprise, provided a strong, responsible group could be found to undertake it.

Canada turned in her hour of need to the mother country. Sir John Macdonald, accompanied by Sir Charles Tupper and Hon. John Henry Pope, journeyed to England to interest British capitalists in the scheme but received little encouragement. The difficulties of the plan from the physical side were too apparent even at that distance and enemies of the line in Canada had been using their powerful connection in London to effectively undermine the project.

Against these combined forces of political and economic opposition and the physical difficulties, however, were soon arrayed as courageous a group of men as ever were inspired by the idea of empire-building.

Stephen First President

Courage and faith in his adopted country led Stephen to become the first president of the Canadian Pacific Railway Company, and the group which he headed completed the bargain with Sir Charles Tupper to take over the whole project of the Canadian transcontinental line

The Government had failed to do the work itself, and the difficulties were still as great, but opposition to the scheme still

was rampant, and in England was epitomized in the devastating article appearing in "Truth" which described the Pacific railway as a foolish and fantastic waste of money, saying that the "Canadian Pacific, if it is ever finished, will run through a country about as forbidding as any on earth . . . **British Columbia is not worth keeping. It should never have been inhabited at all . . . In Manitoba those who are not frozen to death are often maimed for life by frostbites. Ontario is poor and crushed with debt.** It is certain to go over to the States and when that day comes the Dominion will disappear."

At home and abroad the campaign continued with political stump speeches, newspaper editorials and magazine articles, more or less in keeping with "Truth's" attack, from 1871 to 1885. A prominent newspaper declared the C.P.R. would never pay for its axle grease. It was only the lash of party discipline wielded by Sir John and his close colleagues that put the scheme through Parliament.

Kept Line in Canada

But they were dauntless, these Canadian Pacific builders—Stephen, Duncan McIntyre, Richard B. Angus, Donald A. Smith, John S. Kennedy and James J. Hill, and five of them—Stephen, Angus, Smith, Kennedy and Hill—had made a great success of the bankrupt St. Paul, Minneapolis and Manitoba Railway a few years before to be in a financial position to undertake the terrific task of building Canada's confederation line.

Jim Hill did not stay long with the Company. Insisting that the line should be built through the United States between Ontario and Manitoba, while both the Government and his associates in the Company insisted it should stay in Canadian territory along the north shore of Lake Superior, Hill resigned his directorship in disgust on May 3, 1883, and became an implacable foe.

While Stephen, McIntyre, Angus and Smith wrestled with monumental problems of finance they brought to their aid for the practical work of railway building **Van Horne, and to his amazing resourcefulness, energy and strength of character must go much of the credit for the successful completion of the project,** as with mighty drive, he surged on over a succession of obstructions and heart-breaking difficulties.

Van Horne's talents fitted him to be the dynamic leader "in the field" of the thousands of men who played their parts in this drama of empire-building to earn a place in the fine tradition that has grown with the years around the Canadian Pacific. They left a heritage to those whose duty and privilege it has been to carry on since.

Canada, England, the United States and France were repre-

sented in the original Canadian Pacific Syndicate for the letters patent to the Canadian Pacific Railway Company, in which is embodied a copy of the contract of 21st October, 1880, shows that the contract was made between the Government of Canada and George Stephen and Duncan McIntyre, of Montreal; James J. Hill, and Richard B. Angus, of St. Paul; John S. Kennedy, of New York; Kohn, Reinach & Company, Paris; Morton, Rose & Company, London.

The Company was incorporated February 16th, 1881.

First Canadian Pacific Directorate, 1881—The directors at the time of the first meeting on 17th February, 1881, were: George Stephen, president; Duncan McIntyre, vice-president; John S. Kennedy, Richard B. Angus, James J. Hill, H. Stafford Northcote, Pasco du P. Grenfell, Charles D. Rose, Baron J. de Reinach.

Formation of Company and Construction

Red letter dates in early company history were:

Contract signed with Canadian Pacific Syndicate.	Oct. 21, 1880
Contract ratified by Parliament	Feb. 15, 1881
Canadian Pacific Railway Co. incorporated	Feb. 16, 1881
First sod turned	May 2, 1881
Prairie Section of main line finished	Aug. 18, 1883
Lake Section finished	May 16, 1885
First Winnipeg-to-Montreal train	Nov. 1, 1885
Last Spike driven at Craigellachie in Eagle Pass	Nov. 7, 1885
First Montreal-to-Pacific train	June 28, 1886

The Canadian Pacific Railway was built for the most part through a wilderness where men had to be both housed and fed by the Company while immense distances, the muskegs and the mountain barrier offered new problems.

Start Made on May 2, 1881

Construction began on May 2, 1881, when the Company took over 162 miles of lines built by the Government from Selkirk to Pembina and from Selkirk to Cross Lake. By December the main line was located as far as Moosejaw Creek, and trains were running over the 145 miles between Winnipeg and Brandon.

Van Horne became general manager on December 2, 1881, and took over at Winnipeg on New Year's Day of 1882. He brought with him as general superintendent, John M. Egan, who had served him well on construction on the Southern Minnesota Railroad, and 10 months later put Shaughnessy in charge of purchasing at Montreal as chief purchasing agent. In September of 1882 he made Henry Beatty manager of lake transportation in preparation for operation of **the Owen Sound-to-Port Arthur steamer service, which, in 1884, made possible an all-**

Canadian route, from East to West, rail and water, before the rail line was completed.

Floods on the Red River delayed the start in the Spring of 1882. When conditions permitted, Van Horne swung 5,000 men and 1,700 teams into action on the prairies. On February 16, trains were running from Winnipeg to a point 31 miles west of Brandon and on October 3 they were running 356 miles to Regina. Six hundred and twenty-nine miles of track had been located and 508 miles built, besides 897 miles of telegraph lines and 32 stations.

Van Horne drove the Prairie Section to completion in 1883, on August 18, with Calgary being reached on August 10, and an average of three and a half miles of track a day was laid during that Summer. Trains were in operation over 881 miles of the section by September.

Van Horne Created Traffic

When mileage in operation had increased from 748 to 1,552 Van Horne set to work to create traffic. He constructed grain elevators at Head-of-the-Lake and Winnipeg, built at Lake-of-the-Woods a flour mill, since grown into one of the largest milling concerns in the world, bought timber lands in Ontario and laid plans for a string of hotels, with the start on the first of them, Banff Springs Hotel, being made in 1887.

To demonstrate the fertility of the prairies to the sceptical he broke ground for 10 model farms west of Winnipeg, forerunners of the model supply farms in the West and **powerful aids to the land settlement program, aggressively pushed since Stephen first formulated plans for a Ready-Made Farm Scheme in London in 1880,** Hill brought in 20,000 settlers to the West in 1881 and John H. McTavish was made first land commissioner.

Express service from Prince Arthur's Landing (now Fort William) commenced May 14, 1883, via the steamer Campana, connecting with Vickers Express, which operated on the Toronto Grey & Bruce Railway—this being the first all-Canadian express service between eastern and western Canada. A year earlier the Company operated its first express service—over 291 miles from Rat Portage to Oak Lake, Man., and the 20 miles from Winnipeg to Stonewall—with headquarters in Winnipeg.

"200 Miles of Engineering Impossibilities"

Work on the difficult Lake Section had started in the Spring of 1883. Van Horne later described part of it as "200 miles of engineering impossibilities". But the line was built with 12,000 men and 5,000 horses being employed. Later Van Horne put a track-laying machine to work to aid construction over mosquito-

infested swamps. Two hundred miles of track on this section cost $12,000,000 to build. They were Van Horne's "impossibilities".

Three dynamite factories were built. The dynamite used cost $1,200,000.

The three miles of track around Jackfish Bay cost the Company $1,200,000. Between Sudbury and Cartier a lake had to be lowered 10 feet to get a foundation for track.

On May 16, 1885, when the entire section was opened to get troops through to the Northwest Rebellion, the speed with which these troops reached their objective, as compared with the Wolseley Expedition in the Riel Rebellion, helped the Company's financial position at a critical period.

This opening of the rail line at Noslo came roughly a year after the start of Company steamship service on the Great Lakes for which Henry Beatty had been sent to Scotland to arrange for three Clyde-built vessels.

Throughout the construction of the line north of Lake Superior supplies were brought by steamer and barge up the rivers tributary to the lake and two tugs—Butcher's Boy and Butcher's Maid —carried cattle from Port Arthur for the camps.

Chose Site for Vancouver

Surveying and location parties had gone into the Rockies in 1883. Van Horne later went to the Pacific Coast and crossed the Rockies from the west side. He chose the site for Vancouver and named it. On his way east he found Calgary, Medicine Hat and Regina grown into busy towns on sites where formerly only struggling little settlements had existed.

In 1884 of Winnipeg's population of 25,000, six thousand were directly dependent upon the Canadian Pacific Railway.

That year the Government turned sections from Thunder Bay to Rat Portage over to the Company to finish. Seven successive lines of rails vanished in a muskeg on this line.

By June, 1885, the railway was open from Montreal to a point near the summit of the Selkirks, and, **on September 26, 1885, notice was given from Yale, B.C., by Andrew Onderdonk, the Government contractor, that "our last rail from the Pacific has been laid in Eagle Pass today"** and all employees were being paid off on the Government end of the line on September 30.

The Last Spike

Craigellachie, where the historic Last Spike was driven on November 7, 1885, lies between Sicamous and the Gold Range in British Columbia.

When that spike was driven, 4,325 miles of railway comprised the C.P.R. of that day, 1,700 miles in excess of contractual obligations.

The spike was plain, working iron and the place chosen in Eagle Pass for the historic event was named in honor of a rock, "Craigellachie", in the native Scotland of Stephen and Smith, which was a gathering place for Clan Grant in times of danger. **It appeared in the cable, "Stand fast Craigellachie", which Stephen sent from London to Smith at Montreal when the financial outlook was black.**

Present on the late-Fall day in 1885, in addition to Smith, were Van Horne, Major A. B. Rogers, chief engineer of the Mountain Division, and discoverer of Rogers Pass through the Selkirks in following directions given him by Walter Moberly, assistant surveyor general of British Columbia in 1865; Sandford Fleming, a director and the envoy to England in 1863 for the Red River Settlement at Fort Garry seeking a rail connection between there and eastern Canada; George R. Harris, of Boston, a director; John M. Egan, general superintendent of Western Lines; James Ross, manager of construction for the Rocky Mountain Section; John H. McTavish, land commissioner; Arthur Piers, secretary to Van Horne and afterwards manager of steamship services; Frank Brothers, roadmaster; Dugald McKenzie, locomotive engineer; Miller, porter on the private car Metapedia; E. Mallandaine, a water boy; Tom Wilson, Major Rogers' guide; Marcús Smith; Henry I. Cambie, a government engineer on the construction; and M. J. Haney, working for Onderdonk.

Major Rogers held the tie in position and Van Horne, called on for a speech, said "the work has been well done in every way." The conductor then topped it all with "all aboard for the Pacific."

First Transcontinental Passenger Train

The first transcontinental passenger train left the old Dalhousie Station, Montreal, at 8 p.m. on June 28, 1886, and at noon of July 4th it reached Port Moody, the terminus on the Pacific Coast until the line was extended 12 miles to Vancouver on May 23, 1887. **That trail-blazing train was sharp on time, with the journey taking 5½ days. Travelling on Summer schedule in 1945, the "Dominion" went from Montreal to Vancouver in 3⅔ days.**

In January, 1924, a silk train made the trip from Vancouver to Prescott—2,800 miles—in 81 hours, 10 minutes. Had its destination been Montreal it would have arrived there in 84 hours (3½ days) if the same speed had been maintained.

Trackage to Time of the Last Spike and Since

The Last Spike total of 4,325 miles was achieved by amalgama-

tion, purchase and lease, as well as by construction, with a breakdown of the figure showing 2,097 miles built by the Company, 799 miles leased by the Company, 744 miles built by the Dominion Government, 375 miles purchased by the Company and 310 miles acquired by amalgamation.

Records of trackage up to November 7, 1895, include entries showing that: Montreal was reached through amalgamation in 1881 of the Company and the Canada Central Railway (Brockville to Ottawa and Carleton Place to Callander) and purchase in 1882 of the Quebec, Montreal, Ottawa and Occidental Railway's western section (Montreal to Ottawa by the north shore of the Ottawa River). The short line connection between Montreal and Ottawa was opened in 1898, the Company having secured the line of the Montreal and Ottawa Railway when it ran from Vaudreuil to Pointe Fortune and built on from Rigaud into Ottawa . . . Connections with Ontario and the Detroit gateway to the United States came in 1884 through lease of the Ontario and Quebec Railway (Montreal West to St. Thomas and Toronto to Owen Sound), with an extension to Windsor (and Detroit) from Woodstock being completed in 1890 . . . Southern Manitoba was served in 1884 by the lease of the Manitoba South Western Colonization Railway . . . Quebec City and Montreal were joined in 1885 by the purchase of the North Shore Railway.

Since the Last Spike some important extensions in the growth of the system have been: Connection with the Winter port of Saint John, N.B., by the lease in 1886 of the Atlantic and North West Railway and the use of its charter to build from Montreal through Maine to a connection with the New Brunswick Railway System leased in 1890 . . . First step to open up the fruitful Okanagan Valley in British Columbia was the lease in 1892 of the Shuswap & Okanagan Railway connection with the main line at Sicamous to complement the boats in service on Okanagan Lake . . . Connection with American lines started in 1888 when the Company became interested in the Minneapolis, St. Paul and Sault Ste. Marie Railroad Company (Soo Line) and the Duluth, South Shore and Atlantic Railway . . . Moose Jaw was connected with the international boundary in 1893 by the building of a line southeast to a connection with the Soo Line . . . The first beginnings of what was to become an alternative route through the Rockies by the Crow's Nest Pass was the lease in 1893 of the Alberta Railway and Coal Company, a portion from Dunmore to Lethbridge, being purchased outright in 1897. The line through the Crow's Nest Pass was built in 1897 and it connected with several leased lines serving the Kootenay district of British Columbia . . . Access to the United States through the Buffalo gateway was secured in 1897 through the building of the Toronto, Hamilton and Buffalo Railway, a joint undertaking of

the C.P.R., New York Central, Michigan Central and Canada Southern Railway Company . . . Northward extension in the West started in 1890 by an arrangement with the Calgary and Edmonton Railway to work that line for account of the owner, followed in 1900 by lease of the Manitoba and North Western Railway and construction from its western end to Edmonton, and acquisition in 1903 of the Calgary and Edmonton Railway. . . Vancouver Island rail service started in 1912 with the lease of the Esquimalt and Nanaimo Railway in an important lumbering district. . . Halifax and the Annapolis Valley of Nova Scotia first was served in 1912 through lease of the Dominion Atlantic Railway (which has had steamer connection across the Bay of Fundy between Saint John, N.B., and Digby, N.S., since 1895). . . A link between Sherbrooke in the Eastern Townships of Quebec and Levis and Quebec City was secured in 1913 through the lease of the Quebec Central Railway. . . The Peace River country of Alberta and British Columbia came within the Company's orbit in 1920 by the lease for five years of the Edmonton, Dunvegan & British Columbia Railway and the Central Canada Railway, to be worked for account of the owners. On termination of this lease on November 11, 1926, the railways were handed back to the Provincial Government of Alberta. Then in 1929 the C.P.R. and the Canadian National Railways jointly acquired what is known as the Northern Alberta Railways Company (made up of the undertakings of the Edmonton, Dunvegan & British Columbia Railway Company, Alberta & Great Waterways Railway Company, Central Canada Railway Company, Central Canada Express Company and the undertakings of the Crown in the right of the Province of Alberta concerning the Pembina Valley Railway).

The Company's network of tracks is as old as the beginnings of railroading in this country and as new as today.

One of the most historic pieces of road in the system is the Prescott-Ottawa line, built between 1852 and 1854 and acquired when the Company leased the St. Lawrence and Ottawa Railway in 1884.

At the other end of the scale is 9.5 miles of track serving Osoyoos in the Okanagan Valley, which was put into operation on December 28, 1944, when a special train came from Haynes, where the new line starts, to Osoyoos.

No Real "Last" Spike Can Be Driven

There was a "last spike" affair there at Osoyoos too, but, actually, no real "last" spike can be driven, for the Company continues to be guided by the dictum that a railway must keep growing, otherwise it dies or is eaten up by one that is growing.

The first beginnings of the service to the Orient offers a splendid example of this policy of never standing still. **It was less than a month from the arrival of the first transcontinental passenger train at Port Moody on June 28, 1886, that the first cargo from the Orient was landed at this point.** The W. B. Flint, an American clipper-built barque, brought it over—17,430 half-chests of tea—under Company charter from Yokohama. Thus was started the move into the ocean steamship field, on the Pacific in Company-owned vessels in 1891, and on the Atlantic in the newly-purchased Beaver Line in 1903, with Arthur Piers the first superintendent (1891) and then manager (1903). The first tea train left Port Moody on July 30, 1886, and arrived in Montreal on August 6.

Other services developed from sure appraisal of the needs of the times.

The British Columbia Coast Service, for instance, was born as the result of the heavy traffic between Vancouver and Victoria in the Klondyke Rush to the Yukon goldfields starting in 1898. The British Columbia Lakes and Rivers Service was acquired in 1898 to protect the Kootenay and other territories open to American lines. Extension to the South Pacific as a partner in Canadian Australasian Line came in 1931.

The founders broke with tradition where necessary, as in the birth of the communications department and the building and operation of the Company's own sleeping and dining cars.

In September of 1883 when the Company's commercial telegraph service was launched with offices at Winnipeg, railroads generally were providing pole right-of-way and operators for outside telegraph companies in return for the privilege of sending train orders over the wires. The experiment succeeded so well that on January 1, 1886, the C.P.R. Telegraph Department was launched with C. R. Hosmer as general manager at Montreal.

It also was standard practice in those early days for railroads to rent sleepers and diners fully manned from the builders when the Company constructed its own cars and trained its own personnel to look after them on the line.

Some of the Company's pioneering moves paid off more quickly than others. The Orient service, for instance, provided a backlog of traffic which helped the Company survive the depression of 1893-95. This was two years after Shaughnessy went to China and Japan in 1891 "to look into matters generally and to make such arrangements for conducting the Company's business as he may find necessary."

The first headquarters for the Orient was established at Hong Kong by David E. Brown, first agent

for freight and passenger traffic at Port Moody in 1886 and who was sent to the Antipodes and the Orient by George Olds, General Traffic Manager.

The first English office was open at 18 Parliament street, London, at the time of the initial shareholders' meeting on March 29, 1881.

In connection with the driving of the Last Spike in 1885 it was fitting that this ceremony should take place in the Rockies, as it did at Craigellachie, for it was in this "sea of rock" that the Company was to make railway history with two of the most notable engineering feats on record—the Spiral Tunnels and the Connaught Tunnel—built to reduce grades and hazards of snowslides.

Spectacular Engineering Feat

The Spiral Tunnels between Hector and Field on the main line, opened for traffic in August of 1909, constitute a truly remarkable engineering achievement. Going west, the track enters the first tunnel under Cathedral Mountain, 3,255 feet in length, turns 291 degrees of a circle and emerges 54 feet lower down. The track then turns east, crosses the Kicking Horse River, and enters the second tunnel 2,922 feet in length under Mount Ogden and turning 217 degrees, emerges 50 feet lower down.

The Connaught Tunnel piercing Mount Macdonald on the main line through the Selkirk Mountains is one of the longest in the world. It is slightly more than five miles in length, is double-tracked and measures 29 feet from side to side, 23 feet from base of rail to crown and is lined throughout. It was turned over for train operation on December 9, 1916.

Bridges

The system boasts many other remarkable engineering jobs, particularly in bridges of which there are 4,000 on Canadian Pacific lines. **If placed end to end these bridges, with the 30,000 culverts, would extend nearly 70 miles.**

The world-famous Lethbridge Viaduct on the Crow's Nest branch of the Canadian Pacific is 5,435 feet long, with a maximum difference in elevation of 314 feet between the river bed and base of rail.

The Canadian Pacific bridge across the North Saskatchewan River at Edmonton is a double-decked structure, approximately 2,550 feet in length. The rail level of the river spans is 150 feet above mean water level.

The Canadian Pacific line northwest from Moose Jaw crosses the South Saskatchewan River near Outlook by a high-level bridge 3,004 feet in length. The rails are 150 feet above the river bed.

The Canadian Pacific double-leaf bascule bridge across the United States ship canal at Sault Ste. Marie has a span of 336 feet from centre to centre of the channel piers, and, when raised, provides the widest channel afforded by a moveable bridge.

At Montreal, crossing the Lachine Canal, the Company's swing bridge is the longest of its kind in existence. The swing span is 239 feet, 7 inches long and weighs 615 tons. The difference of time between closed alignment for railway service and open alignment for canal traffic is exactly 70 seconds.

Between Highlands and Caughnawaga crossing the St. Lawrence River the Canadian Pacific has a bridge 3,675 feet in length.

Terminals

Terminals, too, call for no little engineering skill when they are as large as those for instance in Montreal, Winnipeg and Vancouver. In 1945 the main track, second track, industrial track, yard track and sidings making up Montreal terminals measured 275 miles. Winnipeg had 271 miles and Vancouver 171 miles, with Vancouver, Coquitlam, New Westminster and the Port Moody spur included in the latter total. At Fort William the trackage of the terminals division was 138 miles.

Another major engineering project was the reclamation of large areas of arid land east of Calgary through irrigation after the acceptance of the tract there in 1903 as part of the land grant.

But, there is more to the Canadian Pacific than an extremely difficult construction job well done in record time. It is more too than a collection of engineering marvels in tunnels, bridges, intricacies of sidings and irrigation projects or an invaluable servant of trade and commerce.

The great service rendered to trade and commerce by the Canadian Pacific's vast transportation system is well known and appreciated. Less well known is the importance of the Canadian Pacific as a taxpayer.

$13,000 a Day in Taxes

For every day of its existence since 1883 the Company has paid more than $13,000 in taxes.

Tax payments up to the end of 1945 totalled $301,000,000 and covered charges on railway property and on outside operations such as hotels, express, land and communications. Neither sales taxes paid on huge purchases of materials and supplies, nor duties paid on such materials and supplies as originate outside of Canada, nor taxes on fares and berths collected for the Government are included in this figure.

The importance of the Canadian Pacific as a purchaser of materials and an employer of labor can be gauged by the fact that in the decade 1936-1945 the normal operations of the railway, express, communications, hotels and steamships required an expenditure of almost $2,000,000,000 or approximately $3,800,000 for every week in the period.

Low Rates

The Canadian Pacific offers freight and passenger service to the people of Canada at rates as low or lower than those of any other country—the result of the Canadian Pacific policy in keeping fixed charges to a minimum.

In 1945 earnings per passenger mile amounted to 1.97 cents, and the revenue per ton mile of freight was .83 of one cent, indicating the narrow margin of profit on which the Company operates.

The ratio of working expenses (excluding taxes) to gross earnings was 81.66 per cent in 1945.

Some idea of the world-wide scope the Company has attained can be had from a list of its offices—in addition to the 3,000 stations and some 200 outside offices maintained in the Dominion.

It has traffic representatives, passenger and freight, in 28 offices in 28 American cities in 20 different states, including the District of Columbia (Washington). Other U. S. territories are looked after by one agency in Hawaii and four in Alaska. In addition there are three in the West Indies.

Throughout World War II offices were maintained in England, Scotland and Ireland and in Sweden, Switzerland and Spain by the European Organization of the company. On the other side of the world Australasia was served throughout hostilities by eight Canadian Pacific agencies in six Australian states and Tasmania, three in New Zealand and one in the Fiji Islands and services under the Oriental Manager were maintained until the fall of Hong Kong and Manila.

The Owners

Who owns all this?

The actual owners of the Canadian Pacific Railway Company are the holders of its ordinary and preferred shares.

At December 31, 1945, the distribution of these was as follows:

	Ordinary		Preference		Total
	No. of holdings	*Percentage of stock*	*No. of holdings*	*Percentage of stock*	*Percentage of stock*
Canada	**22,267**	**14.60**	**158**	**.55**	**10.44**
United Kingdom and other British	**13,476**	**47.24**	**26,987**	**96.47**	**61.82**
United States	**18,605**	**31.89**	**74**	**.34**	**22.54**
Other Countries	**3,506**	**6.27**	**562**	**2.64**	**5.20**
	57,854		**27,781**		

Figures for the 30 years prior to 1933 show that shareholders subscribed for a total of $383,698,829, or a premium of $42.11 per $100 share as an evidence of public confidence in Canada and the Canadian Pacific.

Six Percent After 24 Years

While every $100 share of ordinary stock, to the end of December 31, 1926, yielded to the treasury an average of $112, and an amount equal to $31 per share had been turned back into the property from surpluses, etc., it was not until 1904, twenty-four years after the Company's incorporation that yearly dividends reached 6 per cent.

Dividends of 3 per cent. were paid from 1885 to 1888 and 4 per cent. in 1889. From 1890 to 1893 5 per cent. was paid and other dividends include: In 1894, 2½ per cent.; in 1895, 1½ per cent; and in 1896, 2 per cent. The first $25,000,000 of Canadian Pacific stock to be sold realized only 40 cents on the dollar. **Common shares of the Canadian Pacific ($100 par) sold as low as 67 in 1890, 72 in 1891, 66 in 1893, 58 in 1894 and 33 in 1895.**

In tabulated form some interesting figures on the Company are:

Capital and Funded Debt

Total assets, Dec. 31, 1886, when main line was opened	$ 161,485,799.00
Total assets, Dec. 31, 1945	1,605,895,632.00

Property Investments

Railway, rolling stock and inland steamships	**$841,233,381**
Ocean and coastal steamships	**40,091,223**
Hotels, communications and miscellaneous properties	**97,501,149**
Improvements on leased property	99,262,694
Stocks and bonds—leased railway companies	133,481,665

Rail Traffic for 1945

Freight

Freight revenue	**$226,747,679**
Revenue freight tons	**54,822,012**
Average freight revenue per train mile	$6.48
Average revenue per ton of freight	$4.14
Average revenue per ton mile of freight (cents)	0.83c.
Classification of revenue tonnage carried:	
Products of agriculture	18,108,926
Animals and animal products	1,341,886
Products of mines	16,912,022
Products of forests	5,105,344
Manufactures and miscellaneous	11,966,869
Total carload traffic	53,435,047
All less carload freight	1,386,965
Total carload and less carload traffic	54,822,012

Passenger

Passenger revenue	**$56,491,985**
Revenue passengers carried	**17,740,684**
Average passenger revenue per mile of road	$3,317.00
Average passenger revenue per train mile	$2.72
Average revenue per passenger	$3.18
Average revenue per passenger mile (cents)	1.97c.

Mileage at December 31, 1945

Canadian Pacific Railway —		
New Brunswick district		841.3
Quebec "		1,643.9
Ontario "		1,423.5
Algoma "		1,222.6
Manitoba "		2,516.1
Saskatchewan "		3,627.0
Alberta "		3,107.8
British Columbia "		1,994.3
Dominion Atlantic lines		304.1
Quebec Central lines		356.5
C.P.R.		17,037.1
Canadian Pacific Electric Lines —		
Grand River Railway	18.4	
Lake Erie & Northern Railway	51.0	
C.P. Electric		69.4
Controlled Railway Companies —		
Aroostook Valley Railroad	32.1	
Minneapolis, St. Paul & Sault Ste. Marie Railroad	3,224.3	
*Duluth, South Shore & Atlantic Railway	515.5*	
*Mineral Range Railroad	23.8*	
	539.3*	
Controlled Railways		3,795.7
Grand Total		**20,902.2**

*The properties of these companies are being operated by trustees under Section 77 of Bankruptcy Act of United States.

Rolling Stock at December 31, 1945

(Owned and leased, not including electric lines)

Locomotives		1,775
Freight Train Cars:		
Box, Stock and Flat	62,566	
Refrigerator, Tank and Open-Top	11,747	
Conductors' Vans	1,224	75,537
Passenger Train Cars:		
Coach and Tourist Sleeping	1,306	
Parlor, Standard Sleeping and Dining	546	
Baggage, Mail and Express	867	†2,719
Boarding, Tool and Other Work Cars:		5,535

†Includes 20 cars in Toronto, Hamilton and Buffalo Line service in which the Company owns 36.04% interest.

WHAT THE BALANCE SHEET SHOWS

(EDITOR'S NOTE: An examination of assets and liabilities as of December 31, 1945, against a background of Company history and which should be read in conjunction with the annual reports.)

ASSETS

The Company's assets on the balance sheet for December 31, 1945, totalled $1,606,000,000 grouped under four captions comprising the following percentages of the total:

Property investment, 76%;
Other investments, 16%;
Current assets, 8%; and
Unadjusted debits (less than ½ of 1%).

In the first published balance sheet for December 31, 1883, the assets totalled only $120,000,000. They exceeded $500,000,000 for the first time in 1910 and one billion dollars in 1917.

Railway System: Property investment includes the cost to the Company of the 17,000 miles of railway line comprising tracks, bridges, stations, yards, wharves and shops, as well as the rolling stock and inland steamships. The mileage first reached 5,000 in 1889 and 10,000 in 1910.

Under the original charter of October, 1880, the Dominion Government agreed to turn over 713 miles of railway on which it had expended $35,000,000 if the Company would complete the main line within 10 years. Further government grants totalling more than $32,000,000 were expended on construction of other lines of the Company. These expenditures are in addition to the investment shown on the balance sheet.

The rolling stock owned and leased comprises 1,775 locomotives, 2,719 passenger train cars, 74,313 freight cars, 1,224 conductors' vans and 5,535 work units.

On the Great Lakes, the Company operates three vessels, the Assiniboia, Keewatin and Manitoba. On the Kootenay, Arrow and Okanagan Lakes, there are eight steamships and a number of barges.

Ocean and Coastal Steamships: The investment in ocean and coastal steamships before the war was approximately $100,000,000 but has been considerably reduced as a result chiefly of enemy action. New vessels to replace certain ocean steamships lost are under construction and one has already been placed in service. The ocean fleet dates back to 1890 when three steamships were built for Pacific service. In 1903 fifteen steamships were purchased from the Elder Dempster Company to inaugurate the Atlantic service and in 1915 control of the Allan Line was acquired.

The British Columbia coastal fleet has not been seriously affected by the war and the Princess Helene continues in the Bay of Fundy service.

Hotel, Communication and Miscellaneous Properties: The Company has an investment in hotel, communication and miscellaneous properties totalling nearly $100,000,000.

The operation of hotels dates back to 1888, when proceeds of land sales were applied to the construction of the original buildings at Vancouver and Banff. The Chalet at Lake Louise was built in 1890, followed by the Chateau Frontenac in 1893, Emerald Lake Chalet in 1903, the Algonquin at St. Andrews in 1905, the Royal Alexandra at Winnipeg in 1906, the Empress at Victoria in 1908 and the Palliser at Calgary in 1912. The more recent additions to the chain are the Saskatchewan at Regina in 1927, the Royal York at Toronto in 1929, the Cornwallis Inn at Kentville in 1930, the Pines at Digby and Lakeside Inn at Yarmouth, both in 1931, and the Vancouver (jointly with Canadian National Railways) in 1939. The older hotels have all been extended or replaced, some of them several times.

Telegraph lines were built at the same time as the railway itself and served the public from the beginning. The telegraph system came into full operation in 1886 and commenced to serve all the principal cities and towns in Canada. World-wide connections also were established. The growth of the communication facilities has kept pace with that of the railway and of the country itself, and the original telegraph facilities have been extended to include also telephone and radio. The investment in communication facilities and equipment totals $24,000,000. The system embraces 17,896 miles of pole line carrying 191,373 miles of wire, and providing more than 200,000 additional miles of carrier-current channels or derived circuits.

The Company has office buildings in 10 cities in Canada, as well as grain elevators and other miscellaneous properties serving a variety of uses.

Other Investments: In addition to the investments in physical assets already discussed, the Company has a financial interest in controlled and other companies totalling $123,000,000. These companies operate a wide variety of enterprises, mostly directly connected with transportation.

The most fortunate investment ever made by the Company was in the Consolidated Mining and Smelting Company of Canada, Limited. When the interest was first acquired around the turn of the century in connection with railway construction in southern British Columbia the enterprise was in its infancy, but, through possession of rich lead and zinc deposits and development of the

new flotation process for treating the ores, has grown into a vast industry with interests in many parts of Western Canada and in many kinds of metals as well as chemical fertilizer manufacture and water power. The Canadian Pacific has approximately a 51 per cent interest.

Next in importance among the Company's financial interests are the stocks and bonds held of United States railways, including: Minneapolis, St. Paul and Sault Ste. Marie Railroad, operating 3,224 miles of line; Duluth, South Shore and Atlantic Railway, 539 miles; Wisconsin Central Railway, 1,130 miles; Aroostook Valley Railroad, 32 miles; and several other companies owning terminals, bridges, etc., used by those roads.

Other enterprises controlled through security ownership include Canadian Pacific Air Lines, Limited; Canadian Pacific Express Company, two stockyards, three bus companies, Canadian Pacific Electric Lines, coal mines, a grain elevator and a cold storage plant.

Substantial interests are held in Canadian Australasian Line, Limited; two car ferry companies, Northern Alberta Railways and Toronto, Hamilton and Buffalo Railway.

Land Investments: One of the Company's most important ancillary activities has always been the operation of its Land Department. Under the original charter the Company was granted 25,000,000 acres of arable land in the Prairie Provinces (later adjusted to something over 18,000,000 acres). Other grants were obtained in these, and other provinces, through subsidiary railways and branch line construction. After 1900, millions of dollars were expended on irrigation works in dry areas in Alberta. The Land Department assets consist of mortgages collectible and advances to settlers, deferred payments on lands and townsites, and unsold lands and other properties, and were carried on the balance sheet at $34,000,000.

Working Capital: The current assets consist of material and supplies, accounts receivable and cash. In 1945 they totalled $130,000,000 and were nearly three times the current liabilities.

It is necessary to have on hand throughout the system fuel stocks, commissary stores, and repair parts for plant and equipment, and the stocks on hand valued at $32,000,000 were equal to the working expenses for six weeks. The funds in the hands of agents and conductors to be remitted totalling $15,000,000, were equal to the gross earnings for two weeks. The miscellaneous accounts receivable are of many varieties. The largest items were due from government departments for mail and other transportation service. Next in importance were balances due from other railways in settlement of interline passenger and freight accounts.

Finally there were temporary investments in Dominion of Canada securities and cash in the treasury and in various banks.

LIABILITIES

Capital Stock: The first item among the liabilities is capital stock of which there are two classes, ordinary and preference. The ordinary stock amounts to $335,000,000 and consists of 13,400,000 shares with a par value of $25 each. It was held by 57,854 persons of whom 39 per cent. were in Canada, 23 per cent. in the rest of of the British Empire and 38 per cent. in the United States and other countries. Almost half the number of shares are held in Great Britain.

The original shareholders of the Company subscribed in 1881 to $5,000,000 of stock. When the main line was opened in 1886 the amount outstanding was $65,000,000 and this remained unchanged until 1903. During the next 10 years, $195,000,000 of additional stock was sold and in 1927 and 1929 $75,000,000 more was issued. Since then there has been no change in the amount outstanding. The ordinary stock has realized over $120 per $100 par value issued.

The preference stock, carried on the balance sheet at $137,256,921, is actually issued in sterling and the amount outstanding is £28,203,477. Every £5 of preference stock carries the right to one vote as does a $25 share of ordinary stock. The stock is entitled to annual dividends not exceeding four per cent with priority over the ordinary stock, but the dividend is non-cumulative. Over 96 per cent of the stock is held in Great Britain.

Preference stock was first authorized in 1893 and was sold in moderate amounts from year to year when market conditions in London were suitable. The last issue was made in 1931.

Consolidated Debenture Stock: Perpetual four per cent consolidated debenture stock outstanding with the public amounts to $295,438,229. In addition there was $31,629,500 pledged as collateral to bonds and equipment obligations. Of the interest-bearing debenture stock, $230,438,229 was issued in sterling (£47,350,321) and the balance, $65,000,000, was in United States currency.

This type of security is unusual on the North American continent where mortgage bonds are the rule. The Canadian Pacific now has no mortgages outstanding against any of its owned mileage and is unique in this respect among large railways. With a mortgage, the recourse of the holders in the event of default as to interest or principal is foreclosure of the property subject to the mortgage. This may mean a complete upsetting of the organization. In the case of the debenture stock, however, the recourse is that the holders can vote to the exclusion of preference or ordinary

capital stock if interest is in default to the extent of not less than 10 per cent for more than 90 days. If, at the end of any calendar year after such default, the net earnings are sufficient to satisfy all interest in arrears including the interest for that year, or, if not sufficient, if the shareholders pay the deficiency, the voting rights of the holders of consolidated debenture stock cease. Under ordinary conditions the debenture stock draws interest at the rate of four per cent per annum and the holders exercise no voting rights.

The debenture stock was first authorized in 1889, when the Company had $35,000,000 in first mortgage bonds outstanding, as well as other mortgages on several sections of the system. Subsequently debenture stock was sold on the London market almost every year until the Great War interfered and at the same time the mortgage bonds were steadily reduced. After the war of 1914-18 debenture stock was again issued in London and also, for the first time, in New York. The last issue was made in 1937 to raise funds to pay off the Company's remaining mortgage bonds.

Funded Debt: The funded debt falls into two classes, collateral trust bonds, of which there were $24,765,000 outstanding at the end of 1945, secured by pledge of consolidated debenture stock; and equipment obligations to the amount of $68,904,000, secured by specific rolling stock.

The total of $93,669,000 was the lowest since 1928. The greatest amount of funded debt outstanding was reached in 1938—$232,000,000. By the end of 1945, the Company had redeemed most callable issues in advance of their maturity dates.

Reserves and Unadjusted Credits: The Company's reserves represent deductions made from income and profit and loss accounts over many years in order that the profit and loss balance may properly reflect the corporate results.

Maintenance reserves were built up during the war by charges to working expenses to reflect the ordinary maintenance work that had to be deferred owing to shortages of men and material, and will be utilized when the deferred work can be done. These reserves are matched in the assets by the maintenance fund.

The depreciation reserves have accumulated chiefly in more recent years as depreciation accounting has been progressively applied to all classes of property. They represent a recognition of impairment in the value of corresponding property investment accounts among the assets as a result of the approach of the time when the various property items will have to be retired owing to age or obsolescence. When units of depreciable property are retired the cost as carried in property investment is written off

and this amount, less the value of salvage recovered, is charged to the relative reserve account.

The investment reserves have arisen from charges made to income and profit and loss accounts for apparent impairment in the value of certain securities owned owing to operating deficits and the like, and are available for writing down such securities when the situation becomes clarified.

The insurance reserve has been built up by the operation of the Company's Insurance Department. This department receives the insurance premiums charged to expenses, investing the funds to earn interest or for re-insurance, and out of these funds it pays claims on fire and marine losses. The present reserve of a little over $11,000,000 built up since 1916, represents the excess of insurance premiums and other income received over the costs of the department. The amount so reserved is segregated in the Insurance Fund.

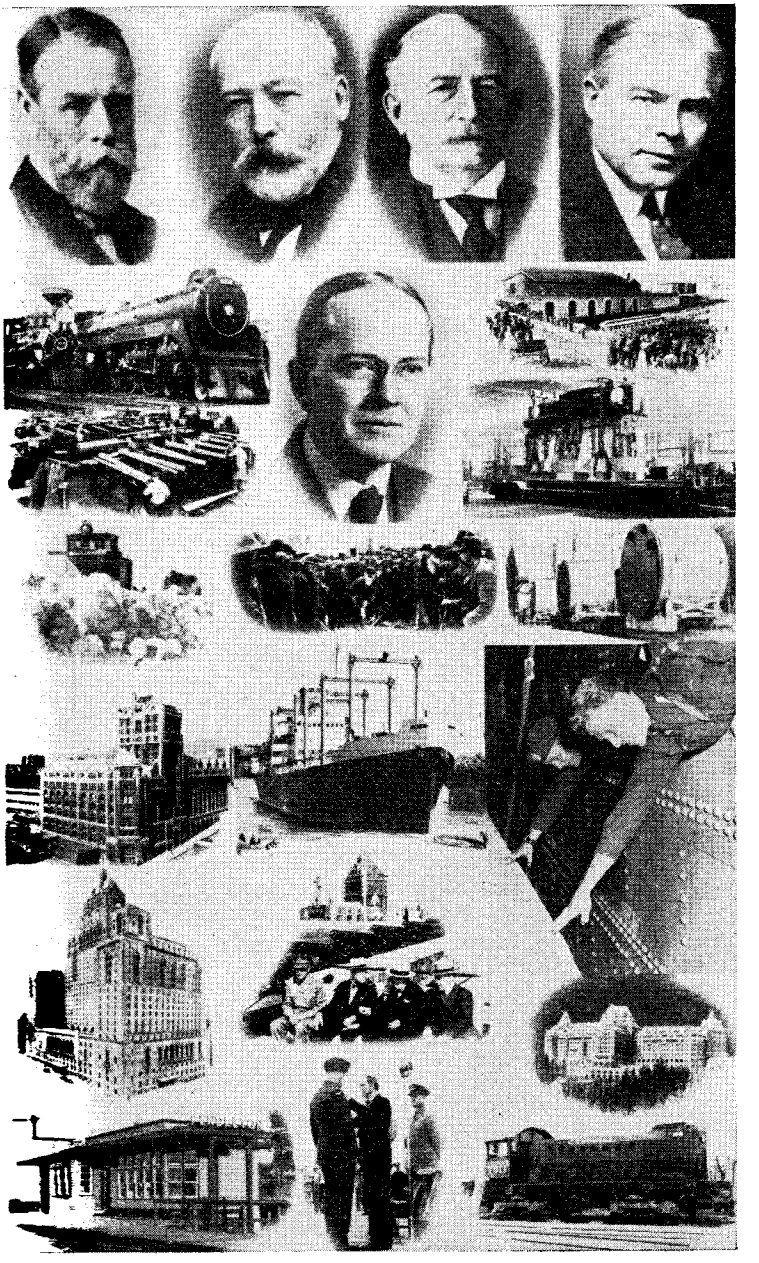
Premium on Capital and Debenture Stock: Throughout its history, the Company's issues of capital and debenture stock have been almost always sold either for more or for less than par value and this account is where the net difference between par and proceeds is carried. The net premium has been invested in the property and contributes to the Company's earning power.

Land Surplus: The balance in this account, $62,000,000, is the net surplus from the Land Department over the Company's history. It includes the valuation of unsold lands, $16,000,000; the balance due on lands sold on the deferred payment plan, $17,000,000; and an additional $29,000,000 of land proceeds that have been re-invested in property.

Profit and Loss Balance: Since the Company commenced operations, the accumulated profits, less dividends paid, have amounted to $263,000,000, as shown in this account. These earnings have been re-invested in property or used to reduce funded debt. The practice of retaining part of the annual earnings for re-investment has been consistently followed and contributes to the financial strength of the Company.

Big Land Sale in 1882

J. H. McTavish, previously a Hudson's Bay factor at Fort Garry, was the first Commissioner of the Land Department, organized about 1880-81 with offices at Winnipeg . . . There were some sales of large areas to land and colonization organizations. The largest, and probably the first, was the sale in 1882 of 2,000,000 acres to the Canada Northwest Land Company, which company for a time, also had an interest in C.P.R. townsites.—*Staff Bulletin* (A. Griffin, manager, Department of Natural Resources).



1873 and became president of the bank in 1876, an office he held until 1881.

With four other Canadians—his cousin, Donald A. Smith, who later became Lord Strathcona; R. B. Angus, James J. Hill and Norman W. Kittson—he bought control of the bankrupt St. Paul and Manitoba Railway in 1877 and made it a great financial success. When the efforts of the Macdonald Government to interest English capital in a railway to the Pacific failed, Stephen reluctantly undertook the work of building the confederation line across Canada. He was President of the C.P.R. from 1881 until 1888 and the commercial conception of the road was his. In providing the money for its construction he performed one of the greatest financing feats in its way that the world had seen. Retiring as president in 1888 he went to England to live, although he remained as a Director of the Company until 1893, after which he devoted most of his time and energy to philanthropic work until his death at Brocket Hill, Hatfield, Hertfordshire, on November 29, 1921.

In recognition of his services to the Empire in connection with the building and operation of the C.P.R. he was made a baronet of the United Kingdom in 1886; elevated to the peerage in 1891, with the title of Baron Mount Stephen, from a mountain of that name in the Canadian Rockies, along the route of the C.P.R., which was named after him when he was made president of the Company in 1881; and was created a Knight Grand Cross of the Royal Victorian Order in 1905.

Sixty-one years after he had left Scotland as a poor, unknown boy, he was made a Doctor of Laws of Aberdeen University.

SIR WILLIAM C. VAN HORNE, K.C.M.G.

William Cornelius Van Horne was born in Will County, Illinois, on February 3, 1843, the son of Cornelius Coverhoven Van Horne, a pioneer lawyer and the first mayor of Joliet, Ill. His father died when his son was 11 years old, leaving his widow to support a younger sister as well as the future builder of the C.P.R. When he was 14 young Van Horne left the common school of the state, which he had attended until then, to help support his mother.

Office boy in a railway station in 1857 was his first job. Step by step he rose from there until at the age of 26 he became Superintendent of the Chicago and Alton Railroad. After serving with that and other railways, and gaining recognition through the vitality his methods breathed into various dying roads, he became General Superintendent of the Chicago, Milwaukee and St. Paul in 1879.

On New Year's Day of 1882 he took over at Winnipeg as General Manager of the Canadian Pacific Railway Company to embark on the phenomenal construction programme which pushed

through the line to the Pacific Ocean, and made Canadian Confederation an actuality. He became Vice-President on May 20, 1884; President on August 7, 1888; resigned the presidency in 1899 but continued with the Company as the first Chairman, an office he retained until 1910, when he resigned.

Van Horne kept the line in Canada, around the north shore of Lake Superior, condemning the proposal of James J. Hill (his sponsor and the director who invited him to Canada) to go through the United States from Sault Ste. Marie, Mich., to a connection with the St. Paul, Minneapolis and Manitoba Railway. He chose the site and name for Vancouver, inaugurated the steamship service to the Orient, built the Chateau Frontenac and even took time out to design the red and white checkered house flag of company steamships. His feat of transporting troops to the West in 1885 during the Northwest Rebellion, in fewer days than it had taken of months for the Wolseley Expedition to get there during the first Riel Rebellion, was the dramatic proof of the road's value which helped to ease its financial problems. The Rocky Mountain barrier which Capt. Palliser, the English explorer, had called impenetrable, was forced to yield before this human dynamo, whose answer to calamity criers once, was simply: "I am going through to the Pacific, get the work done right and send the bills to Stephen and Shaughnessy."

In 1894 he was created a Knight Commander of the Order of St. Michael and St. George. He died in Montreal on September 11, 1915.

LORD SHAUGHNESSY, K.C.V.O.

Thomas George Shaughnessy was born on October 6, 1853, in Milwaukee, Wisconsin, the son of Irish emigrant parents, his father being Lt. Tom Shaughnessy, a Milwaukee detective. He attended public school in Milwaukee, then went to St. Gall's School and a business college.

He went to work in 1869 for the Chicago, Milwaukee and St. Paul Railroad at the age of 15 as a clerk in the purchasing department. Becoming interested in politics he was elected an alderman in the Third Ward and was named president of the common council.

In his work with the Milwaukee Road he had risen to be Purchasing Agent in 1882 when Van Horne persuaded him to join the new Canadian Pacific Railway Company. From there his record was: 1884, Assistant General Manager; 1891, Vice-President; 1899, President; 1910, Chairman and President; 1918, resigned the presidency and remained as Chairman until his death in Montreal on December 10, 1923.

His great contribution to the building of the road was as a matchless provider of supplies. At times, prior to the use of the

C.P.R. to get troops to the West to crush the Northwest Rebellion, and before the financial aid which followed this move, it was mainly the brilliance and marvellous resourcefulness of Shaughnessy which kept the work going as he staved off impatient creditors and "seemed to make a thousand dollars grow where there was only one before". He had met every test when, in 1899, he was selected by Van Horne to fill the chief office of the C.P.R. of which Van Horne said "the best thing I ever did for it (the C.P.R.) was to put Shaughnessy into it."

During the Shaughnessy regime more than $600,000,000 was expended for double tracking, for the purchase of an Atlantic fleet to match the Orient service (with the Beaver Line first, then four ships the company built and finally the Allan Line as the original nucleus), for the erection of palatial hotels in a country-wide chain, for supplanting the snowsheds of the Rockies with tunnels, for vast irrigation works and many other projects which made the company the greatest travel system in the world.

In 1901 he was created Knight Bachelor, in 1907 was made a Knight Commander of the Royal Victorian Order and in 1916 was raised to the peerage as Baron Shaughnessy. The first message he sent when informed he had been knighted was to his mother and it was in honor of her birthplace that he named his private car "Killarney". His honorary degrees were Doctor of Civil Laws, Trinity College, Dublin; and Doctor of Laws, Dartmouth University, Hanover, N.H., and McGill University, Montreal.

SIR EDWARD BEATTY, G.B.E., K.C., LL.D., D.C.L.

Edward Wentworth Beatty was born on October 16, 1877, at Thorold, Ont., the son of Henry Beatty and Harriet M. Powell. His father was the Canadian Pacific Railway Company's manager of lake transportation in the early days, after the Northwest Transportation Company, a steamer service on the Great Lakes in which Henry Beatty was one of the chief partners, was taken over by the C.P.R.

The Beatty family moved to Toronto when the lad who was to become the Company's first Canadian-born Chairman and President was 10 years old and it was in the Ontario capital that he was educated at Upper Canada College, Model School, Harbord Collegiate Institute, University of Toronto, from which he graduated as a Bachelor of Arts in 1898, and Osgoode Hall Law School. He read law in the office of McCarthy, Osler, Hoskin & Creelman, Toronto, and was called to the Ontario bar in June, 1901.

His first position with the Company was as assistant in the law department in Montreal, starting July 1, 1901, and the rest of his record was: 1905, assistant solicitor; January, 1910, General Solicitor; July 1, 1913, General Counsel; December 4, 1914, Vice-President and General Counsel; 1916, elected Director (January)

and elected Member of the Executive Committee (October) serving as Vice-President and General Counsel; October 10, 1918, elected President; May, 1924, elected Chairman and President; May, 1942, resigned as President but continued as Chairman until his death in Montreal on March 23, 1943.

Guidance of the Company was his responsibility through a most difficult period which embraced the post-Great War depression, followed by the world's greatest business boom and its worst depression, and then the hard years of recovery and the first 32 months of World War II. Symbolic of the great changes made when he was at the helm were the commissioning of the Empress of Britain, the building of the Royal York Hotel and the incorporation of Canadian Pacific Air Lines. During these years he was a hard-hitting and brilliant champion of "unification for operation", with regard to the Company and the Canadian National Railways, and led a spirited campaign in addresses before various groups across Canada and in testimony before the special committee of the Canadian Senate which inquired into the Dominion's railway problem.

He had the Company "fighting fit" at the outbreak of war in 1939, when he placed its full resources at the disposal of the country and the British Empire, and it delivered for democracy right from the very start. War work in which he personally led included two years service, from 1939 until September of 1941, as Canadian representative for the Ministry of War Transport of the United Kingdom, charged with getting supplies to the battle zones. Later, under his direction, Canadian Pacific Air Services was organized to initiate the transatlantic ferrying of bombers to Great Britain, a service taken over later by the Royal Air Force, first under the ferry command and then under the transport command.

King George V made him a Knight Grand Cross of the Most Excellent Order of the British Empire on June 23, 1935, and in the same year he was made Honorary Bencher of the Middle Temple, London. Other honors which came to him included: 1924, Knight Commander, First Class, of the Order of St. Olaf (Norway); 1934, Knight of Grace, the Venerable Order of St. John of Jerusalem; 1915, King's Counsel (Ontario, April) and (Dominion of Canada, June).

Chancellor of McGill University from 1921 until his death, he had been chancellor of Queen's University in Kingston, Ont., from 1919 until 1923; a member of the Corporation of Bishop's University, Lennoxville, Que., from 1927; a governor of Lower Canada College in Montreal and chairman of the Rhodes Scholarship selection committee for the Province of Quebec.

Canada's navy honored him with the first honorary rank it ever created, a commission as honorary captain, Montreal division, Royal Canadian Naval Volunteer Reserve, in 1937.

In 1935 Lord Baden-Powell, founder of the Boy Scout movement, presented him with the Order of the Silver Wolf, highest honorary award possible, on behalf of the Boy Scouts' Association of Canada, which he served as president.

In 1943 the "Distinguished Civic Service Award" for 1942 in Montreal was presented posthumously to him by the City Improvement League of Montreal, one of the many projects for city betterment to which Sir Edward gave so generously of his time and talents.

For many years he was President of the Boys' Farm and Training School at Shawbridge, Que., and fulfilled a similar office for the British Empire Games Association at the 1930 games in Hamilton, Ont., and with Canada's National Committee for Mental Hygiene.

Four Canadian municipalities made him Freeman of the City on different occasions with this honor extended by Vancouver, London, Saint John, N.B., and Cranbrook, B.C.

Honorary degrees were conferred on him by leading colleges in Canada, Ireland, Scotland and the United States with this recognition of his work in the field of education coming from McGill University, University of Toronto, Bishop's University, McMaster University, University of Western Ontario, University of New Brunswick, Queen's University and University of Alberta in Canada; New York University and Dartmouth University in the United States; Trinity in Dublin; and St. Andrew's in Scotland.

D. C. COLEMAN, LL.D., D.C.L.

D'Alton Corry Coleman was born on July 9, 1879, at Carleton Place, Ont., the son of James Coleman and Mary Jane Doherty. He was one of a family of seven—one girl and six boys, all of whom have achieved marked success.

Ontario schools provided his formal education—public school in Braeside, high school in Arnprior and business college in Belleville.

Before joining the Canadian Pacific Railway Company he was tallyman in a Braeside lumber yard during summer vacations and later was full-time stocktaker in the same yard; wrote shorthand for Hon. George A. Cox and E. R. Wood at Central Canada Loan and Savings Company, Toronto; was editor of the Belleville (Ont.) Daily Intelligencer, and on the editorial staff of the Port Huron (Mich.) Daily Times.

His first job with the C.P.R. was in Fort William, Ont., where he began as clerk to an assistant engineer there on November 4, 1899. The record of his rise to the top is: 1899-1907, chief clerk and accountant in Winnipeg, Cranbrook, B.C., and North

Bay, Ont.; 1907, superintendent, Kootenay Division, Nelson, B.C.; 1908, superintendent, Vancouver, and superintendent of car service, Winnipeg; 1912, General Superintendent, Winnipeg; 1913, General Superintendent, Calgary; 1915, Assistant General Manager, Winnipeg; 1918, Vice-President, Western Lines, Winnipeg; 1934, elected Vice-President of the Company, and, on October 9, 1934, Director and Member of the Executive Committee, Montreal; 1942 (May), elected President; 1943 (May 5), elected Chairman and President.

During his administration of Western Lines, the Company built and placed in operation in the prairie provinces 2,250 miles of railway. All of the new territory served was traversed and examined by him before construction was undertaken.

A wealth of railway knowledge gained in actual operation, outstanding ability in his chosen field and infinite devotion to the best interests of the nation and of the Company were the qualifications which fitted him to be chief officer of the Company in the critical period of the greatest war the world has known.

During World War II, Mr. Coleman completed the arrangements with the Canadian Government under which the Company undertook a heavy programme of munitions work at Angus and at Ogden shops, as a result of which the mechanical organization of the Company, headed by H. B. Bowen, was enabled to make a contribution to the war effort, which elicited the commendation of the Canadian Minister of Munitions and Supply, of the Soviet Government, and of the overseas representatives of the Government of the United Kingdom.

It was with him that the Government of Canada negotiated to take over the Chateau Frontenac in Quebec City for the historic Quebec Conferences in 1943 and 1944, when this famous hostelry was the work centre for the sixth and eighth wartime meetings between President Franklin Delano Roosevelt and Prime Minister Winston Churchill, with Prime Minister W. L. Mackenzie King as the host. Mr. Coleman's direction of the taking over of the hotel in its entirety and the way the heavy Conference travel was handled was the most positive proof of the flexibility of the system he headed as chief officer. Something well out of the ordinary transpired in the arrangements for the Chateau Frontenac when it was a brother-to-brother conference, for Mr. Coleman's dealings with the Government of Canada were through his younger brother, Dr. E. H. Coleman, C.M.G., K.C., Canada's Under-Secretary of State. Of the preliminary negotiations, Dr. Coleman said in an interview that his brother didn't wish to be told any state secret about the reason the Government wanted the hotel, but added "he is a pretty shrewd fellow." The fact is that, without being told any state secret, the hotel was completely ready when the delegates arrived for the momentous conference.

Among the spectacular Company contributions to the war effort which he directed as "the Chief," over and above the excellent discharge of the primary job of rail transportation, and the service of sacrifice performed by Company ships under Admiralty charter, were the initiation of a comprehensive new shipbuilding and ship reconditioning programme to replace Canadian Pacific tonnage lost by enemy action, and the establishment at Angus Shops in Montreal of one of the first private blood donors' clinics in Canada working in conjunction with the Red Cross.

High honors have come his way. University of Manitoba at Winnipeg conferred upon him the honorary degree of Doctor of Laws in 1932—and in 1937 University of Bishop's College made him a Doctor of Civil Laws. His great encouragement to first aid and home nursing in Canada was recognized in October of 1943 when he was invested with the rank of Knight of Grace in the Venerable Order of St. John of Jerusalem at Government House in Ottawa by the Governor General, the Earl of Athlone, Knight Commander of the Order.

In 1945 he became chairman of the Canadian Committee of The Newcomen Society of England.

On July 17, 1944, he was inducted into blood brotherhood with members of the Piapot tribe of the Qu'Appele Indians with the title Chief of the Iron Trails when in Regina to open the 62nd annual Saskatchewan Exhibition.

Mr. Coleman has taken an active interest in educational, philanthropic and welfare organizations. In 1932, he was asked by the Government of the Province of Manitoba to interest himself in the rehabilitation of the affairs of the University of Manitoba, which were then in a parlous condition, and as Chairman of the Board of Governors he rendered service which in the words of the late Dr. John W. Dafoe, of the Winnipeg Free Press, "entitled him to the everlasting gratitude of the citizens of the Province."

For 10 years he was president of the Navy League of Manitoba, and during his tenure of office there was built up in Winnipeg, far from salt water, a Sea Cadet Corps described by Admiral Campbell, V.C.,—of "Q" Ship fame—as the "best cadet corps in the British Empire."

Other offices he has filled, or is filling, are Bishop's University, chairman of the executive committee; McGill University, Member, Board of Governors; Boy Scouts' Association of Canada, member, Canadian General Council; Boys' Farm and Training School, Shawbridge, Que., vice-president; City Improvement League of Montreal, and Navy League of Canada, honorary president; Montreal Festivals, Montreal General Hospital, Royal Victoria Hospital and Notre Dame Hospital, governor; Montreal Division, Navy League

of Canada, honorary president; Association of Canadian Clubs of Canada, past president; Winnipeg Canadian Club, past president.

On May 22nd, 1944, the Canadian Club of Winnipeg made him a life member: "In recognition of outstanding service and as an expression of the high regard and good wishes of the membership."

He serves as patron of the Canadian Pacific Branch of the Canadian Legion, British Empire Service League.

In sport he is a director of the Canadian Arena Company in Montreal, and vice-president of the Montreal Canadiens of the National Hockey League.

Contributing to his commanding position on the world transportation scene, in addition to his position as Chairman and President and Member of the Executive Committee of the Canadian Pacific Railway Company, are his offices as: Chairman and director, Canadian Pacific Steamships Limited, and Canadian Pacific Air Lines Limited; director, Canadian Pacific Express Company; president and director, Canadian Airways Limited; alternately president and vice-president, and director, Northern Alberta Railways Company, and Toronto Terminals Railway Company; president, Canadian Australasian Line Limited; vice-president, Toronto, Hamilton and Buffalo Railway; director, Minneapolis, St. Paul and Sault Ste. Marie Railroad Company.

Other enterprises in which he has a leading voice in connection with Company business, and the high positions he holds in them, include: Chairman and director, Associated Screen News Limited; director, Chateau Frontenac Company; chairman, Consolidated Mining and Smelting Company of Canada Limited; president and director, Scottish Trust Company, and Seigniory Club Community Association Limited; and alternately president and vice-president, and director, of the Vancouver Hotel Company Limited, a joint operation.

In business and finance he serves as a director of the Bank of Montreal, of the Royal Trust Company, of the Metropolitan Life Insurance Company, of the West Kootenay Power and Light Company Limited, and of the General Theatre Corporation Limited, and as a member of the Canadian Committee of the Hudson's Bay Company.

No Skim Milk for Van Horne

Van Horne insisted on the Canadian Pacific keeping such auxiliary utilities as the telegraph, express and sleeping car department . . . It had been the custom to let other organizations have these franchises, but Van Horne said they took the cream . . . and "left the skim milk to the railway."—*The Romance of the* C.P.R. (R. G. MacBeth).

THE DIRECTORATE

The Board of Directors of the C.P.R. is made up of leaders in the economic life of Canada, Great Britain and the United States, with the record of their many interests and the stories of their respective careers being of interest to all Company people.

D. C. Coleman, Chairman and President, is dealt with in this volume under the section devoted to the presidents. Outlines of the careers of the others making up the directorate follow:

Rt. Hon. Sir John Anderson, P.C., G.C.B., G.C.S.I., G.C.I.E., M.P., of London, England, who became a Director of the C.P.R. on November 12, 1945, was Britain's wartime Chancellor of the Exchequer in the National Government from 1943 to 1945. He was chairman of the British Advisory Atomic Energy Committee at the time of his appointment to the Board.

From 1917 to 1919 he was secretary in the Ministry of Shipping and served as chairman of the Board of Inland Revenue from 1919 till 1922. He was Permanent Under-Secretary of State, Home Office, from 1922 till 1932, Governor of Bengal from 1932 till 1937, and Lord Privy Seal in 1938. At the beginning of World War II he became Home Secretary and Minister of Home Security. He was Lord President of the Council from 1940 to 1943.

In other government positions he had served earlier with the Northern Nigeria Lands Committee, the West African Currency Committee, Insurance Commissioner's Office, Local Government Board, Ministry of Health and was Joint Under-Secretary to the Lord Lieutenant of Ireland.

His decorations are: Knight Commander of the Bath (1919); Knight Grand Cross of the Bath (1923); Knight Grand Commander of the Indian Empire (1932); Knight Grand Commander of the Star of India (1937).

He is an honorary Doctor of Laws from four universities: Aberdeen, Cambridge, St. Andrews and Edinburgh.

Born July 8, 1882, at Westland House, Eskbank, Midlothian, he was educated at George Watson's College, Edinburgh, and at Edinburgh and Leipzig universities from which he graduated with degrees of Master of Arts and Bachelor of Science.

Edwin George Baker, of Toronto, who became a Director of the C.P.R. on March 11, 1946, is chairman of the Board of Moore Corporation Limited, of Toronto, and president of F. N. Burt Company, Incorporated, American Sales Book Company Incorporated, Gilman Fanfold Corporation, Pacific Manifolding Book

Company Incorporated, Burt Business Forms Limited, Western Sales Book Company Limited, and National Sales Check Book Company and vice-president and director of the Canada Life Assurance Company.

His other directorships include Bank of Canada, Canadian and Foreign Securities Company and Canada Northern Prairie Lands, Limited.

His interests in religious works are wide and varied and since 1929 he has been president of the Toronto Bible College. He is vice-chairman of the Ontario Research Foundation and a member of the board of trustees of the International Committee of Young Men's Christian Associations. In 1931 he was president of the international convention of Y.M.C.A.'s of the United States and Canada. He is also president of the Yonge Street Mission in Toronto.

During World War II he was a member of the Province of Ontario Advisory Committee for the war certificates program and during Victory Loan campaigns was a member of the Ontario executive and joint chairman of the City of Toronto campaign.

Born in Toronto on December 3, 1885, he was educated at the University of Toronto.

He has been directly connected with the Moore Corporation for the past 40 years, and has held the offices of secretary, vice-president, president and now chairman.

LaMonte Judson Belnap, B.Sc., D.Eng., of Westmount, Que., who became a Director of the C.P.R. on December 9, 1940, and was appointed to the Executive Committee on October 14, 1941, has been president of the Consolidated Paper Corporation, Limited, since its organization in 1931; is president of Dominion Glass Company, Limited, and St. Maurice Valley Paper Company; chairman of the board of U. S. Hoffman Machine Company, New York, and chairman of the executive committee of Worthington Pump and Machinery Corporation, New York.

Directorships he holds include Bank of Montreal, Royal Trust Company, Dominion Bridge Company, Limited, British American Oil Company, Limited, Dominion Engineering Works, Limited, Canadian Locomotive Company, and Worthington Simpson, Limited, London.

During the Great War he was assistant director of war supplies for the British War Mission in Washington.

Born on November 7, 1877, in Burr Oak, Mich., he graduated from University of Nebraska in Lincoln, Neb., as a Bachelor of

Science and in 1939 was awarded the honorary degree of Doctor of Engineering by his alma mater.

Hon. Charles Avery Dunning, P.C. (C.), LL.D., of Montreal, who became a Director of the C.P.R. on December 14, 1942, and who was formerly vice-president and general manager of the Seigniory Club, is president of Ogilvie Flour Mills Company, Limited, Montreal.

Other directorships he holds include Bank of Montreal, Consolidated Paper Corporation, Steel Company of Canada, Royal Trust Company, Canadian Investment Fund Limited, Sun Life Assurance Company of Canada and Bell Telephone Company of Canada. He is a member of the Canadian committee of Hudson's Bay Company and Liverpool & London & Globe Insurance Company and serves as chairman of Allied War Supplies Corporation.

He is chancellor of Queen's University which made him an honorary Doctor of Laws in 1941.

Four times he has been a federal cabinet minister in Liberal governments—twice as Minister of Railways and Canals, first taking office in February of 1926, and twice as Minister of Finance, with his last term ending in July of 1939 when he retired from public life. Before going to Ottawa he had been successively provincial treasurer, minister of railways, minister of telephones, minister of agriculture and premier in the Saskatchewan Legislature, to which he first was elected in 1916, with his term as premier beginning on April 5, 1922.

With Saskatchewan Grain Growers' Association he was a director in 1910 and vice-president 1911-14. Organizing the Saskatchewan Co-operative Elevator Company Limited in 1911 he was its general manager 1911-16. He investigated agricultural credit and grain marketing in Europe in 1913 as a royal commissioner appointed by the Saskatchewan Government. From 1911 to 1916 he was a member of the Canadian Council of Agriculture, in 1918 a member of the Canada Food Board as director of food production for Canada and in 1917-18-19 was chairman of the Saskatchewan committee for the Victory Loan.

Born in Croft, Leicestershire, England, on July 31, 1885, he was educated in public schools and came to Canada in 1903.

Aimé Geoffrion, K.C., B.C.L., D.C.L., of Westmount, Que., who became a Director of the C.P.R. on December 9, 1940, and a member of the Executive Committee on April 12, 1943, is senior partner in the legal firm of Geoffrion & Prudhomme, Montreal.

His other directorships include Canada Life Insurance Company, Aluminum Limited, Saguenay Power Company Limited, Catelli Food Products Limited, Windsor Hotel Company Limited, National Trust Company and Distillers-Seagram Company.

In 1903 he was created a King's Counsel, nine years after he had been called to the bar of Quebec in 1894. The honorary degree of Doctor of Civil Law was conferred on him by Bishop's College.

A brilliant lawyer, who was professor emeritus of civil law at McGill University from 1905 to 1920 and batonnier of the Montreal bar for 1918-19, he was counsel for the United Church of Canada in connection with its application for incorporation before the House of Commons at Ottawa and the Quebec Legislative Assembly and has been counsel for the Bankers' Association before the House of Commons concerning the revision of the Bank Act. Other important cases in which he has had a leading part include his work as one of the counsel retained by the Province of Quebec in arbitration between it and the Province of Ontario for settlement of outstanding accounts existing at Confederation; junior counsel for the Dominion of Canada in the Alaska boundary arbitration, 1903-04; counsel for the Dominion Government in the Labrador boundary case and the Hudson's Bay Company precious metal case; and counsel for the Province of Quebec in many constitutional cases.

He was Roman Catholic school commissioner for Montreal from 1917 to 1921.

Born in Montreal on November 13, 1872, he was educated at St. John's School, St. Mary's College and McGill, from which he graduated in 1893 as a Bachelor of Civil Law and medallist.

George Blair Gordon, B.Sc., of Montreal, who became a Director of the C.P.R. on December 11, 1939, is president and managing director of Dominion Textile Company, of Montreal, with which he first became associated in 1923, and managing director of Drummondville Cotton Company Limited and Montreal Cottons Limited.

His other directorships include Bank of Montreal, Mutual Life Assurance Company of Canada, Commonwealth International Corporation Limited, Industrial Specialty Company Limited, Canadian Car and Foundry Company, Limited, Penmans Limited, Canadian Investment Fund Limited, Paton Manufacturing Company, Guarantee Company of North America, and Federal Aircraft Limited, a wartime company.

In 1945 he was named president of the Canadian Manufacturers' Association and is a representive of the employers' group on the Provincial Superior Council of Labor in Quebec.

He served with the Royal Air Force as a second lieutenant in 1918-19. In World War II he enlisted in the Reserve Army in the ranks of the 7th (Reserve) Reconnaissance Regiment (17th Duke of York's Royal Hussars).

Born in Westmount, Que., on January 9, 1900, he was educated at Lower Canada College and McGill University, from which he graduated as a Bachelor of Science in electrical engineering.

In 1922-23 he was an electrician with Provincial Paper Company in Port Arthur, Ont.; and in 1923-24 was a fitter-helper with Dominion Textile in Montreal, where he has since been assistant to the general superintendent, assistant to the general manager, and, since 1933, managing director. He was elected president in 1939.

Col. the Hon. Eric W. Hamber, B.A., LL.D., of Vancouver, who became a Director of the C.P.R. on December 11, 1939, is president and general manager of Hastings Sawmill Company Limited, which he has directed since 1912, and of London & Canadian Investment Company Limited, Consolidated Estates and Middlesboro Collieries Limited.

Other directorships he holds include Dominion Bank, Yale Development Company Limited and National Life Assurance Company of Canada; and he is on the advisory board, Toronto General Trusts Corporation.

Lieutenant-governor of British Columbia from May, 1936, to August, 1941, he was made a Knight of the Order of St. John of Jerusalem, with the investiture at Buckingham Palace on May 25, 1937, a little more than a year after he had taken office as the King's representative in Victoria.

The Canadian Manufacturers' Association has had the benefit of his talents as president and he is a Fellow of the Royal Colonial Institute of London.

His honorary colonelcy is with the Seaforth Highlanders of Canada, 5th B.C. Coast Brigade.

Life governor of Vancouver General Hospital and chancellor of the University of British Columbia, which honored him with a Doctor of Laws degree in 1940, he also is honorary president of the British Columbia Cancer Foundation, past commodore of the Royal Vancouver Yacht Club and in 1944 was provincial president of the Canadian Red Cross in British Columbia.

A noted all-round athlete, he rowed and won for Canada at Henley-on-Thames and in this country and the United States, played on Canadian championship football and hockey teams and on the Vancouver Polo Club which carried off British Columbia and Northwest International titles and won individual crowns in tennis, golf and boxing. He now races his own Greencroft Stables horses and his "R" Class racing yacht, "Lady Van", has been an international winner in P.I.Y.A. competitions.

Born on April 21, 1880, in Winnipeg he was educated at St. John's College, won scholarships and graduated in classics as a Bachelor of Arts from the University of Manitoba at the age of 18.

Entering the Dominion Bank as a junior he won rapid promotion and in 10 years was made manager of the branch in London, England, and after 13 years was made a director.

John Wilberforce Hobbs, B.A., of Toronto, who became a Director of the C.P.R. on May 4, 1932, is president of Consolidated Plate Glass Company of Canada Limited, with which he has been identified since 1901, and of Continental Life Insurance Company and Dominion Woollens and Worsteds, all of Toronto, and vice-president of Canada Trust Company, of London, Ont.

Other directorships he holds are: Scottish Union Insurance Company, Edinburgh; Algoma Steel Corporation Limited, Sault Ste. Marie, Ont.; Lake of the Woods Milling Company and Dominion Glass Company Limited, both of Montreal; Huron and Erie Mortgage Corporation, London, Ont.; Imperial Bank of Canada, Securities Holding Corporation and Consolidated Mining and Smelting Company of Canada Limited.

Born in London, Ont., on December 2, 1875, he was educated at the University of Toronto, graduating in 1898 as a Bachelor of Arts.

From 1898 to 1901 he was in the service of Hobbs Manufacturing Company, Limited, of London, Ont. In 1901, he became manager of Consolidated Plate Glass Company in Toronto and since then his positions with this company have been managing director and president.

Robert Samuel McLaughlin, of Oshawa, Ont., who became a Director of the C.P.R. on May 7, 1930, is chairman of the board of General Motors of Canada, Limited, and all its affiliated companies, established in 1918 to take over the business of McLaughlin Companies, with which he had been associated since 1887, and is vice-president of General Motors Corporation, U.S.A., and of the Dominion Bank.

A member of the executive committee of International Nickel Company of Canada, Limited, he also holds directorships in Consolidated Mining and Smelting Company of Canada, Limited, Royal Trust Company, Canadian General Electric Company, Limited, and McIntyre-Porcupine Mines Limited.

He is honorary colonel of the Ontario County Regiment.

His Parkwood Stables racing silks are among the best known on Canadian and United States tracks and he is a director of the Ontario Jockey Club.

In 1911 he served as town councillor in Oshawa.

Born on September 8, 1871, at Enniskillen, Ont., the son of Robert McLaughlin and Mary Smith, he was educated at public and high schools in Oshawa.

Entering his father's carriage factory in 1887, the 20th year of its establishment and its 11th year in Oshawa he served three years as an apprentice in the upholstery department which he later headed before taking on duties in the office and as general designer. He became a partner in McLaughlin Carriage Company in 1893; director and secretary-treasurer, McLaughlin Carriage Company, Limited, 1901; president, McLaughlin Motor Car Company, Limited, 1907; director, General Motors Corporation, 1910; director and treasurer, Chevrolet Motor Company of Canada, Limited, 1915; vice-president, General Motors Corporation, 1918; president of General Motors of Canada, Limited, 1919; and chairman of General Motors of Canada, Limited, 1945.

In September of 1944, he was guest of honor at a dinner given in Oshawa by that city's leading citizens to mark the 75th anniversary of the inception of the business.

Ross Huntingdon McMaster, of Montreal, who became a Director of the C.P.R. on November 11, 1924, and was appointed to the Executive Committee on February 2, 1936, is chairman of the board of the Steel Company of Canada, of which he was first manager at Montreal upon the company's formation in 1910. He is also vice-president of Consolidated Mining and Smelting Company of Canada Limited.

Other directorships he holds include Bank of Montreal, Sun Life Assurance Company of Canada, Royal Trust Company, Canadian Industries Limited, Consolidated Paper Corporation, Northern Electric Company, Dominion Bridge Company, Canada Steamship Lines, Canadian Bronze Company, Limited, Dominion Rubber Company, Canadian Pratt & Whitney Aircraft Company, International Nickel Company of Canada, American Iron

and Steel Institute, Gazette Printing Company, Ogilvie Flour Mills Company, Limited, and Allied War Supplies Corporation.

Born in Montreal on October 11, 1880, he was educated at Montreal High School and Collegiate Institute.

He started with Sherwin-Williams Company, Montreal and Cleveland, and was assistant to the vice-president and general manager, 1897-1903. In 1903 he became assistant to the vice-president and general manager of Montreal Rolling Mills Company. With Steel Company of Canada he has been Manager, Montreal, 1910; assistant general manager, 1916; vice-president, 1919; president, 1926; chairman, 1945.

William M. Neal, C.B.E., of Montreal, who started as an office boy with the Canadian Pacific and rose in 40 years to be elected Vice-President of the Company and Director on May 6, 1942, and a member of the Executive Committee on June 9, 1942, also is President and Chief Executive Officer of Canadian Pacific Air Lines, and president of Quebec Central Railway, Dominion Atlantic Railway and Eastern Abattoirs, Montreal.

His directorships include Canadian Pacific Steamships, Canadian Pacific Express Company, Canadian Marconi Company, Toronto Hamilton and Buffalo Railway, Vancouver Hotel Company, Limited, Eastern Canada Coastal Steamships, Northern Alberta Railways, Sun Life Assurance Company of Canada and Royal Exchange Assurance.

Born at Toronto on June 20, 1886, he was educated in public and high schools there.

His office as Commander of the British Empire, came for "outstanding service in the field of war transport" in the King's Honors List of January 1, 1944.

In World War I, from 1917 until 1920, he was general secretary of the Canadian Railway War Board, later the Railway Association of Canada, which co-ordinated movements of troops and supplies.

During World War II he was Canadian representative on the Transportation Equipment Committee of the Combined Production and Resources Board of Great Britain, United States and Canada, and later chairman of a Canadian committee of the same name, first for Department of Munitions and Supply and then for Department of Reconstruction and Supply. The committee recommended what was needed to re-establish transportation in countries other than committee members, and, when peace came,

supervised production and controlled export of railway equipment for Canada.

In 1940 and 1941 he accomplished much of the organization in the purchase of the aviation companies which became Canadian Pacific Air Lines. He was elected vice-president of air lines on May 21, 1942, and president and chief executive officer of the air lines on February 13, 1946.

As chairman of the general committee in employees' Victory Loan campaigns he made dramatic appeals on a Canadian Pacific broadcast network from 1943 through 1945.

A Commander (Brother) in the Venerable Order of the Hospital of St. John of Jerusalem since October of 1943 he is chairman of the St. John-Red Cross joint board of management for the Province of Quebec.

He is on the executive committee of the Canadian Chamber of Commerce in Montreal, on the council of Montreal Board of Trade, honorary president of Canadian Pacific Branch of the Canadian Legion in Montreal and honorary vice-president of the Montreal Boy Scouts Association.

While at western lines headquarters in Winnipeg he was chairman for Western Canada of the Canadian Forestry Association, and president of the Navy League of Manitoba, Lakeside Fresh Air Camp and Canadian Club.

The going-way "gift" which business leaders and friends in the West decided on for him when he left Winnipeg for Montreal in 1942 didn't go away. It was a costly piece of medical equipment he wanted to have installed in the children's ward of the Winnipeg General Hospital, of which he was president.

He joined the C.P.R. on January 25, 1902, in the superintendent's office at Toronto. When called to the Canadian Railway War Board at Montreal 15 years later he had experience in operating, foreign freight, transportation departments at Toronto, Winnipeg, Moose Jaw, Calgary, Vancouver and Montreal, in the last-named place as acting superintendent of car service from November of 1916.

Two years after his return to the Canadian Pacific he became general superintendent of the Algoma district at North Bay in 1922, then served for three years from 1924 as assistant to the vice-president of the company at Montreal, went to Winnipeg as general manager of western lines in 1927 and became vice-president there in 1934.

Sir Edward Robert Peacock, G.C.V.O., LL.D., D.C.L., of London and Berkshire in England, who has been a Director of the C.P.R. since August 9, 1926, also is a director of Baring Brothers & Company and of the Bank of England.

He has spent most of his time in England since 1907 when he went to London to open an office for Dominion Securities Corporation, which he had joined in Toronto first as private secretary to E. R. Wood, later becoming bond salesman and manager. He was with Dominion Securities until 1915 after which he was concerned with the direction of light, power and traction companies in Spain, Brazil and Mexico until 1924.

In 1922 he was one of the financial advisers sent by the British Government to the Conference at Genoa.

Created Knight Grand Cross of the Royal Victorian Order in 1934, he has been receiver-general of the Duchy of Cornwall since 1929 and is a lieutenant of the City of London. His other offices include that of Rhodes trustee and treasurer of King Edward's Hospital Fund. He served also as chairman of the overseas committee of the National War Services Advisory Board in World War II.

The honorary degree of Doctor of Laws was conferred on him by Edinburgh University in 1938, six years after Oxford University had made him a Doctor of Civil Law in 1932.

Born in Glengarry County, Ontario, on August 2, 1871, he was educated privately and at Almonte High School and Queen's University, from which he graduated as a Master of Arts in 1894 with honors in economics.

Before joining Dominion Securities he was first English master and senior house master at Upper Canada College in Toronto from 1895 to 1902.

Howard P. Robinson, LL.D., D.C.L. of Saint John, N.B., who became a Director of the C.P.R. on January 8, 1945, is chairman of the board of New Brunswick Publishing Company, Limited, having started in the newspaper business with his father, the late Robert D. Robinson, in Sussex, N.B., 48 years ago; and president, managing director, and executive committee member of New Brunswick Telephone Company, Limited, which he joined as general manager 38 years ago after an amalgamation of that company and Central Telephone Company, which he served as manager from the time of his first move into this branch of communications in 1904.

Other directorships he holds include Royal Bank of Canada, Canadian International Paper Company, Famous Players Canadian Corporation, Limited, Bathurst Power and Paper Company, Limited, The Canadian Press, Eastern Canada Coastal Steamships, Limited, Maritime Trust Company, Maritime Publishing Company, Limited, R. D. Robinson Publishing Company, Limited, and New Brunswick Broadcasting Company, Limited.

He is the first resident of the Maritimes to be appointed to the C.P.R. Board.

University of New Brunswick in Fredericton, N.B., honored him with a Doctor of Laws degree in May, 1941, and Mount Allison University in Sackville, N.B., of which he is a member of the board of governors, made him a Doctor of Civil Law in May 1942. He serves Rothesay Collegiate School in Rothesay, N.B., as a governor and is a member of the New Brunswick Museum Board.

Born in Elgin, Albert County, N.B., on March 2, 1874, of Loyalist and pre-Loyalist stock, he spent his boyhood in Sussex and was educated at Mount Allison Academy.

During his first publishing venture with his father he became one of the founders of The Maritime Farmer. Acquisition of a share in the old Saint John Sun and later the purchase of the controlling interest in the morning daily Standard in Saint John, the name of which was afterwards changed to the Journal, were his first moves into the daily field prior to becoming interested in the New Brunswick Publishing Company, Limited which acquired in succession the Telegraph, Times-Star and Globe (1926), of Saint John, and combined them as the present Telegraph-Journal (morning) and Times-Globe (evening).

George W. Spinney, C.M.G., D.C.L., of Westmount, Que., who has been a Director of the C.P.R. since February 14, 1944, is president of the Bank of Montreal, a post to which he was elected in 1942 after 36 years of service with the bank, and was chairman of the committee which organized Canada's first four victory loans in World War II.

Directorships he holds include Canadian Industries Limited, Royal Trust Company, Steel Company of Canada, Sun Life Assurance Company of Canada, Consolidated Mining and Smelting Company of Canada, Limited, Montreal, London & General Investors, Limited, International Nickel Company of Canada, Limited, and he is a member of the Canadian advisory board of Royal Exchange Assurance of London.

He was created a Companion of the Order of St. Michael and St. George in the King's Birthday List of June, 1943 "in recognition of his services as chairman of the National War Finance Committee".

Chairman of the First Victory Loan in June of 1941 he became chairman of the National War Finance Committee in October, 1941 and remained at the head of the committee until August of 1943, when he resigned because of pressure of other responsibilities and was made honorary chairman. At that time Hon. J. L. Ilsley, Minister of Finance, said the success of the committee's actions in each of the four loans "has, in large measure, been due to his (Mr. Spinney's) very great abilities".

A member of the executive committee of the Children's Memorial Hospital, Montreal, he was chairman of a campaign which raised $1,169,000 for that hospital in 1939 and in 1929 was chairman of the Federated Charities campaign in Montreal. He serves Royal Victoria Hospital as a governor.

Acadia University in Wolfville, N.S., honored him with a doctorate of laws in 1942 and he is a governor of McGill University.

For four years—1939 to 1943—he was vice-president of the Canadian Bankers' Association.

Born in Yarmouth, N.S., on April 3, 1889, he was educated at public school there and at Yarmouth Academy.

His start with the Bank of Montreal was at Yarmouth in 1906 and in succession then he served the bank at Edmundston, N.B., Quebec, Hamilton and Montreal with his appointment as secretary to the general manager at head office coming in 1915. Since then his positions with the bank have been: Assistant to the general manager (1922); assistant general manager (1928); general manager (1936) and president (1942).

Robert Crooks Stanley, M.E., E.M., D.Eng., Sc.D., of New York, who has been a Director of the C.P.R. since February 10, 1930, is chairman, president, director, chairman of the executive committee and member of the advisory committee of the International Nickel Company of Canada, Limited; president and director of the International Nickel Company, Inc., New York, with which he has been associated since 1901; member of the advisory committee of the Mond Nickel Company, Limited, England; director and member of the finance committee of United States Steel Corporation; director and member of the executive and foreign committees of the Chase National Bank, New York; a trustee of the Mutual Life Insurance Company of New York, and a councillor of the Copper Development Association in London.

Other directorships he holds include: Henry Gardner & Company and Amalgamated Metal Corporation, Limited, of England; Whitehead Metal Products Company of Canada, Limited, American Metal Company, Limited, General Electric Company and International General Electric Company, Holland House Corporation of The Netherlands, Babcock and Wilcox Company.

His leadership in the mining world is typified by three awards made to him. In 1939 he received the Thomas Egleston Medal from the alumni association of the engineering school of Columbia University in New York, where he won his Engineer of Mines degree in 1901 and which conferred on him the honorary degree of Doctor of Science in 1939. In 1941 he received the first gold medal of the Charles F. Rand Foundation, awarded by the American Institute of Mining and Metallurgical Engineers, with which he is a representative on the Hoover Medal board and a member of the Rand Foundation Award committee. In October of 1944 the American Society for Metals presented him with the A.S.M. Medal for the Advancement of Research because of his pioneering leadership in the field of metals research. Monel metal owes its discovery, in 1905, to him.

In 1935 Stevens Institute of Technology in Hoboken, N.J., of which he is chairman of the board of trustees and from which he received his first degree of Mechanical Engineer in 1899, made him a Doctor of Engineering, an honorary degree which Rensselaer Polytechnic Institute of Troy, N.Y., also conferred on him in 1940. With Princeton University's international summer school of geology and natural resources he is a councillor.

In 1937 the Belgian king, Leopold, made him a Commander of the Order of Leopold at Brussels.

He is a member of the National Foreign Trade Council, British Chamber of Commerce in the United States, St. George's Society of New York, Newcomen Society of England, Academy of Political Science, Canadian Society of New York and Canadian Geographic Society. On the National Industrial Conference Board he is a member of the executive committee, also serves as a trustee of Staten Island Hospital and is a member of the Army Ordnance Association.

Born in Little Falls, New Jersey, on August 1, 1876, he joined International Nickel after his graduation from Columbia. From 1914 to 1918 he was general superintendent, became first vice-president in 1918 and in 1922 became president.

Morris W. Wilson, C.M.G., LL.D., D.C.L., of Montreal, who has been a Director of the C.P.R. since January 14, 1935, and who was appointed to the Executive Committee on October 14, 1941, is president and managing director of the Royal Bank of

Canada, with which he has been associated since 1897, and vice-president and member of the executive committee of the Montreal Trust Company.

Other directorships he holds include Sun Life Assurance Company of Canada, Ogilvie Flour Mills and Consolidated Mining and Smelting Company of Canada, Limited.

The King's New Year's Honors List which became public on January 1, 1944, created him a Companion of the Order of St. Michael and St. George "for distinguished service and leadership in philanthropic and patriotic work."

He was appointed chairman of the British Supply Council in North America in September, 1941, after having served as deputy chairman since January of that year. An earlier appointment, in 1940, made him assistant to Lord Beaverbrook in charge of aircraft production for Britain in the United States and Canada. In 1943 the Canadian Government named him to the pulp and paper committee of the Combined Materials and Resources Board. He is chairman of the board of governors of the Welfare Federation of Montreal, chairman of the National Committee on Mental Hygiene, a governor of Royal Victoria Hospital and chairman of the St. John-Red Cross joint board of management for the Dominion of Canada.

In November of 1943 he succeeded Sir Edward Beatty as chancellor of McGill University, which he had been serving previously as member of the board of governors, and officiated as chancellor for the first time in December when he was awarded the honorary degree of Doctor of Laws. Four years earlier he had been made a Doctor of Civil Law by Bishop's College.

As McGill chancellor he presented diplomas to President Franklin Delano Roosevelt and Prime Minister Winston Churchill, at Quebec City, on September 16, 1944, when they received honorary doctorates of law from McGill during their meeting there to plot the course the Jap War was to take after the German War had been finished.

Born on March 1, 1883, in Lunenburg, N.S., he was educated in public and high schools in Lunenburg.

Entering the Royal Bank in Lunenburg in 1897 he was stationed in Halifax, Charlottetown, Montreal and Truro, N.S., in the last-named place as assistant manager, before becoming manager in Vancouver in 1911. Since then he has been: Chief Inspector, head office, Montreal, 1916; superintendent of branches, 1917; senior assistant general manager, 1922; appointed general manager, 1929; vice-president, 1931; and president and managing director, 1934.

The First Board of Directors

The organization meeting of the Board of Directors of the Canadian Pacific Railway Company was held in Montreal on February 17, 1881.

Comprising that first Board were: President, George Stephen, Montreal; Vice-President, Duncan McIntyre, Montreal; Richard B. Angus and James J. Hill, St. Paul; John S. Kennedy, New York; Henry Stafford Northcote, Pasco du P. Grenfell, and Charles D. Rose, London; and Baron J. de Reinach, Paris. The four first named Directors—Stephen, McIntyre, Angus and Hill—comprised the Executive Committee of the Board.

At the organization meeting Charles Drinkwater, who had served Sir John Macdonald as private secretary for nine years and then acquired railway experience on the Canada Central, was appointed Secretary and Treasurer. As Standing Counsel the Board selected John J. C. Abbott, who, as Hon. Sir John Abbott, was to serve as Prime Minister of Canada from June 16, 1891, to December 5, 1892. F. C. Butterfield became Master Mechanic and I. G. Ogden was brought from the Chicago and Pacific Railway as Auditor in other appointments made upon organization.

March 29, 1881, was the date of the first shareholders' meeting which took place in the offices of the new company at 18 Parliament Street, London, England. The four shareholders at this meeting which was adjourned, without any business having been transacted, to March 31, 1881, at 18 Parliament Street, were Stephen, McIntyre, Angus and Northcote. Later Northcote was to become Governor General of Australia (from 1903 to 1908) as Baron Northcote.

There have been 79 directors since the inception of the Company and some notable records of long service are revealed by a search of the annual reports which show that Richard B. Angus was longest on the Board, serving for 41 years.

Director Became U.S. Vice-President

One of the directors, Levi Parsons Morton, who served on the Board from 1886 to 1888, was elected Vice-President of the United States in 1888. He later served as Governor of New York from 1895 to 1896.

Born in an obscure New Hampshire village, a lineal descendant of George Morton, one of the Pilgrim Fathers, Levi Morton graduated from a dry-goods business in Boston to banking in New York.

He was associated in New York with Pierpont Morgan in a syndicate which broke Jay Cooke's hold on the United States Treasury.

He was appointed Minister to France in the Summer of 1881.

The directors from the inception of the Company to the present, and their period of service, follow:

John J. C. Abbott, Q.C....1888–1891
(Sir John)
Rt. Hon. John Anderson..1945–
(Sir John, G.C.B., G.C.S.I., G.C.I.E.)
Richard B. Angus.....1881–1922
Edwin G. Baker.....1946–
Edward W. Beatty, K.C...1916–1943
(Sir Edward, G.B.E.)
Hon. Frederick L. Béique..1917–1933
L. J. Belnap.....1940–
W. A. Black.....1927–1936
S. G. Blaylock.....1942–1945
George J. Bury.....1914–1918
(Sir George)
Hon. Henry Cockshutt.....1925–1944
D'Alton C. Coleman.....1934–
Adam R. Creelman, K.C...1910–1914
Richard J. Cross.....1886–1894
Hon. George A. Drummond,
C.M.G.....1903–1910
(Sir George)
Hon. Charles A. Dunning,
P.C. (C).....1942–
Hon. James Dunsmuir.....1908–1919
Sir John C. Eaton.....1919–1922
Sandford Fleming, C.M.G..1885–1915
(Sir Sandford)
Hon. L. J. Forget.....1905–1911
Aimé Geoffrion, K.C.....1940–
Sir Charles Blair Gordon
G.B.E.....1929–1939
G. Blair Gordon.....1939–
P. du P. Grenfell.....1881–1886
1888–1889
Grant Hall.....1918–1934
Hon. Eric W. Hamber.....1939–
George R. Harris.....1885–1905
James J. Hill.....1881–1883
John W. Hobbs.....1932–
Herbert S. Holt.....1911–1941
(Sir Herbert)
Charles R. Hosmer.....1899–1927
John S. Kennedy.....1881–1884
Hon. George A. Kirkpatrick 1886–1899
(Sir George, K.C.M.G.)
Hon. Donald MacInnes....1888–1900
Clarence H. Mackay.....1903–1908
John W. Mackay.....1890–1902
Hon. Robert Mackay.....1903–1916
R. V. Martinsen.....1883–1890
Wilmot D. Matthews.....1888–1919
John W. McConnell.....1936–1938
Duncan McIntyre.....1881–1884
Rt. Hon. Reginald McKenna,
P.C.....1926–1943
R. S. McLaughlin.....1930–
Ross H. McMaster.....1924–
David McNicoll.....1903–1916
Major Gen. Frank S. Meighen,
C.M.G.....1915–1946
Robert Meighen.....1908–1911
Sir Vincent Meredith, Bart.1916–1929
Frederick W. Molson.....1923–1929
Hon. Levi P. Morton.....1886–1888
Augustus M. Nanton.....1914–1925
(Sir Augustus)
W. M. Neal, C.B.E.....1942–
Henry Stafford Northcote..1881–1886
(Rt. Hon. Baron Northcote,
P.C., G.C.M.G.,
G.C.I.E., C.B.)
Edmund B. Osler.....1885–1924
(Sir Edmund)
Edward Robert Peacock...1926–
(Sir Edward, G.C.V.O.)
Arthur B. Purvis.....1938–1941
(Rt. Hon., P.C.)
Robert G. Reid.....1903–1908
(Sir Robert)
Baron J. de Reinach.....1881–1885
James A. Richardson.....1927–1939
Howard P. Robinson.....1945–
Charles D. Rose.....1881–1886
John K. L. Ross.....1914–1928
Hon. W. L. Scott.....1883–1890
Thomas G. Shaughnessy....1891–1923
(1st Baron Shaughnessy,
K.C.V.O.)
William J. Shaughnessy,
K.C.....1919–1938
(2nd Baron Shaughnessy)
Thomas Skinner.....1889–1926
(Sir Thomas, Bart.)
Donald A. Smith.....1881–1914
(Rt. Hon. Baron Strathcona
and Mount Royal, G.C.M.G.,
G.C.V.O.)
George W. Spinney, C.M.G.1944–
Robert C. Stanley.....1930–
George Stephen.....1881–1893
(Baron Mount Stephen,
G.C.V.O.)
General Samuel Thomas....1890–1902
W. N. Tilley, K.C.....1922–1942
John Turnbull.....1884–1885
William C. Van Horne.....1884–1915
(Sir William, K.C.M.G.)
Morris W. Wilson, C.M.G..1935–
W. J. Blake Wilson.....1927–1934
Hon. J. Marcelin Wilson...1935–1940
Sir William Whyte.....1911–1914

THE COMPANY CREST

A famous old Canadian crest reappeared in 1946 when D. C. Coleman, the Chairman and President, announced that the style of the Company's crest would be changed to embody again the beaver, symbol of the Dominion which Canada's pioneer trans-continental road has served for so long.

In the new trademark a beaver at work crowns a shield bearing the hand-lettered legend "Canadian Pacific," above a replica of the globe which carries the slogan "Spans the World."



For use in all departments of the Company, in this country and abroad, the new crest replaced the old shield which listed railway, air lines, steamships, communications, express and hotels as the services offered by the Company.

G. F. Gillespie, head of the art division, Department of Public Relations, is the designer of the crest which brought the beaver back to the position it enjoyed from 1885, when the line was completed to the Pacific Coast, until 1929 when the crest was changed.

In restoring the beaver the C.P.R. strengthened yet another link with the very beginnings of the country with which its name has so long been synonymous. The beaver meant Canada, more than any heraldic device ever could, in a pioneer land where the pelt of the "forest engineer" was a form of currency.

The beaver also appears in the insignia of the Hudson's Bay Company with which the Canadian Pacific has a long connection. Lord Strathcona, the Company director who drove the Last Spike signalling completion of the road in 1885, later became Governor of the Hudson's Bay Company, and Mr. Coleman is a member of its Canadian Committee.

The two companies have common interest other than the beaver crest. Through Canada's northlands Canadian Pacific Air Lines swiftly transfers valuable cargoes of furs from the far-flung trading posts of the Hudson's Bay Company to markets "outside."

In the official circular on January 28, 1946, Mr. Coleman said:

"*Effective immediately, the style of the Company's crest will be changed to embody again the beaver, symbolic of the Dominion which the Canadian Pacific has served so long.*

"*This crest will represent all departments of the Company, at home and abroad, and will replace the present shield with its departmental variations.*"

LAND GRANTS

By GEORGE A. WALKER, K.C., *Vice-President and General Counsel*

From time to time there has existed a serious misconception regarding the land grants to the Canadian Pacific, which those who feel impelled to attack the Company or its record have not failed to take advantage of, in order to spread the erroneous idea that the Company was generously endowed at the public expense.

Nothing could be further from the truth. The Government, by the terms of the admission of British Columbia into union with the Dominion of Canada, had assumed the obligation of causing a railway to be built connecting British Columbia with the railway system of Canada, and after repeated failures under Government management, Parliament had expressed a preference for construction by means of an incorporated company. The group of men who were invited to undertake the work faced difficulties which were thought to be all but insuperable. The grants of land and money were not, in any proper sense, subsidies, but were contractual obligations assumed by the Government "in consideration of the completion and perpetual and efficient operation of the railway" by the Company. The history of western Canada since 1881 shows how that consideration was fulfilled. The use to which the lands were put, and what they have contributed to the Company's revenues, is an interesting story.

Value Agreed Upon

Consisting originally of 25,000,000 acres, the grant was reduced in 1886 by 6,793,014 acres surrendered to the Dominion Government in part payment of a loan made by the Government to aid construction of the railway. The value per acre agreed upon at that time, five years after the grant, and a year after completion of the railway, was $1.50. No better answer can be made to the critics still occasionally met, who point to the land values which have since prevailed from time to time in western Canada, and suggest that these figures should be used in estimating the value of the original grant. It is interesting to note that the late J. B. Eastman, Federal Co-ordinator of Railroads in the United States, who could not be accused of partiality towards the railways, in a report on the value of land grants to railroads in the United States, concluded that it could no longer be seriously questioned that it is the value of the lands at the time they were granted which measures the amount of the aid. He included in his report tables which show the average value of the 176 million acres granted by the federal and state governments to have been about 97 cents an acre. Having in mind the notions which prevailed throughout the world in 1881 regarding the rigors of Winter in the Canadian West, the supposed impossibility of growing wheat, and so forth,

it may well be doubted if this is not too high a figure to use in estimating the value of the grant to the Canadian Pacific.

Other Land Acquired

Other land grants for the Souris Branch, the Pipestone Extension, and the unsold portions of certain land grants to subsidiaries such as the Calgary & Edmonton Railway Company, the Manitoba South Western Colonization Railway Company, the Columbia and Western, and the B.C. Southern, which had been partly sold before the lines were acquired by our Company, brought the total of the lands acquired (excluding the acreage surrendered to the Dominion Government) to roughly twenty-nine and a half million acres. Out of this, about three and a half million acres, which had been granted to the British Columbia subsidiaries and which were unsuitable for settlement, were resold to the B.C. Government in 1912 at approximately 60 cents an acre.

From the date of the first sale, which was made on the 21st of September, 1881, until the end of 1945, the Company had sold some 27,728,949 acres (exclusive of the area surrendered to the Dominion Government). The average price for the whole period was $6.93 an acre, which includes 210,000 acres of irrigable land developed at heavy cost and sold at prices ranging from $30 to $60 an acre.

The great bulk of this land was sold on terms which required the purchaser to go into occupation and cultivate and crop the land within a fixed period of time. In the first few years of land settlement, when lands were being sold at a flat price of $2.50 an acre, the contracts provided for a rebate of $1.25 on the purchase price for every acre broken and cultivated. It reflects great credit on the Company's administration of the early days when the financial outlook was so grim, that the temptation to sell large blocks of land to syndicates of speculators who were eager to buy for cash, was steadily resisted.

Crop Failures Expensive

The policy adopted soon brought its responsibilities. Following a rush of settlers in 1881 and 1882, there were successive crop failures in 1883, 1884 and 1885 and the Company was called on to relieve the distress of the farmers. The first really good harvest in 1887 was shortly followed by a drop in the price of wheat to the lowest level then known, 37 cents. The Company at that time took large quantities of wheat in payment under its land contracts, crediting the farmers with 50 cents a bushel in order to encourage them to remain on the land. The same policy of fair treatment to land purchasers has been followed ever since. Indeed it may be fairly said that the Company's policy in this respect has set the standard for all other large land-owning companies

and even for governments in the West. Since 1929 the Company has written off many millions in arrears of interest and in some cases reduced the principal payable under land contracts, to help the farmers weather the economic gale.

Where the Money Went

The Company's receipts from the sale of irrigated and non-irrigated lands and townsites, including the acreage relinquished to the Government, up to the end of 1945 have totalled almost $176,183,283 and expenditures in connection therewith, including immigration, land settlement and irrigation, have amounted to nearly $130,281,642. If account be taken of expenditures on branch lines to open up these lands and of the carrying charges during the period in which many of these lines remained unproductive, the expenditures considerably outweigh the receipts. It was basically the original grant of Crown lands which made it possible for the Company to assist, effectively as it did, in the promotion of immigration and the land settlement of western Canada. It may therefore be said that, whatever value may be set upon its land grants, the Company has already made a very handsome return to the people of Canada.

At the end of 1945 the total unsold acreage of the Company's lands was about 1,407,756, not more than half of which can be regarded as fair average farm land. This is the natural result of 64 years of selection and rejection by purchasers. With such an enormous area of land to be sold, it was impracticable for many years to fix prices on individual units; consequently, arbitrary prices were established, varying according to the general character of the district, and the land was sold on the principle of first come best served. It follows that the goods on the shelf are a little shop-worn.

Taxation a Serious Problem

The problem of taxation has in recent years been a serious one. The lands comprised in the original Canadian Pacific land grant were exempt from taxation for 20 years from the date of the grant or until they were sold or occupied. Because of delay in the issuing of the Crown Grants, it was not until about 1910 that the lands began to fall in heavily for taxation. The period of heaviest increase was from 1920 to 1925, when the amounts paid for taxes on lands adminstered by the Company's Department of Natural Resources increased from $360,000 per annum to $1,090,000. From the commencement to the end of 1945 the Company has paid in taxation of these lands approximately $19,323,177, and, notwithstanding the policy which has been pursued in recent years of ridding itself of worthless lands, the tax bill on land holdings in 1945 was $326,424.

The significance of these factors is that while the receipts from the sale of the Company's lands have in the past largely been devoted to expenditures for colonization, publicity, agricultural development, etc., and have not been distributed in profits to shareholders, the day is not far distant when this source of revenue will disappear, while the necessity for some at least of the expenditures will remain constant. In general it may be said that every sale of a quarter section means a new settler, and new settlers create traffic, but it should also be realized that we have reached a stage where, to a considerable extent, our unsold lands are not directly tributary to our own lines, and with the disappearance of our land holdings we shall have lost the most important factor in directed land settlement.

Giant Cornucopia

The Okanagan is a lazy, comfortable land, basking in the sun. But it produces enough fruit of various kinds to provide a generous helping for every man, woman and child in Canada. And it is the origin of freight and express traffic whose proportions cannot be ignored.

This year (1944) the Canadian Pacific will handle much more than 5,000 cars of fruit from the Okanagan to all parts of Canada. Estimates are that there will be six million and a half boxes of apples, a million and a half crates of peaches and hundreds of thousands of packages of plums, prunes, cherries, pears, crab-apples, apricots and cantaloupe in addition to almost unbelievable quantities of about 16 other varieties of fruits and vegetables.

. . . First glance at the Okanagan district does not impress the visitor. The lake is beautiful but narrow; the upper hills, dry, dusty covered with sage brush; the land, where it is not reached by the pipes and flumes of the irrigation system, seems barren; a few orchards, straggling on the lower benches along the shoreline, do not seem to be out of the ordinary.

But stop at any of these orchards which line the railway and highway for 155 miles from Osoyoos up to Sicamous and you will find individual trees with as many as 20 props to keep the heavy fruit from breaking the branches.

Stop at any of the scores of packing houses and you will see hundreds of nimble-fingered girls sorting tons of fruit for size and quality, packing box after box for waiting refrigerator cars to be shipped to the markets of the world.

Multiply the more than 5,000 Canadian Pacific cars by an average of 20 tons of fruit and you will be able to visualize a cornucopia of giant proportions.—*Orchards of the Okanagan* (Staff Bulletin: September 1944)

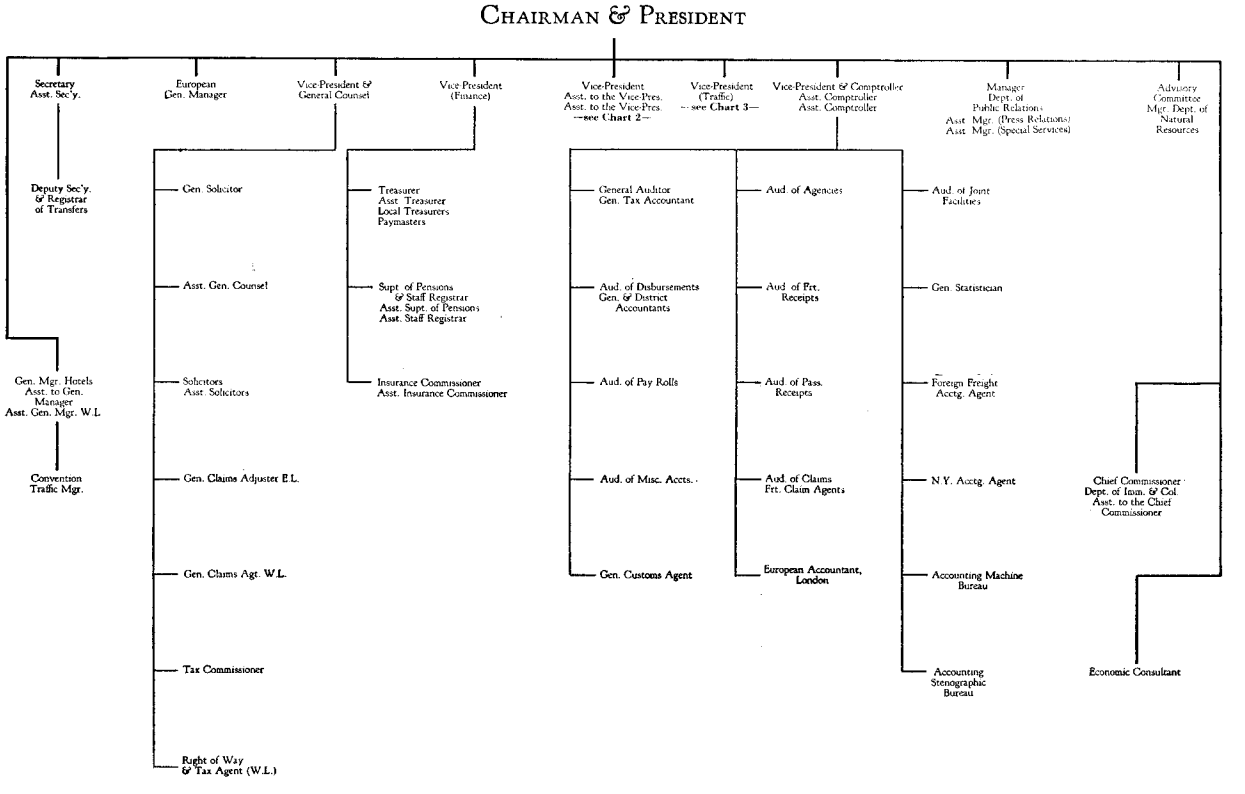
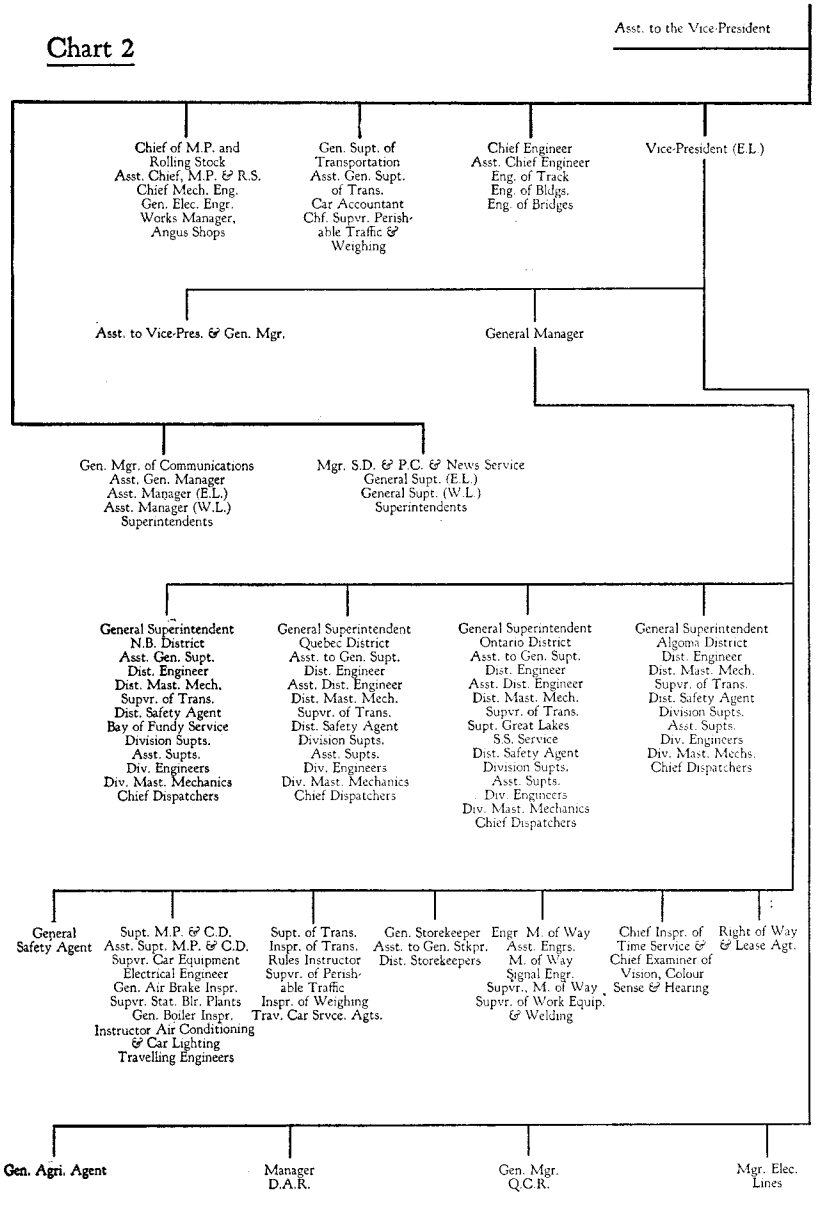

CHAIRMAN & PRESIDENT
Secretary
Asst. Sec'y.
Deputy Sec'y. & Registrar of Transfers
Gen. Mgr. Hotels
Asst. to Gen. Manager
Asst. Gen. Mgr. W.L.
Convention Traffic Mgr.
European Gen. Manager
Gen. Solicitor
Asst. Gen. Counsel
Solicitors
Asst. Solicitors
Gen. Claims Adjuster E.L.
Gen. Claims Agt. W.L.
Tax Commissioner
Right of Way & Tax Agent (W.L.)
Vice-President & General Counsel
Vice-President (Finance)
Treasurer
Asst. Treasurer
Local Treasurers
Paymasters
Supt. of Pensions & Staff Registrar
Asst. Supt. of Pensions
Asst. Staff Registrar
Insurance Commissioner
Asst. Insurance Commissioner
Vice-President
Asst. to the Vice-Pres.
Asst. to the Vice-Pres.
—see Chart 2—
General Auditor
Gen. Tax Accountant
Aud. of Disbursements
Gen. & District Accountants
Aud. of Pay Rolls
Aud. of Misc. Accts.
Gen. Customs Agent
Vice-President (Traffic)
—see Chart 3—
Vice-President & Comptroller
Asst. Comptroller
Asst. Comptroller
Aud. of Agencies
Aud. of Frt. Receipts
Aud. of Pass. Receipts
Aud. of Claims
Frt. Claim Agents
European Accountant, London
Manager
Dept. of
Public Relations
Asst. Mgr. (Press Relations)
Asst. Mgr. (Special Services)
Aud. of Joint Facilities
Gen. Statistician
Foreign Freight Accts. Agent
N.Y. Accts. Agent
Accounting Machine Bureau
Accounting Stenographic Bureau
Advisory Committee
Mgr. Dept. of Natural Resources
Chief Commissioner
Dept. of Econ. & Col.
Asst. to the Chief Commissioner
Economic Consultant

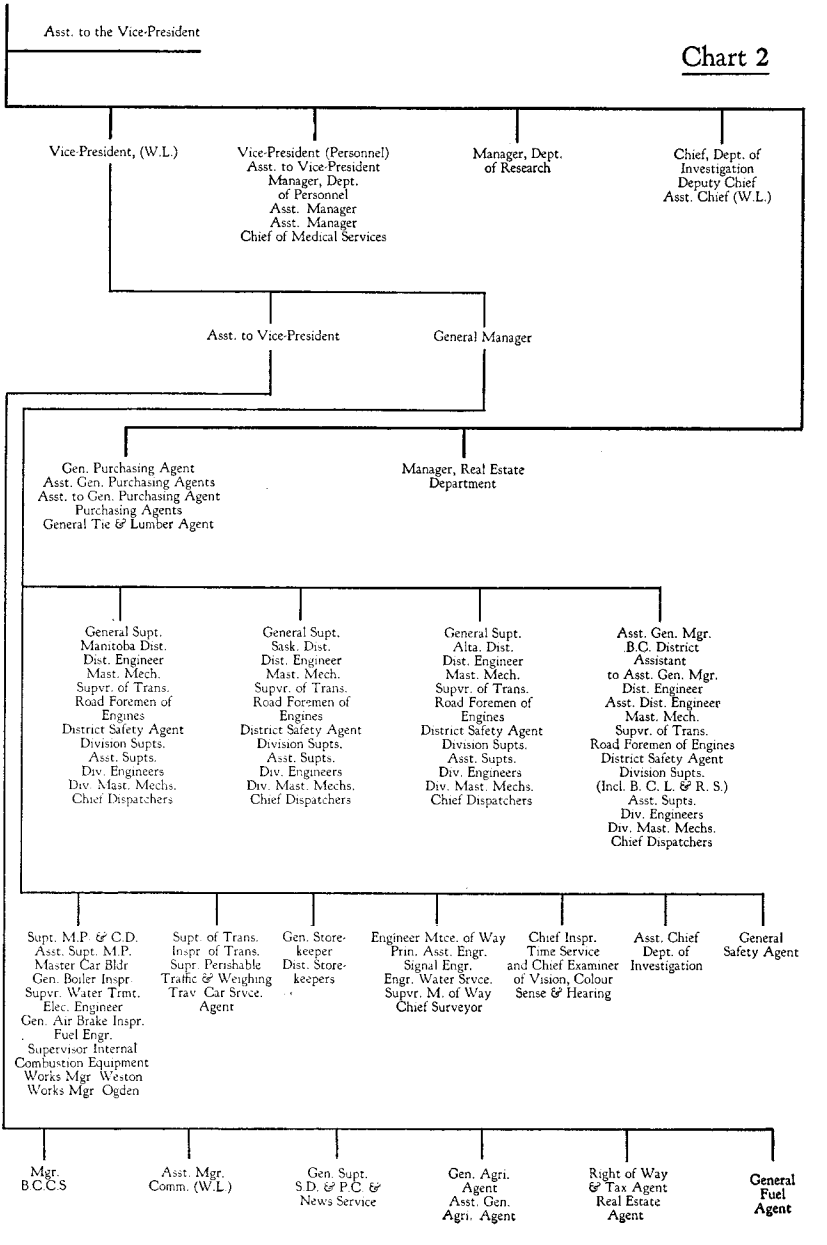
Chart 2


Asst. to the Vice-President
Chief of M.P. and Rolling Stock
Asst. Chief, M.P. & R.S.
Chief Mech. Eng.
Gen. Elec. Engr.
Works Manager, Angus Shops
Gen. Supt. of Transportation
Asst. Gen. Supt. of Trans.
Car Accountant
Chf. Supvr. Perishable Traffic & Weighing
Chief Engineer
Asst. Chief Engineer
Eng. of Track
Eng. of Bldgs.
Eng. of Bridges
Vice-President (E.L.)
Asst. to Vice-Pres. & Gen. Mgr.
General Manager
Gen. Mgr. of Communications
Asst. Gen. Manager
Asst. Manager (E.L.)
Asst. Manager (W.L.)
Superintendents
Mgr. S.D. & P.C. & News Service
General Supt. (E.L.)
General Supt. (W.L.)
Superintendents
General Superintendent
N.B. District
Asst. Gen. Supt.
Dist. Engineer
Dist. Mast. Mech.
Supvr. of Trans.
Dist. Safety Agent
Bay of Fundy Service
Division Supts.
Asst. Supts.
Div. Engineers
Div. Mast. Mechanics
Chief Dispatchers
General Superintendent
Quebec District
Asst. to Gen. Supt.
Dist. Engineer
Asst. Dist. Engineer
Dist. Mast. Mech.
Supvr. of Trans.
Dist. Safety Agent
Division Supts.
Asst. Supts.
Div. Engineers
Div. Mast. Mechanics
Chief Dispatchers
General Superintendent
Ontario District
Asst. to Gen. Supt.
Dist. Engineer
Asst. Dist. Engineer
Dist. Mast. Mech.
Supvr. of Trans.
Supt. Great Lakes S.S. Service
Dist. Safety Agent
Division Supts.
Asst. Supts.
Div. Engineers
Div. Mast. Mechanics
Chief Dispatchers
General Superintendent
Algoma District
Dist. Engineer
Dist. Mast. Mech.
Supvr. of Trans.
Dist. Safety Agent
Division Supts.
Asst. Supts.
Div. Engineers
Div. Mast. Mechs.
Chief Dispatchers
General Safety Agent
Supt. M.P. & C.D.
Asst. Supt. M.P. & C.D.
Supvr. Car Equipment
Electrical Engineer
Gen. Air Brake Inspr.
Supvr. Stat. Blr. Plants
Gen. Boiler Inspr.
Instructor Air Conditioning & Car Lighting
Travelling Engineers
Supt. of Trans.
Inspr. of Trans.
Rules Instructor
Supvr. of Perishable Traffic
Inspr. of Weighing
Trav. Car Srvce. Agts.
Gen. Storekeeper
Asst. to Gen. Stkpr.
Dist. Storekeepers
Engr M. of Way
Asst. Engrs. M. of Way
Signal Engr.
Supvr., M. of Way
Supvr. of Work Equip. & Welding
Chief Inspr. of Time Service & Chief Examiner of Vision, Colour Sense & Hearing
Right of Way & Lease Agt.
Gen. Agri. Agent
Manager D.A.R.
Gen. Mgr. Q.C.R.
Mgr. Elec. Lines

President

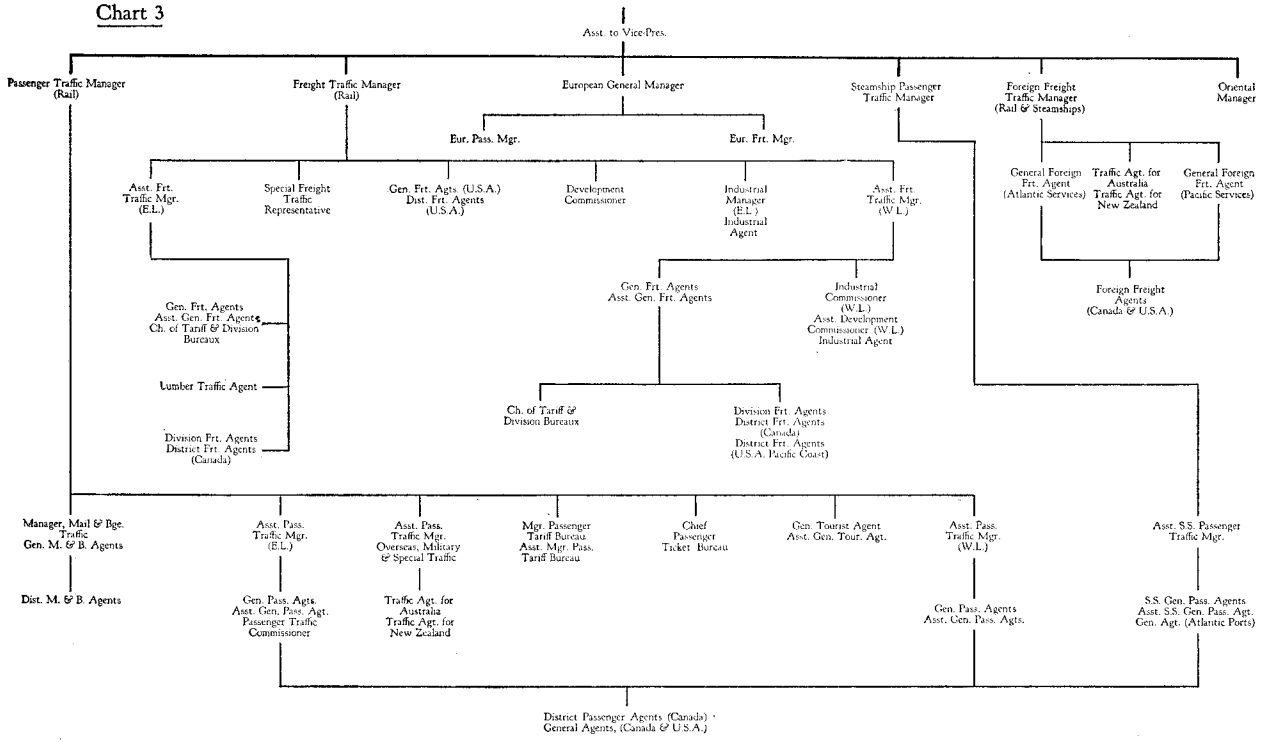
Asst. to the Vice-President

Chart 2



Vice-President Traffic

Chart 3



GOVERNMENT LOANS

(From Published Records)

Many misleading statements have been made as to the nature and extent of the contributions of the Dominion towards the construction of the Canadian Pacific Railway and such contributions are often compared improperly with the outlays of the Dominion in connection with other Canadian railways. In some cases these misleading statements have been made deliberately by those who know, or should know, better. An examination of the circumstances under which the contributions were made will demonstrate that definite obligations were placed on the Company and that these obligations have been met in full.

The original grants, in particular, represented payments for service rendered, as the very existence of the Dominion was at stake. One of the basic conditions under which the Province of British Columbia entered Confederation in 1871 was that the Dominion Government should provide a transcontinental railway. The pertinent section of the agreement reads:

"The Government of the Dominion undertake to secure the commencement simultaneously, within two years from the date of the union, of the construction of a railway from the Pacific towards the Rocky Mountains, and from such point as may be selected east of the Rocky Mountains, towards the Pacific to connect the seaboard of British Columbia with the railway system of Canada; and further, to secure the completion of such railway within ten years from the date of union."

At that time the following resolution was passed by the House of Commons:

"Resolved, that the Railway referred to in the Address to Her Majesty concerning the Union of British Columbia with Canada, adopted by this House on Saturday the 1st April instant, should be constructed and worked by private enterprise, and not by the Dominion Government; and that the public aid to be given to secure that undertaking should consist of such liberal grants of lands, and such subsidy of resources of the Dominion, as the Parliament of Canada shall hereafter determine."

Resigned When Allan Plan Abandoned

Pending completion of negotiations with private syndicates, the Dominion Government undertook extensive surveys. In negotiations with a syndicate headed by Sir Hugh Allan, the Government offered to contribute $30,000,000 in cash and 50,000,000 acres of land towards the construction of the railway but the proposal was abandoned when it was revealed that capitalists identified with the Northern Pacific were backing him. The

Conservatives resigned office, to be replaced by a Liberal Government, which (according to Sir Alexander Campbell speaking in the Senate on February 3, 1881) was prepared, in 1874, to offer $27,970,000 in cash, $20,977,500 under a four percent guarantee, and a land subsidy of 55,940,000 acres to private enterprise willing to undertake construction. Eventually, however, Hon. Alexander Mackenzie, the Liberal premier, decided to proceed with construction as a Government enterprise.

Progress was slow, and nothing was done to implement the promise to construct the railway from the Pacific towards the Rocky Mountains, so that when Sir John A. Macdonald returned to power in 1878, he realized that action must be taken to prevent a threatened secession of British Columbia from Confederation. The result was that a contract was let to Andrew Onderdonk for construction in that province. In 1879, Parliament by resolution appropriated 100,000,000 acres of land, from the proceeds of which it was hoped to finance construction.

Sir John A. Macdonald soon realized that building a railway meant much more than the construction of a roadbed. It involved also heavy expenditures for equipment and maintenance, and cost much more as a Government enterprise than under private auspices. The report of the Royal Commission, which in 1882 investigated this cost, stated:

"That the construction . . . . was carried on as a public work at a sacrifice of money, time and efficiency. That numbers of persons were employed . . . . who were not efficient . . . having been selected on party grounds . . . . That large operations were carried on . . . . with much less regard to economy than . . . . in a private undertaking . . . . That the system under which the contracts were let was not calculated to secure the works at the lowest price or the earliest date . . . "

No Aid From Grand Trunk or Britain

Finding the burden of financing construction too great a drain on the Treasury, Sir John went to England, hoping to secure aid either from the Grand Trunk or the British Government. The Grand Trunk directors at that time declared themselves opposed to promoting a transcontinental railway through Canadian territory, and the British Government also declined assistance. Sir John then turned to George Stephen, president of the Bank of Montreal, whom he persuaded to form a syndicate to take over the completion and operation of the Canadian Pacific transcontinental line. The opinion in banking circles at the time was that the syndicate was coming to the rescue of the Government. A letter in the Canadian Archives from George Stephen to Sir John A. Macdonald, dated September 27, 1880, describes the proposed

contract as one "which my friends and my enemies agree in affecting to think will be the ruin of us all." This contract was executed on October 21, 1880.

Terms of Contract

The preamble to the act of February 15, 1881, ratifying the contract, reads as follows:

"Whereas by the terms and conditions of the admission of British Columbia into Union with the Dominion of Canada, the Government of the Dominion has assumed the obligation of causing a Railway to be constructed, connecting the seaboard of British Columbia with the Railway system of Canada;

"And whereas the Parliament of Canada has repeatedly declared a preference for the construction and operation of such Railway by means of an incorporated Company aided by grants of money and land, rather than by the Government, and certain statutes have been passed to enable that course to be followed, but the enactments therein contained have not been effectual for that purpose;

"And whereas certain sections of the said Railway have been constructed by the Government, and others are in course of construction, but the greater portion of the main line thereof has not yet been commenced or placed under contract, and it is necessary for the development of the North West Territory and for the preservation of the good faith of the Government in the performance of its obligations, that immediate steps should be taken to complete and operate the whole of the said Railway," etc.

The terms agreed upon were that the Company undertook to complete the transcontinental railway by May 1, 1891, and to "thereafter and for ever efficiently maintain, work and run the Canadian Pacific Railway" in consideration of which the Government agreed to contribute to the Company $25,000,000 in cash, 25,000,000 acres of Crown lands, and the lines already constructed or under contract totalling 713 miles, together with certain customs and tax concessions.

Directors Gave Personal Guarantees

During construction, almost insurmountable obstacles were encountered, and at times it appeared that the venture could not succeed. Some of the directors were compelled to give their personal guarantees for large amounts to save the enterprise from collapse. It was such determination that pushed the railway to completion five years ahead of the contract date.

Having completed the main line, the company proceeded, to the extent of its resources, to open up the contiguous territory. In doing so, it received relatively small sums towards the construction

of certain branch lines. The Crow's Nest Pass Line, built in 1897, is an instance. In this case, while the Company received $3,404,720 towards the cost of construction of the line, it agreed among other things to reduce rates on grain and flour to Fort William and points east. The maintenance of these rates in the face of the heavy increases in the costs of labour and materials which have since occurred has involved a loss to the Company amounting to many times the grant received. Unquestionably, such contributions to branch line constructions as were received were made by public authorities with the express object of encouraging the Company to extend its services well in advance of the time when it would otherwise have been justified in proceeding with construction. In such instances, the public's contribution to the railway has been but a fraction of the railway's contribution to the development of the country.

Certain aid towards construction was also granted to railways which were subsequently acquired by this company. Such aid was received, not by the Canadian Pacific Railway Company, but by the owners who built these lines.

Misconceptions have frequently arisen in connection with the land grant. Many ignore the fact that the Government merely transferred the title to land of little immediate worth to gain important public ends. Some have endeavoured to estimate the value of the land to the Company on the basis of the gross selling prices established years later. This is manifestly improper. The Company actually gave the land its commercial value, a value which was also imparted to all other lands tributary to its lines. From the outset it has followed the broad policy of developing western Canada as quickly as possible. In fact, the Company's expenditures for colonization, land settlement, irrigation, and other similar works have been substantially in excess of those of the Dominion of Canada, and the country has received great benefit from the wise settlement and development policies pursued by the Company.

Construction Loans Paid by 1886

During construction, the Dominion assisted to a certain extent in the financing of the Company. In 1883, in the hope of improving the Company's credit abroad, an arrangement was made with the Government to assure the payment of a dividend on the Company's capital stock of three percent per annum for 10 years. Under this arrangement the Company deposited with the Government $8,710,240 in cash and $8,250,000 in securities, the latter to secure the payment by the Company by 1888 of $7,380,912, the balance of the fund necessary to provide for the dividend. Owing to depressed financial conditions, it was found possible to dispose of only a small amount of stock, and the Dominion in 1884 and 1885

made loans aggregating $21,650,700, secured by a first lien on the entire property, to enable the Company to complete the construction of its main line. The two obligations to the Government referred to, aggregating $29,031,612, were paid in full with interest by July 1, 1886. Two temporary loans were made by the Dominion: one in 1882 for $500,000, and the other in 1885 for $5,000,000—in each case for a few months only, and repaid with interest before the end of the year in which it was made.

In 1888, in order to assist in raising money for further capital expenditures and in consideration of the waiver by the Company of one of the provisions of the original contract, the Dominion guaranteed the interest on an issue of $15,000,000 Fifty Year 3½% Land Grant Bonds secured on the unsold acreage of the grant. The Company regularly met the interest on these bonds until July, 1906, when, in accordance with the option available under the original arrangement, the Company deposited with the Government the balance of moneys required for their redemption.

Canada Got Good Value for Its Money

In discussing the contributions to the Canadian Pacific the Drayton-Acworth Report of 1917 stated "the people of Canada, in our view, have had good value for their money." When the Canadian Pacific Railway Company was incorporated, Canada was little more than a geographical expression and the population west of the Great Lakes did not exceed 170,000. With the completion of the Company's main line, the country became a united nation. It may be confidently asserted that no other contract ever entered into by the Dominion has produced a return to it in any way comparable with that received as a result of the original agreement with the Canadian Pacific Syndicate.

58,000,000 Railway Ties

It is highly improbable that anyone has taken the trouble to count them, but statistics say there are approximately 58,000,000 railway ties lining the Company's right-of-way from the Atlantic to the Pacific Coast.

This imposing figure, based on an estimated 2,900 ties per mile, represents plenty of lumber. Yet these unsung heroes of the rails, unglamorous as they are, invoke little interest from the average passenger.

For like its Christmas namesake the railway tie is seldom regarded as a thing of beauty. But the importance of its role in the railroad's operation is too obvious to require emphasis.—*The Ties That Bind* (Graham Nichols, assistant editor: Staff Bulletin, November-December, 1944.)

THE GENERAL OFFICERS — THEIR FIRST JOBS

Chairman and President	D. C. Coleman	Montreal	Nov. 4/99	Clerk, Assistant Engineer, Fort William	$40.00	Month
Vice-President	W. M. Neal, C.B.E.	"	Jan. 25/02	Clerk, Superintendent, Toronto	15.00	"
Vice-President Personnel	W. Manson	"	Oct. 30/09	Clerk, Car Service, Winnipeg	35.00	"
Vice-President and General Counsel	G. A. Walker, K.C.	"	June /90	Telegraph Messenger, Toronto		
General Solicitor	F. C. S. Evans	"	Jan. 24/35	Secretary, Assistant to President, Montreal	350.00	"
Assistant General Counsel	D. I. McNeill, K.C.	"	Dec. 1/24	Student-at-Law, Calgary	50.00	"
Secretary	F. Bramley	"	Apr. 22/19	Confidential Secretary, European Gen'l. Mgr., London	£54-7-6	"
Assistant Secretary	I. R. G. Collins	"	Sept. 12/04	Clerk, Assistant to Vice-President, Montreal	$35.00	"
Assistant to the Vice-President	C. E. Stockdill	"	Dec. 1/96	Telegraph Messenger, London, Ont.		
Assistant to the Vice-President	A. Lyle	"	Sept. 13/10	Stenographer, Moose Jaw, General Superintendent	$60.00	"

FINANCIAL DEPARTMENT

Vice-President	L. B. Unwin	Montreal	Nov. 7/08	Clerk, Assistant Superintendent, Chapleau	40.00	Month
Treasurer	J. A. Dundas	"	Feb. 23/07	Clerk, Vice-President of Finance, Montreal	30.00	"
Assistant Treasurer	T. H. Moffitt	"	Sept. 14/00	Clerk, Auditor of Passenger Receipts, Montreal	10.00	"

ACCOUNTING DEPARTMENT

Vice-President and Comptroller	Eric A. Leslie	Montreal	Apr. 28/13	Chainman, Construction, C.L.O. & W.Ry.	30.00	Month
Assistant Comptroller	W. R. Patterson	"	June 6/13	Clerk, Statistical, Montreal	50.00	"
Assistant Comptroller	S. J. W. Liddy	"	May 1/14	Special Apprentice, Angus	.13	Hour

TRAFFIC DEPARTMENT

Vice-President	George Stephen	Montreal	June 1889	Messenger, Foreign Freight, Montreal	10.00	Month
Passenger Traffic Manager	R. G. McNeillie	"	Oct. 1/01	Stenographer, General Passenger Department, Winnipeg	40.00	"
Asst. Passenger Traffic Mgr., Eastern Lines	G. E. Carter	"	Sept. 25/14	Stenographer, Passenger Department, Saint John, N.B.	35.00	"
Asst. Passenger Traffic Mgr., Western Lines	N. R. DesBrisay	Winnipeg	June 13/04	Stenographer, Passenger Department, Saint John, N.B.	20.00	"
Assistant Passenger Traffic Manager	Ian Warren	Montreal	Apr. 1/20	Junior Stenographer, Engineering, Montreal	55.00	"
Acting Steamship Passenger Traffic Manager	H. B. Beaumont	"	July 4/04	Junior Clerk, Allan Line, Montreal	15.00	"
Freight Traffic Manager	C. E. Jefferson	"	Mar. 17/13	Percentage Clerk, Freight Traffic Bureau, Montreal	125.00	"
Asst. Freight Traffic Mgr., Eastern Lines	G. Hiam	"	June 6/04	Junior Clerk, Freight Traffic, Montreal	15.00	"
Asst. Freight Traffic Mgr., Western Lines	H. W. Gillis	Winnipeg	May 15/05	Night Call Boy, Operating, Mile End	.50	Day
Foreign Freight Traffic Manager	G. C. Dew	Montreal	Mar. 15/07	Stenographer, Assistant Freight Manager, Toronto	40.00	Month
Manager, Mail and Baggage Traffic	W. E. Allison	"	Feb. 13/05	Clerk, General Baggage Department, Montreal	35.00	"

OPERATING DEPARTMENT

Eastern Lines:

Vice-President	E. D. Cotterell	Toronto			
General Manager	N. R. Crump	"			
Asst. to Vice-President and General Manager	G. N. Curley	"			
General Superintendent New Brunswick District	T. C. Macnabb	Saint John, N.B.			
General Superintendent Quebec District	J. R. Kimpton	Montreal			
General Superintendent Ontario District	D. S. Thomson	Toronto			
General Superintendent Algoma District	E. S. McCracken	North Bay			

Western Lines:

Vice-President	W. A. Mather	Winnipeg			
General Manager	G. H. Baillie	"			
Assistant to Vice-President	H. A. Greenlaus	"			
Asst. General Manager, British Columbia Dist.	W. S. Hall	Vancouver			
General Supt. Manitoba District	J. I. MacKay	Winnipeg			
General Supt. Saskatchewan District	H. C. Taylor	Moose Jaw			
General Supt. Alberta District	J. C. Jones	Calgary			

	1897	Messenger, Montreal			
June	24/20	Laborer, Revelstoke	.40	Hour	
May	1, 16	Stenographer, General Manager's Office, Montreal	45.00	Month	
July	1/99	Clerk, Freight, Brandon	30.00	"	
Aug.	25/13	Clerk, Superintendent's Office, Montreal	25.00	"	
June	27/10	Messenger, Angus Shops, Montreal	10.00	"	
May	16/10	Locomotive Fireman, Operating, Medicine Hat	Schedule		
May	1904	Axeman, Construction, Rush Lake, Sask.	$30.00	Month	
Apr.	22/18	Clerk, Vice-President, Montreal	40.00	"	
Apr.	27/11	Clerk, General Superintendent, Toronto	20.00	"	
Apr.	1/03	Clerk, General Superintendent, Calgary	50.00	"	
May	1904	Telegraph Messenger, Nelson	20.00	"	
Sept.	23/08	Night Operator, Operating, Cartier	Schedule		
Mar.	1/12	Rodman, Engineering Department, Moose Jaw	50.00	Month	

OTHER DEPARTMENTS

Chief Engineer	J. E. Armstrong	Montreal			
Chief of Motive Power and Rolling Stock	H. B. Bowen	"			
Manager, Department of Research	W. A. Newman, M.B.E.	"			
*Manager, Department of Personnel	George Hodge, O.B.E.	"			
Acting Manager, Department of Personnel	H. D. Brydone-Jack	"			
General Superintendent of Transportation	H. J. Main	"			
Manager of Sleeping and Dining Cars	T. M. McKeown	"			
General Manager of Communications	W. D. Neil	"			
General Purchasing Agent	B. W. Roberts	"			
General Manager of Hotels	H. F. Mathews	"			
Manager, Department of Public Relations	J. H. Campbell	"			
Chief Commr. of Immigration and Colonization	H. C. P. Cresswell	"			
Chief, Department of Investigation	Maj-Gen. E. de B. Panet, C.M.G., D.S.O.	"			
Manager, Department of Natural Resources	A. Griffin	Calgary			
Special Representative	William Baird	London			
European General Manager	J. C. Patteson	London			
		Trafalgar Square			
Oriental Manager	D. Drummond	Hong Kong			
Deputy Secretary and Registrar of Transfers	F. J. Whiddett	London			
		8 Waterloo Place			

Aug.	5/12	Assistant Engineer, Montreal	110.00	Month	
May	15/05	Machinist Apprentice, Angus	.09	Hour	
July	24/11	Special Apprentice, Angus	.18	Hour	
Mar.	1890	Clerk, General Passenger Agent, Montreal	12.00	Month	
June	1/07	Rodman, Engineering, Boundary	45.00	"	
Aug.	1/02	Operator, Operating, Almonte, Ont.	47.50	"	
June	1909	Ticket Clerk, Chateau Frontenac	35.00	"	
Mar.	28/05	Operator, Commercial Telegraph, Calgary	60.00	"	
Sept.	11/07	Clerk, Treasury, Winnipeg	25.00	"	
June	15/98	Junior Clerk, Superintendent, Terminals, Montreal	10.00	"	
Jan.	1/28	Local Press Representative, Vancouver	200.00	"	
Oct.	25/12	Stenographer, Dept. of Natural Resources, Calgary	65.00	"	
July	15/25	Chief, Department of Investigation, Montreal			
Jan.	19/18	Supt., Operating and Maintenance (Nat. Res.), Brooks, Alta.	375.00	"	
Mar.	27/05	Junior, Allan Line, Glasgow	£42-0-0	Year	
June	12/23	Assistant General Agent, Steamships, New York	$275.00	Month	
Aug.	29/99	Junior, Allan Line, Glasgow	£0-16-8	"	
Dec.	1/04	Clerk, Deputy Secretary, London	£10-0-0	Year	

*Services on loan to Government.

NUMBER OF EMPLOYEES

The Company, in all system activities, employed 83,502 persons in 1945 and their distribution was as follows:

General and Miscellaneous:

Executives, General Officers and Assistants	224
Division Officers	401
Assistant Engineers and Draftsmen	157
Other Miscellaneous Officials	552
Clerks	7,270
Telephone Switchboard Operators	71
Office Boys, Messengers, Attendants and Miscellaneous Trades Workers	585
Janitors and Cleaners	322
TOTAL GENERAL AND MISCELLANEOUS	9,582

Maintenance of Way and Structures:

Bridge and Building Department Foremen	244
Carpenters and Bridgemen	1,216
Blacksmiths, Pipe Fitters, Plumbers, Tinsmiths and Pump Repairers	137
Masons, Bricklayers, Plasterers and Painters	207
Helpers, B. & B. Dept.	85
Pile Driver, Ditching, Hoist and Steam Shovel Employees	131
Pumpmen	119
Extra Gang and Snow Plough Foremen	145
Signal Foremen	25
Section Foremen	2,515
Sectionmen	5,907
Labourers	3,118
Signal and Interlocker Maintenance and Repairmen	266
TOTAL MAINTENANCE OF WAY AND STRUCTURES	14,115

Maintenance of Equipment:

General Foremen	31
Department and Gang Foremen	725
Blacksmiths	281
Boilermakers	516
Carmen (A)	917
Carmen (B)	273
Carmen (C)	2,599
Carmen (D)	119
Electrical Workers	381
Machinists	2,123
Moulders	76
Pipe Fitters and Sheet Metal Workers	562
Helpers to Mechanics	3,541
Regular Apprentices	570
Car Cleaners	746
Other Unskilled Employees	1,369
Unclassified Labourers	1,747
Stationary Engineers, Firemen and Oilers	280
TOTAL MAINTENANCE OF EQUIPMENT	16,856

Transportation:

Inspectors and Sergeants of Police	117
Constables and Policemen	399
Storekeepers	130
Storemen	636
Train Dispatchers and Traffic Supervisors	229
Supervisory Agents and Assistants	213
Station Agents, Non-Telegraphers (small station)	92
Station Agents, Telegraphers and Telephoners	2,171
Signalmen (Non-Telegraphers) at Interlockers	115
Foremen in Freight Sheds	154
Freight Handlers and other Station Employees	2,999
Labourers	563
Dining Car and Restaurant Inspectors, Conductors and Stewards	170
Dining Car and Restaurant Helpers and Attendants	1,472
News Agents	183
Floating Equipment Employees	213
Sleeping and Parlor Car Inspectors and Conductors	172
Sleeping and Parlor Car Porters	769
Drawbridge Operators	26
Signalmen or Watchmen at Crossings, non-interlocked	107
Yardmasters and Assistants	254
Switch Tenders	131
Hostlers	219
Road Passenger Conductors	341
Road Freight Conductors	1,040
Road Passenger Brakemen, Baggagemen and Flagmen	803
Road Freight Brakeman and Flagmen	2,109
Yard Conductors and Yard Foremen	720
Yard Brakemen and Helpers	1,564
Road Passenger Engineers and Motormen	455
Road Freight Engineers and Motormen	1,310
Yard Engineers and Motormen	638
Road Passenger Firemen and Helpers	470
Road Freight Firemen and Helpers	1,395
Yard Firemen and Helpers	657
TOTAL TRANSPORTATION	23,036
GRAND TOTAL RAIL AND INLAND WATER LINES	63,589

Outside Operations and Subsidiary Companies:

Canadian Pacific Air Lines, Limited, and subsidiaries	2,034
Munitions	1,426
Ocean Steamships	3,766
Coastal Steamships	1,683
Communications Dept.	3,435
Canadian Pacific Express Co.	3,194
Hotels	3,353
Miscellaneous	1,022
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GRAND TOTAL—ALL SYSTEM ACTIVITIES	83,502

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INSURANCE DEPARTMENT

By F. PALIN, *Insurance Commissioner*

Prior to the year 1916, all fire, marine and miscellaneous insurances of the Company were placed in the best available markets in England, Canada, or the United States. In that year it was decided to establish an Insurance Fund, with which some part of existing and future insurances would be underwritten. From a small initial participation in the fire and marine insurances the Company's Insurance Fund, which has been administered throughout on standard underwriting practices, including re-insurance, has steadily increased its surplus and the amount standing to the credit of the Insurance Fund at the 31st of December, 1945, was $11,122,712.51, as shown in the Company's annual report. The fund has not participated in the insurance of the Company's ocean steamships against loss or damage resulting from war risks.

Fire Protection and Prevention

The Insurance Department has direct supervision over all fire protection and prevention matters throughout the premises of the Company, including all subsidiaries, and the Company's officers and employees actively co-operate with the Department's inspection staff so that all known fire hazards are eliminated or controlled. The fire insurance rates paid by the Company to underwriters and its Insurance Fund are considerably lower than the average fire insurance rates for the whole of the Dominion. This is due in no small measure to our good fire loss record for some years past which result reflects co-operation between officers and employees in the elimination of fire hazards, enforcement of the Company's fire prevention rules, and periodical inspection of properties. Generally speaking, the Company has probably as complete and efficient equipment for fighting fires as any organization in Canada, and on numerous occasions this equipment and volunteer fire brigades have been of great help in the control of fires in adjacent property, especially in small towns and villages.

New Risks

The recent acquisition by the Company of air line properties and their operation brought new risks which, in so far as aircraft are concerned, are at present insured for other than ground fire risks in the Insurance Fund. Inspections of these properties are under way, with a view to the adoption of the same fire prevention standards, and the maintenance of fire protection equipment applicable to railway properties.

Constant Supervision

Property values, and the values of freight in transit and storage for which the Company may be responsible, have increased substantially since the outbreak of war, so that considerable of the fire insurance has been subject to constant adjustment, apart from the normal fluctuations throughout the year in freight shipments in transit on the railway, in stations, freight sheds, on wharves and docks; in stocks of material stored outside, inside or adjacent to buildings, dining car and sleeping car stores; storm sash in storage during the Summer; hotel and ship linen; ties in storage yards; ties and lumber in woods and at mills; fur shipments; merchandise in storage on docks, in freight sheds and in cars; and grain in the Company's elevators. These situations call for close supervision by those concerned, who periodically report values for fire insurance purposes.

At certain points the railway is responsible under tariffs for insurance on goods when placed in storage on its property, such as binder twine, sugar, flour, etc., and it is necessary to keep the values of all such goods insured to protect the Company's liability. If the owner also has his goods insured, in case of fire loss he may collect from his underwriters and they in turn take subrogation against the railway; payments made by the railway company under this procedure are then recovered from its insurers.

The railway does not insure against purely wreck damage to rolling stock and contents, but its fire insurance covers any loss to such property resulting from fire following wreck or accident. The risks of sprinkler leakage, tornado and inherent explosion, are included in the fire insurance schedule.

Advisory Committee Guides Investments

In 1918 an Advisory Committee was formed with jurisdiction over the investments and administration of the Insurance Fund. The Insurance Commissioner is governed by the advice of this committee, which on December 31, 1945, consisted of: L. B. UNWIN, *Chairman;* W. M. NEAL, C.B.E.; GEORGE STEPHEN, CAPTAIN R. W. MCMURRAY and the Insurance Commissioner. Meetings of the Advisory Committee are held periodically.

The Insurance Fund participates in the general fire insurance schedule to the extent of 25 percent, the remainder being arranged through brokers with a group of strong British companies through Canadian offices.

The percentage of marine insurance placed with underwriters is arranged through London (the marine insurance centre of the world).

The Insurance Department has supervision over all insurance placed on Company's property, including insurance for the following subsidiaries and affiliated interests:—

Alberta Stockyards Company Limited
Aroostook Valley Railroad Company
Canada Colonization Association
Canadian Pacific Air Lines, Limited
Canadian Pacific Car & Passenger Transfer Co.
Canadian Pacific Electric Lines
Canadian Pacific Steamships, Limited
Dominion Atlantic Railway
Eastern Abattoirs Limited
Mersey Towing Company
The New Brunswick Cold Storage Company, Limited
Northern Alberta Railways Company
Public Markets Limited
Quebec Central Railway Company
Seigniory Club Community Association, Limited
50% of Toronto Terminals Railway Company
50% of Pennsylvania-Ontario Transportation Co.
50% of Vancouver Hotel Company, Limited

Supervision is also exercised over insurance on numerous properties in which the Company is interested by way of mortgage or otherwise.

Special Policy Arrangements

Insurances outside the Insurance Fund are arranged through brokers, and while some responsibility rests with them for the stability of the companies selected to carry the risks, all policies are carefully checked as to rates, wording and conditions, prior to recording and filing in our records. The wording of special policies is prepared by the Insurance Department. For the purpose of verifying the stability of the insurance companies in Canada, Government reports are consulted. These reports are issued periodically showing the insurance companies authorized to do business in Canada, the classes of insurance for which they are licensed and, most important, the amount and classes of securities held by the federal government on deposit for the protection of the policyholders.

The broker with whom the marine insurances are arranged usually places the plan of insurance before the leading marine insurance company's underwriter, who names the rates and terms and indicates what percentage of the insurance he will underwrite. Other companies follow this lead to the limit of the insurance company market, any balance being taken by "Lloyd's" Underwriters.

RESEARCH DEPARTMENT

Always alive to the truth of the statement by Van Horne, its great builder, that the railway which stands still is doomed, the Company has a splendid record of achievement in practical improvements to the art of transportation. Independent research in all the departments of the world-spanning travel system has been responsible for many of the refinements enjoyed by today's travellers and, far from resting on its oars, the Company is steadily expanding its research activities.

The function of the Department of Research in the Company's scheme of things is to initiate, co-ordinate, and develop investigations which other departments, owing to lack of opportunity or facilities, find difficulty in handling. In all of its studies, the department works closely in co-operation with other departments concerned. It also maintains liaison with research groups in government, industry and transportation from which valuable working relations are established in respect of specific projects and by which the Company is kept informed of progress in new developments of immediate or potential concern to the Company.

The scope of the department's work may be illustrated by mentioning some of the problems it examined in the year up to April, 1946, when this book went to press. An extensive study of the possible economies and other advantages of direct steaming of locomotives in roundhouses was undertaken in conjunction with the mechanical and operating departments of both eastern and western lines.

Under direct steaming, the pressure is raised in locomotive boilers by the injection of steam direct from a stationary steam plant. The study led to the adoption of this method of steaming up locomotives at Alyth roundhouse (Calgary) which will result in increased and more economical use of cheap lignite coal. Other economies and improved methods in the handling of locomotives in roundhouses were also indicated. Using the information developed in this study, the possibilities of direct steaming at other points on the system are being examined in detail.

A continuous survey of passenger travel, by highway and air, as well as by rail, is being conducted, involving examination of past trends, possible future developments, revenues and costs of

various types of services and the possible effects of competitive forms of transportation upon railway passenger traffic.

In co-operation with the passenger and accounting departments, passenger ticketing procedures are being studied to see whether any improvement over present methods, either in service to the public or in economy of operation, can be achieved by the use of ticketing or accounting machines or by other means.

The department is making a study of car journal lubrication in conjunction with the operating and mechanical departments and the laboratories of suppliers and the National Research Council, analyzing the causes of difficulties experienced in operat on, and exploring possible ways of improving lubricants and materials in an endeavor to attain better performance and more reliable service.

In the interests of greater safety to life and property, the question of boiler explosions has been reviewed. Although with present equipment and under existing practices, boilers explode very infrequently, the possibility is being explored of developing preventive devices which will still further reduce or entirely eliminate these occurrences.

Other problems upon which the Department of Research has been asked to collaborate include methods of weed control on right-of-way, mechanization of freight handling at terminals, means of thawing or freeze-proofing coal in cars or loading chutes, standardization of lubricants with a view to reducing the number of varieties used in the Company's operation, and reduction in locomotive whistle annoyance to the public.

In its general assignment of keeping abreast with the advancement of new ideas, the department has given special attention to developments in gas turbines for locomotive use, particularly to the possibility of using coal with this form of power, having in mind the great economic advantages which might accrue, especially in Western Canada where suitable low cost fuels are available in large quantities.

The scope of research in the Canadian Pacific is as broad and varied as the activities of the Company itself, which include world-wide transportation by rail, water, air and highway. Progress in science and industry, together with increasingly keen competition, have served to emphasize the need for continuous research in the interests of improved service, efficiency and economy.

THE CROP REPORT

By Miss C. L. K. Holmes, *Press Relations Officer, Women's Division*

Not one man's opinion only, but the considered appraisal of nearly 700 Canadian Pacific Railway agents summarized from findings of farmers, elevator men and from their own observation brings the annual C.P.R. estimate of western Canada's grain crop within a hairbreadth of the final count published each autumn by the federal government.

Not one year, but every year since the crop forecast was instituted by the company in 1904 has this been the case.

It was T. S. Acheson, who prepared the first reports and estimates on the western Canadian grain crop by direction of the late Sir William Whyte.

Beginning April 15, or thereabouts, each of the 700-odd western agents, including those among the fruit and garden centres of British Columbia, receives from the agricultural department a letter outlining explicitly the details required from his special locality.

When the report is completed it is summarized and sent to the Vice-President of Western Lines and thence to the Vice-President of the Company at Montreal. It is approved in Winnipeg. This crop "letter" then goes immediately to officials in the grain trade and to agricultural editors, to the banks and such institutions whose business is any way allied to agriculture.

For information to the general public, it is further summarized by press relations and dispatched as a news story to all the Canadian daily newspapers. These are given direct service on the day of its release from the agricultural department throughout the season.

In the spacious days of an active grain market, it was not an uncommon occurrence when market prices wavered noticeably on the publication of the C.P.R.'s weekly crop statement, the first railway grain summary provided in the Dominion.

Earliest bulletins, reporting seeding started, have invariably come from southeastern Alberta in the vicinity of Medicine Hat and Lethbridge. The earliest on record was from Taber, where farmers reported seeding March 23rd, 1946.

In normal times the service rendered by the company was literally world-wide. The weekly crop letter went to the Port of London grain committee, to Spain, Portugal, Sweden, Manchuria, the Rome Institute, the Argentine and wherever there was established a ministry of food with consequent need for information on world grain conditions. The American Railway Development Association has written many complimentary letters on the reliability of the report.

INVESTIGATION DEPARTMENT

By Major-General E. de B. Panet, C.M.G., D.S.O., E. D.
Chief of Department of Investigation

Every time a Canadian Pacific train stops at a divisional point, one of the outstanding objects of interest is the representative of the Investigation Department on duty, whose smart uniform and capable, alert appearance is almost always a subject of comment from one or other of the passengers who have not passed over the line before. There is about him an air of quiet, dignified efficiency, typically Canadian Pacific, and behind him is a good story of effective organization, of painstaking, self-sacrificing devotion to duty, and of regard for the honor of the department he represents and the institution of which it is a part.

Upon all Canadian Pacific property and everywhere within a quarter of a mile surrounding it, this man and his 280 brother uniformed constables represent the power and effectiveness of the law exactly as does the civic policeman on the street corner. Behind him are five staff sergeants, 35 sergeants and acting sergeants, 40 plainclothes investigators, 12 inspectors, two assistant chiefs, one deputy-chief and one chief, a total just short of 400 men. Their charge is a tremendous one—a transcontinental railway with all its freight and operating yards, its buildings in every city and station points, its shipping docks and all the other properties over the whole Dominion. During the Great War and World War II, this staff was temporarily increased by hundreds of additional constables and guards to protect railway structures and plants, also many storage yards for military material.

Protection is their job, protection for the Company, and protection for all those who use its services. Prior to 1913, few if any railways on the American continent had an organized investigation department. They every year suffered almost unbelievable losses from robbery, theft, and wilful destruction of property. With the Canadian Pacific it sometimes ran over a million dollars, which did not take into account annoyance and delay suffered by shippers to whom re-imbursement of the actual loss often fell far short of compensating for trouble occasioned. At that time a half a dozen or so plainclothes investigators spread their efforts over the five thousand miles of the then existing line and a corps of elderly watchmen kept their eyes on freight yards in a somewhat desultory way.

New Force Shows Results

It was not good enough, and in 1912 Lord Shaughnessy decided upon the organization of a police force such as would effectively protect, and a year later the force was in existence under the direction of the late Chief R. G. Chamberlin, whose fine qualities

later on made him an outstanding figure in law enforcement over the whole continent.

The Canadian Pacific Police is now a nationally and indeed internationally known and respected organization. In pursuance of their duties the members of the force have contributed in no small degree to the maintenance of law and order throughout the Dominion. Under their present chief, all ranks have worthily maintained the esprit de corps and good reputation which have, since its organization, contributed so much to its success and standing with the general public.

A Canadian Pacific constable receives his equipment and uniform on enlistment without cost to himself, and his training is conducted with extreme care and with the full knowledge that the constable when on duty must meet and deal with all classes of people, and emergencies ranging from lost children to first aid to persons who have sustained injury on Company property. Incidentally, all members of the force are thoroughly trained in first aid work.

The well-organized, efficiently-conducted Investigation Department, with its smart-appearing, well-trained constables and investigators constitutes a protective force which in its effectiveness is a far cry from the old days when a haphazardly chosen investigator or railway police officer in mufti was by reason of his lack of training and organization hopelessly unable to cope with his task. These early railway policemen lived more often than not in a hostile world. They were too few, and losses from theft were proportionately large. Today the Canadian Pacific constable or investigator enjoys the complete respect and esteem of his fellow-workers in the Company's service. The representative of the Investigation Department is engaged in protecting the good name and integrity of the Company, and enjoys the close co-operation of all other employees.

In addition to policing the Company's property, members of the Investigation Department collect evidence and trace witnesses in cases where this is necessary; protect passengers against gamblers and confidence men; provide escorts for valuable shipments such as gold, silk, or furs; and act in any special capacities which may be necessary.

While the Canadian Pacific police have jurisdiction up to a quarter of a mile from all property owned by the Company, their work or general interest in the prevention of crime by no means ceases at that point. The Investigation Department co-operates closely with all other police forces in the Dominion, and time and again co-operation extended to the Royal Canadian Mounted Police, the different provincial police forces, as well as to police in the cities from coast to coast has resulted in either the pre-

vention of premeditated crimes or the capture and subsequent punishment of the criminals.

Educational Measures

In 1924 a manual of instruction was prepared and issued to members of the department, which included Company and departmental rules, articles on courtesy, self-control, instructions on duties of railway constables, extracts from the Railway Act, Criminal Code, Revised Statutes, etc.

It is the practice to require junior members, before promotion to a senior grade, to pass an examination based on this manual, also including questions relating to general railway business. All members of the department are required to qualify every year in revolver practice and first aid.

This examination system has been extended to include all constables, irrespective of length of service. Also promising constables are given six months' trial as acting investigators, which enables the department to select competent men for investigators when vacancies occur.

Daffodils for Easter

Those lovely Spring flowers which are on sale today in downtown florist shops as far east as Montreal were probably blooming in sun-drenched open fields near the city of Victoria a few days ago.

An ever-growing industry, shipment of cut flowers from Vancouver Island and southwestern British Columbia reaches its peak at the Easter season . . . the profusion of flowers in this evergreen playground making up for the lack of early floral beauty in eastern cities.

. . . In recent years Canadian Pacific Express has carried about 100,000 pounds of daffodils and other Spring blooms to towns and cities across Canada. Each mainline train had about half an express car full of boxes of flowers. One grower alone shipped 20,000 dozen daffodils.

. . . The cutting of the flowers is timed so that they can be packed at the last possible minute.—*Staff Bulletin.*

PERSONNEL DEPARTMENT

By WILLIAM MANSON, *Vice-President of Personnel*

A further development of personnel work started early in 1946 was still proceeding as this volume went to press, with certain matters remaining in a formative state.

The important work of negotiating, revising, interpreting and adjusting written agreements between the employee organizations and the Company is one of the main functions of the Department of Personnel and promises to constitute a large proportion of the work during the immediate post-war years.

Dr. H. A. Beatty, of Toronto, who had been Chief Medical Officer of the System since 1918, retired at the end of May, 1946, after 44 years of service with the Company during which he had seen a steady improvement in the general health of the employees, and had guided the work of the Company's medical officers with tact and ability. He was closely associated with surgical work in the University of Toronto and Toronto Western Hospital. Dr. Beatty had the honour of being a Knight of Grace of the Venerable Order of St. John of Jerusalem, and holds the degrees of M.D., M.R.C.S. (Eng.), F.A.C.S. (U.S.A.), and F.R.C.S. (Canada).

To replace Dr. Beatty the appointment was made of Maj. Gen. C. P. Fenwick, who was Director General of Medical Services for the Department of National Defence (Army) in World War II. Dr. Fenwick was designated Chief of Medical Services, and under his direction the work of health protection will be further developed.

First steps included the institution of periodical physical examinations of all officers in order to safeguard their continued health and activity. Effective August of 1945 the obligatory examination of new employees had been extended to cover all classes, instead of being confined to certain categories.

Another function of the Personnel Department is the Employees' Suggestion Bureau, which is the medium for utilizing the knowledge and experience of employees who feel they have ideas to contribute towards the betterment of methods and practices throughout the service.

The bureau has handled 6,500 suggestions since its inception along present lines in 1934, and of these 17.9% have proved worthy of adoption. Until 1946 monetary awards for useful suggestions were made on an annual basis, but now regular monthly prizes of $25, $15, and $10 are being awarded for the three suggestions judged most valuable and adopted in each month of the

year, and certain changes have been made in the method of handling suggestions with the object of stimulating the flow and shortening the period of investigation and consideration.

Programs of training supervisors and employees in methods of working to attain the best results are other activities which the Personnel Department has the task of carrying out, as well as the general function of fostering good feeling among the Company's staffs as a whole, of dealing with employment and re-establishment problems, and helping in employee communal enterprises such as credit unions, athletic, social, and educational activities.

In endeavouring to carry out the objectives outlined in the preceding paragraph the use of organized groups, and of motion and still sound films is being extended to cover as wide a field as possible.

The First Quebec Conference

Quebec City was a happy choice for the meetings in 1943 and in 1944 between President Roosevelt and Prime Minister Churchill with Prime Minister King as host.

These Quebec Conferences of World War II made history just as had the first one in the Ancient Capital.

It was held on October 10, 1864, with its objects the confederating of all the British possessions in North America into one great Dominion and, as R. C. MacBeth tells it in *The Romance of the C.P.R.*, there were men present from all the then organized British provinces.

Etienne P. Taché was chairman for "The Fathers of Confederation" of the famous picture.

From Ontario and Quebec came John A. Macdonald, George Brown, George E. Cartier, A. T. Galt, William McDougall, Thomas D'Arcy McGee, Oliver Mowat, Alexander Campbell, James Cockburn, Hector L. Langevin and Jean G. Chapais.

From Nova Scotia there were Charles Tupper, W. A. Henry, Jonathan McCully, R. B. Dickey and A. G. Archibald.

From New Brunswick came Samuel L. Tilley, John M. Johnston, Charles Fisher, Peter Mitchell, E. B. Chandler, W. H. Steeves and John H. Gray.

Prince Edward Island was represented by Colonel Gray, Edward Palmer, W. H. Pope, George Coles, Edward Whelan, T. H. Haviland and A. A. Macdonald.

Newfoundland sent F. B. T. Carter and Ambrose Shea, although it was not to come into Confederation.

MEN AGAINST THE STORM

(EDITOR'S NOTE:—The story of the successful fight against the elements during the winter of 1942-1943, is printed here as a typical instance of the courage, resource and ability with which Company men meet and defeat one of the nation's most devastating and difficult transportation problems. It could be written equally well about railroading during almost any Winter season in this country. The story also is a deserved tribute to all Canadian railwaymen.)

By MARC. T. MCNEIL, *Press Relations Officer, Ottawa.*

It takes the Winter to show if you've got a railroad or not, runs the railwayman's adage, and never has the truth of that old saw been proven more conclusively than in the Winter of 1942-43.

Starting in November and running through until mid-March the storm king was on the rampage, and, in turning back the many onslaughts which threatened to tie up transportation and communications, Company men wrote a glowing page in the Canadian Pacific's long history of accomplishment under adverse conditions.

Adding lustre to the victory was the fact that it came while the Company was engaged in moving the heaviest traffic in its history, with every load vitally important in the world's greatest war and when the demands of that war on manpower had got down close to the bottom of the labor barrel.

From a dollars and cents angle these heavy snowfalls and sleet storms which burdened operations meant $1,300,000 in increased cost of snow and ice removal, according to the report made by D. C. Coleman, Chairman and President, to the annual shareholders' meeting in May, 1943.

Going at it from the question of snowplow mileage the figures are staggering. In January, for instance, more than 83,000 miles of Company lines, a mileage more than three times the earth's circumference at the equator, were cleared by Company snowplows for an increase of 72,860 miles or 709 per cent. over the corresponding month in 1942.

The real story of successful operation through the most vicious Winter since the Company started transcontinental railroading in Canada cannot be told though by cost accounts and snowplow mileage. That story is the human story—a stirring saga of men against the storm.

It is a story which takes in the entire system. There were section crews and yard men who fought with pick, axe and fire against the dreaded "blue ice" which threatened to clog switches; who worked steadily in garments which sleet had made into an armor of ice and who took only brief breathers where it was warm before going right back on the job.

On the line there were snowplow operators, engineers and firemen who rode in their cabs with the windows wide open in

sub-zero weather to make up for poor visibility as they bulled their way through the snow—with the plows sometimes powered by as many as four locomotives.

Or, the trainmen could tell stories of floundering back through waist-deep snow with a knife-edge crust for as much as three miles to report their trains stalled in cuts which had been plowed but a short time before. They could also remember their experience in freight service of "doubling hills" in the biting cold.

An All-Out Fight

The communications department could provide its own first-hand description of the truly hellish weather in which Company linemen, aided by experienced men made available from the Army's signals branch, did a terrific job. With many miles of new copper wire and 140,000 feet of insulated twin wire they repaired the hundreds of breaks caused by the hammer blows of sleet and gale and replaced the many poles, some of them reinforced cement test poles, which were bowled over.

Usually balmy British Columbia shared the fight too with one of the ships in British Columbia coast service winding up one voyage with 500 tons of ice coating as added cargo from 70-mile-an-hour gales roaring directly down from the North Pole.

Sleepless officials and other employees fought as hard from their desks as the men who carried out their orders on the line and made brilliant improvisations when their wires went dead.

It was a battle of ever-increasing intensity as engine house crews recall when they think of the coal which froze in chutes and the locomotives which were so coated with ice they looked to be "wrapped in cellophane."

Outside the Company entirely there were mothers of small children in metropolitan centres who rejoiced in the victory, even if they knew little about the fight. If it hadn't been for Company trains there would have been an actual milk famine during at least three periods of the Winter in places like Montreal, Winnipeg and Vancouver. The snow which stopped truck carriers dead saw the shippers back with the "old reliable" and the railway came through. An example of how Company trains filled this breach is the record of Train No. 422 down the north shore from Ottawa to Montreal. Normally 500 cans of milk a month are handled by this train but on one day alone in March 1,110 cans were brought in with two baggage cars and two box-baggage cars being filled.

Roughly the worst periods in the epic fight against the elements were at the New Year, in mid-February and early in March although you would find few railroaders who remember any of the intervening periods as being anything like decent weather.

Even old-timers who pooh-pooh the weatherman's efforts in modern times as compared with the "good old days" had plenty of respect for the savage outbursts of 1942-43.

Eastern Lines Hard Hit

The East was possibly harder hit than the West. Taking the snowplow mileage for January as an example, it is revealed that 60,723 miles of the total of 83,000 miles of track cleared was east of the head of the Great Lakes. In British Columbia the mileage plowed was 14,456 miles while the prairies accounted for 7,821 miles of the total.

Not that the West didn't have its tough times. There was one March blizzard they'll remember for a long time at Mileage 23, Lyleton subdivision, near Dalny, in southern Manitoba. On that occasion a snowplow and Engine 983 were several hours in heavy snow with storekeepers, elevator men, neighbouring farmers and townsmen demonstrating the friendly spirit of the West by coming to the aid of Company workers in getting the snow cleared.

Because it came when the added burden of New Year's holiday travel and use of communications had to be met, the storm which ushered in 1943 best illustrates how the fight was won. Certainly this was true of the communications department for the January storm was the one which coated wires with ice up to 2¾ inches in thickness in places. This was the time when the department's foresight paid big dividends. The lines along the north shore of the Ottawa River between Montreal and Ottawa survived the storm's fury when all other lines were being interrupted. Along this north shore route the communications department established high fidelity facilities and put a 36-circuit carrier system in operation to do telegraph work and bring in Canadian Broadcasting Corporation programs.

For the railway's end of the January storm a feature story in the Canadian Pacific Staff Bulletin of March, 1943, collated reports gathered on the scene in the Quebec, Ontario and Algoma districts. The other sectors had their headaches at the same time but this Staff Bulletin piece spoke for them too, by inference, in the report that:

> This damaging storm, almost unprecedented for the length of its sustained assault of snow, sleet, wind and ice, struck at a time when abnormal traffic conditions prevailed, coupled with the wartime shortage of manpower.

Relentlessly Hard Work

It seemed a miracle, but through it all, the trains were kept moving. The miracle was achieved solely by the relentlessly hard

work and devotion to duty of Company men, spurred on by the innate railroaders' sense of responsibility to the public.

To illustrate how well the trains did keep rolling and the tremendous volume of traffic that was moved despite the white barriers thrown up against them by the storm, take, for example, what the records showed at Windsor Station in Montreal and at the Toronto coach yards. These points typify the amount of work done everywhere. During the week of January 3-9, just a few days after the first onslaught of the hurricane of snow and sleet, 4,622 passenger cars were handled at Windsor Station, as compared to 4,134 passenger cars for the same period in 1942 under normal winter weather conditions.

All these cars were serviced at the Glen Yard, two miles from Windsor Station, which yard has a capacity of 300. The increase in passenger business was duplicated in the freight handled.

At Toronto, during the week of January 14-21, when the storm was still at its height, the coach yards there handled 800 more passenger cars than in the corresponding period of 1942, and 170 more engine shifts. During that week, no less than 2,933 coaches were handled in the big Toronto yards, which have accommodation for 582 coaches.

And similar heavy work was done all along the line: At Ottawa, Smiths Falls, Megantic, Chalk River, Teeswater, Orangeville, North Bay, to name a few points.

The amount of equipment required to cope with the positively terrific conditions engendered by the storm was staggering, and is best exemplified by the needs of the far-flung, frontier-like Algoma district. The Algoma was having tough sledding long before the big storm broke at New Year's; but it had been an unusual winter even for that frigid district.

Extending northward from MacTier and westward to the Great Lakes, the Algoma experienced the coldest sustained snap in living memory. Snow came early and the plows were on the job in November, a virtually unheard-of occurrence. During the month of December, 1942, no less than 64 plow and 15 spreader trips were made on the Sudbury division alone, as against three plow and no spreader trips for the corresponding period in 1941. Then came the big storm that swept the Algoma, Ontario and Quebec districts. The Sudbury division, up to the last week in January of 1943, made 94 plow and 43 spreader trips and, of course, all the extra power necessary to their operation was tied up in snow fighting. Snow plow mileage of 4,102 miles was run up on the Sudbury division in December, 1942, and 5,833 miles was the record in January, 1943. On the Schreiber division 2,087 snow plow miles were operated in December and 3,097 in January.

On the hard-hit Teeswater sub-division of the Bruce division, 20 additional locomotives were required to contend with the situation. Three engines to a plow were a common sight in the vicinity of Teeswater and Elora. Three such engines represent a tractive effort of about 80,000 pounds or 96,000 horsepower. And every ounce of that power was needed when it is realized that snow resistance was such that sometimes the wheels of a 70-ton spreader car would be raised completely off the tracks as it strove to clear the lines. Not infrequently, engines had to take time out to renew their steam pressure because of the rapidity with which water and steam supplies were diminished by the weight of the tasks to be done.

Many types of cars, including flats, gondolas and general purpose cars, were used to haul the snow away from the yards at the big terminals and divisional points, where the multiplicity of switches, welded into immobility by the insidious blue ice, further complicated the already strenuous work.

"Blue ice" is a combination of heavy snow followed by sleet and more heavy snow, and has to be cleared from switches with hand picks, and burned out with a special oil.

A few statistics reveal what this can mean: There are 170 switches in the 35 miles of sidings at Smiths Falls; 106 switches in Ottawa's 15.04 miles of yard sidings, and no less than 1,450 switches in the 182 miles of sidings connected with Montreal terminals.

The storm picked upon the Teeswater subdivision to give it a singularly heavy drubbing and in this snowbound region there occurred one of the rare instances of a train being actually marooned. This was passenger train No. 753, Teeswater-bound from Orangeville, and brought to a standstill only two miles from its destination.

Officials noted that everywhere the travelling public showed a deep appreciation of the problems confronting railwaymen and openly expressed admiration for the way the obstacles placed by the storm were overcome. Nowhere were the public's understanding and tolerance more evident than in the case of the snowbound train, No. 753. The passengers took their unscheduled 17-hour "stopover" in good spirits, and rather enjoyed the novelty of the situation.

Word of the train's plight was despatched by the conductor who braved the blinding snows and waist-deep drifts to reach a farmhouse to summon aid from Teeswater. It came by toboggan and snowshoes the next day.

In the meantime, Donald Cox, son of the Company's agent at Teeswater, brought a toboggan load of coal to keep the coach fires burning. Food was procured from nearby farm houses. With

the arrival of the "relief expedition" the passengers of the stranded train were transported to Teeswater by toboggan. One lady expressed herself as "tickled pink" over the novel "C.P.R. toboggan service" which brought her home.

For the Company's men who pitted themselves against the storm it was a ceaseless, difficult grind. Operating plows and spreaders, shovelling ice and snow, repairing wires and driving ice-encrusted locomotives through the mounting drifts became daily routine.

"It was not so much the severity of the storm that hampered us but rather its continued unabatement," said Superintendent S. W. Crabbe, of the Bruce division, (now assistant general superintendent, New Brunswick district). Never before, he added, had they had such a prolonged battle with the elements and never in the past 30 years were so many snowplows operating together in that sector.

All in Front Line

Although road gangs, linemen and train crews probably bore the brunt of the struggle against the winter tempest, no member of the railway's personnel affected escaped his share of the "headache." Agents, operators, machinists, car repairers, engine wipers, cleaners, hostlers and other classes were all in the front line, while in most cases superintendents and other officials were on the scene to supervise operations. H. A. Greeniaus, (now assistant to Vice-President, Western lines), R. W. Scott and E. S. McCracken, general superintendents of the Ontario, Quebec and Algoma districts, respectively, carried the load of responsibility that the storm laid upon their shoulders and, as soon as was feasible, made personal inspection trips over their lines.

The blizzard-born gremlins played havoc every way they knew. Ice and the frigid temperatures attacked the mechanical parts of engines and cars; hot boxes smoked to delay trains further; drifts mounted to a height of 15 feet.

Trainman George Haystead, of Orangeville, described how crewmen wrapped their faces in towels to protect them against the stinging blasts of wind-spun sleet. Flying snow and engine steam sometimes so reduced visibility that locomotives were forced to a standstill or had their speed cut to a snail's pace.

Then there was the case of a rear-end brakeman on one Ottawa-Montreal run who walked the long storm-swept mile back to protect his train with signals and his lonely, frigid, hour-long vigil until he was "whistled in" after his mates had fixed three hot boxes.

The engine houses had their troubles, too. Locomotive foremen tell of the work involved when the turntables leading to engine sheds were jammed with ice and snow and had to be hauled around with logging chains attached to locomotives. The

120-foot turntable at Toronto terminals was stymied in its concrete pit and was released only by steam jets directed at the snow that held it prisoner. In the roundhouses themselves, the intense cold caused engines to steam up the interior with the result that visibility was reduced to zero and engines literally had to be "led by the halter" to and from the tracks outside.

There was at least one instance where 10 men were required to tend coal chutes which ordinarily need a crew of only two men. The men actually were compelled to "pick out the snow and ice from the coal" which had frozen in the chutes.

Men used small pieces of steel as hammers to clear grab irons of dangerous ice; treacherous footing on the ground and on the slippery tops of box-cars were other hazards; switch engines, which normally handle 24 cars at once, had to work with painful slowness, lifting one car at a time, all that could be taken with safety. At Fraxa, Ont., the snow literally piled up in mountains. Wherever there was a "cut" the flanking embankment was a sheer precipice of snow. At Smiths Falls ash pans on locomotives were frozen solid and four men on a bar were needed to get them ready for dumping.

Record Low Temperatures

In the hard-bitten Algoma district the cold was searing. At Hemlo, Ont., the water supply was temporarily cut off due to the lake at that point freezing almost to the bottom; at Arctic-like White River, the mercury hibernated in the bottom of the thermometer tube to register an official low of 54 below zero. Official snowfall figures in that district stood in excess of nine feet at the end of January.

White River did not have a monopoly on the sub-zero temperatures, however. E. D. Gilmore, section foreman and plow foreman at Chalk River, said they "told" him it was 38 below the night he piloted a plow from Chalk River to Renfrew to clear the way for a freight train which had been held up for 30 hours. And he faced that weather with the windows open, thereby losing most of the benefit of the small stove in the plow. It seems a man doesn't worry too much about heat or cold when he's watching the road on a wild night and remembering where he must lift his plowpoints to avoid ripping out switches and crossings.

Indicative of the way men used their heads when "on their own" was instanced at Rigaud. A through passenger train to Ottawa made its regular stop at Rigaud and stalled. At first, the engine of the following train tried to help lift the through passenger train.

When that failed, the crews of the two commuters' trains lying over at Rigaud came out with their engines and the four

locomotives got the through train moving. It was decided then to use one of the commuters' train's engines to double-head the through passenger to Ottawa. Suburbanites didn't suffer, however, for the engine of a telegraph repair train was commandeered to haul their train to Montreal the next day.

The army helped out to the best of its ability to supply auxiliary manpower from the diminishing labor pool. They did it with men from the army to the number of almost 900—500 of them at Montreal terminals, 100 each at Smiths Falls and Ottawa, and 160 at Toronto.

Pensioners like Otis Kirkland, retired roadmaster of the Farnham division, who came out to help at Montreal terminals; W. Edwards and J. Alexander, retired engineers, who operated two trains which cleared snow at Smiths Falls, and Harry Cavers, retired chief despatcher, who filled the breach at Ottawa when the wires to Montreal and Smiths Falls went dead, exemplified the spirit of the old-timers in the emergency.

1,679,687 Passengers on Electric Lines

Serving the highly industrialized area of Western Ontario north and south of Galt, the Grand River Railway and Lake Erie and Northern Railway's electric lines figure prominently in the transportation picture in this section of Canada.

Subsidiaries of the Canadian Pacific, the lines are served by electric "inter-urbans" or "radials" which operate as units and as trains on their designated runs.

With headquarters at Preston, the Grand River Railway serves a "Y"-shaped territory with Galt at the base, Preston at the fork, Waterloo at the western tip and Hespeler at the east. Running south from Galt the Lake Erie and Northern terminates at Port Dover on Lake Erie, 51 miles distant.

In 1944 the electric lines carried 1,679,687 passengers, constituting an all-time record, in addition to which large quantities of express, freight and mail were transported by the company.

Equipment in 1945 included 17 multiple-unit passenger cars, three passenger-express, one straight express, and seven electrically operated engines which carry freight loads from steam railway junction points to destinations on G.R.R. and L.E. & N. lines.

The cars, which have space for 70 passengers, can attain a maximum speed of 48 miles per hour, and are manned by a motorman and conductor. The company maintains large, well-equipped shops at Preston where cars and locomotives are kept in A-1 running order.

Service is maintained on hourly and half-hourly schedules Winter and Summer.—*Staff Bulletin* (Graham Nichols, editor).

FREIGHT TRAFFIC

By C. E. JEFFERSON, *Freight Traffic Manager*

The building of the Canadian Pacific Railway across Canada between the Atlantic and the Pacific was inspired to ensure the successful binding of the provinces through confederation into one Dominion of Canada. There was another important reason, namely, the vision its builders had of its traffic potentialities. Ever since the driving of the last spike at Craigellachie, B.C., November 7th, 1885, the securing and development of traffic has been the most important task of the traffic departments. This will always be so.

The Company's gross earnings in 1886 were slightly less than $9,000,000; in the "normal peak" year, 1928, $229,000,000; in the lowest year of the depression, 1933, $114,000,000; and in the peak year of World War II, 1944, $318,871,000; while in the year 1945 they amounted to $316,109,000.

The Freight earnings of the Company in 1886 were slightly in excess of $6,000,000; in 1928, $171,000,000; in 1933, approximately $86,000,000; in 1944, $233,000,000; and in 1945 $228,000,000.

The Company's freight earnings represented in 1886, 69%; in 1928, 74.7%; in 1933, 75% and in 1945, 72% of the gross earnings.

In 1886 the Company carried 2,000,000 tons of freight; in 1928, 40,000,000 tons; in 1933, 22,000,000 tons; and in 1945, 55,000,000 tons.

The tonnage carried in the last mentioned year was produced from the following sources:

Products of agriculture	33.0%
Animals and products	2.5%
Products of mines	30.9%
Products of forests	9.3%
Manufacturers and miscellaneous	21.8%
All less carload freight	2.5%

The importance of the Company's freight earnings cannot be over-emphasized.

The first and chief duty of the Freight Traffic Department is to secure and develop traffic for its rail and steamship lines. This traffic, in the order of its importance, may be referred to as: (1) local traffic moving between points on its own lines; (2) traffic interchanged with its connections, rail (Canadian and United States), ocean carriers and water lines; (3) overhead traffic having its origin and destination in the United States passing through Canada.

To properly look after the Company's interests in the securing of traffic for its rail and steamship lines, offices are maintained

with adequate soliciting staffs in all the principal cities in Canada and the United States, as well as in Australia and New Zealand, Great Britain, and, in peacetime, in Europe and the Orient.

While the uppermost thought in the minds of every Canadian Pacific employee in the Freight Traffic Department is to secure traffic, the actual solicitation is only one of their many duties. Close contact has to be maintained with all shippers and receivers of freight, however large or small. The Company's freight traffic representatives must be in a position to discuss with them, their transportation problems, which may involve such matters as rates, service, manner in which goods should be packed and loaded, routes of movement, refrigeration, diversion and reconsigning privileges, development of markets, source of raw materials, and many other questions which may be put to them. No representative of the Freight Traffic Department can possess too much knowledge in such matters to intelligently discuss with the Company's patrons such questions as they desire to discuss with them. The best and lasting impression is made by the party who is in a position to do so. This is productive of beneficial results, both present and future, for the Company when patrons are routing their freight traffic.

Another important duty of a freight traffic representative is to obtain new business from new shippers or consignees. This is most essential as firms frequently change their markets or discontinue production. Should this not be a necessary requisite the Company's earnings would be impaired.

There are occasions when the Company's patrons become dissatisfied with their inability to obtain, in their opinion, a fair and reasonable settlement of some claim. There are others who become dissatisfied with the Company's purchases from them. The representatives of the Freight Traffic Department are required, when these matters are taken up with them, to discuss same with the Company's patrons and then with the department having jurisdiction to prevent any unnecessary ill-feeling between the Company and its patrons where it can be avoided. There are many times when these matters are followed up by a conference between the Company's patrons and a representative of the department involved. It results in a better understanding which is very beneficial. The prompt settlement of justifiable claims is an important traffic solicitor.

In addition to what is known as the soliciting staff of the traffic department, the freight agent renders valuable assistance in the solicitation of traffic. The freight agent can maintain close contact and friendship with the shippers and receivers in his immediate vicinity through his daily associations with them. A freight agent active in his community can become a valuable solicitor for the Company.

The freight agent is of inestimable value in checking all inbound and outbound waybills to determine if the Canadian Pacific Railway and its family lines have obtained the longest possible haul and where they have been short-hauled make a report to the officer of the freight department in his territory that steps may be taken to have the shipper or consignee solicited with the view of obtaining the longest possible haul.

Another important solicitor for the Company is the party responsible, no matter how small a part they may take, for the prompt and safe handling of all traffic. The giving of a service equal to or better than your competitors is very important. There is the closest co-operation between the operating, transportation and traffic departments to achieve this result. Many shippers and receivers desire to know each day the location of important shipments. A system of what is known as "passing reports" is maintained making it possible to give this information to the Company's patrons.

One of the many important functions of the Freight Traffic Department is to maintain a close and friendly contact with representatives of the more important railroads in Canada and the United States. This is also essential with ocean carriers and water lines. This is most important in obtaining their co-operation in the solicitation of competitive traffic, also in the conducting of negotiations for the establishment or maintenance of rates and the apportionment or division of same between such carriers as may participate. This is a situation which must prevail that the Company's revenue interests will not be impaired.

An important function of the Freight Traffic Department is its supervision of the Department of Industrial Development. This, as the name implies, really consists of two departments—one "industrial" and the other "development." Offices are maintained at Montreal, Winnipeg, Toronto, Vancouver and London, England.

It is the prime duty of the Department of Industrial Development to obtain new sources of revenue for the Company through obtaining new industries adjacent to its line and to develop new sources of raw materials for movement over its lines. To accomplish this purpose it is necessary for representatives of this department to keep in close touch with industrial development in Canada and the United States and be in a position to intelligently answer all inquiries respecting conditions, available land or buildings which could be obtained with the cost thereof, facilities for warehousing and distribution, electric power supply, water supply, taxation, volume of labor obtainable with general living conditions in the community under consideration.

To secure and keep this information up to date, the depart-

ment maintains close contact with Boards of Trade, banks, power companies and other organizations who are encouraged to enlist the assistance of the department in following up industrial prospects.

The recent trend on the part of large manufacturing organizations to decentralize their activities, which has been brought about largely through improved transportation facilities, has caused the services of the department to be called upon in an increasing degree by Canadian manufacturers, and many new industries have, by its co-operative methods, been established on Canadian Pacific lines.

The industrial agent in London keeps in close touch with British manufacturers seeking trade connections in Canada and working through the Canadian organization of the department secures the services of manufacturers' agents in Canada to represent the British producer.

This department gives valuable assistance to manufacturers in regard to raw materials, the development of new products and use of by-products. It, in addition, assists mining companies with information as to properties and mineral areas. It helps prospectors by advising on favourable districts for the search of minerals, and, where other technical advice cannot be secured, by supervising and assisting in the early stages of development of mineral prospects.

The services of this department freely rendered is a valuable factor in furthering the goodwill of the Company in the communities which it serves. It is but another evidence of the Company's appreciation of the important relation of transportation to development. Elsewhere in this book will be found an interesting article: "Developing Canada's Resources."

The Company's earnings from freight traffic, representing as it does approximately 75 percent of its gross earnings, necessitates the careful making of freight rates for the movement of such traffic on every known commodity, not only between all points on its own line but also the making of through rates to and from points on lines of other railways in Canada and the United States. This is one of the most important duties of the Freight Traffic Department. Its staff and officers must, through experience, become as expert as possible in every line of business to determine the transportation needs of its customers that rates when made are of mutual advantage to the shipper and the railway, otherwise they are of no use to anyone. Rates when made should be low enough for the public to use them. On the other hand, they should be commensurate for the railway and in the larger interest of the public in general should not be any lower than the need justifies. The same rate cannot be made on silk and lumber, but rates can be made that both industry and railway can continue in business

with a fair measure of return and not be harmful to anyone.

The railway when making freight rates is not only required to consider the needs of customers from a commercial or marketing point of view, but in its own interests attention must be paid to the subsidized competition to which it is subjected by the water lines and truck operators, neither of which is regulated in the same manner or to the same extent as the railways.

Railways are required to publish and file in tariff form all of its rates, rules and regulations with the Board of Transport Commissioners for Canada and the Interstate Commerce Commission of the United States, and furthermore, at all stations, where they are open for public inspection. Railways cannot depart from their published tariffs; to do so, they would be committing an illegal offence and subjected to a heavy penalty by fine or imprisonment.

This regulation of railways in Canada and the United States was instituted to prevent unreasonable and discriminatory rates or practices, as well as to maintain rate stability. This has always been held to be in the public interest.

While the railways are obliged to do business in strict conformity with the rules and regulations of the Board of Transport Commissioners for Canada and the Interstate Commerce Commission of the United States, their chief competitors, the water lines and truck operators have more freedom of action than the railways, in that they are not regulated in the same manner or to the same extent.

The water lines by an Act of Parliament in 1938 known as the "Transport Act—1938" became in some territories and with certain limitations as defined, subject to the rules and regulations of the Board of Transport Commissioners for Canada. By this Act the water lines are, to the extent they are regulated, required to publish tariffs or price lists.

The truck operators who are not regulated are free to do business without publishing tariffs or price lists. Their prices, so to speak, may be carried "under their hat". The truck operators are therefore free to discriminate in any manner they may choose, they may handle hardware, for instance, between the same two points for one shipper at a lower charge than for another shipper. This the railway cannot do, except under an agreed charge which entails a complicated and lengthy procedure.

Anyone will readily admit this character of competition is most difficult to contend with. The remedy in the public interest is not in the entire abolition of the regulation to which the railways are subject but in the complete harmonization of the regulation of all modes of transportation—rail, water, truck, etc.—by one regulatory body, both provincial and interprovincial, This would accord fair treatment to all transportation interests and at

the same time meet with general approval of the public. It is only in this way that the interests of the public will be fully protected.

Although the water lines and truck operators are not regulated in the same manner or to the same extent as the railways and the character of competitition they present is difficult to combat, the railways have not been idle in their efforts to meet the competition with which they had to contend. During the past 15 years the railways have made a continuous and intensive study of this competition and have in a practical way taken steps to meet it. A review of the many water and truck competitive rates as well as agreed charges (an innovation of the Transport Act—1938, to, in a measure, facilitate the railways in meeting this character of competition), made effective by the railways during this period readily demonstrates their alertness. The establishment of pick-up and delivery services, handling of C.O.D. shipments and the speeding up of freight services are other steps taken to combat this competition.

Agencies of the Freight Traffic Department in Canada and the United States in addition to representing the Canadian Pacific Railway, also represent its allied lines, namely: Canadian Pacific Air Lines, Dominion Atlantic Railway, Quebec Central Railway, Lake Erie & Northern Railway, Grand River Railway, Esquimalt and Nanaimo Railway and Vancouver and Lulu Island Railway, in Canada, as well as Aroostook Valley Railroad, Minneapolis, St. Paul and Sault Ste. Marie Railroad (Soo Line), Duluth, South Shore and Atlantic Railway (South Shore), Mineral Range Railroad, and Spokane International Railway, in the United States. It is of utmost importance this should not be overlooked in the soliciting and routing of traffic to fully protect the interests of the Canadian Pacific Railway and its allied lines.

An attempt has been made in this article to outline some of the more important functions of the Freight Traffic Department and the manner in which others can assist in its achievements. It cannot be over-emphasized that all employees of the Freight Traffic Department are actual solicitors of traffic and every employee of the Company is a potential solicitor and can, through his or her own initiative, become an actual solicitor.

How Revelstoke Was Named

Revelstoke, B.C., is named in honor of Lord Revelstoke, head of the London financial firm of Baring & Glyn, which took a Company bond issue in 1885 when the financial outlook was blackest.

PASSENGER TRAFFIC

By R. G. McNeillie, *Passenger Traffic Manager*

In the early days, all phases of railroad activity were under the direct supervision of the Manager, with the Superintendent having charge of traffic as well as of operation. As the public became railway-minded and traffic was developed, it was realized that the passenger business required specialization, with the result that passenger agents were employed to promote and look after this class of traffic. The activities of the passenger agents increased passenger traffic to such an extent that it was necessary to establish a separate department, under the direction of a General Passenger Agent, charged with the responsibility of promoting and servicing that traffic.

With the completion of the Canadian Pacific's transcontinental line, and consequent upon the vast territory involved, it became necessary to appoint separate general passenger agents for the East and the West. In 1887 it was deemed advisable, in the interests of efficiency, to set up an organization which would coordinate the activities of the separate general passenger departments, and the late Sir William Van Horne called upon Lucius Tuttle to head this department, creating for him the title of Passenger Traffic Manager. This title has now become general with the larger railroads on this continent, and has extended into the steamship traffic field.

The Passenger Traffic Department of this Company is one of the most interesting departments in the railway organization, with its close contacts with the public through all its personnel, from chiefs of the department to the remotest agent. Its jurisdiction covers the whole of Canada, and extends to the United States through the medium of agencies in the larger cities of that country.

The functions of the department include the promotion and solicitation of passenger traffic; the supervision and distribution of advertising literature; the supervision of newspaper and magazine advertising; the construction of passenger fares, and their publication through the medium of tariffs; the compilation, printing and distribution of tickets for sale to the public; the compilation, printing and distribution of timetable folders for use by the public, etc.

The chief sources of passenger business in the early days were colonization and migration traffic, and movements incidental to the opening of new land areas. When the Canadian Pacific provided railway access to western Canada there was an influx of people from eastern Canada and the United States desirous of settling in this new country, some to take up homesteads and others to engage in various pursuits associated with life in the new territory. Then came the great migration movement from

Great Britain and the European countries, which continued increasingly until the beginning of the Great War.

In 1884 the Canadian Pacific Railway inaugurated a steamship service on the Great Lakes between Owen Sound and Port Arthur. This was prior to the completion of the section of the railway traversing the north shore of Lake Superior, and the steamship service provided a means of handling traffic between eastern Canada and the North West via an All-Canadian route. A poster in the records of the Passenger Traffic Department advertises this route as "The Thunder Bay Route—the new short line to Winnipeg and the Canadian North West—in comparison with the All-Rail Line to Winnipeg, passengers via this New Route save money in the cost of fare and over 300 miles of travel". This is an example of early-day solicitation through advertising. The alternative route was via the services of United States railways through Chicago and St. Paul.

Since those early days, the Company's passenger service on the Great Lakes has been progressively improved and consistent efforts have been undertaken to promote the traffic. For instance, in recent years special arrangements were inaugurated whereby Great Lakes cruises have been made available to the large number of travellers to whom inland water trips have a special appeal. Another facility has been provided to cater to the increasing number of people who use their motor cars for business and pleasure travel, so that their cars may be transported with them by ship. Both of these innovations have been the means of creating a substantial amount of new traffic for the company.

Almost from the beginning the new transcontinental route has held special interest for the tourist, and that interest has developed to the extent of including visitors from all parts of the world, intent on seeing for themselves the beauties of Canada, and, in particular, the majestic grandeur of the Canadian Rockies, first made accessible through the opening of the Company's line. It is true to say that the Canadian Pacific, from its inception, pioneered the development of tourist traffic in Canada. For instance, it was early realized that good hotels are as necessary as efficient train service to the promotion of tourist travel, so that in 1886, the year in which the Canadian Pacific transcontinental trains were first operated between Montreal and the Pacific coast, the Company opened small hotels at Field, Glacier, Fraser Canyon, and Revelstoke, British Columbia. In 1887 the Company built the original Banff Springs Hotel and Hotel Vancouver, and during the succeeding years opened the many other famous hotels owned and operated by it.

The popular use of the motor car during recent years has had the effect of substantially altering the trend of travel by rail, with the result that it has been necessary for passenger traffic officers

to find ways and means of developing and promoting other types of travel to replace the so-called local or short-haul traffic which has been largely diverted to the privately-owned motor cars and to the busses. This loss of passenger traffic has been particularly evident in connection with travel to exhibitions and other public events which usually attract large numbers of visitors, as well as in holiday and business travel involving short distances.

As a principal means of stimulating local travel, the railways inaugurated what is commonly called the bargain excursion. These bargain excursions were developed from a small beginning to the mass movement of people between principal cities practically every week-end throughout the year. The development progressively expanded so that ultimately bargain excursions were operated between eastern and western Canada, and between the Prairie Provinces and the Pacific Coast, encouraging an interchange of visits between the peoples resident in the various parts of Canada, and thus establishing a basis for a much-to-be-desired better national understanding. These excursions, whose popularity is principally due to the low fares which are made possible because of the large number of passengers carried, and the fact that they are operated when the passenger equipment would otherwise be idle, have been the means of introducing a great many non-travellers to the railways, as well as inducing many, who had patronized other means of transportation, to return to the railways.

It seems but a short time since it was considered that sports and out-of-door exercises in the Canadian Winter were only for the more hardy of the race, but, very largely through the activities of our railway, Winter sports are now the interest of all ages and classes, male and female, with ski-ing, in all its phases, predominantly popular. The ski enthusiast may start his career in a most modest way, near home, but soon he or she is looking for steeper and higher hills to conquer. Consequently, it has been the aim of the Passenger Department to supply the answer by the low fare, special train, one day excursion to suitable ski country within easy reach of urban centres, such as from Montreal to the Laurentians, Toronto to Dagmar, Winnipeg to La Riviere, and Calgary to Banff and Lake Louise. Naturally Montreal, with its large population and its proximity to the hills of the Laurentians, has produced the greatest volume of Winter sports traffic. In ten seasons the Winter sports traffic from Montreal to Laurentian points increased tenfold. The Laurentians have attracted not only residents of Montreal and vicinity but also a great number of enthusiasts from New York State and New England, and from even farther afield.

In co-operation with ski clubs and local communities, efforts are continually being made to explore additional areas suitable for development, for the purpose of promoting Winter sports traffic.

Another method used to create passenger traffic is promotion of the all-expense tour. While this type of travel (which enables the purchaser to know almost exactly what a holiday trip will cost) was primarily intended to appeal to those who desire to work to a budget, experience has shown that it also has a distinct appeal to others who find it most convenient to pay in advance for the principal items of expense involved in a holiday trip, thus reducing to a minimum the arrangements which it would otherwise be necessary for them to make for meals and room at hotels, sightseeing, sleeping and parlor car accommodation on trains, meals on trains, passenger and baggage transfers, etc. The all-expense tour "travel package", which is sold for a stated amount, includes all of these expenses, and the advance arrangements for those services are made by the tour organizer, with consequent saving in effort—and frequently in expense—to the passenger. A wide variety of these popular tours is organized by or in co-operation with the Company. However the one that has the widest appeal is the so-called "All Expense Tour of the Canadain Rockies" which, at the passenger's option, provides for a given number of days at the world-famous Canadian Pacific resorts at Banff, Lake Louise, Moraine Lake and Emerald Lake.

Someone at some time discovered that people like to meet their fellow men (and in this we include the ladies) in groups large or small, and so was born an outstanding pastime of the North American continent, the convention. The solicitation of the delegates, and catering to their hotel and railway travel requirements, singly or in groups, is a major effort of the Canadian Pacific sales force. The travel arrangements entail not only the transportation of the delegates to and from the convention, but frequently also the organization of the popular post-convention tours which are provided to enable the delegates to see something of Canadian cities and resorts. Of comparatively recent origin is our Convention Traffic Bureau, associated with our hotel system and closely allied to the Passenger Department, which, working in co-operation with the passenger sales and solicitation forces, has done much to increase this type of business for the benefit of the hotels and rail lines of the Company.

The Passenger Traffic Department of the Canadian Pacific Railway is headed by the Passenger Traffic Manager who is under the executive jurisdiction of the Vice-President of Traffic. The Passenger Traffic Manager deals with questions of general policy, as well as with administrative and personnel matters. This includes such important subjects as the inauguration and development of services for sale, sales methods, fares and arrangements, equipment and schedules of passenger trains, and the choice of locations of sales offices in Canada and the United States. As all

of these matters directly affect the travelling public, it is of paramount importance that constant and close touch be kept with the requirements of the various communities which are served by the Company throughout the continent.

The Passenger Traffic Manager is assisted by the following officers who are charged with administering, under his direction, the particular activities which are their responsibility:

Assistant Passenger Traffic Manager, in charge of Eastern Lines.
Assistant Passenger Traffic Manager, in charge of Western Lines.
Assistant Passenger Traffic Manager, in charge of Overseas, Military and other Special Traffic.
Manager, Mail and Baggage Traffic.
Manager, Passenger Tariff Bureau.
General Tourist Agent.

The Assistant Passenger Traffic Managers, Eastern Lines and Western Lines, are responsible for matters pertaining to civilian domestic passenger traffic within their respective territories in Canada and the United States, including the administration and supervision of personnel, offices, etc.

Reporting to the assistant passenger traffic managers, and each in charge of a well-defined territory, are the general passenger agents—supported by assistant general passenger agents—who are responsible for the supervision, promotion, solicitation and handling of traffic, as well as the direction of the activities of the district passenger agents, general agents and other representatives of the Passenger Department in the territories under their jurisdiction.

The district passenger agents are supervisory officers responsible for sections of territory in Canada, served by the railway or contiguous thereto, and they deal locally with traffic matters pertaining to their respective districts. Working under the direction and supervision of the district passenger agents are the various passenger agents, city and town ticket agents and, insofar as their duties concern passenger solicitation and ticketing, the station agents.

General agents are stationed at strategic points in the United States and have jurisdiction over off-line solicitation and sales in their respective territories; they are also equipped to assist and service the Company's clients from Canada and overseas countries who visit the States, as well as to provide up-to-date information respecting Canada. The general agents, with their subordinate passenger and ticket agencies, constitute the Company's sales force for the railway, ocean steamships and hotels. There are two

exceptions to the general arrangement, namely New York and Chicago, where there are separate ocean passenger organizations. General agents are also stationed in several of the larger cities of Canada, and their duty is to direct the work of solicitation within their respective cities or territories.

It was early found that, in order to encourage travel, there must be a close contact between the carrier and the prospective passenger, and so the position of travelling passenger agent was established His is the interesting, though at times arduous task of selling his Company's service and facilities to the public, or assisting the local agent to close the deal. He must maintain very close contact with the agents and representatives of other railway and transportation companies, who may have for solution the transportation problems of a large local clientele, extending beyond the reach of the lines which they represent. This, then, means that other lines must be brought into the transaction to complete the "travel package" which the passenger desires to purchase. More recently there has developed in Canada and the United States a large number of tourist agents and travel service bureaux which cater to and encourage the ever-increasing travel-consciousness of the people, following closely the example set many years ago by Thos. Cook, the founder of the well-known firm of travel agents. In addition to the information received through the medium of literature, circulars and tariffs, the agencies receive the personal attention of the Company's officers and travelling representatives, who lend assistance in planning tours and arranging requisite details.

In the general ensemble of the great traffic solicitation machine, a most important cog is the so-called local ticket agent. He may be the station agent, who is located at large and small points over the length and breadth of the country, whose duties are numerous and who is frequently the only source of travel information to the people of his community and contiguous territory. Or, it may be that, as in the larger towns and cities, the town ticket agent or the city passenger agent is the man in the field, but, whichever he may be, on him largely falls the responsibility of closing the deal, selling the passage and sleeping or parlor car tickets, making the hotel reservations, and in general doing everything necessary to send the passenger on his way—to say nothing of the work incidental to accounting for the revenue received. It is difficult to exaggerate the value to the railway of a wide-awake, intelligent and courteous local ticket agent because, particularly in the smaller communities, he is the employee who is in a position to maintain the closest touch with the Company's patrons, whose impression of the Company and its services is frequently a reflection of the service and attention they receive at the hands of the local agent.

In addition to his responsibilities in connection with military traffic the Assistant Passenger Traffic Manager in charge of Overseas, Military and other Special Traffic is the liaison officer between the steamship lines and the Company's rail service. With Canadian Pacific transportation facilities bridging the Atlantic and the Pacific, and providing in conjunction with its rail lines a route between Great Britain and Europe and the Far East, Australia and New Zealand, alternative to that via the Suez, the Panama and South Africa, the Company is in a unique position to develop traffic from and to overseas countries. When passengers from overseas land on this continent, their travel requirements become the responsibility of the railway, and the Overseas Department provides a continuity of service and management. The Assistant Passenger Traffic Manager, therefore, maintains a very close contact with the Company's European and Far Eastern organizations for the purpose of promoting the development of rail traffic from overseas countries and which reaches this continent in Canadian Pacific or other lines' ships. He has direct supervision of the Company's organizations in Australia and New Zealand.

A special feature of the Overseas Department has been the development of escorted all-expense tours from Europe to places of interest in Canada and the United States. The European—and of late the same may be said of the passenger on this side of the water—likes to know before he leaves home, what his tour will cost, therefore the Company organizes all-expense tours of varying duration for his convenience. The quoted rates include the ocean fares as well as all expenses incidental to travel from the time the travellers arrive until they depart from these shores. This policy has met with the approval of our European clientele, as instanced by the increasing number of passengers who each year patronize these tours. All-expense tours to this continent were also promoted by the Company in Australia, New Zealand and the Far East.

Instancing the Company's established policy of long-term promotion of tourist travel, it may be noted that for some years the Overseas Department has actively fostered the development of travel from South Africa, Central and South America, and the West Indies to Canada, notwithstanding the fact that the Company does not operate steamship services directly to those countries.

While speaking of travellers to this country from beyond the seas, it should be noted that a unique service is afforded to passengers who travel in Canadian Pacific trans-Atlantic and trans-Pacific steamships, in that the Company maintains a highly qualified rail traffic representative aboard each of these ships, whose duty it is to facilitate the passenger's travel requirements ashore. The rail traffic representatives are qualified and equipped to outline itineraries, issue tickets, arrange sleeping car and hotel

reservations and effect many other arrangements for the passengers' comfort. Ashore, a special staff, attached to the General Passenger Agent's office, arranges details of special train movements directly from the ship's side, and otherwise assures the efficient and expeditious forwarding of passengers and their baggage from the port of debarkation to their various destinations. This service is one of the advantages of "One Management—Ship and Shore", a position enjoyed by no other transportation company.

The Mail and Baggage Traffic Department has supervision of all matters pertaining to passengers' baggage on the rail and steamship lines, and the carriage of post office mails. During recent years the Department's responsibilities have been extended to include the arrangements for handling passengers' motor cars in the Company's trains and ships, including the many customs and other formalities entailed in shipping motor cars to Great Britain, and European and Pacific countries, as well as to the United States.

Passenger fares within Canada are, in general, established on a mileage basis, and the maximum rate per mile to be charged is established by law. However, in actual practice the standard rate per mile does not always apply because in a great many cases passenger fares produce much less than the standard rate. This may be due to one or more of many conditions. For instance, a shorter mileage via some competitive route between two points may have the effect of reducing fares between intermediate stations. There are also those charges which might be termed concessionary such as commutation, round-trip, week-end, one-day excursion and party fares, all of which represent reductions from the standard rate per mile. The administration of the law, and jurisdiction over tariffs containing passenger fares, is in the hands of the Board of Transport Commissioners for Canada, commonly known as the Transport Commission. In the United States the administrative body with similar powers is the Interstate Commerce Commission.

Standard tariffs publishing the lawful rate per mile, and station-to-station mileages to be used in compiling fares, are filed with the Board of Transport Commissioners.

Tariffs containing fares must be filed with the Transport Commission, and, if the fares involve international traffic, also with the Interstate Commerce Commission. Each tariff so filed must bear an appropriate identification number, which numbers are used consecutively and prefixed "C.T.C." for Canada and "I.C.C." for the United States. Tariffs thus filed contain the lawful charges for the traffic specified therein.

When more than one carrier is involved in a tariff, either as a selling line or as a line over which the business could move to reach its destination, proper concurrences must be secured from each participating carrier, and shown in the tariff. These documents are numbered consecutively by each carrier issuing same.

and the original is filed with the Canadian or American commission directly interested.

Various regulations must be observed in the preparation of tariffs for both the Board of Transport Commissioners for Canada and the Interstate Commerce Commission. These regulations include the arrangement of the tariff rules, fares, etc., and also the size of the tariff, which is generally 8 x 11 inches, with certain minor exceptions as to tariffs for conductors. It will be seen, therefore, that in the publication of fares and the conditions that pertain thereto, the Tariff Bureau must follow prescribed rules, and must be specific as to the scope of the tariffs, otherwise tariffs may be rejected by one or both commissions, resulting in the use of the fares being prohibited until proper corrections are made.

Canada, with its myriad streams and lakes, its forests and mountains, and other bounties of nature, has unlimited interest to sportsmen and other out-of-door enthusiasts. The fame of Canada's fish and game extends beyond its borders into the United States and across the seas. As the result of careful enquiry and investigation, the General Tourist Department has set up a vast fund of information relating to sports and vacation resorts, and that information is being constantly augmented. For the purpose of soliciting the prospective sportsman, passenger and vacationist, and answering his many inquiries, this information is promulgated to the various passenger agencies, representatives, travel bureaux and clubs at home and abroad. Many inquiries for specific information as to suitable hunting and fishing localities, advice regarding guides, modes of transportation, etc., reach the office of the General Tourist Agent, as do numerous letters and personal calls from vacationists, other than those who may be termed hunters or fishermen.

The Passenger Ticket Bureau is assigned the responsibility for the compilation, printing and distribution of all revenue tickets and checks used by the Company's ticket agents, conductors, pursers, etc. This includes all forms of local and interline railway passenger tickets; ocean steamship tickets; coastal and lake steamship tickets; meal checks for dining cars, dining rooms and hotels, as well as all other tickets and checks involving revenue. The Bureau also performs similar services for the Quebec Central Railway, Dominion Atlantic Railway, Grand River Railway, Lake Erie & Northern Railway, and Canadian Pacific Air Lines.

The bureau receives from the printer, and stores in its properly protected store-room, supplies of the various checks and tickets pending their shipment to offices, etc. A record of every ticket and check received from the printers is entered in the stock books of the bureau, and a corresponding record is kept of their distribution on the basis of the requisitions received from agents, pursers, etc. An invoice, embodying full particulars of the forms

OCEAN STEAMSHIPS

By PAT DONOVAN, *Assistant Press Relations Officer, Vancouver*

The ocean services which the Company now operates as Canadian Pacific Steamships Limited could be said to have crowned with success the search for the Northwest Passage, that will-o'-the-wisp which lured brave explorers to their deaths and made others of the early sailors look upon the discovery of North and South America almost as consolation prizes only, to soften the blow of failing to reach the golden goal of Cathay which they sought.

Added after the Company's rails had spanned Canada in the Confederation Line the ocean steamships provided the necessary connections which made the railway a Northwest Passage by land —joining Europe with the Orient through a combination of the Atlantic service, the railway and the Pacific service.

For the beginnings of this important branch of the Company's enterprises the clear vision of Sir William Van Horne deserves the credit. It was he who started the Company's rise in the steamship world, a work which succeeding chief executives have furthered.

Van Horne wasted no time in providing a Pacific steamship connection to supplement the newly finished railway for on July 26, 1886, the first cargo was landed from Yokohama at Port Moody, B.C., then the western terminus of the line.

The brig, W. B. Flint, a tiny vessel by today's standards, was the craft which started the ocean services, under Company charter, from Japan to British Columbia.

The years since 1886 have seen the inauguration of a regular Pacific service, first with chartered steamers and then with the Company's own ships. Then followed expansion to the Atlantic Ocean, with passenger and fast freight service, and there was, too, the development of the highly important cruise business. A further ocean service in which the Company has an interest—separate from its own ocean services—is the Canadian Australasian Line, Limited, operating steamers between the Pacific coasts of Canada and the "down under" dominions of Australia and New Zealand.

An Admiralty crying for shipping in the black days of Germany's ruthless Battle of the Atlantic knows how much the ocean services had grown, for it received from the Company 18 ocean steamships, with a total gross tonnage of 324,738 tons.

These 18 ships from the ocean services proper comprised 14 from the Atlantic and four from the Pacific. From the Pacific there came four Empresses (Canada, Asia, Russia and Japan, this last the one which was renamed Empress of Scotland when Japan came into the war against the United Nations). From the Atlantic there came two Empresses (Britain and Australia), four Duchesses (Atholl, Bedford, Richmond and York), three Monts (Montcalm,

Montrose and Montclare) and five fast-freight Beavers (Beaverford, Beaverhill, Beaverdale, Beaverbrae and Beaverburn).

Of the 18 ships of the ocean services proper placed at the disposal of the Admiralty, 10 were destroyed by enemy action, one through marine misadventure and one was burned while in drydock. The loss was the greatest suffered by an individual company during World War II. Up to the end of 1945 the passenger liners steamed a total of 2,206,710 miles. The five fast-freighters of the original Beaver fleet steamed 406,234 miles.

Going back to the start of the ocean services through the W. B. Flint voyage in 1886, which came two years after the Company's first steamship venture on the Great Lakes in 1884, red letter dates since then have included the following:

1887—Inauguration of regular service between Vancouver, Yokohama and Hong Kong with the chartered steamers Batavia, Parthia and Abyssinia.

1891—Empress of India, Empress of China and Empress of Japan—first of the famous "White Empresses" and built at Barrow-in-Furness—were placed in service on the Pacific.

1903—The Company's ocean service was extended to the Atlantic by the purchase of the Beaver Line from Elder Dempster Lines Limited with the ships taken over being the passenger liners Lake Champlain, Lake Erie, Lake Manitoba and the cargo vessels Lake Michigan, Montreal, Montezuma, Montcalm, Monteagle, Montfort, Monterey, Montrose, Mount Temple, Mount Royal and Milwaukee.

1906—First Empress of Britain and the Empress of Ireland, built for the Company by Fairfields of Glasgow, went into the Atlantic service.

1914—The Missanabie, built for the Company by Barclay Curle at Glasgow, was added to the Atlantic service and was followed by the Metagama, another new ship of the same type.

1916—Canadian Pacific Ocean Services, Limited, was formed on January 1 with G. M. Bosworth, Vice-President of Traffic, as the first chairman, to manage and be agents for the Canadian Pacific Railway Company's ocean steamship lines and the Allan Line Steamship Company. Previous to this the operation of the steamships was part and parcel of the railway and came under the direct control of the vice-president in charge of ocean traffic, with Arthur Piers in charge of operations, as superintendent in 1891 and as manager in 1903 . . . On September 1, 1917, a further change in the executive side was made when Mr. Bosworth relinquished his position as vice-president of traffic but remained as chairman of Canadian Pacific Ocean Services, Limited.

1917—Further strengthening the Atlantic service the Company absorbed the Allan Line of Glasgow taking over the management,

operation and control of the Allan Line steamers and the Allan Line offices.

1921—The Company bought the Tirpitz, former Hamburg-American liner, from the Reparations Commission and she became the Empress of Australia to start the post-Great War reconstruction which brought the fleet up to the high standard it had attained by 1939 and during which older vessels were disposed of. Another vessel acquired in reparations after the 1914-18 war was the German-built Kaiserin Auguste Victoria, which became the first Empress of Scotland. . . . Other ships added, in new building, between wars were: 1921, Montcalm; 1922, Empress of Canada, Montrose and Montclare; 1927, Beaverburn; 1928, Beaverford, Beaverhill, Beaverdale, Beaverbrae, Duchess of Atholl, Duchess of Bedford and Duchess of Richmond; 1929, Duchess of York; 1930, second Empress of Japan; 1931, second Empress of Britain. . . . Records for the other ships in the 1939 ocean fleet show the Empress of Asia and the Empress of Russia both were built in 1913.

1921: September 1—The name of the Canadian Pacific Ocean Services, Limited, was changed to Canadian Pacific Steamships Limited.

1922—First Winter cruise under one management by ship and shore operated by the Company from New York to the West Indies in January in the first Empress of Britain . . . Other cruising highlights include: 1923, Empress of France made a round-the-world cruise under charter to a New York firm; 1924, Empress of Scotland left New York on January 14, 1924 on the first Mediterranean cruise by the Company and the Empress of Canada left New York on January 30, 1924, on the Company's first round-the-world cruise.

1923—Empress of Australia under Capt. S. Robinson and Empress of Canada under Capt. A. J. Hailey did wonderful work in rescue squads in the Yokohama Earthquake of September and all their supplies were used to alleviate suffering in that disaster.

1925—The office of Chairman of Canadian Pacific Steamships Limited was assumed for the first time by the President of the Canadian Pacific Railway Company when E. W. Beatty took over the post on Mr. Bosworth's death. Also at this time the position of Assistant to the Chairman, C.P.S.L., was created with W. A. Wainwright its first incumbent.

1942—On May 30, D. C. Coleman, President of the Canadian Pacific Railway Company, succeeded Sir Edward Beatty, as Chairman of Canadian Pacific Steamships Limited.

1945—Capt. R. W. McMurray appointed Managing Director of Canadian Pacific Steamships Limited. . . Construction was started on four 10,000 ton cargo ships to replace the Beaver line wiped out during the war, and the first of these, the Beaverdell, was launched August 27 at Port Glasgow, Scotland, followed by

the Beaverglen on December 10. The other new Beavers are Beavercove and Beaverlake.

1946—On February 16 the company purchased from the British Government, two cargo-passenger ships Empire Kitchener and Empire Captain for North Pacific service and renamed them Beaverburn and Beaverford. . . The Beaverdell made her maiden voyage to Saint John, N.B., early in March from Liverpool to resume the regular fast freight service between Canada and Great Britain.

Before the outbreak of World War II the regular service offered by the Company on the Atlantic, as dealt with in the article elsewhere in this book on "European Organization" saw port offices at Liverpool, Southampton, Glasgow (for Greenock), London and Belfast in Great Britain and Northern Ireland, at Antwerp in Belgium, and Hamburg in Germany, while Cherbourg in France was a calling port. The fast freight ships maintained a weekly service to London and the Continent of Europe.

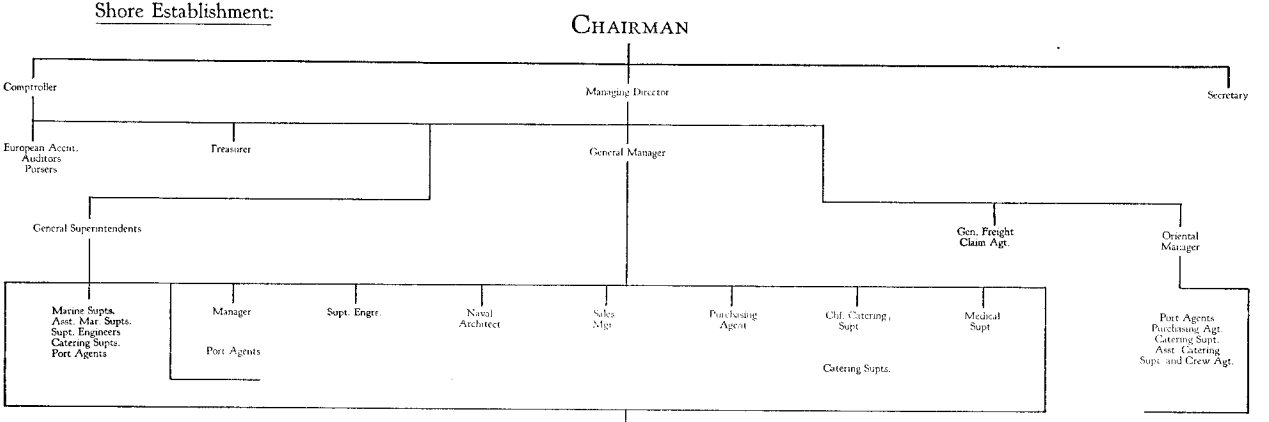
On the Pacific there were two regular routes from Vancouver-Victoria, treated at greater length in the article on "Service in the Orient" on succeeding pages. Going by way of Honolulu the ships reached Honolulu in five days, Yokohama in 13, Kobe 14, Shanghai 16, Hong Kong 19, and Manila 21. The direct express route sailing via the Pacific Speedway omitted Honolulu as a port of call and reached Yokohama in 10 days, Kobe in 11, Nagasaki 12, Shanghai 14, Hong Kong 17 and Manila 19.

In the Company's cruise programme the year 1937 is a good example of how this branch had grown with 39 cruises being operated including a West Indies cruise by the Empress of Britain from New York at the New Year season followed by her world cruise from New York on January 9. In that Winter season the Empress of Australia made seven West Indies cruises from New York. Four short Summer cruises were made by the Duchess of Atholl from Montreal to New York. The British side of the picture for 1937 showed the Duchess of Richmond and the Duchess of Atholl cruising to the West Indies and the Duchess of Richmond to West Africa; the Duchess of Atholl doing the Mediterranean and the African Coast; the Empress of Australia sailing to Russia and other Baltic lands and to the Mediterranean; and 20 cruises, divided between northern and southern voyages, by the Montcalm, Montclare and Montrose, which were primarily cruise ships.

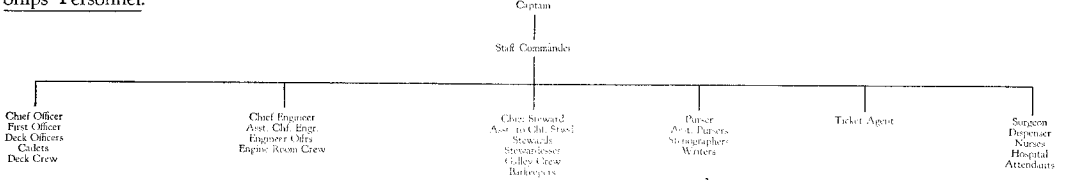
In peacetime the administration of the ocean services sees Canadian Pacific Steamships Limited in control of physical operation, under direction of the Chairman of C.P.S.L., while the traffic department of the steamships setup is part of the railway under direction of the Vice-President of Traffic.

The Managing Director of Canadian Pacific Steamships Limited has his offices in Montreal as does the Steamship Passenger Traffic

Shore Establishment:



Ships' Personnel:



Manager and the Foreign Freight Traffic Manager, while the General Manager of C.P.S.L. is stationed in London. There is a general superintendent and a marine superintendent in Montreal and in Vancouver. At London the officers include the superintendent engineer and the chief catering superintendent while Vancouver and Montreal both have catering superintendents, Montreal and Vancouver each has a superintendent engineer.

The General Manager in London makes appointments to and looks after the administration of all departments on board our Atlantic ships as well as the preparation of all schedules by which ships sail or arrive and controls all major arrangements at home and foreign ports.

Sea staffs are divided into three departments—deck, engine and catering—and the administrative head of the whole ship is the master.

The deck department takes in all navigating officers, including many who have specific duties such as cargo loading, and the petty officers and deck crew while the engine department is responsible for the propulsion of the ship and for many auxiliary services such as lighting and plumbing. Both these departments work on the 24-hour "watch" system. Under the direction of the ship's master is the purser who is the contact with passengers and is in charge of the ship's business relationship with shore, such as all documents and cash transactions. The surgeon is responsible for the health of the ship, of course, while the chief steward is the head of the catering department and is responsible for the care of sleeping accommodation and general housekeeping of the ship.

Shore staffs are divided in a similar way for administrative purposes with other departments added.

For instance the superintendent engineer is responsible not only for engineering appointments but for the maintenance of all machinery and for the design and manufacture of machinery for new ships and so has the chief electrician and hull surveyor on his staff.

The medical superintendent makes all medical appointments.

Design of the hull and layout of new ships, in all departments other than the engine department, is the job of the naval architect who also is responsible for the preparation of detailed plans of additions, alterations or modifications made in deck and passenger space.

The sales manager controls the shops and bars of ships and everything sold therein while the purchasing department handles the ordering of all kinds of supplies.

In addition there are sections to handle accounting, insurance, freight claims, cruises, investigation and baggage.

Resident representatives of several of these headquarters departments give service at the principal ports, but, in addition, at these main ports of call there is a marine superintendent coordinating all services so they stand in proper relation to the ship

while she is in port. Hiring of pilots, towage and stevedoring is the marine superintendent's job, among other things, except at Liverpool where the Company does both its own towing and stevedoring.

At certain of the largest ports a general agent—a dual officer representing both the railway and the steamships—administers the chief business policy of both companies.

In North America the Company has extensive dock rights and sails from Montreal and Quebec to British and European ports except during the December-April freeze-up when docks at Saint John, N.B., and Halifax are used. On the west coast the docks are at Vancouver, Victoria and Seattle, with the latter used only for coast steamships.

To many people the steamships service is symbolized by the Canadian Pacific house flag, the six squares, red and white, checkerboard style, which proudly enters ports all over the world and adorns the uniform caps of all captains, officers and warrant officers of the Company's fleets.

It was designed by Van Horne which was particularly appropriate since it was he who was at the helm for the first marine development.

Many and picturesque were the tales of the flag's origin until M. McD. Duff, assistant manager, and who later became Assistant to the Chairman, Canadian Pacific Steamships Limited, got the real story from Sir William himself in 1913.

He wrote Van Horne asking if it was true that he had designed the flag The letter came back with Sir William's answer written on the left hand margin:

"Yes, I designed the house flag," the answer ran, "partly to differ from any in use and partly that it might be easily recognized hanging loose. It has no historical or heraldic significance. Somebody has suggested that it meant 'three of a kind' but that would not be a big enough hand for the C.P.R., for which a 'straight flush' only would be appropriate.—Wm. C. Van Horne."

Signed First Agreement

The preliminary agreement for the construction of the Canadian Pacific Railway was signed in London on September 14, 1880, the signatories for the government being Sir John A. Macdonald, Sir Charles Tupper, John Henry Pope and D. L. Macpherson, and for the Syndicate Duncan McIntyre, Morton, Rose & Company and Kohn, Reinach & Company.

The final contract which was drawn up by Hon. J. J. C. Abbott, afterwards prime minister of Canada, who took an active part in the negotiations, was signed at Ottawa on October twenty-first.—*Steel of Empire* (John Murray Gibbon).

EUROPEAN ORGANIZATION

By H. T. PENNY, *Chief Assistant to European General Manager*

The period between 1918 and the outbreak of World War II in September, 1939, witnessed a considerable development in the activities of the Canadian Pacific in Europe, and many fine units from the Scottish shipyards of the Clyde were added to the Company's fleet, notably the Empress of Britain for the Quebec-Cherbourg-Southampton service and the four Duchesses for the Liverpool service.

Although emigration declined from 1930, there was, nevertheless, a steady flow of passengers from the British Isles and the Continent of Europe. Much work was done to popularize holiday travel to Canada, both independently and with Canadian Pacific conducted tours, also Around-the-World, in conjunction with the Company's Atlantic and Pacific services, combined with a visit to the hotels in the Rocky Mountains. Economical short-period cruises by famous Canadian Pacific liners also proved immensely popular, and a new public experienced the thrill of Canadian Pacific service —many sailing again and again.

Loyal Staffs Lose Homes, Liberty

During the years 1938 and 1939, with the rising tide of war ever encroaching, the difficulties and problems that arose called for ceaseless care and watchfulness on the part of the European Manager and his staff. Upon the actual outbreak of war, offices in the continental countries involved were necessarily closed, but others not immediately affected were kept open, the staffs loyally remaining at their posts, in spite of personal risk and the difficulties of moving passengers and cargo. When, later, it became necessary to close the remaining offices one by one, some of the staff suffered internment, while others only escaped after trying and hazardous journeys and the loss of their entire possessions and homes.

In the British Isles, preparations to meet all contingencies were made, offices were provided with air raid shelters, windows protected from blast. For administrative purposes in London, alternative offices at less vulnerable points in the outer perimeter of the City were equipped and staffed, but as time went on these were closed and the work is now carried on from the regular offices. Files and documents were duplicated, and although some losses and damage were sustained, the Company's services to the public have always been kept in operation. Southampton office was razed to the ground while Head Office in Trafalgar Square, London, Liverpool, and other offices, were damaged by bombs and blast. In addition to their normal duties, the staff undertook duties as air raid

wardens, Home Guard and rescue squads, and at each office a night and day fire guard duty was maintained by the Company's officers and employees of all grades.

The Canadian Pacific Atlantic fleet had a proud record of service during the war, but space does not permit of the full story being told. All vessels were requisitioned by the British Government, some even before the actual outbreak of hostilities. Grievous losses were sustained, but thousands of Canadian and Allied troops were transported in the Company's vessels to all the different theatres of war. Many refugees who escaped from Europe sought the aid of the Canadian Pacific to assist them to reach haven in North America. Limitation of accommodation, passport and other restrictions resulted in long waiting lists, and many calls were made upon the Company for assistance and guidance.

Carry 6,660 Children to Canada

A notable service rendered by the Canadian Pacific was the evacuation of mothers and children to Canada, following the Fall of France in 1940. During that year 6,660 children under the age of 16 were moved to Canada by the Canadian Pacific, of whom more than half sailed during July and August without fatality.

The freight service, in spite of all difficulties, was maintained, and the Company's house flag was flown at the masthead of many an unaccustomed ship to and from Canadian ports.

In line with their Canadian colleagues, many of the staff rejoined or joined the armed forces, and with their specialized knowledge of transportation, were appointed to responsible work handling cargo and the movement of troops, some acting as beach landing officers in the North African and Italian campaigns.

Particularly notable in this respect was the appointment of a member of the Southampton staff as port commandant at Arromanches—one of the specially pre-fabricated ports built and used for the initial attack upon the coast of Normandy on D-Day.

The European General Manager was loaned to the British Ministry of Supply while other members of the staff did duty with this and other ministries.

While the foregoing very brief outline of Canadian Pacific European activities during this war may serve to connect with the article on the subject of the Canadian Pacific organization that appeared in the first edition of the Foundation Library, the following essential portions of that earlier article, brought up to date, are quoted to show the main structure and operating methods in Europe in times of peace.

Board Always Represented in London

Since the incorporation of the Company, the Board has been represented in London, and at the present time two Directors reside in that city, Sir Edward Peacock, G.C.V.O., and the Rt. Hon. Sir John Anderson, P.C., G.C.B., G.C.S.I., G.C.I.E., M.P.

The European headquarters of the Company are located in Trafalgar Square, London, where the European General Manager maintains his office. He reports to the Chairman and President on matters of policy and to the Vice-President of Traffic on questions related to that field.

The office of the General Manager, Canadian Pacific Steamships Limited, is conveniently located at 8 Waterloo Place, London, also that of the Deputy Secretary and Registrar.

The Express Company in Europe, under the local direction of the European Freight Manager, deals with an appreciable amount of business, both financial and express.

The Deputy Secretary and Registrar in London functions in association with, and under the jurisdiction of, the Secretary in Montreal. This office maintains an important connection with a large proportion of the Company's shareholders, over 66% of the combined ordinary and preference stock of the Company being held in the United Kingdom. All the preference stock and the major portion of the debenture stock is registered in London.

The Auditor for Europe conducts audits at his discretion, reporting direct to the Auditor of Agencies in Montreal.

The Department of Immigration and Colonization is controlled by the Manager for Europe, located at Trafalgar Square, London, who is responsible to the Chief Commissioner in Montreal. A representative also is stationed at Liverpool.

The peak period of the emigration movement from Europe in the last decade was in 1928-29, and at that time the colonization department, in addition to the organization in the United Kingdom, maintained an extensive organization in Europe, with representatives stationed at Rotterdam, Copenhagen, Oslo, Gothenburg, Budapest, Zagreb, Bucharest, Warsaw, Riga and Prague.

This involved close co-operation between the colonization and passenger departments, both in preparing the necessary documents and making the travel arrangements for the emigrants to the ports of embarkation in Northern Europe and the British Isles.

Organization

The European General Manager has as his executive officers, his chief assistant, the European freight and passenger managers, the European accountant and the Public Relations officer.

The freight department staff located at the ports and other offices, are responsible for solicitation and for handling of all cargo inwards and outwards under the jurisdiction of the European

Freight Manager. The general supervision, distribution of tariffs, and liaison with other steamship companies, is controlled directly from his office in London.

The European Passenger Manager has a general passenger agent and assistants who are responsible for the several activities of his department: (a) Steamship and rail passenger traffic, from the United Kingdom and Europe generally (b) Trans-Pacific and round-the-world travel (c) Conference and liaison with other steamship lines (d) Sub-agency organizations, both in the United Kingdom and Europe.

The European Accountant is responsible for all the Company's monetary transactions and accounts in his territory.

The Public Relations Officer handles public relations throughout the British Isles and Europe. He maintains contact with the hub of the press, located in the Fleet Street area of London, and where all the chief newspapers maintain offices, including many of the large and influential provincial papers.

In Europe, press relations takes a dual form. The first, which appeals to the local inhabitant is prepared and printed in the local language. The second is designed to appeal to the large number of tourists and business representatives of the English-speaking nations of North America, Australia, New Zealand, and from the British Isles visiting the Continent.

Supervision of the Company's exhibits at the great international expositions, such as that in Paris in 1937, is another important task in public relations.

The United Kingdom

Traffic offices are located at strategic points in the United Kingdom, in conjunction with the geographical location of the ports from which the Company's trans-Atlantic vessels are operated.

The port offices are Liverpool, Southampton (pre-war), Glasgow (for Greenock where the vessels actually call), London City Office (for London Docks) and at Belfast, the port for Northern Ireland.

In addition to these, offices are maintained at Bristol, Birmingham, Manchester and Dundee. The Company's representatives at these offices keep close touch with the many industries peculiar to each area, such as the cotton industry of Lancashire, the wool, iron and steel industries of Yorkshire, jute in Dundee, linen of Northern Ireland, and many others. The extensive population of these areas forms a pool from which our passenger traffic from the Northern Ports is largely obtained.

Close and friendly co-operation is maintained with the travel agencies, spread all over the country, from whom a substantial

proportion of the passenger bookings are secured for the Company's steamship, Canadian rail and other services.

The port agents act in the dual capacity as representatives for Canadian Pacific Steamships and as Canadian Pacific Railway general traffic agents.

Fine Publicity Site in London

In London the Company's principal office is housed in a five-storey building situated on the south side of Trafalgar Square, and serves an important ocean and rail traffic clientele, through the medium of the well appointed ground floor office. The building is on one of the finest publicity sites in the world, of which full value was obtained in pre-war days, the large ground floor window being used for attractive displays illustrating the Company's many activities. Space on the upper floors of the adjoining Bank and Insurance Buildings is also occupied by the Company, but some of this is not now fully used owing to bomb damage.

London City Office is situated in Leadenhall street in the heart of the shipping area and adjacent to the headquarters of the many banks and financial houses. City Office handles a heavy regular freight traffic, in addition to which the passenger business amounts to a considerable figure each year.

Liverpool office is housed on the ground floor of the Royal Liver Building, which is a landmark of that city and one of the first to meet the gaze of the incoming passenger from Canada. It is adjacent to the Princes Landing Stage where the Company vessels normally berth to embark or disembark passengers. Liverpool office territory includes North Wales, Lancashire, Cheshire, Westmoreland, Cumberland, Nottingham, Derby and Lincolnshire. Freight is handled at the Gladstone Dock, but mails and express traffic are usually dealt with at Princes Landing Stage. Up to the outbreak of war, a regular weekly service to and from Canada was maintained throughout the year, and during hostilities, was largely maintained, in spite of many difficulties. The movement of freight and passengers inwards and outwards at Liverpool was by far the heaviest of all the European ports served by the Company's vessels.

Temporary Steamships Office in War

At Southampton, in pre-war days, the staff were housed in the Company's own building situated at the principal entrance to the docks, but this was destroyed by enemy action and temporary premises are being used as a Canadian Pacific Steamships office only. The territory covered included Sussex, Hampshire, Dorsetshire, and certain other parts of the Southern Counties.

At Glasgow part of the building originally erected by the

Allan Line is being used, it being conveniently situated in the shipping district and adjacent to the several main line railway stations. Under normal conditions the Company's vessels embarked and disembarked passengers at Greenock in the Clyde Estuary, known locally as "The Tail of the Bank," which service was controlled from Glasgow office. The distance between Glasgow and Greenock is about 23 miles, and passengers were conveyed by special train between these points.

The whole of Scotland comes under the control of Glasgow, but a subsidiary office is maintained at Dundee, in view of the important jute industry there. Most of the Company's fleet was built in the Clyde shipbuilding yards, and Scotland has many other associations with Canada. The value of its tourist possibilities, particularly the City of Edinburgh, are being actively developed.

Belfast office is situated in the heart of the city with an attractive window for display purposes. Control of all traffic from both sides of the border in Ireland is handled from there. Linen goods form a considerable item in the shipments from this area. There are numerous sub-agents throughout the country, but their number has been much reduced since the drop in emigration.

Manchester and Birmingham offices located in convenient and central areas of their respective cities cover the industrial heart of England. Although somewhat smaller than the other offices, nevertheless a considerable proportion of the Company's westbound traffic, both freight and passenger, emanates from these areas. Manchester territory includes Yorkshire, Northumberland, and Durham, while that of Birmingham includes the Black Country, Leicestershire and Northamptonshire.

Bristol office covers the southern half of Wales, the Western Counties of England, including Somerset, Cornwall and Devon. From this area large shipments of tinplate have been made to Canada in the past.

The Continent of Europe

During the war the Company's Continental organization was necessarily closed down, but a limited contact was maintained with representatives located at Lausanne, Switzerland, and Stockholm, Sweden.

Prior to the outbreak of war in 1939, an extensive organization was maintained covering the whole of the Continent of Europe through our own offices and agencies. The principal port offices were Antwerp and Hamburg, while vessels calling at Cherbourg were administered by the Paris office.

Other offices were Brussels, Rotterdam, Rome, Berlin and Warsaw, while lesser offices were also maintained at Prague,

Vienna, Zagreb and Bucharest, these last dealing chiefly with emigration traffic.

Antwerp, the first of the Continental offices to be re-opened since the war, is the principal port handling freight to and from Belgium, Holland, central and southern Europe, and the Canadian Pacific maintain a regular service of freight steamers between Canada and Antwerp. In addition, considerable passenger traffic to and from the Continent routed over Liverpool or Southampton was also handled there.

Hamburg controlled traffic from Germany and the Baltic area, while in France, a well equipped office was maintained in Paris with agencies in the principal French cities, and ports, also in Switzerland and Spain.

In the Scandinavian countries of Denmark, Sweden, Norway and Finland, the Company's interests were mainly covered by general agencies who reported direct to London.

The future position is difficult to assess, and much re-organization and modification will have to be made, but the re-opening of our Antwerp office, although on a much smaller scale than pre-war, marks the first step towards the rehabilitation of the Canadian Pacific on the European Continent.

Docks used by the Canadian Pacific in the United Kingdom

Liverpool—Normally our vessels embark and disembark passengers at the Princes Landing Stage which can be used at all states of the tide. The stage is admirably equipped with modern appliances and covered gangways from which passengers proceed directly into the baggage and customs halls, thence into the Riverside Station to and from which the London special trains were operated in connection with the arrival and departure of our steamships. Cargo is dealt with at the Canadian Pacific Piers in the Gladstone Dock, the most modern of the world-famous Mersey Dock System. This system has a water area of 58 acres with quayage of three miles and shed floor area of 60 acres. Direct connection with the railway services to all parts of the United Kingdom, together with modern equipment of electric cranes combine to ensure safe, economical and speedy handling of cargoes both inwards and outwards.

London—All the docks are under the jurisdiction of the Port of London Authority and pre-war Canadian Pacific vessels used the Surrey Commercial Docks. These, however, were badly damaged during the blitz on London and the Royal Albert Docks will probably be used when the post-war service recommences, but all docks are conveniently located for rapid distribution of

cargo by rail, road and water to private wharves and warehouses. A good proportion of cargo is discharged overside into barges which ensures rapid clearances, and economical transit.

Southampton—The docks here are unique in that they are owned and entirely operated by the Southern Railway of Great Britain. Canadian Pacific liners generally berthed at the New Docks Extension at which, although a tidal dock, it is possible to berth at almost any hour of the day. Cold storage premises were built on the Docks Estate with a capacity of 1,700,000 cubic feet of which 640,000 cubic feet were specially designed for the storage of fruit. Express freight trains operated directly from the dock to ensure rapid delivery in London and other areas.

Greenock and Belfast—At both these places before the war, the Atlantic steamship anchored in the Clyde Estuary and Belfast Lough respectively. Embarkation and landing was made by means of local tenders, which vessels had comfortable and adequate covered accommodation for passengers. Mails and express traffic were handled, also passengers' automobiles, but no regular freight shipments. During the war many Canadian Pacific vessels both from the Atlantic and Pacific fleets were ordered right up the Clyde to the docks within the Glasgow City limits.

During World War II, the sheds and dock installations at London, Liverpool and Southampton received considerable damage from enemy action, and plans for their rehabilitation on the most modern lines are being prepared by the several authorities concerned.

Lumber for 2,300 Bungalows

It is said that every story about lumbering should begin with a tale about the fabulous Paul Bunyan, who pioneered the industry and logged off the prairies before the first settlers arrived.

Just to be in style let this one begin:

Paul Bunyan owed his real fame to a gigantic blue ox called Babe who could skid a complete township, logs, stumps and all to tidewater between waking time and breakfast.

Babe's descendants are the train crews now at work on the Esquimalt and Nanaimo Railway between Lake Cowichan and Crofton on Vancouver Island. In the past three years they hauled more than 37,000 cars of logs. Translated into figures that you and I can understand that would be enough board feet to build more than 2,300 generous-sized bungalows, about enough to house the population of Windsor, Ont., if the wood were used for that purpose alone.—*Logging on Vancouver Island* (R. J. O'Leary, Staff Bulletin, September 1944).

SERVICE IN THE ORIENT

By H. B. BEAUMONT, *Acting Steamship Passenger Traffic Manager*

Initiated 59 years ago by the voyage of the W. B. Flint, first sailing ship under charter to the Canadian Pacific to make the journey from Japan to Canada, the Company's Orient service twice has been suspended by war during that period.

In the Great War of 1914-18 four Empresses and one of the Mont ships were requisitioned by the British Government and the freighters, Mattawa and Methven, were utilized temporarily to restore service.

Again in World War II, with Britain desperately needing wartime carriers—for "trooping" and other vital work—four of the Company's proud Empress liners were requisitioned in two years, with two of them sailing off to war two months after hostilities had commenced. Their transfer to these grimmer tasks necessitated the suspension of the Company's Orient service, in common with all other trans-Pacific lines.

In the second world conflict the Empress of Canada and the Empress of Japan, the latter having been renamed Empress of Scotland after Japan's active entry in the war on the side of the Axis powers, were the first to go into British Government service. They were requisitioned in November of 1939, the Canada at Hong Kong and the Japan at Vancouver.

In November of 1940 the Empress of Russia was requisitioned at Hong Kong and in January of 1941 the Empress of Asia was pressed into service at Vancouver.

The following is a description of the Pacific organization, ashore and afloat, prior to the outbreak of World War II, together with a brief history of the Orient service:

Following the completion of the main line of the Canadian Pacific Railway in 1885 came the problem of finding eastbound traffic for the road in order to avoid hauling empty cars over the mountain ranges lying between the Pacific Coast and the already productive cattle ranges and wheat fields of Western Canada. The possibilities of attracting a portion of the traffic of China and Japan from the Suez Canal to the Canadian Pacific route appealed to the management, and on June 20, 1886, the first sailing ship under charter to the Canadian Pacific, the W. B. Flint (800 tons) left Yokohama for Canada. She took 37 days to accomplish the journey. At the time the ship left Yokohama the Canadian Pacific transcontinental route had not been connected up, but it was opened 10 days later.

The sailing vessels, beginning with the W. B. Flint, used to initiate the Company's service from Yokohama to Port Moody,

which was then the Pacific terminus of the Canadian Pacific Railway, were all loaded entirely with tea, as there were no other commodities at that time shipped from China and Japan by these sailing vessels. The experiment was successful and in 1887 regular trans-Pacific service was established with three chartered steamships, the Batavia, Parthia and Abyssinia.

In July, 1889, a contract with the British Government was concluded providing for a mail subsidy of £60,000 per annum (of which the Canadian Government paid £15,000), for a service of three twin-screw passenger and cargo steamships between Vancouver and Japan and China, and the Empress of India, Empress of China and Empress of Japan, steamers of 6,000 tons each, were specially built and placed in commission in 1891. In the early nineties trans-Pacific business had improved so much that it was decided to operate a subsidiary service with the steamers Tartar and Athenian. The service was further strengthened in 1906 by the addition of the Monteagle (6,160 tons). In 1907 the Tartar and Athenian were sold to the Japanese. The Empress of China went ashore off Yokohama in July, 1911, and was sold by the underwriters.

Growth of Service

The popularity of the short route between Vancouver and the Orient and the growth of tourist and cargo traffic were such that two steamers, the Empress of Russia (16,800 tons) and Empress of Asia (16,900 tons) were built and placed in the service in 1913.

The Great War broke out in 1914 and for a time, when the British Government had requisitioned the Empress of Russia, Empress of Asia, Empress of Japan, Empress of India and Monteagle, the Company actually was without a Pacific service. Following this period, the freighters, Mattawa and Methven, were utilized temporarily.

The Empress of India was purchased during the Great War by an Indian maharajah, rechristened the Loyalty and presented to the British Government for duty as an hospital ship. The Monteagle was taken off the Far East run in 1922 and later sold.

Following the disappearance of the old Empress of Japan, which was taken to Vancouver in 1922 and sold to shipbreakers after a steaming record of 2,500,000 miles, the Pacific fleet was augmented temporarily by the addition of the Empress of Australia, from our Atlantic service.

In 1922 the Company added the Empress of Canada (21,500 tons) to the fleet, the new liner carrying on with the Empress of Russia, Empress of Asia and Empress of Australia. In 1926 the Empress of Australia was returned to the Atlantic service, leaving a three-ship Pacific fleet. In 1928 the Empress of Canada was sent to the shipbuilders in Scotland for reconditioning and, during her

absence, her place in the Orient service was filled by the Empress of France from our Atlantic fleet.

In 1930 an event of transcendent importance occurred. This was the advent of the 26,000 ton 22-knot Empress of Japan, still the largest and fastest ship on the Pacific Ocean.

In 1931 the Company made another forward move in connection with its Orient service. This was the inclusion of Honolulu in the list of ports served, and before long the Empress of Japan and Empress of Canada were calling at the Hawaiian port on both the westbound and eastbound passages. This innovation was an immediate success and brought the Company increasing traffic to and from Honolulu and between Honolulu and the Far East.

As the Empress of Canada outsped the Empress of Russia and Empress of Asia, and as these ships outsped the old Empress of Japan, so the new Empress of Japan "showed her heels" to the Empress of Canada. In 1931, with the former King and Queen of Siam as passengers, the Empress of Japan set a new mark for the Yokohama-Victoria crossing of 7 days 20 hours and 16 minutes, and since then the biggest and fastest of the Pacific Empresses has established new records for every leg of the Pacific voyage.

At the outbreak of World War II the trans-Pacific fleet was comprised of—

Empress of Japan.....26,000 tons gross register
Empress of Canada.....21,500 tons gross register
Empress of Russia.....16,800 tons gross register
Empress of Asia.....16,900 tons gross register

maintaining a fortnightly service between Vancouver-Victoria and Orient ports.

The route followed by the Empress of Japan and Empress of Canada was Vancouver, Victoria, Honolulu, Yokohama, Kobe, Shanghai, Hong Kong, Manila and vice versa, and the route followed by the Empress of Russia and Empress of Asia was Vancouver, Victoria, Yokohama, Kobe, Nagasaki, Shanghai, Hong Kong, Manila and vice versa. During the Shimidsu tea season, from June to October inclusive, our Pacific Empresses called eastbound at that port when there was sufficient tonnage offering.

Across the Pacific, the Canadian Pacific Empresses dominated the passenger traffic movement to and from the Pacific northwest ports of Seattle, Vancouver and Victoria, and left far behind in carryings their competitors to and from these ports

One of the factors primarily responsible for the inauguration of our trans-Pacific service, the attraction of a portion of the traffic of China and Japan from the Suez Canal to the Canadian Pacific route, remained a competitive problem up to the start of

the war in 1939. Newer and faster ships had been placed on the Suez route by the British, German, Italian and Japanese lines. There were 11 lines competing for traffic between the Orient and Europe via the Suez. Included in these was a fast modern 24-day service between Shanghai and Trieste. The fastest ships between Shanghai and United Kingdom ports via the Suez Canal made the voyage in 30 days. The minimum time taken to convey passengers from Shanghai to the United Kingdom, using our trans-Pacific ships, our transcontinental railway and our trans-Atlantic ships, was 26 days.

While our through fares were necessarily somewhat higher than those via Suez, our more attractive route enabled us to increase steadily our share of the traffic between the Orient and Europe. In order to cater for this traffic, we endeavored, as far as possible, to co-ordinate our trans-Pacific and trans-Atlantic sailing schedules so as to provide convenient through connections both eastbound and westbound. Incidentally the Canadian Pacific route between the Orient and the United Kingdom is of great strategic value to Great Britain.

Although we had friendly competition with the Suez Lines, we were also associated with them in the development of traffic. Independent round-the-world travel was becoming more and more popular and in recruiting and handling this traffic, we co-operated with the Suez Lines, passengers travelling one half way round the world by Canadian Pacific and the other half via Suez. As a matter of fact, Canadian Pacific acted as general agents for Canada for the great British steamship organization familiarly known as the P. & O.—the Peninsular & Oriental Steam Navigation Company.

Another development which helped business after the Great War ended in 1918 was the building up of an improved trans-Siberian rail service, catering to travellers between the Far East and European countries and the United Kingdom.

The handling of traffic by our Pacific Service was fraught with many problems not met with to the same extent on our Atlantic Service. Distances are very much greater, the distance from Vancouver to Manila being 6,946 miles by direct express route, and 8,458 miles via Honolulu, as compared with 2,771 miles from Montreal to Liverpool. The Orient voyage, with its several ports of call was more in the nature of a cruise than an ocean crossing, occupying 20 days by direct express route, and 21 days via Honolulu, as compared with seven days for the Atlantic crossing to Liverpool and five days to Southampton.

In addition to normal traffic of international trade lines, our Pacific passenger traffic field embraced Japanese, Chinese, Filipinos and Hindus. On the regular voyage of a Pacific vessel seven different forms of currency were in use at the various ports of call.

This necessitated a careful watch on the fluctuation of exchange in order to ensure that our through and local fare schedules should not develop inconsistencies. There was no field for immigration in connection with our Pacific service. With the exception of a limited number of Japanese, Asiatics were not permitted to immigrate to Canada, or to the United States, so that our handling of this traffic was restricted to regular travel between ports in the Orient, and, in respect of the trans-Pacific voyage, to those who had previously been legally admitted to Canada or the United States and who, after obtaining return permits from their respective governments made a trip to their homeland; and to Asiatics travelling through Canada and the United States to points beyond.

Our field for eastbound trans-Pacific travel, therefore, comprised European and North American residents in the Orient, commercial travellers, officials of the various governments, Army officers from India, missionaries, merchants of Oriental nationality, Chinese and Japanese students, returning Chinese, Japanese and Filipinos, and Chinese proceeding through to the West Indies, Havana and South America. We offered attractive rates and facilities in an effort to create a movement of passenger traffic from African ports, Indian ports, the Dutch East Indies, and from New Zealand and Australia via Hong Kong to Canada, the United States, the United Kingdom and Europe.

Tourist Travel Future Field

For westbound traffic, our field comprised tourist travel (individual travellers and organized tour parties) commercial travel, missionary travel, returning Chinese, Japanese, Filipinos, Hindus, and Chinese from the West Indies, Havana and South America.

Our main prospective field for the future is in the development of tourist travel, including school teachers and college professors. The attractions of the Orient are becoming very much better known and as a stimulant to tourist travel, there are available attractive round trip trans-Pacific fares, in addition to alluring Round-the-Pacific tours at moderate fares.

For the better handling of this wide variety of passenger traffic, and in order to enable us to offer diversified and elastic itineraries, we had interchange arrangements with eight lines operating in the Far East, so that passengers holding Canadian Pacific tickets could stop over at Orient ports of call for the length of time desired and proceed onward to the next port by one of the interchange lines. We also had an interchange arrangement with the Nippon Yusen Kaisha, which not only included interport travel in the Orient, but also trans-Pacific travel, enabling passengers, if they so desired, to travel one-way Canadian Pacific and the other way Nippon Yusen Kaisha. In addition to providing our patrons

with a maximum of transfer facilities, these interchange arrangements also brought to our ships considerable additional revenue from the lines with which we had agreements.

Equally active on the Pacific was our freight organization. Shippers of all kinds of freight, particularly high-priced merchandise and perishable goods, valued the fast freight service offered by our speedy ships. Spacious accommodation for refrigerated cargo was a feature of the Pacific Empresses. Silk was stowed in special rooms convenient to the conveyor system from which it was discharged into waiting freight cars at Vancouver for shipment by rail. On practically every voyage all the available cargo space was filled to capacity. From the Orient we carried such commodities as cigars, coffee, cotton goods, dates, furs and skins, glassware, gunnies, lily bulbs, oranges, canned pineapple, provisions, rice, silk goods, raw silk, tea, toys, walnuts, etc., and from Vancouver typical cargoes included agricultural implements, asbestos, automobiles, automobile tires, canned goods, cigarettes, flour, lead and zinc, machinery, nickel, newsprint and kraft paper, woodpulp, etc. Through bills of lading were issued and cargo routed via Canadian Pacific White Empresses consigned to or from Canada, United States, Hawaii, Japan, China, Hong Kong, the Philippines, Java, Siam, Straits Settlements, Sumatra, Ceylon, India, British East Africa, South Africa, Mauritius, United Kingdom, Europe, West Indies, etc., In the 1930's there had been a steady growth of through freight traffic from the Orient via Canada to the United Kingdom, comprising principally raw silk, silk goods, toys, frozen eggs, etc.

A diversified traffic was handled by the Canadian Pacific Express Company on our trans-Pacific ships. From the Orient large sums in gold and silver bullion and coins were carried, in addition to general merchandise in less than carload lots, unaccompanied dogs, prize poultry and sample parcels of tea, cotton, silk, etc. To the Orient were conveyed by express, machinery parts, electrical equipment, maple syrup, kodaks and sound film, ice-skates, hatching eggs, seeds, etc. Though it may seem unusual to ship flowers to the flowery kingdom, our express company handled seasonal shipments of orchids each year from the United Kingdom to Japan.

Staffs in Orient

We had our own offices with our own salaried staffs at Tokyo, Yokohama, Kobe, Shanghai, Hong Kong and Manila. These offices had jurisdiction over a widespread territory, comprising Japan, Chosen, Manchukuo, China, the Philippine Islands, Dutch East Indies, Borneo, French Indo China, Siam, Federated Malay States, Burma, Ceylon and India.

Our chief Orient office was in Hong Kong. Here was located the Oriental Manager, who had executive control of steamship operation and traffic, and who functioned under the jurisdiction of the Vice-President of Traffic, and the Assistant to the Chairman, Canadian Pacific Steamships, Limited. Purchasing in the Orient was under the general jurisdiction of the General Purchasing Agent, Montreal. Advertising was undertaken locally in the Orient under the direction of Montreal.

The Oriental Manager's supervising officers were the general passenger agent, the agents of the operating and freight departments, and the purchasing agent and catering superintendent.

The General Passenger Agent was responsible, under the Oriental Manager, for the development of steamship, rail and hotels passenger traffic, and the administration of branch office staffs under his immediate jurisdiction. He was also responsible for sub-agency organization and liaison in the Orient with connecting lines and lines members of the trans-Pacific Passenger Conference.

The freight department was administered by the Oriental Manager, to whom the freight representatives of all Orient ports reported direct. The same organization functioned as agent for Canadian Pacific Express Company, reporting to the Foreign Department of the Express Company.

As his title implied, the purchasing agent and catering superintendent had jurisdiction over all purchases in the Orient, and also over the catering for our Pacific ships in the Orient. Notwithstanding the number of ports of call, it was unnecessary to have a purchasing agent at each port, and the Company's accounting agent at ports other than Hong Kong acted as purchasing agent, the purchasing agent for the Orient making periodical visits to the different ports.

Hong Kong—a British Crown Colony since 1841 and the distributing centre for South China—is an island about 11 miles long and two to five miles wide, situated near the mouth of the Canton River. The harbour of Hong Kong is one of the finest and most beautiful in the world, having an area of about 10 square miles and with its diversified scenery and varied shipping always presented an animated and imposing spectacle. Here were located modern shipbuilding yards and drydocks and extensive civil, naval and military establishments.

Canadian Pacific Empresses docked at No. 5 wharf at Kowloon, across the bay from Hong Kong. A frequent ferry service connected the two communities, so that within 15 minutes the newcomer was standing on the Praya, the broad street that stretches along the water's edge in Hong Kong.

We had an excellent office in Hong Kong, and our location was one of the best on the waterfront. Our management and freight departments occupied one corner of a block and our passenger department the other.

In addition to our executive officers, a general agency was maintained at Hong Kong, with jurisdiction over a territory which comprised South China, Dutch East Indies, Borneo, French Indo-China, Siam, Federated Malay States, Burma, Ceylon and India, where we were represented by powerful mercantile firms. Our passenger and freight representatives, in addition to the solicitation and handling of traffic in Hong Kong, made periodical trips throughout their territory in the interests of our service. Shore excursion and operation arrangements from Bombay through to Yokohama (including all India, Ceylon, Penang, Singapore, Siam, Java, Bali, Manila, Hong Kong, Shanghai, Peiping, Beppu, Kobe, Kyoto, Nara and Tokyo) in connection with our annual Round the World Cruise of the Empress of Britain were completed by our Hong Kong organization.

A large portion of our Chinese passenger traffic was recruited in Hong Kong and Canton and for the handling of this business a Chinese branch of our passenger department was maintained.

For the more efficient and economical handling of the accommodation on our ships, all passenger space for eastbound sailings was centralized on Hong Kong, whence it was allotted to our various offices in the Orient.

Manila, one and a half days distant by sea from Hong Kong, is the capital and largest city of the Philippine Islands and the principal distributing port for import traffic and an important factor in export traffic. At Manila, our organization comprised an agent in charge of operation and freight traffic, supported by a passenger agent and general staff. Their jurisdiction embraced all the Philippine Islands.

Our Empresses docked at Pier 7, one of the most modern in the world. It was 1,400 feet long and could accommodate four of the largest vessels on the Pacific. Our office was in the centre of the business district—15 minutes by motor from the piers. Canadian Pacific enjoyed a very good standing in the Philippines and was well supported by the business firms there.

Shanghai is the largest port in China and the gateway to North China. It is connected with all the principal cities in this territory either by rail or water, and in some cases by airways. With its large foreign population and progressive civic development, it was an excellent field for traffic, both passenger and freight. Besides having a large import and export traffic, Shanghai was the principal transhipment point for ports on the Yangtze River, that great waterway which pierces inland China.

Our organization comprised an agent in charge of operation and freight traffic, and a general agent in charge of passenger traffic, with supporting staffs. Territory served was all of North China.

Our trans-Pacific ships proceeded up the Whangpoo River and docked at the Hongkew wharf on the Shanghai side of the river, within easy reach of our office. On her world cruise, the Empress of Britain, because of her huge size, used to anchor at Woosung, 14 miles down the Whangpoo River from Shanghai, transferring her passengers by tenders. Before the war there was in course of construction a modern new wharf, with up-to-date passenger and freight handling facilities, about 10 miles from the civic centre of Greater Shanghai.

Shanghai had the finest Canadian Pacific offices in the Orient. Our premises were on the ground floor of a large modern building, at the corner of The Bund and Peking Road, one of the best water-front locations in Shanghai, convenient to the heart of the city and to the Cathay Hotel, which is the centre of social life in Shanghai.

Shanghai, the principal financial and industrial centre for China, was the headquarters of many British, American and international manufacturing and distributing firms serving China, and was also the headquarters of the principal missionary societies whose field is North China. Here, as is the custom with "foreign" establishments at other points in the Orient, it was the general practice to give officers and employees extended leave of absence (ranging from three months to a year) at the end of periods of service ranging from three to five years, and almost invariably this long leave was utilized for a trip home to Canada, the United States, the United Kingdom or Europe.

It is but a short trip from Shanghai to Nanking, Tientsin and Peiping, all colorful cities and highlights in the Orient for tourists.

Nagasaki—Here we operated through a commission sub-agency, which reported to our general agent at Yokohama.

It is a coaling station and the Empress of Russia and Empress of Asia called there to replenish their bunkers. It was not a very productive traffic territory.

Yokohama, Kobe and Tokyo.—Our chief office for Japan was at Yokohama, where a general agent in charge of operation and freight traffic, and a general agent in charge of passenger traffic were located, with supporting staffs.

Yokohama, completely rebuilt on modern lines since the earthquake of 1923, was the premier silk shipping port and exported 60% of the world's silk. It was also the port where the majority

of travellers to Japan got their first sight of Oriental life. It will be recalled that during the 1923 earthquake the Empress of Australia, in command of Captain Samuel Robinson, since retired, performed heroic deeds of rescue work, saving thousands of refugees of many nationalities from fire and desolation and earning the thanks of six different nations.

At Kobe, reporting to the general agent at Yokohama, were an operating and freight agent, and a passenger agent, with their staffs, and at Tokyo there was a joint freight and passenger agent, who also reported to Yokohama. Jurisdiction of Kobe office was the southerly section of Japan, and that of the joint freight and passenger agent at Tokyo, was the City of Tokyo.

Kobe is Japan's most important port and its modern, reinforced concrete piers and warehouses, all connected by rail with the main railway line, made it one of the most up-to-date and best equipped in the Orient. Our office in Kobe was situated on Harima Machi, about 10 minutes by motor from the dock. It is but a 40 minute trip from Kobe to Osaka, the second largest city in Japan, ranking high in commercial and industrial importance.

Tokyo, the capital and largest city of Japan, with a population of about six millions, is the third largest city in the world. It is the administrative, political, commercial, industrial and educational centre of Japan and was, therefore, a prolific territory for our passenger and freight departments.

Honolulu.—We are represented here as general agents by the long established and well-known firm of Messrs. Theo. H. Davies & Company. Honolulu, in Hawaii, familiarly known as the Paradise of the Pacific, was essentially a passenger port of call, although we did handle some freight. The attraction of the Honolulu call of our Empresses was not only a decided stimulant in the booking of through passengers, but enabled us to create a substantial volume of local traffic between Vancouver-Victoria and Hawaii, and also, in co-operation with the Canadian Australasian Line, to develop traffic between Australia and New Zealand and the Orient via Honolulu. It also enabled us to tap the fertile California tourist market by booking passengers at ordinary trans-Pacific through passage fares between that area and the Orient, and permitting them to use one of the U. S. flag-lines between the U. S. Pacific Coast mainland and Honolulu and Canadian Pacific ships between Honolulu and the Orient.

Prior to our activities there, Honolulu residents seeking a change were attracted to California by extensive advertising and age-long tradition, but we brought a share of this remunerative holiday business to Canada, creating new rail and hotel revenue, as well as financially benefiting our ships.

SOUTH PACIFIC INTERESTS

(Editor's Note:—This article deals with the situation as at the outbreak of World War II. Since then the Niagara has been lost through enemy action on Admiralty service, in which service the Aorangi still was engaged at press time in March of 1946.)

By IAN WARREN, *Assistant Passenger Traffic Manager*

While a steamship service between Australia and Canada was established by James Huddard as early as 1893, the first direct action by the Canadian Pacific to actively participate in the development of traffic to and from the South Pacific was taken in 1920 when a passenger representative for Australia and New Zealand was appointed with headquarters at Sydney, New South Wales, Australia.

The original service established by Mr. Huddard operated between Sydney, Brisbane (Australia), Honolulu (Hawaii), and Vancouver. Subsequently, a call was scheduled at Suva, Fiji Islands, then in 1911 a call at Auckland, New Zealand, was inaugurated in place of the call at Brisbane.

The progressive development of the Canadian Pacific's interest in the traffic is demonstrated by the fact that in 1926 the organization was extended so that an assistant representative was appointed with headquarters at Auckland, New Zealand, while in 1929 Canadian Pacific offices were opened at Melbourne, Victoria, Australia, and at Wellington, the capital of New Zealand.

Prior to 1931, the interest of the Canadian Pacific was centred in the rail and Atlantic passenger, freight and express traffic moving between the South Pacific and North America and between the South Pacific and Europe, inasmuch as the Company did not operate ships between New Zealand or Australian ports and Canada, nor did it have a financial interest in the line which operated the only ships in the service, the Canadian Australasian Royal Mail Line.

In 1931 an arrangement was consummated whereby the Canadian Pacific purchased a half interest in the Canadian Australasian Royal Mail Line from its owners, the Union Steamship Company of New Zealand, thus the Company became directly interested in the steamship service on the Pacific, as well as in the rail and Atlantic traffic, marking another milestone in the association of the Canadian Pacific with the members of the British Commonwealth and Empire in the South Pacific.

The present Canadian Pacific organization consists of a traffic agent for Australia and staff at Sydney, with a freight and passenger agent and staff at Melbourne, and a traffic agent for New Zealand and staff at Auckland, with a freight and passenger agent and staff at Wellington.

The responsibility of the traffic agents and their assistants is the promotion, development and servicing of passenger, freight and express traffic to and through Canada via the Company's services, as well as the servicing of traffic destined to New Zealand and Australia, and the solicitation of passenger traffic for the round-the-world and the other cruises operated by this Company. This involves the placement and supervision of newspaper, magazine and other advertising, the distribution of literature, the direct solicitation of prospective traffic, the giving of lectures and the exhibition of films descriptive of the attractions of Canadian Pacific routes and services, as well as a multitude of other duties and activities necessary to the promotion of traffic.

In addition to the representation provided through the Company's salaried organization, the Union Steamship Company of New Zealand, through its large number of offices in Australia, New Zealand and throughout the South Pacific, acts as general agent for the Canadian Pacific. The well-known firm of Theo. H. Davies & Company acts as general agent for the Company at Honolulu.

The market in New Zealand and Australia for Canadian Pacific passenger services is principally the business and pleasure travel to and from the British Isles of the citizens of those important parts of the British Commonwealth of Nations, and the opportunities available to the Company in that direction will be more readily appreciated when it is realized that over 95% of the approximately eight million people who make up the population of those two countries are of British nationality. As a result of the very close ties which Australians and New Zealanders have retained with their kith and kin in the Old Country they all hope for the opportunity of making at least one trip "home" during a lifetime, and the high proportion of British capital invested in industry and agriculture in Australia and New Zealand also results in a considerable amount of business travel to and from Great Britain.

The principal competition we face in the solicitation of passenger traffic in Australia and New Zealand is from the large steamship lines operating between ports in those countries and (1) Los Angeles and San Francisco, and (2) European ports via the Suez Canal, via South Africa and via the Panama Canal. To attract travel to the Canadian Pacific route in competition with the so-called "all-sea routes", we must aggressively and convincingly "sell" the advantages of our route—for business travel, the saving of time—for pleasure travel, the scenic resort attractions directly on the route, such as Lake Louise, Banff, the Great Lakes, Niagara Falls, as well as the easily-reached attractions, Alaska, New York, Quebec, the Maritimes, etc. We make a feature of the facility of travel via Canada, and the excellence of our trains, ships

and hotels, and the outstanding advantages resulting from our unique position as the operator of both rail and ocean transport "One Management—Ship and Shore".

Recent years have seen the inauguration of airlines services between Europe and North America and the South Pacific, and large sums of money are being expended in the development of this mode of travel. While the capacity of the airline services has been so restricted that the steamship services have not so far been adversely affected, it is very likely that this form of travel will be substantially expanded in years to come, with corresponding effect upon the ocean carriers. There is no doubt that the very great saving of time enjoyed through air travel as compared with surface transport over these long distances will have a distinct appeal, particularly for business trips—and, because of the expense necessarily involved for transportation between the South Pacific and Europe or America whatever the mode of travel, the airlines will not be unduly handicapped in that direction.

The present Canadian Australasian Line service consists of two ships—the 17,500 ton motor vessel Aorangi, with a speed of seventeen knots, and the 15,400 ton Niagara with a speed of 16½ knots, maintaining a sailing every twenty-eight days from Vancouver and from Sydney. The trip between Vancouver and Sydney consumes about twenty-three days and is via Honolulu, Suva and Auckland. However, to meet the needs of the steadily-growing traffic, plans are proceeding for the establishment of an improved service through the placing of larger and faster ships on the run.

Back to Beginnings

Although the Canadian Pacific Railway Company was incorporated in 1881, it is interesting to note that some of the lines acquired, and now either part of the parent system or operated as subsidiaries, constitute a direct link of over a century from the present time to the very earliest days of Canadian steamboat transportation and of railway development.

The Dominion Atlantic Railway, in Nova Scotia, is a particularly striking example of such a connection, inasmuch as the ferry service operated between Saint John, N.B., and Digby, N.S., perpetuates a service originating July 4, 1827; while the first proposal for a railway to provide access to Halifax from Annapolis Valley was projected in 1835, only 10 years after the opening of the Stockton and Darlington Railway in England.—*D.A.R.'s Roots Go Deep* (A. E. Mimms, chief engineer, munitions: Staff Bulletin, February 1944).

BRITISH COLUMBIA COAST STEAMSHIPS

By JOHN R. STURDY, *Press Relations Officer, Vancouver*

No area in the world is better served by its coastal steamers than is the coast of British Columbia by the Company's British Columbia Coast Steamships.

That is a sweeping statement but it has been fully backed up by the opinion of British Columbia industrialists and by shipping experts in Great Britain and the United States.

The Company's fleet consists of 13 speedy passenger ships with combined passenger accommodation of 11,550; these 13 plus a freighter and three powerful tugboats have a gross tonnage of 46,587; and there is an additional fleet of transfer barges for which the motive power is supplied by the tugboats.

Two new ships were contracted for in February of 1946 to be 6,000 ton turbo-electric passenger vessels for the Vancouver-Victoria-Seattle triangle run with a speed of 23 knots.

They operate the year round on the Vancouver-Victoria-Seattle triangle run, Vancouver to Alaska, Vancouver to Nanaimo, and to the west coast of Vancouver Island, the Gulf Islands, Powell River and northern British Columbia. Seventy-two ports of call are included on these regular routes.

World War II brought about temporary abandonment of some of these services and the modification of others. The two largest ships of the fleet, the Princess Marguerite and the Princess Kathleen, 5,875 gross-ton sisters, were taken over by the Admiralty for war service, the Princess Marguerite being lost by enemy action in the Mediterranean on August 17, 1942.

The history of the coast shipping of British Columbia goes back more than a century, to 1836, when the Hudson's Bay Company brought its first steamship, the Beaver, to Fort Vancouver on the Columbia River. The adding of many new steamers to the coast fleet and the competition caused in the early 80's when the Canadian Pacific Railway needed ships to take men and supplies to Yale for the construction of the mountain line, brought about an amalgamation of coast shipping in 1883. The resulting organization, the Canadian Pacific Navigation Company, had a fleet of nine vessels.

Service Develops Coast Industry

The B. C. Coast Steamships came into being in 1901 when the C.P.R. bought the Canadian Pacific Navigation Company's 14 vessels to extend services to Vancouver Island and other British Columbia ports.

At that time seven regular services were maintained: Victoria and Vancouver daily; Victoria and Westminster, three trips a week; New Westminster, Ladner and Steveston, daily; New Westminster and Chilliwack, three trips weekly; Victoria and West Coast, three trips a month; Victoria, Vancouver and northern B. C. ports, three trips monthly; and Victoria, Vancouver and Alaska, two trips a month.

Modernization of the fleet commenced in 1903 with the building of the Princess Victoria for the Victoria-Vancouver night service, also the Princess Beatrice for the northern B.C. service, but about this time the steamer Clallam, operating between Puget Sound and Victoria, foundered in the straits with heavy loss of life. The people of Victoria were so wrought up about this that the late Simon Leiser appealed to Thomas (later Lord) Shaughnessy to put the Princess Beatrice, which had just been completed, on this run. This was done, inaugurating the Vancouver-Seattle-Victoria run, one of the most important of the coastal services to this day.

The Princess Victoria, with a speed or 20 knots, was for several years the finest and fastest coasting steamer on the Pacific. On the celebration in 1943 of her 40th birthday she was widely lauded for she retained much of her old popularity and a good deal of her speed.

In size the fleet embraces steamers from 5,875-ton Princess Kathleen and Princess Marguerite, which used to handle the Triangle Run in pre-war days, to the 1,243-ton Motor Princess, which normally ferries passengers and motor cars from Steveston, south of Vancouver, to Sidney, north of Victoria on Vancouver Island.

Great Help to Tourist Industry

The coast service is most widely known for the excellence of its passenger sailings and its immeasurable contribution to the tourist industry of the Far West.

Another important service it renders is in its freight handlings for all the ships are equipped to carry heavy cargoes and great quantities of express. The Nootka is a hard-working coastwise freighter of 2,069 tons, putting into odd ports along the coast. The sturdy tugboats, Kyuquot, Nanoose and Qualicum perform a humble but industrially important mission in ferrying barges laden with freight cars between Vancouver, Ladysmith and Nanoose Bay, forming a floating bridge between the Canadian Pacific mainline terminus and its Esquimalt and Nanaimo branch on Vancouver Island. Coal and forestry products comprise the barges' main cargoes.

Scope of the service is as wide as the territory in which it operates and it has contributed much to the development of industries scattered along the British Columbia coast. Among the centres closely linked with the coast service ships over the years are such northern towns and cities as Prince Rupert, B.C.'s fishing capital; Powell River and Ocean Falls, the pulp and paper cities; Comox and Courtenay; Nanaimo, the central distributing point of Vancouver Island; the mines at Zeballos, on Vancouver Island's west coast; fishing canneries on the west coast, at Port McNeill, Port Hardy, Namu and Butedale, up north, and Victoria, the provincial capital.

A Splendid Record

Figures for 1938, the last complete pre-war year, show that vessels of the coastal fleet steamed 676,984 miles, carried 878,290 passengers, transported 63,403 automobiles and handled 146,397 tons of cargo. The transfer barges carried 256,696 tons in the same year. In the summer there were 64 officers and 265 ratings in the deck department and 86 officers and 165 ratings in the engine department. Winter figures were about 60 lower for each department.

The catering department is an important one and the cuisine has gained a reputation for excellence. In one mid-summer month (July, 1941) the 582 employees of this department prepared 371,546 meals, including those served in the coffee rooms, for consumption by passengers and members of the ships' crews. The cost of the provisions in that month was $71,395.

Maintenance is a big item each year because of the high standard that has been set for the coast service. Painting alone calls for an appropriation of $45,000 annually.

Administration

The headquarters of the British Columbia Coast Steamships is in Victoria, where the administrative staff consists of a manager, a marine superintendent, a superintendent engineer and a catering superintendent.

The marine superintendent supervises all matters pertaining to the deck department, including the navigation of the vessels, the handling of all cargo, mail, baggage, express and automobiles, and the manning of all the vessels. In conjunction with the superintendent engineer, he arranges for all annual surveys and overhauls. The assistant marine superintendent is stationed in Vancouver.

The superintendent engineer supervises all matters pertaining to the engineroom department, and is responsible for the maintenance of all vessels, as regards hull and machinery. The assistant superintendent engineer is stationed in Victoria.

The catering superintendent supervises all matters pertaining to the stewards' department in all vessels, including all catering, and is responsible for the maintenance of all furnishings in passenger accommodation. The assistant catering superintendent is also stationed in Victoria.

All superintendents report to the manager, also the pursers of all vessels and the agents at the various ports. The B. C. Coast Steamships is under the supervision of the Vice-President of Western Lines, at Winnipeg, to whom the manager reports.

Details of Ships, Freighter and Tugs

Name of Ship	Gross Tons	Length, Over all	Day Passengers as per certificate	No. of Rooms	Approx. No. of Cars	Speed in Knots	Built Where	Built When
Princess Kathleen	5,875	368'-9"	1,800	123	30	22.5	Scotland	1925
Princess Elizabeth	5,251	366	1,100	206	50	16.3	Scotland	1930
Princess Joan	5,251	366	1,100	206	50	16.2	Scotland	1930
Princess Louise	4,032	330	1,000	106	14	17.5	Vancouver	1921
Princess Charlotte	3,925	342	1,000	94	15	19	Scotland	1908
Princess Alice	3,099	302	800	75	8	17.4	England	1911
Princess Adelaide	3,061	302	800	94	6	17.9	Scotland	1910
Princess Victoria	3,167	307	1,000	70	48	18	England	1903
Princess Norah	2,731	262	450	61	9	16	Scotland	1928
Princess Mary	2,155	260	600	71	16	14	Scotland	1910
Princess Elaine	2,027	299'-3"	1,200	4	60	19.5	Scotland	1928
Princess Maquinna	1,777	244	300	50	6	12.5	Victoria	1913
Motor Princess	1,243	170	400	..	40	14	Victoria	1923

Nootka (freighter)—2,069 gross tons, 260 feet over all length, 9.5 knots, built in Port Arthur, 1919.

Kyuquot (tug)—419 gross tons, 142 feet over all length, 12 knots, built in England, 1919.

Nanoose (tug)—305 gross tons, 120 feet, six inches over all length, 12.5 knots, built in Victoria, B.C., 1908.

Qualicum (tug)—200 gross tons, 112 feet over all length, 10 knots, built in United States, 1904.

In addition there are five transfer barges, the largest with a capacity for 18 railway cars, one with 17, two 15 and one nine. There are also two scows, one with a gross tonnage of 252 and the other 220.

GREAT LAKES SERVICE

By CHARLOTTE KYLE, *Assistant Press Relations Officer, Toronto*

A fleet of three ships for passengers and freight serves the Company on the Great Lakes, under the direction of a superintendent. Port McNicoll, Ontario, is the home port.

The three ships are the S. S. Assiniboia, S. S. Keewatin and S. S. Manitoba. They carry freight during the complete navigation season, which is from early in April until the beginning of December, and operate a scheduled passenger service from June to early September. The Assiniboia and Keewatin ply between Port McNicoll, Sault Ste. Marie and Port Arthur-Fort William, and the Manitoba cruises between Port McNicoll, Owen Sound and Port Arthur-Fort William.

The Assiniboia and the Keewatin were both built at Govan on the banks of the Clyde in Scotland in 1907 for the Company. The Assiniboia is 336 feet long with a gross tonnage of 3,880 tons, and the Keewatin is 336 feet long with a gross tonnage of 3,856 tons. The Manitoba measures 303 feet and registers 2,616 tons gross. Her parts were built in Great Britain, and she was put together at Owen Sound, Ontario, in 1889.

The Great Lakes boats make it possible for the Company to offer combined rail and water travel and passengers arrange their itineraries to take advantage of the switch from train to boat and back to train again.

For those travelling west the train ride is broken at Port McNicoll, reached by boat train from Toronto. Conveyed to dockside, the passengers step from train to one of the Canadian Pacific boats bound for the Twin Cities of Port Arthur and Fort William at the head of the Great Lakes, where they resume their trip by train.

The same change is available, of course, for those coming from the west. They leave the train at the Twin Cities and cruise down to Port McNicoll and the train.

The tourists who sail into the golden west across Georgian Bay are travelling an historic summer waterway in the delightful Great Lakes voyage. In 1615, Champlain and his Indian friends blazed a trail to this bay by way of Lake Nipissing and French River thinking to find a path to the Orient. That path was never completed, but in its stead is a story of Indian warfare, the martyr-

dom of Jesuit missionaries and the pluck and resourcefulness of explorers, fur traders and lumbermen.

Over 30,000 islands dot the shores of Georgian Bay—islands among the oldest known to geologists. Of these the first easterly group is the Christian Islands—Faith, Hope and Charity—now Indian reservations of the Ojibway race. Far in the distance are the Blue Mountains of Collingwood, and to the right a group of rocky islands—the Westerns, where stands a friendly lighthouse. There is gentle beauty in the tree-clothed slopes of the shores, a sharp contrast to the rocky pine-clad islands. Canoes, yachts and sailboats ply to and from the mouth of the Severn River—summer cottages and camps form colorful patches along the shores. Westward is Bruce Peninsula where stands Cabot Head, the limestone cliffs extending to Cape Hurd, and what looks like a flower pot stuck in the waters is Flower Pot Island. High on its rocky cliffs is perched a lighthouse. Still westward close to the boundary line is Cove Island.

Voyage Is Pleasant

The boat train from Toronto arrives at Port McNicoll in a little over two hours. There in the harbor rides majestically a great white ship of the Canadian Pacific fleet—the S.S. Assiniboia or the S.S. Keewatin. The dock is a lovely flower garden except for the path from train to ship. Back of this attractive setting are the huge elevators which line the waterfront.

Dancing in the moonlight to the rhythm of the ship's orchestra, or a quiet game of bridge in the cosy lounge with a pleasant interlude for light refreshments, occupies your time. Meanwhile the ship sails into Lake Huron, the second largest of the Great Lakes, 207 miles long and 101 miles wide. Sheltering the shores and forming the picturesque North Channel is Manitoulin Island. This island, once the scene of fierce warfare between the Hurons and the Iroquois, now boasts prosperous farms and summer homes.

Through the diamond-paned windows you glimpse the change in the landscape. Here is the prettiest and most frivolous bit of water you ever hope to see. On each side of the river, which is the International Boundary and also the channel proper, are stretches of sandy beaches trimmed with rows of birch and poplar.

The big white ship cruises through the narrow channel towards the Soo. The captain stands at the bridge. An officer pauses to tell you Frying Pan and Pipe Island have been passed and that the old chimneys and magazine on St. Joe Island are all that remain of

the historic fort. Now the country takes on an urban guise—heavy smoke rises in the distance. Eagerly you watch the shoreline. On one side stands a mighty smelter pouring molten metal from its furnaces. Then the ship docks at Sault Ste. Marie, where time is well spent in touring this attractive city.

Sailing still westward the ship enters the Sault Canal. Gushing water lifts the ship until she towers above the city. As she passes the lock a shrill whistle sounds, and the stately liner heads for Lake Superior, the world's largest lake. On one side is the famous bascule bridge that opens like a jack-knife.

It is not long before you realize how majestic this lake is with its sparkling clear water, bold rugged shores and wonderful climate. Far away on both shores are mining and lumbering towns, with some of the deepest copper mines in the world on Keeweenaw Peninsula.

Everyone rises early for the magnificent sunrise, and are glad not to have missed the view of Silver Islet, once a famous silver mine sunk 1,200 feet below the level of the lake, also Thunder Cape rising almost perpendicularly. You see the "sleeping giant" on top of the cape, and hear its story. The ship passes close to Welcome Island—a lighthouse guards the twin cities of Fort William and Port Arthur, where stand the terminal elevators with their enormous bushel capacity. This is the gateway to the West. It is a popular resort ground—only a short distance away are the Kakabeka Falls, a great picnic spot. At Chippewa Park, established on an ancient Indian Reservation, is a zoo inhabited by wild animals and birds native to those virgin forests—bear, moose, fox, cranes, loons and herons.

The Manitoba's Cruise

On the Manitoba cruise you enjoy every moment of your five day voyage of 1,200 miles over the blue-green waters of Georgian Bay, Lakes Huron and Superior. The first day you pass the picturesque towns of Killarney, Little Current and Gore Bay; with the view of the North Inside Channel of Manitoulin Island particularly enchanting. Then in the late afternoon the ship enters the narrow channels of St. Mary's River. Your second day finds the ship steaming steadily westward out of sight of land for long stretches, with Thunder Bay, Sleeping Giant and Welcome Island marking the western terminus of the cruise.

On the return trip you cruise through the delightful Mackinac area, passing the historic Mackinac Island and the harbor, through

the Straits of Mackinac towards the town of that name, down the South Channel past Chaboygan and Rogers City, Michigan. All through the night and during the following morning the ship glides across the sapphire waters of Lake Huron, second largest of the Great Lakes back to Owen Sound and thence to Port McNicoll.

No Cashed Cheque—No Watch

The spirit of the men engaged in this great enterprise is illustrated in the case of Major Rogers, who was voted a bonus of five thousand dollars by the directors for his services in locating the pass over the Selkirks.

As the cheque was not cashed, Van Horne asked him the reason.

"Cash that cheque!" answered Rogers, "No, sir, I have had it framed and hanging on the wall at home, so that my nephews and nieces may know what we did."

Van Horne said nothing, but had a gold watch engraved with a suitable inscription about the Major's services to the railway.

Next time Rogers was in Montreal, Van Horne drew the watch from the drawer of his bureau and said "How would you like to have that?"

Rogers was naturally delighted, but Van Horne put it back in the drawer and said, "You'll get that watch when you cash that cheque."—*Steel of Empire* (John Murray Gibbon).

R. B. Angus, a Bathgate Scot

R. B. Angus, a young Scot born at Bathgate near Edinburgh, at the age of 26 came from the Manchester and Liverpool Bank in 1857 to join the staff of the Bank of Montreal.

In 1861 when the Canadian banks were taking over from the eastern banks of the United States the financing of the crop from the northwestern states, R. B. Angus was sent by the Bank of Montreal to Chicago to establish a branch there, after which he was made assistant manager of the branch in New York.

In 1864 he returned to Montreal as local manager, the year in which the outstanding stability of the bank was recognized by its securing the Canadian Government's account.

R. B. Angus was particularly happy in making social contacts, a useful qualification in banking business.

In 1869 he was appointed general manager, and as such came into particularly close association with George Stephen and Donald Smith, and thereby a few years later onto the Canadian Pacific scene.—*Steel of Empire* (John Murray Gibbon).

BAY OF FUNDY SERVICE

By J. W. A. MERKEL, *Press Relations Officer, Saint John*

The S.S. Princess Helene provides an essential link in the Canadian Pacific through route from Montreal to Halifax and Yarmouth, across the Bay of Fundy, sailing between Saint John, New Brunswick and Digby, Nova Scotia. One round trip is made each day—except Sunday—a three-hour run from Saint John to Digby in the morning, while 15 minutes less is required for the return from Digby in the afternoon. At Digby the Dominion Atlantic Railway, a C.P.R. subsidiary, takes over to furnish transportation from Digby to Yarmouth and Halifax in Nova Scotia.

Designed and built on the Clyde to meet the unusual conditions of this service, the Princess Helene is a specialized ship, modern from keel to truck. Many visitors still remember the Prince Rupert which the D.A.R. placed in service in 1895. The Prince Rupert had a speed which many modern ships cannot reach, and for one Summer made two daily trips across the bay. The Prince Rupert was replaced by the St. George in August, 1913, and in 1916 the S.S. Empress was put on the route; this ship was still in service in 1930 when the present ship, S.S. Princess Helene, came over from Scotland and went into service.

Built by Dennys of Dumbarton to specially serve this run, the Princess Helene sailed across the Atlantic in August, 1930. Of nearly 4,000 tons, she is well proportioned and is an exceptionally good sea boat, a desirable feature in Atlantic waters.

Passenger accommodation on the Princess Helene is up to the high standard set by Company's ships and approaches that of the Duchess trans-Atlantic steamers. On the main deck unusually wide corridors lead from a dining saloon aft to the main hall and companionway forward. The dining saloon has small tables for two persons and larger ones for four, and is furnished with upholstered chairs and pleasant decorations. The staterooms, as well as the suites with their private sitting rooms and baths, are well appointed. The deluxe rooms are decorated in walnut panelling and are tastefully furnished. Two of the public rooms, the large smoking room aft and the observation room forward, are well equipped, comfortable and popular with the passengers. The designers were generous in leaving walking space and on the top deck eight people can walk abreast. Two wide corridors on the forward deck provide a sheltered exercising space in cold or rough weather.

The most modern equipment for safety of passengers has been installed. The life boats carry all the equipment, including flares, iron rations, water beakers, which is furnished on trans-Atlantic ships. These life boats have unusually well designed davits and can be operated effectively and quickly on the shortest notice,

and are amply provided with all that is necessary for emergency accommodation of 50 persons each.

The Princess Helene was designed with side ports so that freight could be quickly handled on and off the ship at both Digby and Saint John. At Digby an unusual design of electrically operated elevators for freight makes for fast and secure handling of mail, freight and express. The ship enables Canadian Pacific to give an uninterrupted service to all commodities between the West and Nova Scotia, and while it is actually a sea and rail route, it gives the same speedy uninterrupted service as an all-rail route. This service across the Bay of Fundy is important to producers and shippers in Nova Scotia, particularly the Annapolis Valley and the southwestern district towards Yarmouth.

Freight to and from Quebec, Ontario, and the western provinces, as well as New Brunswick, is promptly handled on this route. Normally cargo is stowed between decks which, due to the large side ports, is readily reached for loading and unloading. Freight is normally taken aboard the steamer in four-wheeled dollies which are provided with racks to protect the freight. These dollies are wheeled on and off the ship to speed up the handling. Usually they are not unloaded onto the deck but remain during the journey until arrival at destination when they are wheeled into the cars for transhipment or, if containing local freight, are unloaded onto the freight shed floor.

This arrangement of side ports large enough to permit dollies to be wheeled in and out does away with ship's cranes, which, by using slings, ordinarily hoist freight from the dock into the hold of the ship. This system of dollies results in less handling, which is much safer in the case of fragile goods. The ship also has a forward hold that has an electric elevator which gives quick service into this part of the ship. This hold is divided into forepeak and forward hold, and is so arranged that dollies can be taken up and down on the freight elevator and stowed in the hold during journey.

The electric elevators at Digby Wharf which serve both forward and after holds of the ship simultaneously, are better adapted for the handling of freight than the ramp originally in use as it is not now necessary to move the ship according to the variation in the water level as was the case when the cargo was handled on the ramp. These elevators are large enough to take in and discharge passenger automobiles. Normally there is a large number of motor cars offering, as many as 60 having been handled on one trip, during past tourist seasons.

The Princess Helene has many features in its design which were incorporated to permit it to quickly and economically handle the cargoes between Saint John and Digby. This ship is an essential part of a through route which is of growing importance to

shippers in the West who wish to serve Nova Scotia, particularly the southern portion, and to the producers in Nova Scotia who require to reach expeditiously with their sea foods the markets of Ontario, Quebec and the New England States.

Sardines Are a Whale of an Industry

The lighter "Duke", heavy-shipped and low in the water, edged up alongside the end of the Company's DeWolfe Wharf at St. Andrews-by-the-Sea, N.B., and made fast. The hatch came off her hold amidships; the hoist atop the wharf dropped its hook and some slings, and the lighter's crew began stacking cardboard cases in the sling, which the hoist lifted to the top of the wharf.

. . . At the end of an hour and a half, 1,500 cases of sardines were transferred from the lighter to the shed, ready for shipment over Company lines . . . a tiny drop in the huge bucket of fish traffic funnelled through the little resort village of St. Andrews and handled by the Canadian Pacific.

"From ice to ice"—that is, from the middle of March to early the following January—the fishing season is in full swing, and in that time the Company does about $350,000 worth of business in freight.

All through the packing season, boatloads of cases and barrels of fish (mainly sardines but including finnan haddies, anchovies, bloaters, herring in tomato sauce and other pickled and smoked fish), arrive from the canneries in the area.

. . . During last year (1944) the Company shipped 532 carloads of fish out of St. Andrews. . . . But that was not the entire extent of the business. There was the l.c.l. traffic to be considered, and in addition the tinplate from which the cans are made. In 1944 the Company carried 145 carloads of tinplate into St. Andrews from Hamilton, Ont., from West Virginia, Pennsylvania and Ohio.—*Sardines Are a Whale of an Industry* (Marc T. McNeil, Staff Bulletin: June, 1945).

Red River Petition of 1863

James Ross and William Coldwell, publishers of The Nor-Wester, first newspaper in the Red River colony, wrote the petition to the Imperial and colonial governments in 1863 asking railroad connections with eastern Canada, according to R. G. MacBeth in *The Romance of the C.P.R.*

At the request of the Red River colonists Sandford Fleming presented the petition to the government of the then Province of Canada, this being prior to Confederation, and proceeded to the Old Country where he placed the memorial with the Duke of Newcastle, then Colonial Secretary.

B. C. LAKE AND RIVER SERVICE

By JOHN R. STURDY, *Press Relations Officer, Vancouver*

Part of the Company since 1898 the British Columbia Lake and River Service has done much in bringing the Kootenays to their present proud position as a banner section of Canada's Pacific Coast province.

The records of regular service by single-stacked sternwheelers —some of them of such shallow draught it was reputed they could navigate in a heavy dew—actually go back to the 80's, when the Columbia Transportation Company's Despatch was operated from Revelstoke to the American Boundary.

Company participation came nearly two decades later when the Canadian Pacific paid nearly $200,000. for seven steamers, 10 barges, shops and other equipment of the Columbia and Kootenay Steam Navigation Company.

Today the extension of railways and highways has cut down the passenger business on these lake and river carriers but the freight service offered is still an important part of the fertile lake country's transportation picture—as demonstrated in 1944 when it was an important factor in the shipping of more than 10,000 cars of fruit.

"Home waters" of the impressive Company fleet of passenger ships and tow-boats with their brood of barges has been the Okanagan, Kootenay, Arrow and Slocan district.

In freight service the task of these boats is to assemble cars loaded with mineral ore, fruit and other produce and bring them by barge to points on the Kettle Valley and Kootenay divisions.

The passenger service is on a reduced scale from the old days. On the Arrow Lakes there are two trips weekly between Nakusp and Robson West with regular calls at Robson, Deer Park, Renata, Edgewood, Needles, Burton City, Arrow Park and Glendeven; and two trips weekly between Nakusp and Arrowhead with a regular call at Halcyon. On Kootenay Lake there is a weekly trip from Proctor to Lardeau with regular calls at Queen's Bay, Kootenay Bay, Ainsworth, Riondel, Kaslo, Johnsons Landing, Argenta and Lardeau. On Slocan Lake there is a weekly trip between Slocan City and Roseberry with regular calls at Silverton and New Denver.

Arrow Lakes now have the sternwheeler Minto, built in 1898, and the screw steamer "Columbia", built in 1923, as well as three-deck barges—plying waters where once operated the sternwheelers Illicilliwaet, built in 1900; Kootenai, built in 1885; Kootenay, built in 1896; Nakusp, built in 1895; Lytten, built in 1896; Columbia (first) built in 1891; Trail, built in 1896; Rossland, built in 1908; and Bonnington, built in 1911. The Trail was destroyed by fire and the others have been dismantled.

Kootenay Lake's most famous sternwheelers were the Kokanee, Nelson, Kuskanook and Nasookin, now the Provincial Government ferry operating between Fraser's Landing and Gray's Creek linking the Transprovincial Highway, and there were four tugs, where now service is provided by the steam-driven sternwheeler Moyie, a veteran of 1898; the Granthall, built in 1928; and one of three 224-foot steel barges built in 1911 and capable of carrying 15 railway cars each.

Slocan Lake used to be proud of the William Hunter, Slocan and Sandon, all built before 1905 and all dismantled. Now it has two car barges each capable of handling 10 cars and a new steamship Rosebery, built in 1943 to provide the power.

On Okanagan Lake, where the Aberdeen, Okanagan and the Sicamous once carried gay passengers over the cool blue waters, there is now no passenger business. The Sicamous, 30-year-old sternwheeler, is tied up but there are still in service two tugs, the Naramata and Kelowna, and five transfer barges with capacity for about 40 freight cars.

Since the birth of the inland lake and river service in the early 80's, 28 vessels and 31 barges have been dismantled or otherwise disposed of. Remaining in service are seven steamers, including the 45-year-old Moyie and Minto, and 11 barges in a fleet which means much to British Columbia's fruit and mining industries.

When the service had its birth, the country was just being opened to settlement. Farms were being hewn out of the bush, the first orchards were freshly planted, growing communities of settlers needed communication with the rest of the world.

This was when the Canadian Pacific main line to the north and American railroads to the south were opening up and competing for the wealth of the Kootenays.

The series of lakes, lying north and south, provided ready-made parallel routes; man did the rest, building shallow-draught sternwheelers that could edge up to crude floats or nose right in to the shore to take on or discharge passengers and cargo. Some of the steamers drew as little as 22 inches of water while few exceeded three feet in draught.

The quest for gold gave inland shipping its first impetus in 1865 when Captain Leonard White's steamboat Forty-Nine braved the waters of the mighty Columbia in taking men and materials to the Big Bend gold rush above Revelstoke.

The first attempt to operate a regular service, however, was made in the 80's by Fred Hume, William Cowan and Captain Sanderson. They were the organizers of the Columbia Transportation Company and builders of the Despatch which ran from Revelstoke to the American boundary.

Their success in attracting business in the South Kootenays encouraged them to build a larger and faster ship which could run

all the rapids of the Columbia up to Revelstoke. To do so, they formed the Columbia and Kootenay Steam Navigation Company and started work in 1889, at Revelstoke, on the sternwheeler Lytton.

The new company, with $100,000 capital and having J. A. Mara, Captain John Irving and F. (later Sir Francis) Barnard as additional shareholders, did a fine job in holding for Canada a good part of the Kootenay's rich trade which was going into the United States. This was at the time that the newly completed Canadian Pacific was the only agency linking Canada's provinces, the only tangible barrier to the financial and political abduction of frail, widely scattered Canadian settlements and industries by more robust American interests.

The C. K. S. N. was a progressive company and built and bought more boats until its fleet and services practically dominated Kootenay, Okanagan and Arrow lakes. It was this company which the Canadian Pacific bought out in 1898.

For years, this growing fleet went its busy way in fair weather and foul, high water and low, winter and summer.

What a sight it was to see the Sicamous, for instance, more than 200 feet long, capable of a speed of 17 miles per hour, electric lights, staterooms for those who desired a floating hotel, throbbing engines and pounding sternwheel to thrill the small fry.

Royalty travelled the lakes. The Prince of Wales made the trip in 1919, his right arm in a sling from too much hand-shaking but doing his duty cheerfully with his left. In 1893 a regal sailor was the Archduke Franz Ferdinand, whose assassination in 1914 was the spark which started the Great War. There were governors general and national leaders galore, overlords of finance, world-renowned travellers, camera-laden tourists, all following in comfort the trail of those early gold miners and settlers who opened up the country.

No history of this branch of Company activity would be complete without some record of those veterans who made it work.

G. S. Rees, pensioned port steward, is an enthusiastic historian speaking of those whose loyalty guided the service for many years.

He recalls J. W. Troup, J. C. Gore and Douglas Brown, captains all, and the hardy skippers who served under them, men such as Forslund and Fraser, McMorris and McLennan, Estabrooks and Robertson, Orr and Fitzsimmons, Seaman and Kirby, and J. B. Weeks of the Sicamous and J. Ferguson of the Moyie. Engineers, mostly from Tyne or Clyde, who served under Dave Stephens and Tom McKechnie, included Fyfe and Joe Johnston, Cameron and Hawthorn, Grey and Colbeck.

J. M. Bulger, as master builder, constructed most of the early wooden ships after the company took over the service in 1898. J. A. Stobo, who retired to live in Toronto, built a number of the later ones. W. Carruthers is at present the master builder.

Two veterans who recently entered retirement are Gerald S. Rees, who went on pension at the end of 1944 after completing more than 40 years' service, and captain Walter H. Wright, one of the best-known skippers, who retired in May, 1944, after 46 years' service.

Captain Malcolm McLeod, of the Moyie, who entered service in 1904, is the oldest veteran still in service.

Two other veterans of the fleet, the twin ships Minto and Moyie, have a particularly interesting history. Built in 1898 for northern waters during the Klondyke gold rush, their sectional hulls, fabricated in Toronto, were diverted to the Kootenays. There, periodically refitted and reconditioned, they have stayed and are still carrying on.

Last Spike Souvenirs

In connection with the Last Spike, John Murray Gibbon reports in *Steel of Empire* that : Some sidelights on the spike used were given to Hon. Randolph Bruce, former lieutenant-governor of British Columbia, by the late Arthur Piers, afterwards in charge of the Canadian Pacific steamship operation, but at that time secretary to Van Horne.

According to Mr. Piers, Donald A. Smith struck at first a glancing blow so that the head of the spike turned over. Ready for the emergency Roadmaster F. P. Brothers yanked the twisted spike out and replaced it with another. This time Donald A. took no chances and drove it home in a succession of careful taps.

Seeing the discarded spike lying on the track, young Piers slipped it into his pocket, but when the party returned to the car the observant Donald A. told him to hand it over. He said he wished to use it for souvenirs.

The historic piece of iron was then split into thin strips which were mounted with diamonds and presented to ladies who were closely connected with the party but not present.

Such is the way of the world, however, that a number of ladies, who had not received a souvenir so interesting, felt piqued, whereupon the resourceful Donald A. secured another iron spike, a larger one this time, and had a new set of iron strips set in diamonds. In the case of this second edition, however, the strips were larger, so that the original recipients would know.

As to the spike that was actually driven, Roadmaster Brothers was afraid that souvenir hunters would tear up his track to secure it, so he forestalled trouble by removing it himself, and years after, presenting it to Sir Edward Beatty.

AIR LINES

By W. M. NEAL, *C.B.E., President and Chief Executive Officer, Canadian Pacific Air Lines, Limited*

Diverse and colorful is the youngest of the Canadian Pacific family, the Canadian Pacific Air Lines. Born early in 1942 through consolidation of 10 north-south air routes, the wings of the world's greatest travel system grew broad and strong in a lusty first year of growth. The part played by C.P.A. in forwarding Canada's war effort can hardly be overestimated.

Canada's air transport industry underwent a major change when C.P.A. was formed. Internally, there was the tremendous activity necessitated in welding into an efficient whole the ten heretofore independent companies which formed the nucleus of the new organization. It involved organization, a variety of new appointments, all the concentrated effort needed in moulding a number of scattered activities into a cohesive whole. Externally, this new phase in Canadian air transportation pointed the way to the efficient and orderly development of air routes in the logical Empire air chain.

Obtained Charter in 1919

Almost a quarter of a century ago, the Canadian Pacific first became interested in aviation. The Great War, then, as the struggle now, was the driving force in expanding aerial activities. Delegates from Canada aided in drafting the International Air Convention at the Peace Conference, but it was principally the action of the Canadian Pacific Railway in securing a charter from the Canadian Parliament in March of 1919, giving it the right to own and operate aircraft within and without Canada, that centred attention on the civil air industry and brought it within the field of government action. On June 6, 1919, the Air Board Act was passed, providing for the regulation of civil aeronautics. Thus was born Canada's commercial air business.

Prior to 1930, however, the Canadian Pacific had not actively taken part in Canadian air development, although through its association with James A. Richardson of Winnipeg, the development had been closely followed. In 1930, in order to assist in the development and at the same time to avoid unnecessary duplication, the Canadian National and Canadian Pacific agreed to subscribe equal amounts in the capital stock of Canadian Airways. In 1936 and 1937, conforming to a previous understanding as to avoiding unnecessary duplication, discussions took place between the Government, the Canadian National and the Canadian Pacific, with the object of jointly developing a transcontinental air route. The plan developed was for a jointly owned company—similar to the Northern Alberta Railways Company—the board of which

would consist of an equal number of directors appointed by the Canadian National and the Canadian Pacific. Each company was to put up one-half of the capital required. After agreement had been reached on practically all points, the Government insisted that the board should consist of three directors appointed by the Canadian National, three by the Canadian Pacific and three by the Government. This proposal was not acceptable to the Canadian Pacific, as it would have resulted in it subscribing half the capital but having only one-third of the voting power. Trans-Canada Airlines was thereafter developed as a subsidiary of the Canadian National Railways.

During 1939, the Canadian Pacific Railway conducted a survey of the nation's privately-owned air operation. As a result of the findings, a progressive policy of integrating these lines was followed which resulted, in 1942, in the organization of the present Canadian Pacific Air Lines.

Scope of the air line system today is vast. (*Map on back cover*). The ten companies purchased operated, in a general way, in a north-south direction. They were Canadian Airways, Winnipeg; Yukon Southern Air Transport, Vancouver and Edmonton; Quebec Airways, Montreal; Dominion Skyways, Montreal; Arrow Airways, Le Pas, Manitoba; Wings Limited, Winnipeg; Prairie Airways, Moose Jaw, Sask.; Ginger Coote Airways, Vancouver; Starratt Airways, Hudson, Ontario; Mackenzie Air Services, Edmonton. Until acquired by Canadian Pacific, practically all these lines were engaged in what are known as "bush" operations. Today, the word "bush" is obsolete. The company engages in northern flying—but northern flying is deluxe, complete on many runs with the finest twin-engined aircraft obtainable, radio facilities on the ground and in the air, uniformed captains and first officers, stewardesses and excellently-trained ground personnel.

Scheduled Service

A quick run over the system reveals frequent daily runs between Victoria, and Vancouver, operating twin-engined aircraft over the island-studded waters between these two western cities. Also, from Vancouver, are regularly scheduled runs to the tip of Vancouver Island and beyond. From Vancouver Airport each day big twin-engined aircraft take off for Prince George, thence on to Fort St. John, there to meet the north-bound Lockheed Lodestars from Edmonton on their way to Whitehorse in the Yukon. Other ships fly north from Edmonton into the vastness of the North West Territories, to Simpson and Norman Wells and "down north" to Aklavik, inside the Arctic Circle at the mouth of the great Mackenzie River. Regular schedules are maintained from Edmonton to Fort Smith, and Yellowknife, then on to Coppermine on Coronation Gulf. A little farther east daily services

are operated from Regina, through Moose Jaw, Saskatoon, Prince Albert to North Battleford. From Winnipeg planes head north and east to the rich mining properties of Red Lake and God's Lake and surrounding areas. And from Montreal, through Quebec City, north to Bagotville which services the great aluminum town of Arvida, twin-engined aircraft drone their way. The St. Lawrence River's lonesome north shore, right to the tip of the Strait of Belle Isle, all know the planes and the services being rendered by Quebec Airways Ltd., operated by Canadian Pacific Air Lines.

At the end of 1945, Canadian Pacific Air Lines operated approximately 13,000 route miles.

But the transport facilities alone are not the whole story of C.P.A. The company played a major part in the successful operation of the British Commonwealth Air Training Plan. Six air observer schools were operated on a non-profit basis by C.P.A. and this company was the largest civilian organization connected with the Empire Air Training Plan. In 1944 aircraft in the six air observer schools flew a total of over 56,394,000 miles. In addition, five engine overhaul and aircraft repair plants were operated by C.P.A. for the servicing of R.C.A.F. aircraft on a contract basis with the Department of Munitions and Supply. In these three branches of the company's service there were approximately 9,600 employees.

Non-Profit Basis

All schools operated by the company were managed on a strictly non-profit basis—operated as a patriotic duty, part of the company's help in winning the war against Axis aggression. The Government set a target price at which the schools aimed. Any savings effected, or any amount unspent beneath this target price was returned to the Canadian government.

Transport planes of the company now fly regular scheduled mileage routes of about 20,000 miles per day. Many of these services, particularly those out of Vancouver and Edmonton, and from Montreal east, are vital links in the defense chain which surrounds this country. Approximately 65 percent of the company's traffic and air cargo was closely connected with war work. In 1945 C.P.A. carried 9,419,556 pounds of air cargo, 1,253,537 pounds of air mail and 125,110 passengers.

Little known is the part the Canadian Pacific played in organizing and operating the Atlantic Ferry Service, which was turned over to the Royal Air Force Ferry Command as a going concern in 1941. Completely untried, the ferrying of planes across the North Atlantic was entrusted to the Canadian Pacific in July, 1940. On November 10, 1940, seven Lockheed Hudsons took off from Newfoundland and landed in Britain ten hours later. Planes were ferried in ever increasing numbers until the termination of

the contract in July, 1941. It was this Company, under the guidance of the late Sir Edward Beatty, which laid the groundwork for the R.A.F. Transport Command.

Aerial mapping is a science, and one that the aerial surveys division of C.P.A. has mastered completely. Vast areas of Canada have not yet been mapped, and the company's facilities will undoubtedly be called upon in the post-war period of reconstruction.

'Low Gear' Out of Field

The statement that the world has no more spectacular piece of railroad than that which lies between Banff, Alberta, and the far western slopes of the Rockies is not news.

It has been Canada's well-justified boast for over 50 years, and throughout that time its difficulties and its hazards, no less than its world-recognized beauties, have challenged and inspired every known engineering resource and constructive energy that capable and efficient railroad builders and operators could lavish upon it.

Modern facilities have eliminated the once-serious hazards, but never-ceasing skill and vigilance carry on day and night, while a vast river of traffic moves over it in both directions.

To see a heavy freight pound out of Field and up the hill is an inspiring and almost terrifying sight, for those who witness it for the first time.

Exhausts barking like great prehistoric animals, boilers literally singing under their terrific steam pressure, cylinders battened down and the motion shortened for the quick, biting stroke, the locomotives simply surge with life and power.

Experienced pusher engineers rate their iron steeds like skilful jockeys, gentling them into the turns, picking up speed in the easier spots and literally hurling them onward with every little trick of throttle, sand and quadrant.

Old-timers nurse their charges with one hand on the reversing gear and the other on the sand valves, for they use sand every step of the way, particularly in the tunnels where water leaking down the tunnels on to the track might give bad rail.

Those unfamiliar with the operation of a steam locomotive find it somehow hard to believe that, without transmission, engines can be "geared". But it's low-gear work on the Field hill and the really sound engineer makes intelligent use of the quadrant, setting the Johnson bar down to what the hill-boys call, "The OCS corner", for that short, choppy stroke which gives considerably less than the full travel of the valve but spells POWER in any language.—*The Big Hill* (H. T. Coleman, press relations officer, Winnipeg: Staff Bulletin, February, 1945).

HOTEL DEPARTMENT

By H. F. MATHEWS, *General Manager of Hotels*

As the measurement of a journey in stage-coach days was calculated by the inns where good accommodation was a fact as well as a precept, so today, when iron horses course along steel highways, it is fitting that their stopping places should be provided with first class hotels.

Just such a policy has been developed by the Canadian Pacific Railway, the largest hotel company in Canada, in its great chain of hotels from the Atlantic to the Pacific, aligned to the high standard of efficiency and service characteristic of every branch and department of the world's greatest privately owned transportation system.

Nor are these hostelries merely stopping places for travellers; they are temporary homes for those who visit the Dominion's principal cities or resorts for business or recreational reasons. All Canadian Pacific hotels are characterized by the same perfection of service as the Company's trains and steamships; all are closely linked with the life of the community in which they are located.

Tourists in Canada can actually see the most interesting sections of the Dominion without stepping off Canadian Pacific property. In addition to the Company's "big city" hotels, there is a bungalow camp in the wilds of Ontario, palatial alpine resorts and rustic chalets in the Canadian Rockies, and seaside hotels on both the Atlantic and Pacific shores.

Matchless Scenery at Mountain Hotels

In its mountain hotels the Company offers a feast of scenery unmatched by anything of its kind in the world. In even greater measure than Switzerland is, the Company's hotels in the Canadian Rockies are surrounded by the Alpine splendor, which has made of that country a famous resort land. The everlasting hills, with their rushing water courses in Spring, luxuriant vegetation in Summer and towering Winter snows, constitute a priceless asset which the Hotel Department was quick to realize.

For 59 years now the Company has developed its theme of "bringing the mountains to the people" amid ideal surroundings. The beautiful Banff Springs Hotel was the pioneer with the first start made on construction in 1887. Since then there have been added Chateau Lake Louise, starting point for the Banff-Jasper Highway through the Columbia Icefields, a drive of breathtaking beauty, and Emerald Lake Chalet. These three fine mountain hotels, along with the lodges and tea houses, filled a real need in taking care of tourist travel which has grown steadily larger.

Canadian Pacific hotels are almost unique in the variety of

interests they offer along with the excellence of service and appointments that the public has come to expect of the Company's nation-wide hotel system. Several hotels have their own golf courses, while most resorts have facilities for golf, swimming, riding, hiking, tennis, and other Summer pursuits. The Chateau Frontenac in Quebec adds skiing, skating and tobogganing to its Winter sports card.

Many hotels observe the seasons by special red-letter events. Christmas and New Year's, for instance, are gala seasons at the Empress Hotel in Victoria and the Chateau Frontenac in Quebec City. Springtime attracts throngs of visitors to Kentville, N.S., and the Cornwallis Inn when the Annapolis Valley is in bloom. Summer attractions include golf tournaments at Banff Springs Hotel and the Algonquin at St. Andrews-by-the-Sea, N.B.

All in all the Canadian Pacific Railway operates 14 major hotels and five bungalow camps, with a total of 5,447, rooms (exclusive of 560 in Hotel Vancouver), and has a substantial interest in other hotels and chalets across the Dominion. In the Maritime Provinces the visitor has his choice of the world-famous Algonquin Hotel with its championship golf course, the Digby Pines at Digby, N.S., widely known for the beauty of its surroundings and recreational opportunities, or the Cornwallis Inn with its rare Acadian atmosphere.

In the important coastal cities of Halifax, N.S., and Saint John, N.B., the famed Lord Nelson and Admiral Beatty Hotels are well known to tourists and visitors. Both these hotels, in which the Canadian Pacific holds a substantial interest, have played a prominent role in the development of business and social life in the communities they serve.

Few hotels are more widely known by travellers than the turreted Chateau Frontenac, renowned the world over for its rare tourist opportunities and association with old French Canada, while its role in August of 1943 and September of 1944, as the work centre of the Quebec Conference meetings between Prime Minister Winston Churchill and President Franklin Delano Roosevelt as the guests of Prime Minister W. L. Mackenzie King, lend it added lustre.

The Royal York, in the heart of downtown Toronto, is the largest and one of the most modern hotels in the British Empire. Between Toronto and Winnipeg, in northwestern Ontario's lake and wildwood country, is found Devil's Gap Lodge, Kenora, one of the most delightfully unique resorts in eastern Canada.

Stopping off at Winnipeg the visitor finds a cordial welcome at the Royal Alexandra Hotel, while farther west the Hotel Saskatchewan at Regina, and the Palliser Hotel at Calgary uphold

the high standard of Canadian Pacific hotel service in their respective communities.

Eighty miles west of Calgary rises the baronial Banff Springs Hotel, most famous alpine resort on the continent, and mecca for thousands of tourists throughout the summer. Chateau Lake Louise farther west enjoys equally high prestige in the tourist's eyes, affording as it does a variety of alpine recreational pursuits in surroundings of matchless beauty.

Canadian Pacific passengers alighting at Vancouver can continue to enjoy their accustomed service and hospitality at the new Hotel Vancouver, under the joint management of the Canadian Pacific and Canadian National Railways, and operated by the Vancouver Hotel Company, Ltd. And across the Gulf of Georgia on the southern tip of Vancouver Island lies Victoria with its ivy-covered Empress Hotel, scene of winter golf tournaments, December roses and centre of social and business life for the island capital.

In addition to the hotels and bungalows already mentioned, the Canadian Pacific also owns, operates or leases a number of camps, tea houses, and chalets in remote sections of the Rockies which are served by Canadian Pacific lines. These include Emerald Lake Chalet and Yoho Valley Lodge, Field, B.C.; Lake O'Hara and Lake Wapta Lodges at Hector, B.C.; Moraine Lake Lodge, Lake Louise, Alta. Tea Houses are located at Twin Falls, Plain of the Six Glaciers, and Lake Agnes, near Lake Louise.

History of Hotel Construction

The history of Canadian Pacific hotels goes back to 1886, one year after the completion of the Company's transcontinental line. That year saw the construction of four pioneer hostelries, designed primarily to provide meal service for passengers in the Rocky Mountains where railway grades were too severe to justify the operation of dining cars.

Located at Field, Glacier, Revelstoke and North Bend in British Columbia, the four hotels were operated successfully for a number of years and were discontinued only when through dining car service made their maintenance unprofitable. All four have since been abandoned as hotels. One of these early Company enterprises, the Glacier House, attracted considerable alpine patronage till diversion of the railway left it considerably removed from the beaten track, and this resort too ceased to operate.

Banff Springs Hotel, constructed in 1887, and the Chateau Lake Louise, which came into being three years later, were reserved for a far greater role in the Company's scheme of things. Though both had their beginnings on a comparatively modest scale, subsequent additions to Banff Springs Hotel in 1911, 1914, 1926 and

1928, and to the Chateau Lake Louise in 1893, 1900, 1906, 1911, 1913, 1924 and rebuilt in 1925, necessitated by the growing volume of tourist traffic, soon raised them to a front rank status which they enjoy to the present day.

The year 1887 also marked the opening of the Hotel Vancouver, a great wooden structure, and built during the hey day of Vancouver's real estate boom. A far cry from the imposing brick edifice that subsequently replaced it, the original hotel played an important role in the city's early development.

The second Hotel Vancouver, completed in 1915 and later enlarged, served the public faithfully and well during the first Great War and through the next two decades. In 1939 the hotel moved to its imposing new quarters on Georgia street where it now serves as hub of the social and business life of the coast city.

First of the Company's eastern hotels—the Chateau Frontenac —was opened at Quebec City on December 11th, 1893, while subsequent additions in 1904, 1906, 1916 and 1923, which included the great central tower, made it one of the finest hotels in eastern Canada. It was further improved in 1926. The turreted Place Viger Hotel, now one of Montreal's familiar old landmarks, was the city's leading hostelry for many years. Erected in 1898, the hotel and its adjacent terminals catered to a large section of the travelling public till 1935 when the hotel ceased to operate.

For the next Canadian Pacific hotel development the spotlight shifts westward again, when the small hotel at Sicamous, B.C., was opened in 1900. Overlooking Shuswap Lake, the Hotel Sicamous is a great favorite with the visiting tourist. Once owned and operated by the Company, the hotel has since been leased.

The following year saw the opening of the McAdam Hotel, one of the Company's smaller hotels, at McAdam, N.B., gateway to St. Andrews-by-the-Sea and other popular vacation resorts. In 1902 the Emerald Lake Chalet opened its doors to Rocky Mountain tourists. The proximity of this attractive chalet to Banff and Lake Louise further enhanced its popularity in the Rocky Mountain vacation picture.

In 1905 the Algonquin Hotel at St. Andrews was taken over by the Canadian Pacific Railway, then was rebuilt in 1915, and has been operated successfully by the Company ever since. One of eastern Canada's most popular vacation resorts, the Algonquin is noted for its championship 18-hole golf course.

Next link in the Company's hotel chain appeared in Winnipeg, when the Royal Alexandra Hotel was completed in 1906. Substantial additions were made in 1914 on this popular prairie hostelry, the largest C.P.R. hotel between Toronto and Calgary.

The Empress Hotel, the Company's world-famous hostelry at Victoria, B.C., was erected two years later and officially opened on January 20th, 1908. Additional wings have since been added, the latest in 1929.

The Hotel Palliser at Calgary joined the C.P.R. hotel family in 1914 when it was opened to the public. This handsome and well-appointed hostelry near the Rocky Mountain foothills, was enlarged in 1929. In 1927, in the neighboring province of Saskatchewan, the Company opened its Hotel Saskatchewan at Regina, now a favorite stopping-place for visitors to the Queen City of the West.

Largest hotel in the British Empire and one of the finest on the continent, the Royal York Hotel, opened its doors on June 11th, 1929. Located in downtown Toronto and overlooking the vast expanse of Lake Ontario, the Royal York is noted for its unrivalled convention facilities, beautiful lounges, and modern appointments.

The year 1930 saw the opening of the Cornwallis Inn at Kentville, N.S., in the Annapolis Valley, and the following year the rebuilding of the new Pines Hotel at Digby, N.S. The attractive Lakeside Inn at Yarmouth on Nova Scotia's southern tip, opened in June, 1931.

CANADIAN PACIFIC HOTELS

Pacific Coast

Empress Hotel, Victoria, B.C.—573 rooms—European Plan. —One of the most beautiful hotels in the world, the Empress Hotel, ivy-clad and surrounded by expansive lawns and gardens, looks over the placid waters of Victoria's Inner Harbor. Open all year, it provides ideal opportunities for golf, tennis, yachting, motoring, hunting and fishing in surrounding waters. Eastern visitors are attracted by special Winter vacation rates—European Plan—in effect from October 1st to April 30th.

The hotel is headquarters for the Empress Annual Golf Tournament, played in late February or early March. Trophies up for competition include the Sir Edward Beatty Challenge Cup, Chamber of Commerce Trophy, Victoria Rotary Rose Bowl and the Matson Inter-District Team Cup. The competition is open to all guests of the Empress Hotel and members in good standing of clubs in Victoria.

A popular feature of the hotel's Winter activities is the Old English Yuletide, lavishly prepared for guests of the Empress Hotel. Complete with blazing Yule Log, the Boar's Head and Christmas Carols, it embodies all the legendary frolic and fun of an old-fashioned Christmas.

Spring Garden Week, inaugurated in 1937, and usually held in late April or early May, attracts flower lovers by the hundreds from all parts of the Island and mainland. The Empress Hotel, in addition to its own exotic conservatory, has eight and a half acres of gardens, shrubs and lawns. Nearby Butchart's Gardens are major attractions to garden lovers.

Swimming in the Crystal Gardens, an enclosed sea-water bathing pool owned and operated by the Empress Hotel, is a highly popular year-round pastime, while 12 months of summer make golf, tennis, hiking, riding, and other sports enjoyable on a year-round basis.

Hotel Vancouver, Vancouver, B.C.—560 Rooms—European Plan. Serving Vancouver, Canada's gateway port to the Orient and commercial metropolis of British Columbia, the new Hotel Vancouver is one of the finest and most modern in Canada. Of fireproof construction the handsome white stone building is centrally located, possesses ample public and convention space, and is built on a commanding site overlooking the Gulf of Georgia. Opened in 1939 under the joint management of the Canadian Pacific and Canadian National Railways, it replaces the old C.P.R. Hotel Vancouver, corner of Granville and Georgia streets.

Hotels in the Canadian Rockies

Emerald Lake Chalet, near Field, B.C.—69 rooms—American Plan. Open early in June to second week in September. Situated in Yoho National Park, seven miles from Field, B.C., in the cool green depths of evergreen forest, lies Emerald Lake, surrounded by snow-capped mountains, a delightful setting for Emerald Lake Chalet and its private bungalows. Recreations here include boating, riding, hiking and alpine climbing.

Chateau Lake Louise, Lake Louise, Alta.—386 rooms—European Plan. Open from early June to the second week in September. At an altitude of 5,680 feet, and enhanced by what many believe to be the most beautiful scenery in the world, the Chateau Lake Louise offers all the comforts of city life in the midst of towering snow-clad peaks, glaciers, and on the marge of lovely Lake Louise.

Of fireproof construction and modern in every respect, the Chateau Lake Louise is served by the Canadian Pacific Railway and reached by motor road from Lake Louise station. Swimming in an open-air, sheltered pool, in glacial water heated to a comfortable warmth, is a major source of appeal at the Chateau, while riding, hiking, tennis, boating, and dancing are highly popular pastimes. Competent Swiss guides and a swimming instructor are in attendance at all times.

Banff Springs Hotel, Banff, Alta.—593 rooms—European Plan.—Open early in June to second week in September. Situated in the heart of Banff National Park in the Canadian Rockies and overlooking the valley of the Bow River, Banff Springs Hotel combines all the advantages and modern appointments of a big city hotel with a setting of rare alpine charm. There are 593 rooms, all equipped with baths, including 38 charming period suites, two dining rooms, and beautiful lounges.

Attractions include golf on the hotel's famous mile-high course, measuring 6,704 yards with three sets of tees, long tee 6,625 yards, medium tee 6,270 yards and short tee 5,977 yards, with par over the long tee of 71; swimming in the hotel's two adjacent pools, one a hot sulphur spa and the other crystal clear and cool; tennis, fishing, riding, dancing, hiking and climbing with experienced Swiss guides.

Red-letter event on the hotel's sport card is the annual Golf Week, when golfers arrive from far and wide to compete for the Banff Springs Hotel and Chateau Lake Louise Trophies; Edward, Prince of Wales Cup, Brewster Cup and Associated Screen News Cup.

Indian Days at Banff during the latter part of July constitute one of the most colorful events in the Canadian Rockies. Every year at this time some three to four hundred Stoney Indians from the nearby Morley Reserve converge on Banff for their tribal sports, attired in colorful Indian regalia and mounted on lavishly decorated steeds.

Lodges and Tea Houses

In the Canadian Rockies, strategically located in the most scenic environs and adjacent to good fishing waters and alpine trails, are Lake Wapta and Lake O'Hara Lodges, reached from Hector, B.C., on the main transcontinental line; Yoho Valley Lodge at Field, B.C., and Moraine Lake Lodge reached from Lake Louise, Alta. Each of these lodges has a central community house with adjoining cabins, all of which are operated on the American Plan.

In the immediate neighborhood of Lake Louise, the company operates two tea houses at Plain of the Six Glaciers, and Lake Agnes.

Hotels in the Prairies

Hotel Palliser, Calgary, Alta.—489 rooms—European Plan. Commandingly situated in the centre of Calgary, and adjacent to the Canadian Pacific station, the Hotel Palliser is an imposing and modern edifice of fire-proof construction that serves a large section of the travelling public en route to the Rockies or eastbound from the Pacific Coast.

In its appointments and cuisine, the Palliser ranks high in the North American hotel picture. Its Oval Drawing Room, Sun Parlor on the 12th floor, and large convention rooms are highly popular features of the hotel, which provides access to fine fishing and hunting territory in the Calgary district.

Hotel Saskatchewan, Regina, Sask.—268 rooms—European Plan. An imposing structure of limestone and brick, centrally located in Regina, to the south of Victoria Park. A commanding view of parks and tree-lined boulevards of the city can be obtained from the hotel's windows. Its modern equipment, fine cuisine, and high standards of service make it a delightful stopping place for visitors to Regina. The city has several fine golf clubs, where guests of the Hotel Saskatchewan are accorded playing privileges.

Royal Alexandra, Winnipeg, Man.—445 rooms—European Plan. A modern and fireproof structure, conveniently located within a short distance of Winnipeg's shopping, business and theatrical districts, and connected by covered passageway to the Canadian Pacific station. Its spacious public and private rooms, perfection of service and cuisine, combined with homelike comforts, make it a popular stopping place for visitors to the prairie capital. Guests at the Royal Alexandra Hotel, which is open all year, are afforded playing privileges on the city's leading golf courses.

Hotels and Lodges—Ontario

Devil's Gap Lodge, Kenora is one of the most outstanding vacation resorts in Ontario. Long famous for its unrivalled fishing and summer vacation opportunities and owned by the Canadian Pacific Railway, it is open during the Summer only.

Though located in Ontario's deep hinterland, it provides its patrons with golf on a nearby nine-hole course over which guests have playing privileges, while launches, canoes and guides are available for those interested in fishing and cruising. The Devil's Gap Lodge consists of a central community lodge surrounded by rustic little cottages. Service and cuisine live up to C.P.R. hotel standards, being equipped with running water and electric lighting.

Trophies are awarded by the Company for the largest muscalunge, bass and pickerel taken by guests from the surrounding waters.

Royal York Hotel, Toronto, Ont.—1156 rooms—European Plan. Opposite Toronto's Union Station, with which it is connected by a well-lighted subway, the Royal York is con-

veniently located in relation to the city's business, shopping and theatre centre. All the hotel's rooms face the "outside", and all are equipped with tub bath, shower and radio. Private suites range from two-room Bachelor suites to the luxurious Vice-regal Suite.

Largest hotel in the British Empire, the Royal York possesses the finest convention facilities on the Continent. A whole floor devoted to catering, conventions, includes the Convention Hall, Banquet Room, and Ball Room.

Hotels in Quebec

Chateau Frontenac, Quebec City, P.Q.—723 rooms—European Plan. Situated on the site of the old Chateau St. Louis, residence of the governors during the early French and English colonial regimes. Overlooking the St. Lawrence River, and built in the style of a 16th century French chateau, the hotel is fireproof throughout and modern in every respect. Open all year, it is noted for its excellent cuisine, lounges and convention facilities.

Promenading on Dufferin Terrace, the quarter-mile boardwalk skirting the hotel, touring the historic Lower Town with its narrow, winding streets, and visiting nearby Isle of Orleans or the Shrine of Ste. Anne de Beaupre are a few of Quebec's many attractions during the summer.

The Chateau Frontenac is also headquarters for the Ski Hawk School, where skiers are taught the fine points of "Parallel Skiing", under the tutelage of Fritz Loosli, celebrated Swiss ski pro. The Lac Beauport snow-bowl, nine miles distant, is thronged with skiers throughout the winter, while the Chateau maintains its own open air rink and triple-chute toboggan slide on its own premises, for Winter sports visitors. Quebec is well provided with facilities for hockey, curling, snow-shoeing, and skiing.

Hotels in the Maritimes

Algonquin Hotel, St. Andrews-by-the-Sea, N.B. — 230 rooms—American Plan. Open from end of June to early September. Built in charming Old English style, the Algonquin is situated on a picturesque promontory overlooking the St. Croix River and Passamaquoddy Bay, an inlet of the Bay of Fundy.

Two excellent golf courses, one an 18-hole layout as famous as its Scottish namesake, and the other a nine-hole practice course, are leading features of the Algonquin Hotel, which, with its dancing Casino, is the centre of social life during the summer season.

Sea-bathing in the sun-warmed waters of Katy's Cove is enjoyed on a day-to-day basis by guests of the Algonquin, while

tennis, fishing, sailing, dancing and cycling are other popular sports. The town maintains an up-to-date movie theatre.

The McAdam Hotel, McAdam, N.B.—American Plan. A popular stopping place for commercial travellers and vacation visitors for nearly 40 years, the McAdam Hotel is widely known by tourists en route to St. Andrews, Saint John and other points in the Maritimes served by the Canadian Pacific Railway. The hotel, a handsome stone building, maintains excellent dining facilities and its accommodation is in keeping with the Company's highest standards.

The Pines, Digby, N.S.—189 rooms—American Plan. Open from end of June to mid-September. In addition to the hotel's comfortable rooms, each with private bath, the Digby Pines maintains 31 attractive cottages for those who prefer home privacy combined with efficient hotel service.

The Pines maintains a championship golf course, fanned by Atlantic sea breezes, while guests also have their choice of horseback riding, swimming in a glass-screened pool of warmed sea water, tennis, sun-bathing or dancing to the music of a pleasing orchestra.

Cornwallis Inn, Kentville, N.S.—87 rooms—European Plan. In the centre of the Annapolis Valley, in the beautiful Acadian countryside, the attractive Cornwallis Inn is one of the finer hotels in the Maritime Provinces. From the hotel, many delightful excursions can be taken where the romance of Old Acadia and Evangeline still pervades the picturesque countryside. A fine golf course is located on the outskirts of the town.

Lakeside Inn, Yarmouth, N.S.—92 rooms—American Plan. Overlooking lovely Milo Lake, the Lakeside Inn, lies on the highway to Halifax, about a mile from the town of Yarmouth. Designed in Old English style, it is a cosy and popular retreat for vacationists interested in deep-sea fishing, golf, tennis, yachting, speed boating, swimming, riding and other vacation pursuits. The Inn is open from the end of June to early September.

Fire-Fighting System

Throughout its nation-wide system of stations, office buildings, freight yards and shops, the Company is prepared to fight fire.

At Angus Shops, Montreal, the Company maintains one of the largest fully-equipped, privately-owned fire stations in Canada and apart from other conventional types of fire-fighting apparatus employed by the Company from coast to coast, its yard engines are equipped to combat fires in freight and terminal yards.—*Staff Bulletin.*

SLEEPERS, DINERS AND NEWS SERVICE

By T. M. McKeown, *Manager*

The Sleeping, Dining and Parlor Car Department and News Service is comprised of four units:

1. Sleeping and parlor cars;
2. Dining, cafe, buffet and commissary cars;
3. Station restaurants;
4. News service.

The directing personnel is as follows:

Manager
Assistant to the Manager
— Montreal —

Eastern Lines:

General Superintendent, Toronto
Superintendent, Montreal
Superintendent, Toronto
Chief Supervisor, News Service, Montreal

Western Lines:

General Superintendent, Winnipeg
Superintendent, Winnipeg
Superintendent, Moose Jaw
Superintendent, Calgary
Superintendent, Vancouver
Chief Supervisor, News Service, Winnipeg

It is the function of this department to play the role of host to thousands of Canadian Pacific guests every day in the year.

Every single hour of the day and night, passengers board our sleeping cars at various points along the vast Canadian Pacific system there to find comfortable berths in which to spend hours of relaxation and refreshing sleep, and later to enjoy tasty meals in dining cars or station restaurants, or, possibly, the light refreshments made available by News Service salesmen on trains.

Sleeping and Parlor Cars Service

The lines in which sleeping and parlor cars operate, and the number of cars assigned to each line, is decided upon by the passenger department and is, of course, governed by the volume of traffic and the train service. The movement of cars is controlled by the transportation department, and under the Sleeping Car Department comes the operation of the service, that is, the manning of cars, furnishing of linen, blankets, soap, hat bags and other miscellaneous equipment. The laundering of linen, cleaning of blankets and replacement or renewal of miscellaneous equipment is what might be termed the "housekeeping" branch of the department.

Approximately 30,000 blankets are laundered per year by a special process in order not to destroy the texture of the fabric. There were required for essential passenger service during 1945 approximately one million pieces of linen, and the laundry bill for the combined operation of sleeping, dining, tourist and parlor cars and restaurants, was $484,500, or, over $1,300 per day. The number of pieces of clean linen required daily for all services was 67,000.

In order to maintain this linen in the best of condition, linen repair rooms are located at Montreal, Winnipeg, Calgary and Vancouver, where expert seamstresses are kept constantly at work.

When a sleeping car is turned out of shops, it is equipped with a suit of linen and other equipment, and an inventory card is placed in the locker so that the porter will know what equipment is on the car. When a car returns from a trip, a check of both the clean and soiled linen is made and if there is a shortage the porter must explain the cause. Sufficient clean linen is then placed on the car to bring it up to standard. The miscellaneous equipment is also checked and brought up to standard. While en route, sleeping car conductors and porters make notes of any car defects requiring repairs and make a report, so the car department may have them fixed before car goes out again.

Selection and Education of Employees

The selection of employees for positions as sleeping car conductors and porters is done with the utmost care by experienced men. Not only must the applicants have the very best references from former employers as to character, honesty and ability, but they must be made of that timber so essential to a good employee —a pleasant, courteous manner under the most trying circumstances.

After an employee has been engaged he has to go to the school of instruction, where he is taught how to make down berths, properly control the air-conditioning, heating and ventilating systems, keep cars clean and to look after car equipment and linen. He is also taught how to give the most efficient service to the public. When an employee has been thoroughly trained and instructed, he is placed in the service, where travelling inspectors watch his work and give any further coaching that may be necessary. A complete efficiency record of each employee is maintained by the superintendents, whereby they can tell if the employee is measuring up to the standard which has been set. If an employee has failed to come up to this standard, the superintendent personally points out any shortcomings and how to remedy them.

On long transcontinental runs between Montreal or Toronto and Vancouver, porters have to divide up with the sleeping car conductor the very few hours' rest, between the time the last passenger retires and the first one arises. In order to make up for lack of sleep en route, they are provided with adequate layover at turnaround points, where the Company provides them with attractive quarters or rooms in private houses. On their return to home station, they are given a longer layover in order to fit them for the succeeding trip.

It may be noticed that Pullman cars are sometimes operated over Canadian Pacific Lines. This is done in order to provide convenience to the travelling public in the matter of through accommodation. For example, between Toronto and Chicago a Canadian Pacific car runs over the New York Central Lines from Detroit to Chicago (which railroad has a contract with the Pullman Company to give a sleeping car service on their lines), and, rather than break the car line at Detroit and cause the transfer of passengers from one car to another, the service is worked out on an equalization basis, the Canadian Pacific car running right through to Chicago and the Pullman car through to Toronto. The Canadian Pacific retains the earnings in the Pullman car while it is in Canadian Pacific territory, and the Pullman Company retains the earnings in the Canadian Pacific car while it is in their territory, the expense being borne by the owner of the car and equalized by the Company which has the shorter portion of the trip putting in the lesser number of cars.

Dining Car Service

There is a difference in the method of recording the financial operation of dining and sleeping cars, inasmuch as all sleeping cars are considered in the aggregate in the operation of the service, whereas each dining car is treated as a separate unit, like one unit in a chain of restaurants. The equipping of a dining car from shops is handled pratically the same as described for sleeping cars, but of course there is much more equipment, such as silverware, crockery, glassware, pots, pans and other utensils.

After the car is equipped and ready for service, a crew is selected, which under normal traffic conditions consists of a steward, chef, second, third, fourth and fifth cooks, and five waiters. The menus for the trip, which have already been made up by the superintendent, are handed to the steward and chef, who place a requisition on the dining car stores for a sufficient quantity of food to prepare all the items on the bill of fare. The supplies are then put up by the storekeeper, like an order in a grocery store, the steward signs for what he receives and is handed

an invoice showing the cost of the food supplies. When the car returns from a trip, the supplies on hand are checked, and the cost of food consumed is figured out. The amount of cash received for meals is balanced with the food cost, and the profit or loss for the trip is then known.

From the results of these operating statements the superintendent is able to judge whether or not the crew has operated the car on an economical basis. There will likely be a profit shown on the sale of food for the trip under ordinary circumstances, but there are additional expenses to be added in the superintendent's office in the matter of overhead, such as wages, laundry, crockery and glassware renewals, upkeep of silverware, linen and utensils. The cost of coal, charcoal, ice and cleaning must also be added. There are also the wages of the storeroom staff and salaries of supervisory officers, so that in the end there is a considerable loss in the year's operations.

In figuring the losses on dining cars, it is not the practice for the Canadian Pacific or any American roads to include interest on capital investment, depreciation on the car, periodical shopping or maintenance, that is, running repairs. That losses will occur on dining cars is recognized as part of the price which must be paid in order to give the travelling public what they want in the matter of satisfactory meals at reasonable prices. The traffic officers all over the continent know that a satisfactory dining car service at comparatively low prices must be given if people are to be encouraged to travel by railway, and every road on the American continent suffers yearly losses in the operation of their dining cars, some running as high as 75 cents lost on every dollar taken in as revenue.

Cleanliness, pure foods well cooked, costly furnishings and appointments, while very necessary, do not make a dining car service. It is the human factor that gives it its distinction. No matter how well a meal is prepared, if the waiter who places it before the guest is slovenly or indifferent, naturally the guest is not very favorably impressed. Years of experience, with careful training, are required to qualify a dining car waiter in the arts and artifices of the trade. The proper way of serving dishes may be carried out in a mechanically perfect manner and yet the guest is left feeling that the service is inadequate; he feels that the personal element is lacking. A good waiter takes a pleasure in anticipating the wants of his patron. On long runs it is, of course, necessary for employees to sleep in the dining car, and each car is equipped with cots and bedding, which are stored in lockers in the daytime. On short runs where cars lay over at night, the

Company furnishes quarters or rents rooms in private houses for the accommodation of the dining car crews.

Commissary Cars

On the declaration of war in September, 1939, it was realized that it would be necessary to provide adequate facilities for the feeding of large numbers of the armed forces who would be moving from one training camp to another and from training camps to the seaboard, en route to the scene of hostilities. As a result of the satisfactory experience with commissary cars in the last war, it was decided to follow the same general procedure for the feeding of members of the armed forces, and therefore 12 dining cars were converted into commissary cars. The change required no structural alterations but only a different layout in the interior. The dining car kitchen was converted into a butcher shop with large refrigerators for the storage of the great quantities of perishable supplies required to feed a trainload of soldiers. The dining car pantry, with well arranged lockers, was not altered and was used for the same storage on the commissary cars as when the car was in regular dining car service. Cooking equipment was placed in the former dining room and consisted of the following:

1 standard 6 ft. range 3 ft. wide
1 upright 10 H.P. tubular boiler
1 steam jacketed meat roaster
2 50-gal. capacity standard steam jacketed kettles
4 2-basket type vegetable steamers
1 double sink
1 cook's table

A service counter the full length of the room was installed upon which to serve the fatigue parties which were assigned to take the food from the commissary car to the colonist or tourist cars in which the members of the armed personnel were accommodated.

While it was possible to cook food by using the steam from the road engine, the upright boiler provided steam at all times so that cooking could be done ahead without the necessity of the engine having to be attached to the train, and this was of considerable advantage at the departure and arrival terminals when meals had to be prepared before the train started to move, and in cases where meals had to be served on arrival at terminal after the road engine had been detached.

These commissary cars could very easily take care of the feeding of five or six hundred men, for which was required at least three or four dining cars, and they reduced the dead weight in relation to the number of cars on the train two or three times, thus enabling a larger number of loaded cars to be handled.

The method of feeding the troops was to have tables set up in each section of the cars in which they had accommodation, and the knives, forks, spoons, plates, cups, etc., placed on the tables at mealtime. When the time for serving the meal arrived, a fatigue party consisting of six men from the armed forces personnel was sent from each car in rotation, starting from the first car at the front of the train and the last car at the rear, who went to the commissary car, which was in the centre of the train, and received their supplies in large carriers. The soup, meat, vegetables and dessert were divided up amongst the various members of the fatigue parties who also looked after the dishing out of the food to the men in their sections in the car, and it only took from 15 to 20 minutes to distribute all the food from the commissary car to the individual men in the cars.

The washing up of the dishes was done in the colonist car kitchen by members of the armed forces who were paid by the railway company for doing this work.

In order that the crew of the commissary car were able to have comfortable sleeping quarters while en route, a crew's sleeper was provided along with each commissary car.

The commissioned officers on the troop train were fed in sections of a sleeping car by regular dining car waiters, but if the number of officers was 50 or more on any move, a regular dining car was provided in order to take care of the feeding of these officers. Following are specimens of menus served to military officers and men:

(OFFICERS)

Breakfast	*Luncheon*	*Dinner*
Fresh Fruit	Soup	Soup
Cereal with Cream	Entree or Joint	Roast or Entree
Ham or Bacon with Eggs	Potatoes	Potatoes
	Vegetable Salad	Vegetables
Potatoes	Dessert	Salad
Toast	Bread and Butter	Pie or Pudding
Marmalade or Jam		Bread and Butter
Tea or Coffee	Tea or Coffee	Tea or Coffee

(MEN)

Cereal, Hot or Cold	Hot Meat	Soup
Sausage with Scrambled Eggs or Bacon & Eggs	Potatoes	Roast (Hot or Cold)
	Vegetable	Vegetable
Bread and Butter	Bread and Butter	Potatoes
Marmalade	Pudding or Pie	Dessert
Tea, Coffee or Milk	Tea, Coffee or Milk	Bread and Butter
		Tea, Coffee or Milk

That the meals served were satisfactory to both officers and men was attested by the large number of favorable comments received in this connection.

Hospital Cars

During 1944 the Company constructed ten hospital cars, which were equipped with 28 beds, dispensary, and other appurtenances necessary for the care of wounded members of the armed forces returning from the battlefront. These cars are serviced by the Sleeping Car Department which furnishes and launders linen and supplies, soap, cleaning materials and other miscellaneous equipment.

There are now a total of 10 hospital cars operated by the Company, in conjunction with the Royal Canadian Army Medical Corps.

Station Lunch Counters

Station lunch counters are operated by the department at most divisional points. At these lunch counters passengers may obtain light refreshments promptly, at reasonable prices, while the train is being serviced and inspected. These facilities are operated by attendants, on commission basis, and most of the supplies have to be shipped from the news department storeroom located in each superintendent's district. Each lunch counter is operated as a separate unit and the net revenue is included in the News Service official figures. The larger station restaurants, such as those at Montreal (Windsor Station), Moose Jaw, Calgary and Vancouver, however, do not come under this service, but are operated in conjunction with the Dining Car Department.

News Service

The News Service is operated not only as a convenience to the travelling public but is a source of considerable profit to the Company. News stands are located in the larger stations, where the latest newspapers, magazines and books, cigars, cigarettes and tobaccos may be obtained at city prices. The news agents on trains also provide an important service to the travelling public. At one time their stock-in-trade consisted mostly of papers, magazines, cigars, cigarettes, popcorn and candy, but in recent years they have enlarged their stock-in-trade by providing coach passengers with light refreshments obtained from the dining car. These supplies consist of sandwiches, tea, coffee, orange juice, tomato juice, etc. These items are sold at reasonable prices and the service is very popular with the travelling public.

Another service provided by the news agent on most night trains is the renting of pillows to passengers in day coaches. Many passengers cannot afford to purchase a berth in sleeping or tourist car, and find the renting of a pillow, at 25c., is the solution for a comfortable night's rest in the coach. The News Service, under the superintendent of each district, has to look after these pillows, which must have a clean slip applied each time they are rented, and the pillows must be thoroughly aired before being re-issued, and frequently washed in order to keep them in proper sanitary condition. News agents on transcontinental trains, going through the mountains, carry a large assortment of view books and are thoroughly posted on the historical and scenic points of interest, which they are continually pointing out to interested passengers.

Summary

The war has placed an enormous burden on the department in the handling of the greatly increased volume of traffic, and some idea of the increase is given by the following table of percentage of increase in business during 1945 over 1938:

Sleeping, tourist and parlor car earnings up	205%
Dining car earnings up	406%
Station restaurants earnings up	317%
News service earnings up	310%

The number of employees in the department for the same period shows an increase of 50% but this does not give the whole story because in 1938 many employees were working part time, whereas now they are all working full time and many of them put in long hours of overtime.

Duncan McIntyre from Aberdeen

The Canada Central could not be kept out of the picture as it had always been considered the Ottawa extension of the Canadian Pacific from Lake Nipissing, and Duncan McIntyre, who had recently become the dominant factor in the Canada Central, was a Montrealer known to be on friendly terms with Stephen.

Duncan McIntyre was another of those inevitable Scots from Aberdeen or thereabouts, who came to Canada in 1849 and like George Stephen worked his way up from being a clerk in a dry-goods business to becoming the head of the firm.

An opportunity to purchase the interests of an English firm in the Canada Central had enabled him to secure control.—*Steel of Empire* (John Murray Gibbon).

MAIL, BAGGAGE AND AUTOMOBILES

By W. E. ALLISON, *Manager, Mail and Baggage Traffic*

The privilege of having transported free of charge a certain amount of personal effects, commonly known as baggage, is a legacy to the railway travelling public of today from the stage coach days of old.

Advertisements of the early stage lines in Europe and in the United States stipulated that each passenger would be allowed a certain amount of free baggage. It was therefore natural that on the first railroad the privilege of carrying baggage without charge should be continued.

The transportation of baggage is incidental to the transportation of passengers, and in fixing the limits as to the amount and character of property that should be accepted for carriage as baggage, railway and steamship carriers everywhere have endeavoured to extend to passengers their natural rights, and to grant them transportation of such personal wearing apparel and other effects as are necessary for their comfort, convenience and use in accordance with the purposes of their journey. This explains why the extent of the free allowance varies in different countries, and even in different sections of the same country.

The concessions by railways in Canada and the United States are more generous than in any other country in the world. This can be ascribed principally to the immense distances on this continent, the necessity of liberality to immigrants and settlers in order to encourage the colonization of the vast territories, and to a realization by the railways of the advantages of baggage service as a means of aiding in the commercial development of the country, and facilitating and stimulating travel by rail.

As a consequence, the development of the baggage system in this country has been in harmony with the progress in all other branches of passenger transportation, and the liberal concessions and comprehensive arrangements now in effect are world renowned and consistently referred to as one of the outstanding conveniences of railway travel on the North American continent.

The extent of these concessions and conveniences is worthy of review, contrasting as they do the advantages and economies of railway travel as compared with other modes of transportation. The free weight allowance of 150 pounds per adult passenger in the case of regular travel is a matter of common knowledge, but a notable exception is the free allowance of 300 pounds of personal and sample baggage to commercial travellers who are members of the various commercial travellers' organizations of the Dominion.

This concession to commercial travellers is exclusive to the railways of Canada, commercial travellers in the United States and other countries of the world being accorded only the usual baggage allowance and privilege extended to the ordinary travelling public.

Apart from the free allowance of ordinary baggage, there is also provision for the carriage of practically every conceivable article of a miscellaneous nature which might be required by a passenger for business or pleasure purposes at destination or en route, most of which are now transported free as part of the passenger's weight allowance.

One of the outstanding advantages of the service is that baggage can be delivered into the possession of the railway company at the start of the journey, and a receipt obtained for it in the form of a baggage check, which ensures transportation and protection through to destination, regardless of the number of railways or transfers involved en route. The railway check or checks constitute a premium-paid insurance policy for $100.00 on the property of any one passenger, this being the liability assumed by the railway carriers. Moreover, the baggage can be checked through to hotel or residence in practically any town or city, with assurance that it will be promptly delivered without further action or trouble on the part of the owner.

Parcel room facilities are available at all principal stations for the storage of hand baggage, coats, umbrellas and parcels at a nominal charge—usually ten cents per piece for each twenty-four hours or fraction thereof. Provision is also made at all stations for the storage of baggage transported under check, a free storage period of twenty-four hours being ordinarily allowed, with extended free periods covering Sundays and holidays.

Customs formalities in connection with baggage checked between Canada and the United States, or in transit through one of these countries, usually viewed by passengers with some apprehensions, have been so simplified and arranged as to cause a minimum of inconvenience. In many cases inspection is made at originating point at the time the baggage is checked, but where this is impossible it can be arranged on the train at the frontier, or the baggage bonded on any of the principal towns or cities in Canada or the United States, where examination is made at the passenger's leisure. Customs examination is not necessary in the case of baggage in transit through either country, the baggage being automatically bonded without the necessity of inspection or any action on the part of the owner.

It is not difficult to visualize the huge capital investment of an organization like the Canadian Pacific in baggage rooms, baggage cars, baggage trucks, etc., and the labour expense necessary in

order to provide for the safe and expeditious transportation of passengers' baggage and the storage of it—largely a free service.

In making a comparison with other means of transportation the public is prone to consider chiefly the question of rates, without reflection on the very essential and important points of protection and extent of service provided. The Company's employees should not overlook the concessions and merits of the baggage service when advancing the attractions and conveniences of travel by rail.

Baggage via inland and coastal ships, such as on the Bay of Fundy, the Great Lakes and the British Columbia Coast, is handled very much as on the railways, being checked and transported under the same rules and regulations, with similar concessions as to free allowance, storage, etc., and insofar as baggage arrangements are concerned these services are merely the connecting links in the chain of the Company's domestic transportation facilities.

In wartime the resources of the baggage organization of the railway were largely directed towards the safe and expeditious handling of the large volume of personal and Government property checked by members of Canada's armed forces.

The discontinuance of regular ocean steamship travel caused suspension of many baggage services of an unique character, which the Company had been successful in developing over a long period of years through the advantages presented by its combined operation of railways and steamships, and its representation in the principal cities of the world. The post-war resumption of ocean steamship travel will see many of these services restored, in whatever amended form is necessary to meet new travel conditions.

Automobile Traffic

The Company does not regard the private automobile owner as a complete loss from a transportation viewpoint, but under the jurisdiction of its Baggage Department has developed a number of services for the transportation of passenger automobiles which attract considerable patronage, and yield a substantial financial return.

When accompanied by one or more passengers holding valid transportation, privately owned passenger automobiles are accepted for carriage in all of the Company's inland and coastal water services at reasonable rates, and under arrangements which are convenient to the motorist. The automobile may be driven to the dock and checked with the same simplicity as a piece of baggage, and delivery obtained immediately on arrival.

Prior to the war, passengers to Europe were taking their motor cars with them in increasing numbers, and the Canadian Pacific enabled them to do so without trouble or the worry of the annoying details of transportation, foreign customs formalities, etc. All that was necessary was to make prior reservation, and drive the car to the dock at port of sailing, where it was accepted as baggage, uncrated, and delivered immediately on arrival at landing port in Europe accompanied by documents which surmounted customs barriers, and permitted unrestricted touring of Great Britain and the Continent for a period not exceeding one year.

Passenger automobiles were also carried on the Company's Pacific ships, but on a transportation basis only, the owner being required to make personal arrangements for all customs documents, touring permits, etc.

Another service available to motorists before the war, but now temporarily suspended, was the shipment of automobiles by freight under what was termed the "passenger-with-automobile" plan. It was a convenient and economical arrangement for the transportation of automobiles to destination by freight on passenger transportation. It enabled the motorist to enjoy his own automobile for touring at destination, and saved him the grind of driving great distances to and from resort territory. Customs formalities and the question of touring permits in connection with international shipments were taken care of by the Company with a minimum of trouble to the car owner.

The Canadian Pacific will be prepared to take a leading part in restoring these services as quickly as possible after the return of normal travel conditions on land and sea.

Mail Traffic

One of the major functions of the Canadian Pacific Railway and its allied air and steamship interests is the transportation of post office mails.

The history of mail transportation is closely linked with that of civilization, and the development of it can be traced by the spread of education, the discovery of new worlds and means of travel, and the subsequent growth of international traffic. Of all the public utility services in existence today, the postal organization is undoubtedly the oldest.

As it has always been the policy and practice of postal administrations to take advantage of all available means for the carriage of mails, it is natural that with the extension and improvement of railway and steamship facilities these services should have become the principal means of mail transport.

Little more than 50 years ago mail from Eastern Canada for Winnipeg, then known as Fort Garry, had to go via the United States, and similarly mail for Vancouver had to go via the United States to the western coast and then by ship north into Canada. The completion of the transcontinental line of the Canadian Pacific between Montreal and Vancouver changed all this, and provided Canada with an independent means of carriage and distribution of the mails within its own boundaries.

Along with the railways came the establishment of travelling railway post offices, with railway mail clerks sorting and distributing mails in the course of their trip. These railway postal cars are really travelling post offices, being equipped with sorting tables, letter cases, paper boxes, bag racks, and all facilities necessary for the sortation of the mails en route. The modern cars in operation today are all equipped with the latest sanitary arrangements, hot and cold water, hot plates for cooking, and other conveniences for the comfort of the men working in them.

The first railway post office service on this continent was placed in operation between Niagara Falls and London, Ont., in 1854, some seven years before the inauguration of similar service in the United States. The cars are owned and maintained by the railways, and are manned by employees of the Post Office Department.

At the present time mails are transported by railways in Canada under rules, regulations and rates prescribed by Government Order-in-Council approved September 13th, 1922, and effective June 1st of that year. This Order-in-Council provides for three classes of regular service and three of special service, any one of which can be authorized or terminated by the Post Office Department in accordance with postal requirements.

The three classes of regular service are comprised of 60-foot railway post office cars, 30-foot railway post office cars, and baggage car space units of three feet, seven feet, 15 feet or 30 feet. While post office clerks receive and despatch mails carried in railway post office cars, the mails handled in baggage car services are received and distributed en route by the railway train baggagemen.

The three classes of special service consist of special mail trains, storage cars of a length of 60 feet, and baggage car space units of three feet, seven feet, 15 feet and 30 feet. These special services are authorized as may be required to take care of mails to and from ocean ships, excess mails over the regular volume such as the huge quantity of gifts and cards handled during the Christmas season, and spasmodic movements of weekly newspapers, magazines and other periodical publications.

The Canadian Pacific Railway transported mails during the year 1945 a combined distance of 19,220,439 miles.

The rates for the carriage of the mails by rail are on a mileage basis, according to class of service authorized, and payment is received through monthly accounts rendered against the Post Office Department.

Post office mails are also handled by the Company in its steamship service across the Bay of Fundy between Saint John, N.B., and Digby, N.S., on boats on the British Columbia lakes and rivers, and in all of the many services covered by its British Columbia Coast Steamships. A large volume of United States mails is handled in British Columbia Coast Steamships between Vancouver and Alaska under a reciprocal arrangement between Canada and the United States, whereby each country extends to the other the free and unrestricted use of its steamship service for the carriage of mails to and from Alaska.

The carriage of mails in all coastal and water services is paid for on a contract or mileage basis, according to the character of the service and the volume of mails handled.

In the carriage of the mails, as with all other traffic, there is the competitive feature to be considered, not only in relation to other railroads, but with all other means of transportation by land and water and in the air. Time is an all-important feature in mail transportation, and rail and steamship schedules must be closely watched and arranged so as to give the maximum convenience and despatch to the mails consistent with the requirements of other traffic. The extent of the patronage the Company enjoys is largely dependent on the standard of service provided, and maintenance of close co-operative relations with the officers of the Post Office Department entrusted with the responsibility of the safe and expeditious transportation of His Majesty's mails.

So far as the public is concerned, the transportation of mails by railways or other means within the country is a mundane affair; a matter of cut and dried business efficiency to which but little thought is given. Not so with the ocean transportation of mails from countries beyond the seas; the arrival of each mail carrying ship is a matter of general interest, and eagerly awaited by someone in every corner of this wide Dominion. It is a harbinger of news from home; the one constant and to many the only means of maintaining family ties and the bonds of friendship with those abroad.

Prior to the war the Canadian Pacific was supreme in the North Atlantic trade between Europe and Canada, and in the Pacific between Canada and the countries of the Orient, and Canadian

Pacific ships in these services carried the great bulk of the mails transported to and from foreign shores.

The Company first engaged in steamship service in the Pacific in the year 1887, and mails have been transported since that time under varying rates and conditions. For a great many years they were conveyed under contract with the Imperial Government, providing for carriage in both directions between Halifax or Quebec and Hong Kong, and later in both directions between Liverpool and Hong Kong, including overland carriage across Canada. The Dominion Government contributed to the payment, and ultimately assumed full responsibility for the Canadian trans-continental rail haul, as well as conveyance across the Pacific.

The Canadian Pacific commenced its trans-Atlantic steamship operation in 1903, and through its enterprise in building up a fleet of ships which for size, speed, and frequency and regularity of sailings was vastly superior to any of its competitors in the Canadian trade, it attained the distinction of conveying the great bulk of the mails moving between Canadian ports and Great Britain and the Continent of Europe.

Westbound from Europe the principal despatch was of course from Great Britain, but mails from Europe were also received at continental ports of call such as Antwerp, Havre and Cherbourg. The country of despatch assumed responsibility for payment for the ocean carriage, regardless of origin of the mails, and secured reimbursement through adjustment of international accounts.

The combined steamship and rail services of the Canadian Pacific's "All-Red" route from England to the Orient and New Zealand and Australia was regularly used by the Imperial Government for the conveyance of through mails. Connection between the Atlantic and Pacific ship was guaranteed by the Company for each despatch, and it never failed to fulfill its obligation, although on occasions it involved special train operation and even holding the Pacific ship for some hours in order to ensure the connection.

Due to the excellence of the Company's Atlantic service, and its unusual facilities for giving the mails prompt despatch from the Canadian port of landing, a considerable volume of mails for the United States was forwarded from England by Canadian Pacific ships. The mails were loaded into cars at the ship's side immediately on arrival at the Canadian port, and sent by first train connection to New York and Chicago for distribution from there. It was frequently possible to provide more expeditious delivery through shipment in this manner than by direct sailings to New York or other United States port.

The Company looks forward with confidence to a resumption of all its ocean services in a world of peace, and the opportunity of

again performing a great public service in carriage of the mails across the seas.

The carriage of mails by land and sea is old in tradition and practice. but present day thoughts are focussed on air transportation.

The regular air mail services are two in character; one restricted to the carriage of mails prepaid at the air mail rate of postage —designed to speed delivery of letter and other first-class mail, —and termed an "air mail service"; the other an "air stage service", involving carriage of mails of all classes. The former is in effect on routes where there is regular and expeditious railway or steamship service, and the latter to remote areas where there is only infrequent or primitive means of surface transport, such as in the Yukon and North West Territories, the mining areas of northern Ontario and central Manitoba, and to the communities along the north shore of the St. Lawrence River throughout the winter months when navigation is suspended.

The rates for mail carried vary, and are on a mileage, poundage or contract basis, according to the nature of the service performed. The determining factors are frequency of schedules, mileage involved, average weight of mails to be carried, and amount of other revenue traffic available.

It might be of interest to include in this brief sketch of the Company's activities in connection with the transportation of post office mails, a short resume of the manner in which the postal organization of the world functions in order to permit of the safe and rapid exchange of communications between all the peoples of the universe through prepayment of a nominal transit charge by affixing a few postage stamps at time of mailing.

Without going into the absorbing history of the early growth and development of the postal service, it can be stated that the first important advancement was the adoption in Great Britain in 1840 of the penny postage rate proposed by Rowland Hill, and which was accompanied by the creation of the postage stamp. The example set by Great Britain was gradually followed by other countries, and gave international postal service its first definite unity.

However, international service continued under rules which greatly varied, and which were often not practicable, until establishment of the International Postal Union in 1874, with headquarters in Berne, Switzerland. Through it has been developed the amazing postal system of today, with its myriad uniform rules and regulations, rates of postage, etc., permitting unrestricted exchange of communications throughout the world.

The balancing of postal revenues, and the adjustment of charges for the carriage of the mails of one country by the postal

administration of another, is effected by periodical weighing of all international mails during a test period, and a subsequent accounting through the central office of the International Postal Union in Berne.

The world owes much to the genius of the men who created and developed the postal system, and to those who are instrumental in the continued progress of it.

These Buses and Trucks 'Get Along'

The first of May was "moving day" in more than one sense of the word in Quebec's Eastern Townships this year. On that day a sleek maroon-and-cream colored Diesel motor coach of the Quebec Central Transportation Company rolled out on the highway to commence its regular Summer service between Sherbrooke, P.Q., and Newport, Vt., a distance of 48 highway miles.

Two weeks later, on May 15, the balance of the Q.C.T.'s smart fleet of streamliners were speeding over their respective routes, all of which, with the exception of the bus line between St. George and Lake Frontier, P.Q., run more or less parallel to the rail lines of the Quebec Central, a subsidiary of the Canadian Pacific Railway, which incidentally was the first steam railway in North America to operate its own bus line.

That the Company operates buses in addition to its other transportation services may be something of a surprise to some members of the Company family, particularly since buses are often regarded as a competitor in the transportation field. In the case of Quebec Central services, however, there is an interesting exception to the rule, the train and bus getting along beautifully together.

Actually, each of the two services is a necessary supplement to the other. It has been proved that passengers can be handled more profitably in the Summer by bus than by rail over certain areas of the province served by the Quebec Central Railway. Consequently buses are put into operation early in May to replace certain passenger train services which are resumed again in November when the bus season terminates.

This idea has proved highly successful both from the company's standpoint and the public's in addition to which it has helped offset the threat of competition by outside bus companies over the highway serving Quebec Central territory. Today the Company has franchise over 241 route miles of highway in Quebec Province and the State of Vermont over which its bus fleet operates.—*Staff Bulletin* (June 1944).

EXPRESS COMPANY

By P. T. COLE, *Press Relations Officer, Toronto*

The Dominion Express Company, now the Canadian Pacific Express Company—its name was changed on September 1, 1926—was incorporated in 1873 and commenced operations in the Summer of 1882 on the Company's lines in the west from Rat Portage, Ont. (now Kenora), to Oak Lake, Man., a distance of 291 miles, and from Winnipeg to Stonewall, a 20-mile stretch, with its head office in Winnipeg.

The late W. S. Stout was at that time appointed superintendent of the new company by Van Horne, the then general manager of the Canadian Pacific Railway, the parent company, and remained in harness for 63 years until his death on January 5, 1945, at which time he was chairman of the board, a position he took over on July 1, 1928, when T. E. McDonnell, then vice-president and general manager, succeeded him in the presidency.

From 1882 to 1884 the head office of the Dominion Express was in Winnipeg. In the latter year it was moved to Toronto, and has remained in that city ever since.

Mr. Stout was appointed general manager in 1890 and vice-president in 1899. He was also made a director in the same year. In 1903 he became president and general manager, and held the presidency until July 1, 1928, the position of general manager having been assumed by T. E. McDonnell in 1918 when he was also made vice-president. Mr. Stout has had two successors as president and general manager—Mr. McDonnell, who died on March 2, 1940; and the present incumbent J. Edgar Coulter, who became president and general manager on April 1, 1940.

Mr. McDonnell was one of the most outstanding expressmen on this continent. Commencing work as a wagon boy in 1887, he began to climb at once. In 1910 he took charge of Canadian Pacific subsidiary express operations in the United States and eight years later was made vice-president and general manager at Toronto over the whole system. His was a remarkable career, but he was a remarkable man who actually occupied all the positions in an express company from wagon boy to president.

Mr. Coulter joined the company on February 16, 1903. He was appointed chief clerk to the president in 1911 and was made assistant to the president in 1928, and general superintendent, eastern lines, in 1932. On January 1, 1937, Mr. Coulter was made general manager and on January 1, 1940, vice-president and general manager. Mr. Coulter, who was born at Toronto on March 18, 1890, is one of the best known of the younger expressmen in North America, and has in his five years of the presidency established already a high reputation for himself.

The growth of the company from its very humble beginning, and its first reputation for efficiency and fair dealing is proof, if this were needed, of the adequacy and soundness of the plans carried out by Mr. Stout and his successors. In the beginning Mr. Stout and his very few assistants had a hard uphill fight for they had to create the traffic as well as move it. From its pioneer days of 11 offices and non-agency points with an operating mileage of 442 in 1882, the company has expanded beyond all the expectations of its founders and is now favourably known the world over with 8,828 offices and correspondents and a mileage coverage of 33,250.

Express is a name long associated with fast movement. Use of passenger and special express trains, aircraft, motor vehicles and fast ships enables express companies to provide the fastest means of merchandise transportation on the continent, together with personal attention and care in transit. Express service was brought into being to meet a definite demand for this kind of expedited service.

While the primary movement of practically all merchandise is by freight train, the ordinary requirements of commerce demand that under certain circumstances, and sometime because of emergencies, some of the freight traffic seeks an outlet from the ordinary channel of the freight train to the faster passenger train where, as well as more expeditious movement, it will also receive the advantage of personal attention and care from the time the goods are collected at shipper's premises until they are delivered into the hands of the consignee at destination.

Express service harmonizes transportation by rail with pick-up and delivery service at point of origin and destination at all principal points throughout the country and is sufficiently elastic to handle all kinds of commodities or any type of shipment. Express service is a personal service direct from the hands of the shipper to those of the consignee.

Father of Express

In 1839, just 106 years ago, a young man by the name of William Harnden solicited merchants in Boston and New York, who entrusted him with valuable packages, which he transported in a carpet bag between these two points. Harnden's chief asset was the goodwill of his customers and their confidence in his integrity, and he travelled over the then disconnected water and rail route as a passenger making delivery of his packages from his carpet bag to the owners. His business grew and he called in helpers whom he imbued with the traditions of integrity and courtesy on which he had founded his business. Harnden is regarded as the originator of express transportation.

Because of the demand which existed in the early days for a dependable, expedited, personally conducted transportation, which service was supplied by express, it was encouraged to increase and multiply and to extend its services. Since the early pioneer days transportation generally has made enormous strides and express has continuously improved and enlarged its plans for serving the public with a maximum of convenience.

Express service has played an important part in the commercial development of Canada. Many industries owe their successes in part to the reliable expedited service and have built up their business through the channels which it offers for the handling of emergency shipments, obtaining supplies, etc. In the producing field the express company has done much to encourage growers in the production of fruit, vegetables, poultry, eggs, dairy products, etc., as well as providing expedited transportation service to carry such products to markets. Before the inauguration of parcel post, express was the only agency for handling small packages of merchandise, and was instrumental in helping to build up what is now known as the mail order or catalogue system of merchandising.

Behind the Scenes

As a general impression prevails that the express company confines itself to the handling of small packages it may be of interest to take a peep behind the scenes and obtain an insight into the diversity of the merchandise and commodities entrusted to express service. One of the most important activities of express is the prompt movement of perishable food products between production areas and centres of consumption. Such service is practically indispensable in connection with shipments of fish, cream, butter, poultry and eggs, for the transportation of which the express company provides proper and suitable equipment to assist in the quick dispatch so essential to ensure food products reaching market in prime condition. Furthermore, the express company has played an active part in the discovery and development of profitable and potential markets, thereby assisting primary producers in the absorption of their output and tending to reduce wastage and loss to a minimum.

Perishable commodities travel in large volume by express, for, because of their character, they must be rushed to market. The early crops in various parts of the country obtain the highest prices, but require expedited transportation so as to arrive before the main crops reach the market. As a result a large volume of fruit and other perishable commodities is shipped by express during the beginning and at the end of the producing season. The same conditions apply to perishable products of the sea, such as fish, oysters, lobsters, crabs, etc., which are shipped in large quantities by express.

A Great Problem

It is only through careful co-operation and efficiency in handling, that urban communities are supplied daily with the actual necessities of life. Transportation is a great problem, allied with and bearing an important part in relation to the conservation of food products. It is therefore necessary that the system of transportation, refrigeration and preservation should be as nearly perfect as human ingenuity can make it. That the express company has been successful in providing this system is shown by the fact that less than one-tenth of one per cent of the shipments forwarded by express are involved in claims.

Reference should also be made to emergency shipments like rush movements of dynamos, machinery parts, etc., where manufacturing plants have had to close down due to failure of machinery. The express movement of rolls of wire to restore communications after storms and floods is also very important and has to be handled with highest speed.

As before mentioned, the transportation of parcels is one aspect of express activities. There are special cars for the movement of automobiles, horses, livestock and for large shipments which must be moved as expeditiously as passengers themselves. Express is positively essential to the movement of seasonal merchandise, such as millinery and ready-to-wear garments, where styles change frequently. The service has been found so dependable that many retail stores advertise a sale of certain lines which at the time the advertisement is written are being placed in the hands of the express company at Montreal, Toronto or some other large manufacturing point. Moving picture films are another important express commodity, since time is a very important element in the leasing of films by moving picture theatres.

One of the outstanding features of the express business is the simple manner in which it is conducted. All that is necessary for the shipper to do is simply summon the expressman by telephone or postal card and a call is made for the shipment. A receipt is given to the sender and when the shipment is delivered a receipt is taken from the consignee. The charges may be made by the shipper or may be allowed to follow the shipment and be collected at destination.

Promotes Business

In addition to transportation, the express company performs other services such as the collection of C.O.D.'s on shipments of merchandise, and remits the collection to the shipper by express money order. The C.O.D. system of shipping was originated by the express companies many years ago and furnishes a simple and effective method of selling merchandise without risk to the shipper.

It has been an important feature in extending trade relations between thousands of manufacturers, merchants and individuals. Without it the purchaser would be obliged to establish credit or else pay in advance, thereby limiting his opportunities for purchasing in the most desirable markets.

Sending Money by Express

The Canadian Pacific Express Company in addition to money orders, issues travellers' cheques, foreign cheques, foreign postal remittances, cable money transfers and exchanges foreign monies.

Money orders, which are limited to $100. per unit, may be issued in either Canadian or United States dollars, and are used principally for remittances to points in Canada, the United States and Newfoundland, but are also used quite extensively for remittances to foreign countries where they are exchanged by the payees for the (Canadian or United States) dollar equivalent in the currency of the country. The charges for money orders range from 7c. for $2.50 and under, to 24c. for amounts $80. to $100., and as they are not drawn payable at any particular place they can be cashed almost anywhere.

Foreign cheques are somewhat similar to money orders except that they are drawn payable by one of our thousands of correspondents throughout the world, and may be issued payable in the currency of the country on which drawn, or in Canadian dollars or pounds sterling at the current buying rate for cheques on Toronto or Montreal, New York or London, as the case may be.

Foreign Remittances

The foreign postal remittance system is used almost exclusively by immigrants from Europe. As these people are not familiar with banking methods, rather than give them a money order or foreign cheque the express company gives the remitter a receipt for the amount of the remittance and arranges payment by mail—part mail and cable—or full cable—as desired, in Russia, Poland, Austria or other countries. In order to get an idea of this method of remitting, consider a typical part mail-part cable foreign postal remittance from Vancouver to Moscow, U.S.S.R. A Russian comes into the Canadian Pacific Express office in Vancouver to send, say, $20. quickly but cheaply to Moscow. He is given a receipt for his money. Full particulars of the amount and address are sent by mail from Vancouver to the treasurer of the Canadian Pacific Express, Toronto, and paying instructions are forwarded from Toronto by cable to the Bank for Foreign Trade U.S.S.R. Moscow. Payment is there made to the payee—his receipt is taken and mailed to Toronto, from Moscow. If the remitter wishes proof of payment, the payee's receipt is sent to Vancouver for his

inspection. By the foreign postal remittance system the express company can effect payments in even the smallest hamlets in continental Europe.

Money Transfer by Cable

Our money transfer service by cable reaches all banking points in all countries. Between Great Britain and Northern Ireland and Eire, and Canada, by reason of our exclusive arrangements with the British Postmaster and the Minister of Post & Telegraphs of Eire, money may be transferred by cable from any place in those countries direct to any money transfer office in Canada, and from our money transfer offices in Canada to any place in Great Britain and Northern Ireland and Eire. To places in Canada other than regular money transfer offices the money is cabled to a central office of the Canadian Pacific Express Company in each province where money orders are issued and forwarded to payee by Government mail, which gives a full cable or part cable-part mail money transfer service to all points in Canada.

Cheques Spendable Everywhere

And now we come to Canadian Pacific travellers' cheques. These cheques are issued in Canadian and United States dollars in denominations of $10, $20, $50, and $100 and in sterling in denominations of £2, £5, £10 and £20. The Canadian dollar travellers' cheque is payable for face dollar value in Canada and in other countries at the current buying rate for bankers' cheques on New York; the sterling travellers' cheque is payable in Great Britain and Northern Ireland and Eire for face sterling value and in other countries at the current buying rate for bankers' cheques on London.

Some of the advantages of carrying Canadian Pacific Express travellers' cheques are—You do not need to be personally identified—your own signature identifies you. You need not necessarily go to a bank to cash them—you can spend them like money in shops, restaurants, service stations, etc. All banks in Canada and thousands of banks in other countries cash them—all express companies cash them. Railways and steamship companies, tourist and sleeping car companies accept them in payment of transportation and other services, and they protect you from loss. If you lose them before having countersigned them you get your money back.

Advertising the Canadian Pacific

Canadian Pacific Express travellers' cheques—are world travel money—they are on sale in 22 different countries—on the Company's Atlantic and Pacific and cruise ships—in Canadian Pacific rail, steamship and express offices—travel bureaus—and most banks in Canada, and they are spendable everywhere.

Aside from the direct earnings from the sale of Canadian Pacific Express financial paper, it is well to remember that on each unit issued, whether it be money order, foreign cheque, foreign postal remittance or travellers' cheque, the name "Canadian Pacific" is brought directly and prominently before the eyes of many people, which is of real merchandising value to all departments. Let all employees, therefore, endeavor to increase the circulation of the name "Canadian Pacific" by improving their knowledge of and recommending the use of Canadian Pacific Express financial paper, to those whom they contact in business and to their friends.

Small Package Express Traffic

While the Canadian Pacific Express handles a large volume of heavy shipments which require fast transportation, improved freight service has diverted a considerable amount of the heavier class traffic from express to freight. As a result a substantial portion of express business today consists of small package traffic.

Low express charges on packages up to twenty-five pounds, with prompt pick-up and delivery service at any address within cartage limits at all principal places are set out in the following schedule, with New Brunswick, Nova Scotia and Prince Edward Island being considered as one province.

Weights per Package	CHARGES IN CENTS PER PACKAGE BETWEEN EXPRESS POINTS IN				
	Same Province	Adjoining Province	Second Province	Third Province	Fourth Province and beyond
1 lb. or less...	20	20	20	20	20
2 lbs.	20	22	24	28	30
3 "	23	30	33	40	43
4 "	28	37	42	52	56
5 "	33	44	51	64	69
6 "	36	49	58	74	80
7 "	41	56	67	86	92
8 "	46	63	75	98	104
9 "	51	69	83	109	116
10 "	56	75	90	120	128
11 "	61	80	97	131	140
12 "	66	85	104	142	152
13 "	71	90	111	153	163
14 "	76	95	118	164	174
15 "	81	100	125	175	185
16 to 20 lbs. incl.....	85	115	150	200	220
21 to 25 lbs. incl.....	90	125	175	225	250

Canadian Pacific employees in all branches of the service are invited to assist the express company in developing small package traffic, by making known to their families and friends that the

express company is in a position to handle small packages at low rates, with the advantage of free collection and delivery at a large number of places, receipts given and taken, privilege of forwarding shipments with charges collect, part paid or fully prepaid, privilege of examination of goods by consignee before payment of C.O.D., when authorized by the shipper, prompt notice to shipper if not delivered, a convenient method of insurance, with speedy delivery and prompt adjustment of claims.

Pick-up and delivery of express traffic by the express company's own employees is a great asset and a policy found most successful in securing express business.

Express vehiclemen have daily contact with regular shippers, as well as with a large number of occasional shippers. Express vehiclemen are highly trained business-getters, an integral and important part of the organization—in effect they are commercial travellers. Express vehiclemen contact shippers frequently several times daily, are on intimate terms with them, and are thoroughly familiar with the routine of the shipping rooms. These shippers are a major influence in the routing of business, control unrouted traffic, and it is a distinct advantage in establishing shipper contact to have the company's employees perform the cartage service. They are on friendly terms with shippers, are on the spot to receive practical demonstration of friendship, and in a position to serve the shipping public more efficiently.

Through experience and training, our own vehiclemen establish in the minds of shippers the desire to provide a personal service and at the same time solicit all available traffic. In addition to direct shipper contact, there is a definite advertising value in performing cartage service with company owned equipment, painted a standard colour and bearing company advertising display cards which not only feature express, but also other railway services.

Another advantage in performing collection and delivery service with our own employees is the large number of traffic tips gathered by vehiclemen in their daily contact with the public, not only for express traffic, but in connection with business for other departments of the railway as well.

Canadian Pacific Express Overseas

In addition to its activities in the local transportation field on this continent, the Canadian Pacific Express Company extends its operations to and from foreign countries throughout the world, and it is well to mention that the same care, attention and rapid service is accorded the movement of express traffic in foreign spheres as has become traditional in the domestic field. In this connection it may be stated that the volume of traffic now moving

by express between foreign countries is not an unsubstantial proportion of the business.

In the early days, the movement of shipments to and from foreign countries by express service was confined chiefly to packages, which, because of their size and nature, could not be properly handled by parcel post, and were a little too small for freight service. It was not long, however, before importers and exporters, and the shipping public generally began to realize that express foreign service was destined to fill a place of much greater importance and usefulness than merely an alternative between parcel post and freight service.

Extending Foreign Markets

The steady expansion of Canadian trade with foreign countries is watched closely by the Canadian Pacific Express Company and facilities promptly increased to take care of the growth. Helpful suggestions and practical aid are extended to Canadian firms wishing to secure an opening in foreign markets, and to foreign firms desiring to enter the Canadian field. Such firms are brought in contact with each other, generally samples are exchanged by express and results contribute in no small measure to the general increase of Canada's foreign trade.

To firms established in overseas trade the reliability and speed of express service makes a strong appeal. Their experience with the manner in which their samples and moderate size shipments are handled usually leads them to forward larger consignments of an urgent nature by the same service, and particularly seasonal goods of all descriptions which have the call for a limited period only, and if delayed in transit must remain on the shelves until the next season. Another advantage of fast express service is that it relieves the merchants from tying up large amounts of capital in stock, as commodities that prove to be fast selling lines may be replenished in short order by stipulating "express service" in their repeat order cables.

In addition to a steady stream of general merchandise, there is a constant flow of special traffic moving in foreign express service. All classes of livestock, including canaries, and song birds of every description, pigeons, swans, parrots, pedigreed fowl, monkeys, beavers, mink, foxes, bears, snakes, dogs, cats, rabbits go to make up the cargo in the express compartments on the steamers, together with commercial documents, precious stones, paintings and works of art. Perishable commodities also augment the list. For such traffic cold storage facilities are provided to handle fresh fruit, game, poultry, fish, eggs, butter and agricultural products for show purposes, in short every variety of shipment that requires speed and just a little more than ordinary attention.

Movements of gold and silver coin and bullion are all made under the auspices of the express company with gold and silver shipments to the value of many millions of dollars being handled annually by the foreign department. The movement of such traffic is largely affected by the variation in the rates of exchange but international disturbances are liable to influence the routing.

During the progress of the war in Ethiopia, large quantities of silver bullion from the Orient destined for England, which formerly moved via the Suez, were diverted via Canada owing to the danger of delay due to congestion in the Suez Canal caused by the heavy movement of war material and warships. The added cost of insurance against war risks via the Suez-Mediterranean route was also responsible for diversion via Canada and North America. As a matter of fact this route, while affording greater security, was also faster. The Canadian Pacific Express Company is particularly interested in the movement of silver bullion to Canada as the company is an authorized depository of the Canadian Commodity Exchange in Montreal and operates safe deposit vaults for storage of the white metal.

To many the advantage of shipping merchandise by express service on the ocean may not be fully appreciated. Express traffic is forwarded exclusively on passenger steamers. They are the last shipments loaded and the first unloaded, being given preferential location and stowed in special express compartments apart from and above the ordinary cargo, so as to be available for immediate discharge upon arrival. To appreciate this advantage one has to merely look into the depths of the holds of the modern liners and see the vast quantities of merchandise stowed therein, row upon row, to a depth of some 60 or 70 feet. When the last of this cargo is unloaded, the spacious wharves and sheds are filled to capacity, and while the unloading is accomplished without any unnecessary loss of time, the express goods, which are always given top stowage, are far on their way to destination by passenger trains before the last of the ordinary cargo is out of the hold.

Trained Staff Abroad

The superior ocean service, however, is only one of the advantages of through express service. Preferential treatment is accorded express shipments from point of origin until the goods are finally delivered at destination. The movement is accelerated at every turn on each leg of the journey. The Canadian Pacific Express Company maintains highly trained staffs in the principal cities throughout foreign countries, who carefully watch the progress of the company's traffic.

Canadian Pacific Express Cartage Department

The Canadian Pacific Express Cartage Department was formed in March, 1937, and was organized primarily for the purpose of bringing about closer co-operation between the express company and the railway freight department, whereby the facilities of the express company might be used to provide a fast pick-up and delivery service to enable the freight department to meet more effectively the competition of other transportation agencies in the movement of freight traffic.

The express company commenced freight cartage work at Ottawa and Sherbrooke on March 1st, 1937, and the service has now been extended to the following points: Nova Scotia—Halifax, Digby, Yarmouth, Kentville, Windsor; New Brunswick—Fredericton, Saint John, St. Stephen, Woodstock, Edmundston; Quebec—Montreal, St. Hyacinthe, Three Rivers, Joliette, St. Jerome; Ontario—Toronto, London, Peterborough, Sault Ste. Marie, Sudbury, Chatham, St. Thomas, Midland, Parry Sound, Guelph; Alberta—Lethbridge; British Columbia—Duncan.

When the freight cartage work was first commenced at Ottawa and Sherbrooke in March, 1937, there was in operation a total of seven motor vehicles. On January 1, 1946, there was a total of 411 motor vehicles and forty-one 20 ft. semi-trailers.

During November, 1945, coordinated railway-highway trucking service was inaugurated in certain areas in Ontario and Alberta to improve and expedite the movement and delivery of merchandise traffic. The routes in Ontario are: Galt—Guelph—Fergus—Elora; Orangeville—Owen Sound; Orangeville—Walkerton; and Orangeville—Teeswater, with freight cars moving nightly from Toronto to Galt and Orangeville with merchandise traffic for handling by truck from these points. The Alberta routes are: Lethbridge—Coutts; Lethbridge—Cardston; Lethbridge—Turin; and Red Deer—Rocky Mountain House with merchandise cars carrying traffic for these areas being loaded at Calgary and Edmonton and moved to Red Deer and Lethbridge on night trains, enabling the trucks to make an early morning start on the routes serving all intermediate points and to return to their headquarters in the afternoon.

To take care of the large number of motor vehicles now operating in Toronto and Montreal, new modern garages have been erected. The Montreal garage will accommodate over 160 vehicles and Toronto garage over 200. In each case these garages are located close to the freight sheds, reducing to a minimum slow, dead mileage through heavy street traffic. These new garages are equipped with the most modern arrangements for taking care of all servicing and repair work. They are also equipped with lunch rooms, showers and locker rooms for the employees.

At points where this work is undertaken it is intended that the express cartage department will perform for the railway all those functions ordinarily handled by outside cartage agents previously employed by the railway company.

While the operation of the freight cartage service is under the control of the express company and has the direct supervision of the express company's officers at the different points, the vehicle equipment used is entirely separate and distinct from the regular express vehicles.

The cartage vehicles are of somewhat heavier type and capacity with bodies specially designed to afford the maximum protection and permit the quick and safe handling of freight traffic at both terminal and shipper's warehouse. They are painted Killarney green and are lettered "Canadian Pacific" on the side panels and carry a Canadian Pacific freight crest on the cab doors. Each vehicle is equipped with a tan tarpaulin lettered "Canadian Pacific" and the whole turnout has a very smart appearance. The vehiclemen contacting the public are salaried employees of the Cartage Department, carefully selected and trained. They are uniformed in blue drill overalls and windbreakers with driver's cap and badge.

This comparatively new service has proved its value to a very great extent—co-ordination of a highly efficient pick-up and delivery service with improved rail service has speeded up freight delivery from origin to destination to a very marked degree.

One of the big advantages of the new system is the development of new business for the company. The vehiclemen are assigned to regular routes which enables them to develop contacts and carry on direct solicitation. The vehiclemen phone in from their routes for pick-up calls every half-hour and the method of recording these calls has facilitated the handling and sorting at the shed. Co-operation between the freight cartage and express vehiclemen and the interchange of information on business moving has resulted in new business for both departments.

The President Comments

In an address to the Canadian Pacific Educational Group at Montreal on March 7, 1939, Mr. Coulter pointed out that, before the inauguration of parcel post, as has been explained earlier in this article, express was the only agency for handling small packages and rendered assistance in building up what is now known as the mail order or catalogue system of merchandising.

"With the introduction of parcel post it was necessary for express companies to adopt package rates comparable with those charged by the post office. Because this small package traffic was

and continues to form a substantial part of express volume, as the post office increased its weight limits or reduced its charges, it has been necessary for the express companies to make similar adjustments.

"In December, 1938, the parcel post limit was increased to 25 pounds and the express companies at that time were required to make substantial reductions in their charges to meet the post office rates. Express rates on packages up to 25 pounds are at least as low as post office rates and in some cases, due to the original express zone system, they are lower, except that the express companies have a minimum of 15 cents."

"To facilitate the handling of these small packages," said Mr. Coulter, "the Canadian Pacific Express Company operates what is called a 'Packer System'. These packages or hampers are made of heavy canvas on a steel frame, with wooden lid. It is the practice to place small packages for principal destination offices into these packers and bill the packer direct on destination office or messenger route. By this system we reduce handling at the larger terminals and transfer points, speed up loading at stations along the line and reduce loss and damage. We experimented with bags, but found that packages in a hamper are protected against pressure when loaded in cars or on trucks. You can visualize what may happen to a small package in a bag especially if it is at the bottom of the pile and supporting considerable weight."

Motor Truck Competition Rates

In connection with heavier shipments or ordinary merchandise, the express company, pointed out Mr. Coulter, has two competitors, the much improved fast freight service with free pick-up and delivery and reduced minimum freight charges, and highway transports. To meet the competition of highway transports, the express companies have adopted what are called "motor truck competition rates" between various points for certain commodities.

Such rates are established from time to time where it is found that traffic, which ordinarily moved by rail, is being diverted to highways. Where the express company can ascertain the rate charged by the transports and provided it will cover our out-of-pocket costs and leave some profit, we adopt the known transport rate.

Through this process the express company has been successful in bringing back to the rails very substantial tonnage. In adopting these motor truck competition rates, Mr. Coulter added, they are put into effect only after consultation with the freight department, the purpose being, of course, to recover traffic from the highways for rail service and not divert it from freight trains to passenger trains.

Why Express Company Is Separately Operated

"Some may ask," concluded Mr. Coulter, "why the express company is separately operated and managed. Over a period of years, a number of railways in the United States experimented with the handling of express without setting up separate organizations and the experiments were abandoned. The controlling reason for the abandonment seems to be that the nature of the business is such that it is not readily absorbed into ordinary railway operations. Where railwaymen think in train-loads of traffic, a successful expressman thinks in packages; in other words, the express business is made up of a multitude of small transactions necessitating the closest attention to detail and, because of the limited revenue per transaction, requires a highly specialized system of handling and accounting that will insure the completion of these transactions with dispatch and at a minimum cost. The Canadian National Express is a department of the railway in name only because it is separately managed as are also the express operations in the United States."

CLASSES OF EMPLOYEES—CANADIAN PACIFIC EXPRESS CO. OTHER THAN OFFICIALS

Chief Clerks
Stenographers
Staff Record Clerk
Money Order Clerks
Money Delivery Men
Money Transfer and Postal Remittance Clerks
Money Order Branch Agency Collectors
Prepay Collectors
Foreign Exchange Clerks
Earnings Book Clerks
Tellers
Cashiers
Assistant Cashiers
Time Clerks
Outstanding Accounts and Payroll Clerks
Prepay Settlement Clerks
Joint Traffic Clerks
Correspondence Clerks
Voucher Clerks
Claim Clerks
Rate Revision Clerks
Abstract and Statement Clerks
Junior Clerks
Office Boys
Waybill Sorters
Waybill Clerks
Outgoing Waybill Distribution Clerk
Depot Chief Clerks
Depot Foremen
Traffic Solicitors
Traffic Inspectors
Custom Clerks
On Hand Clerks
Day Intrip Clerks
Night Intrip Clerks
Tracing Clerks
General Clerks
Telephone Operators
Vehicle Despatcher and Vehicle Telephone Service Clerks
Agents
District Representatives
Garage Mechanics
Assistant Garage Mechanics
Garagemen (Washers and Greasers)

CLASSES OF EMPLOYEES—*Continued*

Ledger Clerks
Commission Checkers
European Traffic Clerks
Record Room Clerk
Over and Short Clerks
Typists
Adding Machine Operators
Calculating Machine Operators
Electric Accounting Accumulating Machine Clerks
Printing Shop Employees
Supply Requisition Clerks
Blacksmiths
Woodworkers
Vehiclemen
Vehicle Helpers
Depot Warehousemen
Porters
Train Messengers
Train Messenger Helpers
Caretakers
Night Watchmen
Elevator Operators

'Sweet' Business for Lethbridge

Taking it by and large, the sugar beet traffic on the Company's Lethbridge division is a "sweet" business from more than one standpoint.

In the first place, the Company hauls in a season approximately 3,000 cars of the succulent roots to the two big factories of the Canadian Sugar Company at Raymond and Picture Butte, Alberta. This is roughly 60 per cent. of the sugar beet movement from farm to factory, since large acreages of the beets are situated so close to the factories that it is more economical to send them in by truck or wagon.

Not only is there freight on the beets in their movement to the factory, however, but the Company gets the movement of the manufactured sugar to market—and that is to all parts of the prairie provinces.

Nor is that all, for there is an interesting sideline to the southern Alberta sugar beet industry. Pulp, or residue from the roots after they have been processed to recover their sugar, is made into by-products, one of which goes by the name of Betalasses, to be fed to livestock. It is estimated that 60,000 lambs and 15,000 head of cattle are fattened and "finished" on these sugar-beet by-products each year. The Company thus ships each season into the sugar beet area large quantities of livestock for fattening and these animals are again shipped out to market as far away as the east coast of the United States.

. . . This means (in 1944) that the movement (of sugar beets) to the factories is going to work out finally at close to 350,000 tons of which the Company will have handled close to 200,000 tons or nearly 3,500 cars.—*It's Sweet Traffic* (Staff Bulletin: January 1945).

COMMUNICATIONS DEPARTMENT

(See special article in the volume "Factors—Railway and Steamship Operation")

By W. D. NEIL, *General Manager of Communications*

Pole mileage, 1886	4,525
Pole mileage, 1945	17,732
Miles of wire, 1886	14,508
Miles of wire, 1945	191,588
No. of telegrams accepted for transmission, 1945	6,627,511
No. of cablegrams accepted for transmission, 1945	597,474

Its charter, granted in 1881, authorized the Company to transmit messages for the public by telegraph or telephone and to collect the tolls for so doing. Its charter also granted the right of using any improvement that might be invented (subject to the rights of patentees) for telegraphing or telephoning and any other means of communication that might be deemed expedient by the Company at any time thereafter.

The privileges so granted to the Company were first exercised in 1882 when commercial telegrams were accepted for transmission over newly-constructed pole and wire lines, paralleling the Company's rail lines, as they were extended between points in western Canada west of Fort William. Upon the completion of the Company's transcontinental rail and wire lines in 1885, the first all-Canadian telegraph service was established between the Atlantic and Pacific oceans. Previously all telegrams between eastern Canada and points in British Columbia were transmitted through the United States. As a natural corollary of these developments Canada was connected directly by deep-sea cable with Australia in 1901, thus binding together the far-flung parts of the Empire by a speedy medium of communication with the mother country, the trans-Atlantic cables having been operated successfully for many years.

In the intervening period between 1882 and the present time, the Company has greatly expanded the number and variety of its communications services. Its wire lines reach and serve almost all points of importance throughout Canada. Whereas in 1882 the Company's wire lines were used for the despatching of trains and the transmission of commercial telegraph messages only, the continuing modernization of the system has so altered and improved the Company's position in respect of its communications activities that, in addition to performing these functions, it is presently operating or providing the facilities to others to operate, long distance telephone, radio broadcast transmission, and other important services on a transcontinental basis.

All of its main and many of its branch line trains are dispatched by long distance telephone. The mileage of its telephone lines, used exclusively for the business of the Company, is greater than any other railway in the world. In short, the Company not only has made the fullest possible use of the privileges granted to it under its charter, but it has also kept itself abreast of all modern developments and achievements in the art of wire communications. In so doing it has justified the faith, vision and enterprise of those who conceived it.

Through its extensive world-wide connections it provides a modern and efficient telegraph service to and from all points in the United States and radio and cable service to all overseas countries. Its exclusive British Empire connections by both cable and wireless are especially important to the people of Canada since it was by reason of this company's close alliance with other communications interests that the present low intra-Empire preferential telegraph rates were introduced in 1939.

Many of the principal cities in Canada are connected directly by wire with important cities in the United States. Direct telegraph circuits between cities in Canada and cities in England, Australia and Newfoundland are operated 24 hours daily. In conjunction with connecting cable systems operating between Great Britain and Canada on the one hand and between Canada and Australia on the other, direct operating circuits are maintained 24 hours daily between London and Sydney, the Company's transcontinental wire lines supplying an important link in this undertaking, popularly known as the All-Red Route between Great Britain, Australia and New Zealand.

OFFICERS, SUPERVISORY STAFF AND EMPLOYEES OF THE COMMUNICATIONS DEPARTMENT

Accountant
Agent
All Night Chief Operator
Assistant Agent
Assistant Accountant
Assistant Cashier
Assistant Chief Operator
Assistant Engineer
Assistant General Manager
Assistant Manager
(Eastern Lines)
(Western Lines)
Assistant Printer Supervisor
Assistant Superintendent
Assistant Telephone Supervisor
Assistant Transmission Engineer
Assistant Wire and Traffic Chief
Automatic Typist
Branch Agent
Broadcast and Carrier Inspector
Broadcast Attendant
Broadcast Supervisor
Cable Tester
Cashier
Chief Clerk
Chief Collector

Chief Delivery Clerk
Chief Draughtsman
Chief Engineer
Chief of Tariff Bureau
Chief Operator
Clerk
Climber
Collector
District Accountant
District Engineer
Draughtsman
Equipment Engineer
Equipment Tester
Foreman Installer
Gang Foreman
General Agent
General Inside Plant Engineer
General Outside Plant and Standards Engineer
General Transmission and Foreign Wire Relations Engineer
Groundman
Inspector
Inspector—Automatic Plant
Installer
Lineman
Messenger
Morse Telegrapher
Night Chief Clerk
Night Chief Operator
Night Telephone Supervisor
Office Boy
Plant Records Supervisor
Printer Traffic Supervisor
Repeater Attendant
Repeater Chief
Service Message Supervisor
Special Studies Engineer
Stenographer
Superintendent
Superintendent of Broadcast
Superintendent of Traffic
Supervisor Special Services
Tariff Supervisor
Telephone Operator
Telephone Supervisor
Ticker Supervisor
Timekeeper
Traffic Chief
Traffic Solicitor
Transmission Engineer
Typewriter Mechanic
Wire Chief

Train on Wooden Rails

The operation of a train on wooden rails was proposed in 1847 by the St. Andrews and Quebec Railroad Company which had been incorporated in 1836.

This was the line which sent a delegation to London with a petition for King William IV and received a grant of £10,000 towards the surveying of a route.

Ten years after its "wooden railroad" plan was advanced (but never put into effect) the St. Andrews and Quebec was absorbed by the New Brunswick and Canada Railway and Land Company, in 1857, and later became part of the Canadian Pacific as a link in Canada's first transcontinental road.—*Staff Bulletin.*

TYPES OF LOCOMOTIVES

By H. B. BOWEN, *Chief of Motive Power and Rolling Stock*

The steam locomotive of today represents over a century of improvement. Step by step, it has been developed, from the elementary units of Trevethick and Stevenson, to become the powerful, efficient locomotives upon which the land transport of the world depends.

During the long period of railway operation, desire for increased power and greater economy has brought about the development of many different types of locomotives, each especially suited to meet particular conditions. This evolution from the basic types has been most marked in the United States and Canada, as in these countries ample loading gauge dimensions of approximately 16 feet in height, by 11 feet in width, have permitted designers to advance in the construction of large locomotives suitable for movement of the heavy trains characteristic of this continent.

Symbols Classify Engines

Symbols, names and letter classifications, based upon the wheel arrangement of the locomotive, exclusive of tender wheels, are used for identification of locomotive types. The various basic types have been produced by many combinations of truck and driving wheels, each wheel arrangement becoming an individual type. This method of identification has become universal, and is applied to locomotives of the Company as on accompanying diagram.

From this diagram it will be noted that each group of engine truck wheels, driving wheels and trailing truck wheels is separated, with a symbol representing each group.

If no trucks are used, as in switching locomotives, their absence is shown by the symbol 0. For example, a six-wheel switcher is designated 0-6-0, the centre digit representing the six driving wheels.

In addition to symbols, type names, are used, being usually assigned to the first locomotives built with a new wheel arrangement, and are later generally adopted to signify this type.

Also, for convenience, railway companies identify their own types of locomotives by a series of letter classifications.

For example, a locomotive having a four-wheeled engine truck, four driving wheels and a four-wheeled trailing truck would be symbolized by the figures 4-4-4. The Company has a number of locomotives with this wheel arrangement, to which was given the name "Jubilee" type in commemoration of the 50th anniversary of the Company's operation. The letter classification of this group is "F", which in addition carries a number, and a sub

letter, indicating a sequence of construction orders, or of minor changes in design, the final classification becoming F-1-a, F-2-a, etc.

For many years a two-wheeled engine truck was generally used in freight service, while locomotives having a four-wheeled engine truck were standard for passenger service. Today, the advent of long engine runs and higher freight train speeds, has led to the extension of application of four-wheeled engine trucks to locomotives used in freight service, or interchangeably in either service.

Trailing trucks having two wheels, have been almost entirely superseded by trucks having four wheels, as the weight of locomotives has increased. A few six-wheeled trailing trucks have been applied.

It will thus be apparent that this system of identification not only serves to cover various wheel arrangements, but also to indicate the approximate age of the type, the service for which it was designed and the size and power of the unit.

While an increase in the number of wheels has brought about construction of successively larger and heavier units, there has also been a need for small modern locomotives to meet specific traffic and operating needs, as exemplified in the introduction by this company of modern 4-6-2 Pacific type, Class G-5-b locomotives. These engines are designed to replace older types of motive power, and have been given a weight distribution on the wheels which permits them to be used not only on main lines but on most of the branch lines of the Company. Ample boiler capacity and strict attention to details have been primary considerations. The principal dimensions of several types of locomotives used by the Company are given at the end of this article.

Tremendous Advances in Locomotives

Development of the steam locomotive during the past 25 years has resulted in increased hauling capacity and greater economy. This in turn has produced a reduction in the number of locomotives required in the inventory. During the same period, there has been a considerable increase in train speed; in total tonnage moved; in availability of locomotives and in locomotive mileage. This has been accomplished with a great reduction in fuel consumption per ton of freight moved one mile, while the cost of maintenance per locomotive mile has remained almost constant, as shown on the attached diagram.

Record Locomotive Performances

Probably the Company's best known locomotives are 4-6-4 "Royal Hudson" locomotives, (Classes H-1-c-d-e), which are

so named by permission of the British Government to commemorate the visit of the King and Queen to Canada in 1939. They are numbered from Engine 2820 upwards, and bear a crown on the running board scarf plate at each side.

The Royal Train was hauled from Quebec City to Vancouver by Locomotive No. 2850. This engine was most attractively finished, having a boiler jacket of highly polished stainless steel, a general painting scheme in royal blue and with decorations in silver and gold. On the front end of the streamlined smokebox was mounted the Royal Arms; the side of the running boards bore the Imperial Crown; the Company crest appeared beneath the cab windows, and on each side of the tender was displayed the Royal Arms on a large plaque.

The performance of this locomotive was remarkable, since during a journey of approximately 3,100 miles, no mechanical trouble occurred, and the engine was assisted only over the steepest grades of the Canadian Rockies.

Other engines of this class have given remarkable performance records. Locomotives 2838, 2839, 2840 and 2841 on the Toronto-Fort William run averaged in excess of 400 miles per day in ten months of continuous service. Locomotive 2858 has averaged 534 miles per day during nine months of continuous service, and Locomotive 2859 averaged 596 miles per day for eight continuous months of service.
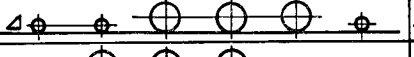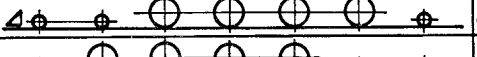
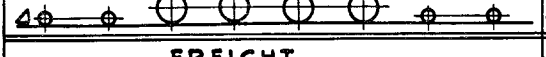
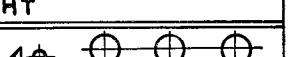
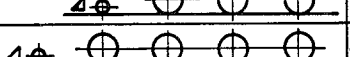
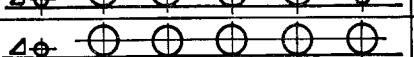
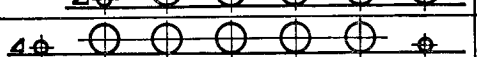
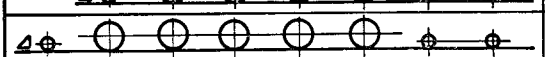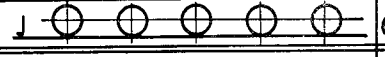
Outstanding records have also been made by other classes. For example, 4-8-4 Northern Type Class K-1-a Engines 3100 and 3101, on the Montreal-Toronto night run, averaged 350 miles daily for 12 continuous months of service.

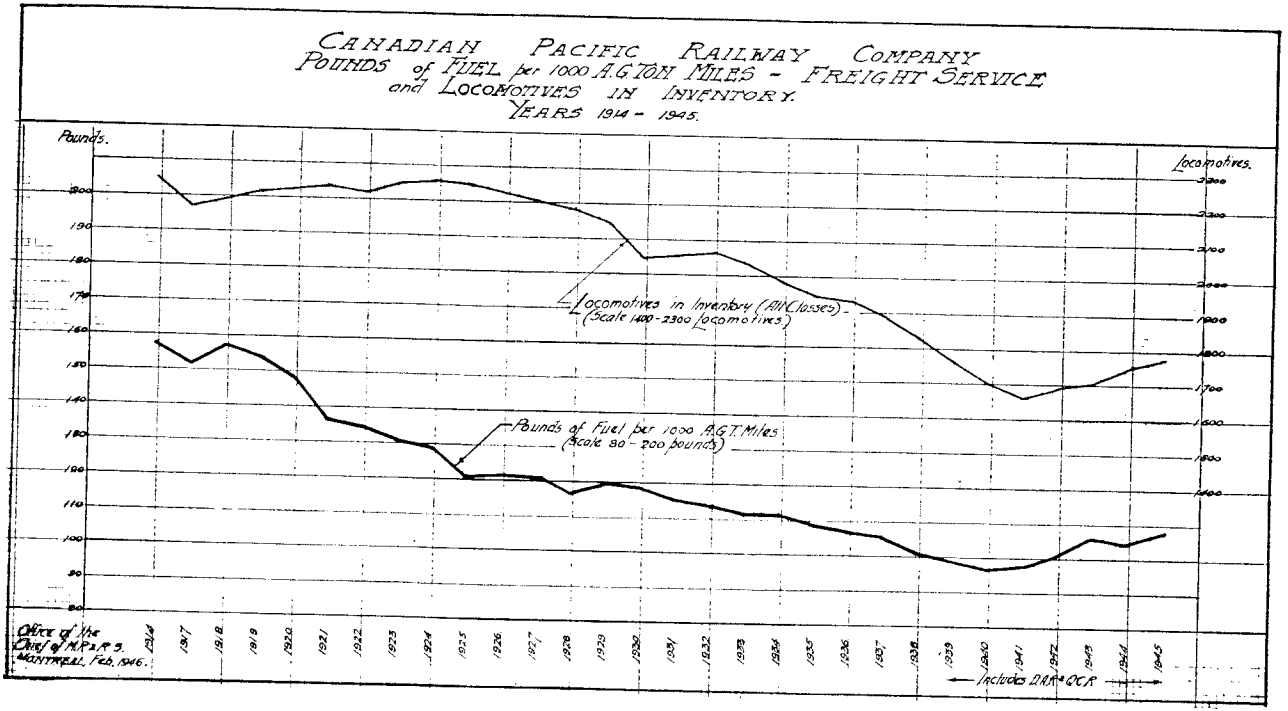
Diesel Locomotives

In 1943 the Company introduced diesel-electric locomotives for switching service in units of the 0-4-4-0 type, 1,000 H.P., equipped with one six-cylinder supercharged diesel engine, furnishing current to four driving motors. They have an overall length of 45′ 5¾″, total weight of 230,000 lbs. and a starting tractive effort of 69,000 lbs. Twenty-eight of these engines were in service in 1945.

Further development of diesel-powered locomotives is in progress, intended to advance the availability and economy of this modern type of motive power.

TYPES OF LOCOMOTIVES

WHEEL ARRANGEMENT	TYPE SYMBOL	NAME OF TYPE	CAN. PAC. CLASS
PASSENGER			
	4-4-0	AMERICAN	A
	4-4-4	JUBILEE	F
	4-6-0	TEN-WHEEL	D-E
	4-6-2	PACIFIC	G
	4-6-4	HUDSON	H
	4-8-2	MOUNTAIN	I
	4-8-4	NORTHERN	K
FREIGHT			
	2-6-0	MOGUL	J
	2-8-0	CONSOLIDATION	L-M-N
	2-8-2	MIKADO	P
	2-10-0	DECAPOD	R
	2-10-2	SANTA FE	S
	2-10-4	SELKIRK	T
SWITCHER			
	0-6-0	SIX-WHEEL	U
	0-8-0	EIGHT-WHEEL	V
	0-10-0	TEN-WHEEL	W
DIESEL			
	0-4-4-0	—	-


CANADIAN PACIFIC RAILWAY COMPANY
POUNDS of FUEL per 1000 A.G.TON MILES - FREIGHT SERVICE
and LOCOMOTIVES IN INVENTORY.
YEARS 1914 - 1945.
Pounds.
Locomotives.
Locomotives in Inventory (All Classes) - (Scale 1400 - 2300 locomotives)
Pounds of Fuel per 1000 A.G.T. Miles (Scale 80 - 200 pounds)
Includes D.R.A. & O.C.R.
Office of the Chief of M.P.S.R.S. MONTREAL, Feb. 1946.

The principal dimensions of the eight most modern C.P.R. classes are as follows:

Wheel arrangement	0-8-0	4-4-4	4-6-2	4-6-2	4-6-4	4-8-4	2-8-2	2-10-4
Can. Pac. Class	V-5-a	F-2-a	G-5-b	G-5-h	H-1-e	K-1-a	P-2-j	T-1-b
Road Nos	6600 to 6609	3000 to 3004	1202 to 1231	2418 to 2462	2860 to 2864	3100 to 3101	5437 to 5461	5920 to 5929
Tractive effort, lbs	59,500	26,500	34,000	45,250	*57,250	*72,800	57,500	*89,900
Boiler pressure, lbs	250	300	250	275	275	275	275	285
Cyls., dia. & stroke	22½" x 32"	17¼" x 28"	20" x 28"	22" x 30"	22" x 30"	25½" x 30"	22" x 32"	25" x 32"
Dia. driving wheels	58"	80"	70"	75"	75"	75"	63"	63"
Firebox, length	114"	114 1/16"	94⅛"	111 1/16"	131 1/16"	140 3/16"	120 1/16"	140 3/16"
Firebox, width	84¼"	70 3/16"	69⅞"	84 3/16"	88⅞"	96"	84¼"	96"
Grate area, sq. ft	66.7	55.6	45.6	65.0	80.8	93.5	70.3	93.5
Tube and flue heat. surf., sq. ft.	2,575	2,601	2,377	2,885	3,465	4,509	3,126	4,642
Firebox and arch tubes	242	232	199	291	326	422	310	412
Superheating surf., sq. ft	778	1,100	744	1,475	1,542	2,112	970	2,032
Combined heat. surf., sq. ft	3,595	3,933	3,320	4,647	5,333	7,043	4,406	7,086
Weight on drivers, lbs	269,000	121,000	151,000	199,600	*249,000	*308,500	248,400	*367,500
Total weight, eng. & tdr	468,500	461,500	417,500	580,500	648,600	728,000	577,000	731,000
Total length, eng. & tdr	74' 0⅜"	79' 10⅛"	76' 4⅛"	87' 5¼"	90' 10"	97' 5⅛"	88' 7½"	97' 10⅝"
Coal capacity, tons	12	12	14.5	18	(Oil) 4,100 Imp. Gals.	21	18	(Oil) 4,100 Imp. Gals.
Water capacity, Imperial Gallons	8,000	7,000	8,000	10,000	12,000	12,000	10,000	12,000

*With booster.

RECONDITIONING OF LOCOMOTIVES

By J. R. MACKEN, *Supervisor of Costs and Labor Schedules in the Office of the Chief of Motive Power and Rolling Stock*

The steam locomotive has a working life of from 30 to 40 years. This span of life is determined by the boiler as all other parts are renewable, and through periodical inspections and general repairs locomotives are maintained in safe and serviceable condition for the life of the boiler. The longevity of the active period of a locomotive contrasts remarkably with the comparatively brief life of some other forms of motive power.

Even in the early stages of the design of a locomotive, careful attention is given to the arrangement, location and construction of each detail, to the end that accessibility and facilities for renewal of wearing parts may be provided.

It is the purpose of this article to outline the procedure by which the re-conditioning of a locomotive is effected.

Selection of Locomotive for Shopping

The selection of a locomotive for shopping is determined by several considerations, of which the factors are the mileage accumulated since previous general repairs, condition of boiler and firebox, date of next internal inspection and tests, condition of machinery, and operating requirements which may demand specific classes of power. Accumulated mileage since the previous general repair may be varied in the case of individual locomotives but in general a passenger locomotive would average, between shoppings, 125,000 miles; a freight locomotive 80,000 miles; a switching locomotive 65,000 miles. The locomotive foreman of the roundhouse at which an engine is maintained, has a record of the mileage made by each locomotive, with a general summary of its condition, particularly as regards boiler tubes and firebox, machinery and tires. His recommendations, being transmitted to the division and district master mechanics, are used as a basis for the preparation of shopping lists, covering the engines which it is proposed to shop. These lists, made up each month, cover a period of three months in advance. They are then forwarded to the Superintendent of Motive Power, who makes the final decision as to which engines will be recommended for shopping.

Assuming the repairs will be made at Angus Shops for Eastern Lines locomotives. A work report is submitted to cover the necessary visible repairs required and authority is given by the Chief of Motive Power and Rolling Stock for the movement of the locomotive to the shop. Upon arrival at Angus examination of locomotive is made and an estimate is submitted to the Chief of Motive Power and Rolling Stock, giving particulars of the necessary repairs and the estimated cost to complete same.

The first operation is to place the locomotive on a coaling pit. Any coal remaining in the tender is removed, grates cleaned, ashes dumped, fire brick arch removed from firebox and all water drained from the boiler and tender.

From the coaling pit the engine is moved to the shotblast house, where any pitted and scaled paint surfaces are thoroughly cleaned by means of air-pressured shotblast. This cleaning includes wheels, cab and tender when necessary, smokebox and jacket and any other parts which require complete removal of old paint before the surface is suitable for re-finishing. For protection against rusting, surfaces which have been shotblasted are given a priming coat of black paint, after which the engine is taken to the erecting shop for stripping.

Upon arrival at the erecting shop, it is placed upon a stripping track and stripping operations commenced. The tender is uncoupled from the engine and taken to the tender shop.

The preparation of the locomotive for lifting from the wheels, requires the removal of all guard stays, main and side rods and brake gear. While this is in progress, smokebox front, grates, headlight, handrails, dynamo, steam and safety valve casings and automatic fire door are removed by the erecting shop gang. The jacket shop removes firebox and cylinder jackets; the tank shop removes the netting and plates from the front end and commences to strip the ash pan. The carpenter shop removes firebox lagging, so that firebox may be properly examined, when being tested, and cab seats, sashes and arm rests are removed. The steamfitter shop strips the pipes for test. The engine is lifted off the wheels by two cranes and is carried down the shop and placed upon the pit where repairs are to be made.

To ensure complete repairs, and that all details will be reconditioned and returned to the erecting shop at the proper time for assembly, a definite system of scheduling is in effect at Angus. When removed from the locomotive, all parts are sent to the various shops responsible for them, each of which has a definite date for the return of the parts, ready for application.

Assuming, for example, that it is desired to repair the locomotive on an 18-day schedule, the progress of the principal work would be as follows:

1st day—Stripping.
2nd day—Stripping, hydro test of boiler.
3rd day—Stripping completed and all parts cleaned and delivered; tube removal commenced.
4th day—Tube removal completed; driving box brasses and wearing faces removed; valves and valve motion cleaned and tested; main and side rods tested.

5th day—Old cylinder and valve bushings removed; boiler scaled and smokebox cleaned; new driving box brasses in; superheater header examined; frames repaired.

6th day—Cylinders repaired; driving boxes drilled; superheater pipes examined; motion work repairs commenced; dynamo cleaned.

7th day—Cylinders bored; boiler patches applied; tank, tender frame, engine truck and cab repairs commenced; dynamo repairs commenced; cab cleaned and primed.

8th day—Frame repairs completed; staybolts applied and tubes welded; numerous frame castings completed; superheater pipes finished; tender cleaned and primed.

9th day—Guard stays up and shoes and wedges lined up; tubes cut to length and tested; pumps repaired; superheater pipes fitted; cab doors and sashes completed; first coat of black engine surfacer applied.

10th day—Boiler mountings applied; tubes rolled and beaded; arch tubes, crossheads, guide bars, dry pipe, etc. applied; spring gear delivered; inside of cab painted.

11th day—Dry pipe tested; tubing completed and boiler tested; wheels and motion parts delivered; headlight repaired; dynamo tested; paint rubbed down on tender and cab.

12th day—Engine wheeled and trucked; dry pipe and superheater headers applied; valves, steam chest covers and cylinder covers applied; tender brake details cleaned and tested; boiler and cylinders lagged; coat of black engine finish applied to cab and tender.

13th day—Main and eccentric rods delivered; stand pipe applied; superheater pipes applied and tested; jacketing commenced; lettering, numbering and striping on cab and tender completed.

14th day—Valves set; steam and exhaust pipes applied; varnish cab and tender.

15th day—Engine blown through; pistons, etc. delivered; tender and tender truck repairs completed; brake gear delivered.

16th day—Grates, fire brick, arch, pistons, brake gear, ash pan and cab doors applied; tender mounted; 2nd coat of varnish on tank.

17th day—Ash pan and gear applied; smokebox front, smokestack, netting, main and side rods, cab sashes applied; general paint work commenced.

18th day—Safety valves set and sealed; all piping and light plate work completed, brakes tested and set; tender coupled to engine; dynamo and wiring tested; paint work finished.

The engine is now ready for trial trip, after which a thorough inspection is made and any necessary adjustments made before the engine is delivered for service.

Control of Costs and Production

In undertaking the repair of a locomotive it is of course essential that the relation of costs to production be controlled at all times. In order that this may be attained a system of records and a knowledge of the costs of individual jobs must be depended upon to permit of making locomotive repairs at a minimum of expense consistent with thorough workmanship.

The operation of this system at Angus is based upon studies of time values, set and recorded for each job or operation.

When an engine is shopped for general repairs, the foreman of each department is required to make a personal inspection and record of the work which must be handled in his department. This report is analysed; then, using the time values already referred to, the cost of labour can be accurately and readily determined.

By the maintenance of up-to-date records of material values, the cost of material required for replacement of worn or damaged parts can be also determined.

When the labour and material costs have been itemized, a final cost estimate is prepared, so that the expenditure required to recondition the locomotive is known before the money is spent. This system makes it possible to regulate output in proportion to money appropriated for making repairs, also to compensate for any extraordinary expenditures above the estimates.

The system of records in use permits control of costs in each shop as the work progresses. If an increase above the estimated cost is noted, the foreman of the shop involved is called upon to account for the increase. If it is unavoidable, revision of the estimated cost total for the locomotive can be made at once. In other words, it is possible each day to determine any variation in costs from the preliminary estimate and to make adjustments to meet any deviation from the anticipated routine.

Progress sheets are maintained which tell at a glance the status of the repair work in every shop. Should any delays occur in the output of a shop, it can be located and corrected in time to prevent interference with the schedule of the locomotive repair under consideration.

SHOP SYSTEM

By H. B. BOWEN, *Chief of Motive Power and Rolling Stock*

The Angus Shops, Montreal, under the supervision of the Chief of Motive Power and Rolling Stock, is the main repair plant for the construction and maintenance of the Canadian Pacific Railway's 86,162 units of motive power and rolling stock. In the west, at Weston Shops, Winnipeg, and at Ogden Shops, Calgary, are maintenance plants for motive power and rolling stock mainly assigned to operation on the western lines of the Company.

The Angus Shops are situated in the north-east end of Montreal on a plateau overlooking the St. Lawrence River. They cover 200 acres with a shop floor space of 38 acres and 50 miles of railway tracks within the fence.

The Angus Shops were named after the late R. B. Angus, one of the original Canadian Pacific directorate. They consist of 23 separate buildings comprising a locomotive repair shop, four passenger car repair shops contained in two larger separate buildings with a transfer table operating between them, two large freight car repair buildings, one housing mainly machinery units used in steel freight car repairs or construction work and the other the assembly line for heavy repairs to so-called "house" cars more commonly known as box, refrigerator, stock and similar. A cast iron wheel foundry, a general castings foundry, a frog and track switch repair shop, a bolt and nut manufacturing shop, a very large blacksmith shop, a truck repair shop, a car metal working machine shop, a large wood mill, an electrical repair shop, a cabinet and varnishing shop, a brass machine and tinsmithing shop, an upholstery repair shop, a very large general stores, a plant hospital and police building and a modern general office and administration building. There is also a Test and Inspection Department and open freight car repair tracks accommodating some 1000 freight cars. A new and modern scrap and reclaim dock, a shot blast building, replacing the former sand blast plant used for cleaning steel equipment and a large new locomotive boiler repair shop are now under construction at the Angus plant.

Well-Equipped Power Station

The Angus Shops has its own power station. This is a steam plant equipped to convert high tension electric current to commercial voltages for use at the machines and for the lighting, etc., of the different shops. At the power station also is developed the necessary pressure for compressor air line service and for oil feed for the oil furnaces at the blacksmith shop, steel car and other shops. Here also is developed the steam necessary for the heating of the various buildings.

There is a very large stores department at Angus wherein is housed most of the great quantity of materials currently used at the different shops and as a central point for Eastern Lines generally. There is a hospital unit, fully equipped, with a qualified medical practitioner always in attendance. There is an ambulance service and a first aid attendant on duty on each 8 hour shift. In 1942 a blood donor centre was opened in connection with Red Cross war services. There is a very efficient fire brigade with a fire engine and several pumps and a 24-hour standing fire protection force. Angus has its own police and security force which is a section of the Company's well-known police department.

The Angus Shops are mainly used for the maintenance of locomotives, passenger cars and freight cars. Approximately 30 classified locomotive repairs and five new locomotives can be turned out monthly at the locomotive shop. One thousand passenger cars are shopped annually at the passenger car shops and in addition there is capacity for an output of 10 new passenger cars per month. The freight car shops have a capacity for 100 shop repairs per day and 15 new freight cars, and together with the freight repair tracks, now turn out around 15,000 freight car repairs per annum. The wheel foundry has a capacity for 320 cast iron wheels per day and turns out between 70,000 and 80,000 cast iron wheels per annum. The general casting foundry has a capacity for close to 19 tons of castings per day and turns out between eight and nine million pounds of castings per annum.

There are lunch and rest rooms and shop canteen service. The athletic grounds nearby comprise 160,000 square feet of area. There is a well equipped sports building close by. During 1945 more than 7,600 persons were employed at Angus Shops, Montreal.

Vital Wartime Role

At the outbreak of World War II, the company placed the facilities of the Angus Shops at the disposal of the Canadian Government for the utilization of all available space, equipment and facilities in the prosecution of the War. In June, 1940, an order for the construction of 300 18-ton Valentine military tanks was placed upon Angus Shops by the Department of Munitions and Supply, acting on behalf of the Canadian Government, this order being subsequently extended to a total of 1420 tanks of this class. The production rate was three per day limited by available supply of the necessary materials. In addition to the manufacture of Valentine tanks, orders were placed upon Angus Shops for the building of marine engines for patrol defence vessels of the Royal Canadian Navy and for the manufacture in part, or in entirety, of many other different classes of military and naval ordnance.

Weston Shops and car service yards at Winnipeg, cover an

area of 284 acres, and comprise 26 buildings with an aggregate floor space of 16 acres.

Weston Shops are the main locomotive and car repair shops for western lines. The buildings comprise locomotive erecting and machine shops, boiler, tender and wheel shops, blacksmith shop, coach shop, general freight car repair shop, pattern shop, railway frog assembly shop, wood mill, general casting foundry and power house. The locomotive shops have a capacity for 25 classified locomotive repairs per month. The freight car shops have an output of 800 repairs per month and the coach shops 40 front end passenger cars per month. The shops employ between 2,000 and 3,000 men.

Ogden Shops are situated four and a half miles from Calgary, and, after Weston Shops, are the largest repair shops on Western Lines. Ground was broken for the Ogden Shops, April 1st 1912, and they were named after the late vice-president of finance, I. G. Ogden. These shops cover an area of 213 acres with shop floor space of 10 acres and employ betwen 1,200 and 1,500 men. The shops comprise locomotive and freight repair shops and include erecting, boiler, machine, blacksmith, tender and wheel shops. A pattern shop, wood mill, freight car repair shop and general castings foundry. The locomotive shop has a capacity for 25 classified locomotive repairs per month and the freight car shops a capacity for 500 repairs a month. A small number of passenger front end cars (coaches and baggage cars) is also handled at these shops.

The Company's shops on Western Lines were also surveyed with a view to utilization for war material production and it was arranged to assign the greater part of the locomotive shops at Ogden for use as a naval gun manufacturing plant. This undertaking necessitated the transfer of the regular repairing of locomotives at this point to other smaller shops on western lines and entailed considerable expansion both in buildings and facilities at Alyth, Alberta, and at Revelstoke, British Columbia. It also entailed the moving of a large part of the machinery from Ogden locomotive shop to other points on western lines. On the 11th of January, 1941, an order for naval guns and gun mountings was placed upon Ogden Shops by the Department of Munitions and Supply, acting on behalf of the Canadian Government. This order necessitated the building up and training at that point of a force of nearly 2,000 mechanics, specialists and their helpers. Several additional war contracts were placed on this shop. At the conclusion of the war and the cancellation of munitions contracts the Ogden Shops were rapidly returned to motive power maintenance, and on October 25, 1945, the first general locomotive repair, since reconversion, was returned to service at these shops.

In addition to the three main shops, or centres, referred to above, there are smaller locomotive repair shops located at five points on

eastern lines, namely, McAdam (New Brunswick); West Toronto (Ontario); North Bay (Algoma); Lyndonville (Vermont), and at Kentville, Nova Scotia. There are six points on western lines where smaller locomotive repair shops are maintained, namely, Fort William (Manitoba); Brandon (Manitoba); Moose Jaw (Saskatchewan); Alyth (Alberta); Revelstoke (British Columbia), and Vancouver (British Columbia).

Castle Mountain Renamed Mount Eisenhower

In expression of Canada's gratitude to Dwight D. Eisenhower, who as Supreme Commander of the Allied Armies in Europe, had directed the destinies of millions of men in World War II, Castle Mountain in the Canadian Rockies was renamed Mount Eisenhower. The announcement was made in January 1946, by Prime Minister Mackenzie King at a luncheon in Ottawa given in honor of General Eisenhower's visit to the Capital.

The massive 9,380 foot Rocky Mountain giant, familiar to every tourist who has taken the road from Banff to Lake Louise, is eight miles long and has been scaled but few times. The first ascent was made in 1884 by a professor of the University of Toronto who viewed the glittering majesty of the Bow Valley from the height known as the Tower jutting above the main mountain.

Mount Eisenhower was named by Sir James Hector as Castle Mountain during the Palliser expedition of 1857, because of its resemblance to a medieval castle.

In early days stories from the Stonies, an Indian tribe that frequented the territory, revealed many native superstitions pertaining to the mountain. Legends were recounted of the Chinook winds, the story of the blind daughter of the South Wind searching through the Bow valley from her home on Mount Eisenhower for the parent she lost when the North Wind of winter carried him away.

Renaming of Castle Mountain recalls the well-known desire of Sir William Van Horne to commemorate forever the names of great men in Canadian History and the Canadian Pacific Railway, of which he was the second president.

On inspection tours to the end of steel during the period the line was under construction in the Rockies, Van Horne would forage ahead of his crews. During these trips he conceived the idea of naming prominent peaks on the line.

He paid tribute thus to Sir John A. MacDonald, the Prime Minister of Canada, who was responsible for the political conception of the rail link with the west coast; Sir Charles Tupper, Donald A. Smith, later Lord Stratchcona, who drove the last spike to complete the line, and Lord Mount Stephen, first president of the Canadian Pacific.—(*Staff Bulletin, February, 1946*).

RECONDITIONING OF PASSENGER CARS

By H. H. Boyd, *Asst. Chief of Motive Power and Rolling Stock*

Quarterly for Eastern Lines and annually for Western Lines, a condition report is forwarded for each passenger car in service to the Office of the Chief of Motive Power and Rolling Stock, Montreal. This condition report indicates condition of (1) platforms and draft gear, (2) roof, (3) upholstery, (4) paint condition, with a general condition summary under the three headings "Good", "Fair" and "Poor". In the Office of the Chief of Motive Power and Rolling Stock, at Montreal, is a detailed record for each passenger car, showing where last shopped, date, cost and specific repair made at previous shopping. On the accumulative evidence of these combined reports, and in collaboration with the General Superintendent of Transportation, the car is ordered to Angus, Weston or Ogden repair plants for shopping. Arrived at the shop, the car is inspected by the painter foreman as to class of paint job required. Paint repairs are classified as "A", "B" and "C". An "A" repair is a general calling for a heavy outside job, "B" a medium repair and "C" a light repair. This symbol classification is further defined by the prefix "1" to denote a heavy exterior repair, "2" a medium exterior repair and "3" a light exterior repair. The numerals are again used as a suffix to denote interior repairs required so that "1-A-1" would denote a heavy repair job inside and outside and so on.

All Trimmings Removed

The first operation at the shop is the stripping of all removable trimmings, such as parcel racks, fire extinguishers, berth fronts, headboards, etc. These trimmings are distributed amongst the various ancillary shops, the brass work to the brass finishing shop, the water tanks to the tinsmiths, etc. The electricians remove the batteries, electric fixtures, bells, etc. The batteries are taken to the electrical shop where they are washed out, worn parts removed, refilled with acid, and placed under test. The electrical fixtures go to the bench where wiring is examined and repaired or renewed and the fixtures, if necessary, are sent to the brass finishing shop to be repaired, replated, etc. The car seats and upholstery go to the upholstery shop to be blown, cleaned and repaired. The car is washed inside and outside if an "A" paint job and a steel car is sent to the shotblast house to be thoroughly cleaned externally.

The car is then moved to the coach shop, under shop trucks, where the repairs to the body, etc., will be made. Here both the interior and exterior are inspected by the interested shop foremen, and "marked up" for necessary repairs, such as scraping, sand-

ing, patching, removal and renewal of defective material.

Passenger cars are repaired on a regular schedule basis. If an "A" repair job, the schedule will be as follows:

1ST DAY:

All upholstered seats, electric lighting fixtures, batteries and other movable parts, along with air conditioning equipment and trucks, are removed and sent to the various departments for a complete overhauling and inspection.

2ND DAY:

The air conditioning ice boxes are tested while car is being washed inside.

3RD DAY:

Exterior:—Shotblasted and coat of protective paint applied.

4TH DAY:

Interior:—Car and air-condition ducts thoroughly blown out with compressed air and sterilized.

5TH DAY:

Interior:—Carpenters commence work.

Exterior:—Steel work prepared for painters.

6TH DAY:

Interior:—Carpenters continue repairs.

Exterior:—First coat of prime paint applied.

7TH DAY:—

Interior:—Carpenters' work completed and air-condition unit applied.

Exterior:—Primer coat of paint drying.

8TH DAY:

Interior:—Painters fill and prepare woodwork for varnish.

Exterior:—Painters apply surfacer. Water tank and air brake reservoirs are applied and roof is repaired.

9TH DAY:

Interior:—First coat of varnish applied and application of air conditioning and plumbing fixtures.

Exterior:—Glazing of paint started and electric wiring applied.

10TH DAY:

Interior:—First varnish drying.

Exterior:—Glazing of paint completed and water raising system applied and tested.

11TH DAY:

Interior:—Second coat of varnish applied and insulation of air-conditioning unit.

Exterior:—Paint guide coat applied and rubbed smooth.

12TH DAY:

Interior:—Second coat of varnish drying.

Exterior:—Finish rubbing and coat of sealer paint; battery and ice boxes applied.

13TH DAY:

Interior:—Third coat of varnish and air-condition ceilings applied.

Exterior:—First coat of paint colour.

14TH DAY:

Interior:—Third varnish drying.

Exterior:—Second coat of paint colour, lettering and trap doors applied.

15TH DAY:

Interior:—Fourth coat of varnish applied.

Exterior:—First coat of varnish applied.

16TH DAY:

Interior:—Fourth coat of varnish drying and car heating system tested.

Exterior:—First coat of varnish drying.

17TH DAY:

Interior:—Second day varnish drying preparatory to rubbing.

Exterior:—Second coat of varnish and pipe lagging applied.

18TH DAY:

Interior:—Rubbing and polishing of varnish, and plumbing tested.

Exterior:—Second coat of varnish drying, trucks applied and car levelled.

19TH DAY:

Interior:—Painters finished and application of electric lighting fixtures and other trimmings started.

Exterior:—Third coat of varnish applied. Brakes tested and tinsmith work completed.

20TH DAY:

Interior:—Application of trimmings continued.

Exterior:—Generator, direct drive and batteries applied.

21ST DAY:

Interior:—Application of trimmings completed. All seat upholstering and berth mattresses applied.

Exterior:—All safety appliances, roof ventilators, steps, trucks and other underframe equipment, are tested for clearances with car clearance gauge.

22ND DAY:

Air conditioning equipment completely tested in special air-conditioning room.

23RD DAY:

Final inspection and testing of electric lighting, water raising system, air brakes completed and car is ready for service.

The painter's work is an almost controlling factor in the completion of the repair and the various trades, of which there are some 33 classified under the Company's wage and rules agreement, must take advantage of the drying periods between coats

of paint or varnish to complete their work. There is a continuous interlocking of work and all must be complete against a definite schedule date. The shopping of a passenger car takes approximately 23 working days and the bulk of the shopping, under normal conditions, must be scheduled through the shops in the so-called light travel season, October-May of each year.

Started in the Ranks

The Company has never gone in for any form of paternalism. We have had regard for individual dignity, and for the desire of each man to order his own life according to the pattern which appealed to him . . . That this system has worked well is proven by the high position which everywhere our employees occupy in public respect, by the honors won in many fields of endeavour by their sons and their daughters, and also by the fact that every official position on the system is now held by a man who started his employment in the ranks. No school tie has helped to win a commission.—*D. C. Coleman speaking to general chairmen of the 26 Company labor organizations on October 8, 1942.*

Real Kicking Horse

Before leaving the Kicking Horse Pass it may be interesting to relate the origin of this striking name.

When I first went down along the river I recall some one on the train who told his version by saying that the name was given to the river because as it rushed down the grade it was constantly thrown back in splashing spray by the rocks, as if by the kicking of a horse.

This is a poetic description of a very turbulent stream where the rocks look vicious enough to kick anything to pieces that might be hurled against them, but it is not the real origin of the name.

The prosaic fact is that when, in 1858, Capt. Palliser and Dr. Hector were exploring the region they were leaving the camp by this river one morning and Hector, while trying to round up a straying pack horse, was kicked in the chest by his own riding horse as he was passing him.

Hector was laid up in the camp for several days, and the incident was so impressed on the explorers that they anathematized and immortalized this lively animal by calling the river and the pass after him.—*The Romance of the C.P.R.* (R. G. MacBeth).

APPRENTICE SYSTEM

By H. B. BOWEN, *Chief of Motive Power and Rolling Stock*

The Company maintains an apprentice system at the main and back shops of its mechanical department.

Applications for apprenticeship are accepted from suitable youths between the ages of 16 and 21 years. Applicants must be able to speak, read and write the English language (French being accepted in the Province of Quebec) and are given a preliminary examination in reading, writing and the first four rules of arithmetic. If the applicant satisfactorily passes this examination his name is registered and he will be called to commence his apprenticeship in order of registration. Applicants who are sons or dependent relations of Company employees are given preference if other factors are equal.

When the apprentice is called he is indentured and is furnished with a duplicate of same. If, within six months of starting work, he shows no aptitude to learn his trade, he is not retained in the service. Apprentices serve for a period of five years of 290 working days each calendar year and make up in the last six months of their final year any voluntary lost time.

Apprentices are paid on a common basis and on a sliding scale which advances at the conclusion of the first six months' service and at the conclusion of each period thereafter.

Apprentices Attend School

At the Main Shops, between September 30th and June 1st, an Apprentice School is held and it is obligatory for all apprentices, up to the end of the third year of indenture, to attend this school for one day of three hours per week. Here the apprentice is instructed in practical mathematics, composition, drawing and general mechanics. Examinations are held at the end of each school year and prizes awarded for efficiency. Free scholarships, both at McGill University and Université de Montréal, are offered for competition each year and awarded to the apprentice showing the most proficiency during the entire instruction period. Two instructors handle the apprentice training, one for class instruction and the other for shop instruction.

Apprentices who commence their indenture in Back Shops are required to move to Main Shops after they have completed three years of indenture to enable them to acquire wider experience in their particular crafts. In the same way apprentices indentured at Main Shops are encouraged to move to Back Shops before completing their apprenticeship, so that they may become familiar with the problems of the road mechanics.

Each craft has a definite schedule of training which is closely followed up by means of a card index system which indicates not only the progress in routine, but also the progress in efficiency and application of the particular apprentice.

The following apprentice schedules are representative of the main crafts employed at the shops of the Company.

Machinist Apprentices

Apprentices shall be instructed in all branches of the machinist trade. They will serve three years on machines and special jobs and they will not be required to work more than four months on any one job or machine. During the last two years of their apprenticeship they will work on the floor and will be instructed in the oxy-acetylene, thermic or other electric welding processes.

Boilermaker Apprentices

Months	Work
6	Helping and heating rivets.
6	Tank repairing and sheet iron work.
6	Rolling flues, ashpan work.
6	Staybolt work and setting flues.
20	General boiler work.
3	General boiler work in roundhouse.
6	Oxy-acetylene and electric welding.
1	Oxy-acetylene cutting.
6	Laying out and flanging.

Blacksmiths' Apprentices

Apprentices shall be instructed in all branches of the trade and will not be kept on any one class of work longer than four months. In the last two years of their indenture they will be instructed in oxy-acetylene, electric, or other welding processes.

Sheet Metal Worker Apprentices

Months	Work
6	Helping.
6	Light pipe work.
12	Tinning, babbiting, brassing, laying out and forming.
12	Engine and car work.
24	General work, including one month in electric welding.

Electrician Apprentices

Months	Work
12	Inside wiring and electrical repairs.
6	Outside line work.
6	Locomotive headlight work.

Electrician Apprentices—Continued

Months	Work
6	Car lighting work.
6	Armature winding.
24	General electrical work.

Painter Apprentices

Months	Work
6	Freight car painting.
6	Color room, mixing paint.
6	General locomotive painting.
12	Brush work, passenger equipment.
30	Lettering, striping, varnishing, designing, and general work.

Carmen Apprentices

Months	Work
24	General freight work, wood and steel.
6	Air brake work.
6	Mill machine work.
24	General coach work, wood and steel.

This latter craft includes the cabinet maker, coach carpenter, freight carpenter and wood machinist.

607 Apprentices Enlisted

On January 1st, 1946, there were employed throughout the system a total of 600 apprentices, of whom 525 were employed at the three Main Shops, Angus Shops in Montreal, Weston Shops in Winnipeg, and Ogden Shops in Calgary, the remaining 75 apprentices being employed at various Back Shops on the system. A total of 25 different crafts are represented by these apprentices, and 607 apprentices enlisted in the different military and naval services for World War II, which number exceeded the normal apprentice force.

Built Up Pool of Skilled Craftsmen

The apprentice system of the Company has played a very important role in developing the talent of a host of mechanically minded youths throughout the years and providing them with a craft knowledge which has equipped them to take their place in the industrial life of the country—at the same time the Company has provided for the maintenance of its rolling stock a large staff of carefully trained and well-equipped shop men, the advantages of which, both to the Company and to the employees themselves, is almost beyond measure.

LAW DEPARTMENT

By GEORGE A. WALKER, K.C., *Vice-President and General Counsel*

The widespread activities of the Canadian Pacific bring it under the laws of many jurisdictions, and because of this fact and the necessity for advice and representation by counsel and solicitors wherever its operations are carried on, the work of the Law Department is practically world-wide in its scope.

The headquarters staff of the department in Montreal consists of the Vice-President and General Counsel, the General Solicitor, an Assistant General Counsel, head office solicitors and their assistants, who deal with matters of general concern to the Company and also supervise the work of all branches of the department. The solicitor for the Province of Quebec and his assistant are also stationed at Montreal. There are full-time solicitors, with their assistants, at Toronto, Winnipeg, Calgary and Vancouver. The members of the department who are outside of Montreal deal chiefly with matters of local concern in their particular districts. At Washington, D.C., the Company employs a full-time solicitor who gives his attention to a wide range of departmental and legislative matters. In all, 24 lawyers devote their entire time to the business of the Company.

At Ottawa the Company retains the services of a firm of solicitors who also act as parliamentary and departmental agents, and at certain other centres in and out of Canada where the work, though considerable in extent, does not justify the appointment of full-time solicitors, law firms are regularly retained to act for the Company.

In addition to the foregoing, it is found necessary from time to time as the need arises to retain solicitors and counsel to act for the Company at various other points throughout the world.

The work of a Canadian Pacific solicitor is most diversified. The Law Department holds a unique position in that its problems are seldom its own, but are the problems arising in the other departments of the Company; and to give accurate advice it is often necessary for the solicitor to become almost as familiar with the operation or activity in hand as are those who consult him. The operation of the Company's railways, steamships, airlines, express service, communications, hotels, natural resources and other activities constantly gives rise to questions which must be carefully examined in the light of the laws applicable to them.

In Admiralty cases it is found as a general rule desirable to retain Admiralty lawyers who are expert in this branch of the law, but the Company's solicitors keep in close touch with the proceedings.

The financial arrangements of the Company and its subsidiaries, the incorporation, purchase and sale of subsidiary companies and the purchase, lease and sale of lands are all carried out in collaboration with the Law Department.

New legislation passing through Parliament, the legislatures of the provinces and the Congress of the United States, and the voluminous regulations issued by governmental and wartime bodies, are scrutinized by the department for their effect upon the Company's interests, and, when necessary, representations are made to these legislative or regulatory bodies on the Company's behalf.

Contracts and agreements made by the Company with other railways and with governments, corporations and individuals are all prepared or examined by the department and must be approved as to form by a solicitor before execution by the Company. The war services performed by the Company have added greatly to the number of such documents.

Actions pending in the courts of Canada and the United States in which the Company is involved are numbered in the hundreds, in addition to the large volume of proceedings before the Board of Transport Commissioners for Canada, the Interstate Commerce Commission of the United States, and other regulatory bodies.

In this field of litigation the possibilities of variety and interest for the railway counsel are almost without limit, for, in addition to his necessary knowledge of the law applicable to the operation of the railways, steamships, airlines and other activities of the Company, he is from time to time enabled and compelled to familiarize himself with many branches of science and industry. He catches glimpses of the customs of strange and distant lands, and is constantly brought into contact with the lives and occupations of others, their methods of business, processes of manufacture, conditions of trade and social surroundings.

Changing conditions bring new duties to the Law Department. In recent years it has been in the forefront of the railways' ever-widening contest with highway competition. The Company's solicitors throughout the Dominion keep vigilant watch upon all new applications for commercial vehicle licences, and those which would afford unjust competition are vigorously opposed before the licensing tribunals. The knowledge thus gained from contact with the commercial vehicle industry has been of service to the Company in the formulation of its policy.

The entry of the Company into large scale airline operations which followed the purchase and consolidation of ten Canadian air-transport companies, and the organization and rapid expansion of transport by air as part of the Company's activities, have

involved a great deal of work and the solution of many new problems on the part of the Law Department.

The solicitor must always make careful distinction in his advice between matters of legal expediency, in which his views should be accepted by the Company, and matters of policy, to which his jurisdiction does not extend. He may at times be called upon to represent the Company in important negotiations and may be given the powers of a plenipotentiary for this purpose, but save in such cases, his duty as a solicitor is only to advise upon the legal advantages and dangers of any policy, leaving the final decision to the officers entrusted with the management of the Company. However, there is a broad field in which decisions on questions of policy depend largely upon the legal implications, and here the advice of the solicitor is often the determining factor.

While the conduct of litigation occupies a large portion of the time of the solicitors, it cannot be said that this is the most important function of the department. Every lawsuit, whether won or lost, is a direct expense to the Company, and moreover, in many instances a potential source of friction with one or more of its patrons. When unwarranted and excessive claims are made, the Company will always be found ready to defend its rights, but experience has proved the desirability of avoiding conflicts where this can be done without undue prejudice to its interests. Here the Law Department finds its most useful work. If, by knowledge of the facts, vigilance in the law and the exercise of imaginative foresight, it can guide the Company away from future trouble, it may consider that thus its greatest service has been accomplished.

First Through Passenger Train

When the first through passenger train started out from the old Dalhousie Station, Montreal, at eight p.m. or rather at twenty o'clock on the new twenty-four time which the Canadian Pacific inaugurated, the locomotive carried a silken banner presented by the civic committee, accompanied by the cheers of the thousands present and the booming of a fifteen gun salute from the guns of the Montreal field battery.

It was a mixed train made up of colonist cars, first class coaches, a dining car named Holyrood and two sleeping cars appropriately named Yokohama and Honolulu. These cars were equipped to attract Oriental travel by being provided with baths.

The silverware on the dining car excited the reporter of the Montreal Gazette who stated that it was valued at three thousand dollars.—*Steel of Empire* (John Murray Gibbon).

IMMIGRATION AND COLONIZATION

By H. C. P. CRESSWELL, *Chief Commissioner, Department of Immigration and Colonization*

The immigration and colonization activities of the Canadian Pacific Railway began with the first efforts to dispose of the lands which the Company had received under the contractual obligations assumed by the Dominion Government "in consideration of the completion and perpetual and efficient operation of the railway" by the Company. The selling of land might have appeared to be, at first, of greater importance than the creation of traffic, but as time went on the advantages of building up traffic adjacent to the railway became the primary consideration. Consequently, the Company has been just as concerned with the upbuilding of eastern Canada as with that of the West, and for many years an efficient colonization organization has operated in Ontario, Quebec and the Maritimes. The long and interesting history of the Company's colonization work was the subject of a book entitled "Building the Canadian West," by Dr. James B. Hedges, Professor of American History, Brown University, Providence, R.I., published by Macmillan's in 1939.

The story of immigration and colonization in Canada may be said to fall into two main periods: The one before the construction, and the other beginning with the completion of the first line of railway across Canada. The growth of population, and that of Canada itself, has been far greater since the opening of the railway to the Pacific Coast than in the longer period which preceded it. According to the first census of the Dominion which took place in 1871, shortly after Confederation, the population at that time was 3,580,525. By 1881 it had grown to 4,216,263, and, at the last census in 1941, it was over 11,500,000. The 60 years following the construction of the Company's line across Canada had seen, therefore, a growth of population and a period of productiveness in Canada greater than that which had taken place in the previous two and a half centuries.

Railway Spurred Immigration

Until about 1896, however, the number of immigrants coming into Canada was offset by an equal if not a greater number of people emigrating from Canada, chiefly to the United States. During the periods of the large outward movement from Canada, immigration made no headway and whatever growth in population is recorded during these periods only balances the natural increase. Indeed, during the few years before 1896 the growth of population in Canada seems to have about reached the vanishing

point. Immigration began to make headway again only when large areas in the West were made accessible by the construction of the Canadian Pacific Railway and when the possibilities of these hitherto inaccessible areas had been made known throughout Europe and the United States. A large factor in bringing about this movement to Canada was the activity of the Canadian Pacific Railway. In picturing the opportunities that existed in the West for settlement on land it induced thousands of people to come to Canada to avail themselves of these opportunities.

To be of value to a country, immigration, by itself, is not enough; it must be accompanied by colonization and land settlement, for which capital, as well as people, is required. It has, therefore, always been the governing aim of the Company's immigration activities to seek and to encourage to come to Canada people possessing a moderate amount of capital, who are in a position to buy land, settle on it and make it productive.

The factors governing immigration and land settlement are constantly changing, due mostly to the prevailing economic conditions in Canada or in the countries from which intending settlers are encouraged to come here. In no two countries are the conditions continually alike. During the war from 1914 to 1918, immigration from the British Isles and the European countries was practically at a stand-still, but it was possible to interest large numbers of people in the United States to come to the Canadian West at that time because of the comparatively low-priced lands and the high prices for agricultural produce. Consequently, most of the Company's efforts to secure settlers then were made south of the line.

By the time the war was over, however, circumstances had made it impossible to obtain settlers in the United States, and it was necessary to look elsewhere. Soon there was renewed interest in Canada on the part of the people in the British Isles and many of the European countries. The efforts to get settlers were then switched overseas. By this time the bulk of the Company's western lands had been sold, but the importance of immigration and colonization as a means of producing a steady volume of freight and other traffic for the railway warranted special attention, so that the necessity for settling as much as possible of the available land tributary to the company's lines of railway became of special importance. With this purpose in view, the Department of Colonization and Development was formed in 1916, with the late Col. J. S. Dennis at its head. In 1930 the name of the Department was changed to the Department of Immigration and Colonization.

Promotes Canadian Development

It is the function of this department in peacetime to help to promote the upbuilding of Canada, thereby bringing about con-

ditions which will result in a steady and increasing flow of freight, passenger and express traffic for the company's rail and steamships, and increased business for other departments of the company. To carry on this function, the Department of Immigration and Colonization makes known to suitable people in the British Isles, various European countries and the United States, the opportunities for settlement in Canada. It encourages people who can be expected to improve their lot in Canada to come here and assists them to get established in this country so that they may be in a position to make a comfortable living as producers of food and other commodities, and become, themselves, users and consumers of articles produced in Canada and elsewhere, thus contributing to the trade and commerce of the Dominion. A subsidiary of the department, the Canada Colonization Association, performs services to new settlers in aiding them to obtain on easy terms, fully or partially improved privately owned farms, and is in a position to offer expert supervision. It has offices at Winnipeg, Regina, Edmonton, Calgary and Lethbridge.

The activities of the department outside of Canada require on the part of all the members of the staff whose duty it is to inform, advise and examine intending settlers a knowledge of the laws of the countries in which they are working concerning the migration of people. In no two countries are these laws alike, and they are constantly subject to change. It is, likewise, the duty of the responsible officers and staff to be thoroughly acquainted with the regulations governing immigration into Canada, and they must have the ability to determine whether people found to be interested in moving to Canada possess the adaptability, experience and morale likely to ensure their success and enable them to become satisfactory settlers in the Dominion.

Needless to say, thorough knowledge of the Canadian immigration requirements is of the utmost importance. For instance, considerable embarrassment, if not irreparable harm, could be done to the company if a family is allowed to sell its home and go to the expense of travelling to the point where the nearest Canadian immigration and medical officers are located—which might be a considerable distance away—and then be rejected after reaching that point. Such a contingency must be avoided at all costs.

Recommends Suitable Localities

The work of the Canadian organization is complementary to the activities of the organization outside of Canada. Here preparations have to be made in advance for the reception of intending settlers, so that suitable places can be recommended to them immediately on their arrival and their establishment facilitated

with a view to conserving the settler's capital as much as possible. To be in a position to do this, the department must keep itself well posted as to the settlement opportunities available throughout the Dominion, taking into consideration the experience and ability of prospective settlers, their nationality, their religion, the amount of capital they bring with them, whether or not they have friends or relatives already established here, and many other factors more or less important, which are furnished in reports of the department's examining officer sent to Montreal prior to the settler's arrival.

Whatever the prevailing conditions, the Company has consistently adapted its colonization activities to the needs of the situation here and the circumstances in the different countries in which suitable settlers are available. It did so during the first world war, when the United States was the only field available. It had done so between 1896 and 1914 when the movement to Canada was greater than in any like period before or since, and it had also done so when contributing to the pioneer work since early in the eighties of the last century when the activities leading to Canada's new growth began.

The last few years—pre-war and early war—furnished another excellent example of adaptation to the needs and circumstances of the times. The increase in unemployment in Canada, which became acute after the depression began in 1929, led to a virtual stoppage of immigration into Canada. By this time, signs of a condition, which may be called the "ageing process," were becoming more and more acute. Farms in many of the older parts of Canada had become vacant everywhere. Others were being neglected, their occupants being unable to operate them properly owing to infirmity through advancing age or other causes. Most of the farms could not be resettled because suitable people with money to buy them were not available. Either hereditary successors did not exist or they were engaged in other occupations and did not wish to return to the farms.

Practically unproductive, the farms were consequently of no value to the economy of the country. Many hundreds of them lay within fifteen miles of the Company's line of railway producing little or no ingoing or out-going freight or other traffic. The owners of such of these farms as were occupied were living from savings of previous years or from money provided by children or other relatives, or, in a good many cases, from the proceeds of loans which they had been obliged to take on their property.

This situation constituted a challenge to the Department of Immigration and Colonization. It could only be remedied by the introduction of new blood; there had to be found experienced agriculturists, in the prime of life, with enough capital to enable

them to make a cash payment on the purchase of farms and possessing sufficient energy to make the farms productive and paying propositions, so as to enable the purchase to be completed over a number of years, and provide a living for themselves and their families in the meantime.

Experienced Agriculturists Recruited

Obtaining authority from the Dominion Government, the Department proceeded to recruit in the British Isles, and in several of the European countries, selected experienced agriculturists possessing some capital, and encouraged them to come to Canada for the purpose of acquiring and operating these farms. The movement began in a small way with the settlement of some British and Dutch families in Nova Scotia and New Brunswick, but it was extended to the Eastern Townships of Quebec and to the Province of Ontario, and resulted in the settlement on previously unproductive farms of several hundred first-class farmers. Also some hundreds of families from across the Atlantic have been settled on lands tributary to the Company's lines of railway in the West during these years. The aggregate capital of the people brought over and settled under the Company's auspices in the East and in the West during the six years preceding 1941 amounted to many millions of dollars.

The establishment of selected agriculturists with capital on unproductive farms or vacant lands throughout the country has had the effect of checking, in some measure at all events, the possibility of stagnation and ensuing retrogradation in many parts of the country, and contributed to an extent not generally appreciated to a mitigation of the effects of the world-wide trade recession. Owners of unproductive farms obtained ready cash, which enabled them to buy or build homes and settle down elsewhere. The farms they sold were brought into a state of production. Money has been circulated to pay for needed improvements, for material and equipment purchased, and for local labour employed. From all these activities in connection with immigration and colonization the Company stands to benefit in the future, as it has in the past, in accordance with the development of the country's resources, the creation of new wealth and the promotion of trade.

Prior to, and since the end of the war, the Department has kept itself informed of conditions and emigration probabilities in many countries. This has involved the supplying of information in response to enquiries arising either from the Department's particular activities or otherwise. Increasing now, these activities will, as previously, contribute to, and will continue to reflect, Canada's progress in the years ahead.

DEPARTMENT OF NATURAL RESOURCES

By S. G. PORTER, *Chairman, Advisory Committee, Department of Natural Resources*

The Department of Natural Resources was organized in 1912. Its field of activity embraces practically all phases of the problems arising out of the administration of the Company's land grants, and inasmuch as the land grants included millions of acres of timber, oil, gas and mineral rights, and also imposed the obligation to colonize and develop the lands so they would produce traffic, it is obvious that its activities have been very diversified.

The department, instead of being under the jurisdiction of any one particular official, is administered by an Advisory Committee. The authorization setting up this committee specifies that the Vice-President of Western Lines and the Manager of the Department shall be members of the committee. Others members are appointed by the Chairman and President or by the Executive Committee of the Company. The personnel in 1945 was S. G. Porter, Calgary, Chairman; W. A. Mather, Vice-President, Western Lines, Winnipeg; P. L. Naismith, Victoria; G. A. Walker, K.C., Vice-President and General Counsel, Montreal; H. C. P. Cresswell, Chief Commissioner, Department of Immigration and Colonization, Montreal; A. Griffin, Calgary, Manager of the Department.

Prior to 1912, the sale of Company lands was handled in Winnipeg. But the Company's interests growing out of the administration of its lands, particularly by reason of the construction of large irrigation works, being centred more in Alberta than in Manitoba, the headquarters of the Department of Natural Resources when it was organized was located in Calgary.

In order to facilitate the administration of the greatly diversified interest of the department, the department was divided into a number of branches, such as the executive branch, agricultural and animal industry branch, development branch, engineering branch, coal mines branch, forestry branch, industrial branch and accounting branch. In the course of time the industrial branch and the work of the forestry branch were turned over to the vice-president's jurisdiction, while the publicity work was transferred to the colonization department when it was organized in 1916, and development branch activities have been merged with other departments.

Land Branch:—The work of the land branch being very broad and covering a great variety of duties, was divided into a number of sections, the principal ones being sales, collections, inspection, tax, registration, and, until recently, townsite. The principal function of the land branch is of course to sell land and collect

the payments under the contracts. Incidental to this there is a vast amount of work in connection with the issuing of contracts, transfers, leases and other documents; likewise the examination and pricing of lands.

Inspections:—The inspection staff, consisting of 32 men in the field, constitutes a contact between the office and the settler. The territory between Winnipeg and the mountains is divided into 29 districts and sub-districts, each in charge of an inspector. These inspectors have more than 11,000 land contracts to administer, of which nearly 7,000 are crop-share contracts or crop-share arrangements of one type or another. In addition, there are more than 4,200 leases on unsold land.

Townsites:—It has been the Company's policy to lay out townsites on all our own railway lines as they were constructed. In pursuance of this policy, nearly 800 towns have been established in the three prairie provinces by the Company, and sales of town lots to the amount of nearly $16,000,000 have been made since the railway was constructed. This does not include the City of Vancouver. We still have on our books nearly 2,500 lots in about 240 towns.

Taxes.—The burdens of taxation have increased very rapidly since our lands have become taxable, and the taxes which we pay on lands and townsites have amounted to as much as nearly a million dollars a year. But that is not all. Hundreds of our land purchasers find themselves unable, at times, to pay their taxes, and we have to keep a very close check on these and advance the taxes ourselves in order to avoid the forfeiture of our lands for non-payment.

Agricultural and Animal Industry Branch:—Our agricultural and animal industry branch was organized for the purpose of encouraging better agricultural methods and to provide a source of supply of good livestock for western farmers. and in general to assist in improving the agricultural and livestock interests of western Canada. One of the principal activities of this branch was the operation of the supply farm at Strathmore. This farm was in operation for about 33 years, and during that time maintained a large and very select herd of Holstein cattle. Hundreds of breeding animals were distributed throughout western Canada, and without doubt this farm made a very outstanding contribution to the quality of livestock to be found in western Canada. Many animals bred at Strathmore now head outstanding herds, both in Canada and the United States.

The Strathmore herd won so many prizes and championships in western Canada exhibitions and at the Canadian Royal in Toronto that it would be almost impossible to enumerate them.

Strathmore Farm also specialized in Hampshire and Suffolk sheep and practically swept the boards at major livestock exhibitions during the past several years.

For some years we shipped Suffolk rams to the annual ram sale in Salt Lake City, and on more than one occasion they brought the highest prices in their respective breed at this sale, which is one of the most important in North America.

Our Percheron horses also made a wonderful record in the larger show rings of western Canada, Vancouver and Victoria, as well as at the Canadian Royal.

At its Coaldale farm the Company built up an outstanding herd of Aberdeen-Angus cattle which ranked among the best on the continent. On half a dozen or more occasions it contributed the grand championship carload of steers at the Canadian Royal Winter Fair.

The primary purpose for which the Company's herds were founded and maintained, to improve the supply of western livestock, having been accomplished, the Company has discontinued this activity, having disposed of cattle from the Strathmore and Coaldale farms at sales in the Spring of 1943, which attracted buyers from all over Canada and the United States and brought some outstanding prices. (The Agricultural and Animal Industry Branch was closed out at the end of 1945).

Mines Branch:—Our mines branch has the responsibility of administering the oil, gas, coal and other mineral rights under Company lands. The Company has reserved the mineral rights, including gas and petroleum, under most of the lands which it has sold. These rights have tremendous potential values, though insufficient exploration work has yet been done to determine just how valuable they are. It may not be generally known to you that the well which made Turner Valley famous, Royalite No. 4, was on Canadian Pacific land. During the time of its highest production the Company was receiving a royalty of $8,000 per month from that one well, the total royalty received being more than $400,000, which means that its total production yielded more than $4,000,000. The total revenue from royalties and rentals of coal, gas and petroleum leases, up to the end of 1945, has been more than $5,000,000.

Galt Mines, from the date of the organization of the Department of Natural Resources until transferred to Lethbridge Collieries Limited, in 1935, produced 6,000,000 tons of coal at an operating profit of nearly $5,000,000. The freight paid on commercial shipments of coal amounted to more than $16,000,000.

B. C. Lands and Tie & Timber Branch:—Through the construction of several railways in British Columbia we received about 5,500,000 acres of land in that province. A greater part of this

area has since been turned back to the B. C. Government at a nominal price, the bulk of the land not having any agricultural value, nor containing merchantable timber. The Company, however, retained large areas of timber lands and has been producing railway ties and other lumber for its use. The mills, formerly operated under the direction of the Vice-President's Office, were transferred at the beginning of the year 1937 to the Department of Natural Resources, the timber land itself in most cases being controlled by the Department of Natural Resources. During 1943 these operations were disposed of under terms assuring continuation of supplies of ties and other timber products for Company needs. These areas do not include the timber lands on Vancouver Island which the Company controls as a result of its having acquired control of the Esquimalt & Nanaimo Railway. These are valuable holdings, but the Company does not operate any mills on the island, confining itself to sales and royalty leases on a stumpage basis. This comes under the direction of the B.C. sub-committee of the advisory committee, and not under the Department of Natural Resources.

Accounting Branch:—The accounting branch keeps the accounts and financial records for all the branches. It has charge of the accounting for all receipts and disbursements of the department. Receipts from all branches are remitted by our accounting branch to the treasurer, and have ranged from around $2,000,000 to over $9,000,000 per year, and totalling more than $156,000,000 for the 33 years of operation of the department. Disbursements made from Calgary since 1913 have amounted to more than $63,000,000. This does not include disbursements made from Montreal.

Irrigation:—When the main line land grant of 25,000,000 acres was made to the Company, it provided that selections were to be made of alternate sections in a strip extending 24 miles each side of the railway line. It also provided that the Company was not obliged to accept any lands which were not fairly well suited for agricultural purposes, and that any deficiency in area might be made up by selections outside this belt, in blocks set aside for the purpose. The Company had not been satisfied to accept lands between Moose Jaw and the mountains for climatic reasons, it being thought that the rainfall was too light for successful farming, so other areas farther north in Saskatchewan and Alberta had been selected instead.

In 1903 the Government issued an order that the balance of the land grant must be selected before the end of that year, the deficiency at the time being some 3,000,000 acres. Prior to this time, investigations had been made under the direction of J. S.

Dennis, inspector of surveys for the Dominion Government, of the possibilities of irrigating large areas of land in western Canada. The principal areas which were shown to be possible of irrigation were tributary to the St. Mary River in southern Alberta, and tributary to the Bow River east of Calgary.

Therefore, when the matter of making up the deficiency of 3,000,000 acres in the land grant was under consideration, the possibility of taking this tract lying along the main line between Calgary and Medicine Hat was gone into, with the result that the Company decided to accept this block and build irrigation works to serve it.

The entire irrigation block was divided into three sections, known as the Western Section, the Central Section and the Eastern Section. Subsequently, the irrigation of the Central Section was abandoned, but systems covering the Western Section and the Eastern Section were completed.

Western Section:—The Western Section comprises slightly over a million acres, of which over 200,000 acres were classified by the Government as irrigable.

Eastern Section:—The Eastern Section has a total area of about 1,250,000 acres, of which approximately 400,000 acres were classified by the Government as irrigable.

The construction cost of the Western and Eastern Sections together amounted to about $18,000,000. The combined length of constructed canals was nearly 4,000 miles, or long enough if built parallel to the main line of the Company to reach from Montreal to Vancouver and back from Vancouver to Regina.

The Western Section irrigation system was transferred to the Western Irrigation District in 1944, and is no longer operated by the Company.

The Eastern Section was transferred to the Eastern Irrigation District in 1935, and is no longer operated by the Company.

A. R. & I.:—In addition to the eastern and western sections of the irrigation block east of Calgary, the Company is interested in an irrigation system at Lethbridge, known as the Alberta Railway and Irrigation Company system. This system is the oldest irrigation system of any size in Canada, having been constructed by the old Alberta Irrigation Co., afterwards the Alberta Railway & Irrigation Co. It was opened for operation in 1900. About 120,000 acres are irrigated, including the Magrath, Raymond, Coaldale and Taber districts.

Irrigation in Coaldale, Taber, Duchess, Brooks and Tilley has converted them into the most dependable crop and livestock producing districts in the West, whereas without irrigation they would be among the most uncertain and hazardous.

As a sidelight on the value of irrigation as a producer of freight traffic, let me give you a summary of a report on that subject prepared for the Chairman and President a few years ago. These figures cover the whole of the irrigation block of 3,000,000 acres:

Average area in crop annually		625,000 acres
Average annual yield		10,862,500 bus.
Estimated gross freight on outgoing shipments of grain, assuming 75% of the total is shipped:		
C.P.R.	$995,600	
C.N.R.	401,900	
		$1,397,500
Assuming that all other outgoing freight plus all incoming freight equal outgoing shipments of grain, these figures are doubled, or—		
Total to C.P.R. per annum		$1,991,200
Total to C.N.R. per annum		803,800
Grand total per year		$2,795,000

These figures represent the gross freight revenue from the entire irrigation block. It is not of course all, or even half, attributable to irrigation, for the western section is only indifferently irrigated, and the central section not irrigated at all, while the eastern section depends entirely on irrigation and would produce almost nothing without it. These results, I say, are not all attributable directly to irrigation, but were prepared for the purpose of showing what traffic returns have been developed through acquiring, developing, and colonizing the irrigation block.

Canadian Pacific Concessions to Land Contract Holders:— There is one other phase of this department's activities which should be mentioned. The general effect of the years of depression along with droughts, poor crops and low prices had very serious consequences on all business, and on no class of industry was it more disastrous than to farmers. Their returns, particularly in the drought area, were reduced to a point far below the cost of production and as a consequence they were unable to meet their obligations. The Canadian Pacific has earned a well merited reputation for generous treatment of the settlers it has placed on its

lands in western Canada, and it more than maintained that reputation during the last crisis. It was the first organization in Canada to take action to lighten the farmers' burden of debt and the plan adopted had its origin and was administered by the Department of Natural Resources.

In February, 1932, the Company voluntarily and unconditionally remitted one year's interest on the total amount owing under its land contracts in western Canada, and also agreed to remit a second full year's interest conditional on the purchaser having paid the equivalent of one year's taxes and delivering to the Company a one-third share of the crop, or paid the equivalent of one instalment. In addition to this, the C.P.R. gave further credit on arrears of interest by giving the purchaser dollar-for-dollar additional credit for every dollar paid in cash or by delivery of crop.

In each of the years following 1932, so long as the drought and depression continued, concessions were granted on similar conditions, except that the share of crop which was stipulated for in 1933 and subsequent years was one-quarter instead of one-third, and in order to earn the benefit of these concessions it was only necessary for the farmer to enter into the covenant and deliver a share of the crop harvested; in other words, if his crop was a failure as a result of hail, frost or drought, the farmer still obtained the remission of a year's interest.

These generous concessions enabled hundreds of farmers in western Canada to retain their homes and to continue to produce agricultural wealth for our country.

Classification of Employees
Department of Natural Resources

Manager
Chief Accountant
Asst. Chief Accountant
General Supt. of Lands
Supt. of Lands
Asst. Supt. of Lands
Chief Inspector
Supt. of Operation and Maintenance
Canal Superintendents
Chief Engineer
Tax Commissioner
Inspectors
Dragline Helpers
Excavator Operators
Asst. Excavator Operators
Elevator Operator
Engineer
Foremen
Forester
Garage Foreman
Gatetender
Gardener
Headgate Keeper
Hydrographers
Asst. Hydrographers
Janitors
Asst. Janitors

Asst. Engineer
Accountant
Adjustment Clerk
Agency Clerk
Barn Boss
Barn Man
Blacksmiths
Camp Foremen
Caretakers
Carpenters
Cash Clerk
Asst. Cash Clerk
Cashier
Chief Clerks
Chief Draftsmen
Chief Sales Clerk
Chief Statement Clerk
Surveyor
Cleaners
Clerks
Conveyance Clerk
Cost Clerk
Cooks
Correspondence Clerks
Ditchriders
Dragline Operators
Dragline Foremen
Junior Clerks
Laborers
Ledger-Keepers
Mechanical Supt.
Mechanics
Mechanics' Helpers
Mining Engineer
Asst. Mining Engineer
Night Watchman
Office Boys
Salesmen
Secretary
Shop Carpenter
Stationery Clerk
Special Agent
Stenographers
Supt. of Telephones and Electrical Equipment
Teamsters
Watermasters
Asst. Watermasters

Post Office to Order

Holt (Sir Herbert) was the kind of man who gets things done. At the time when the C.P.R. reached the Bow River, the hamlet of Calgary was not so near the tracks as it wished to be, and wanted to move the post office near the station. The government, however, was slow to action, even though the post office building was a mere shack. Holt solved the problem by taking a bull team to the building and moving it to where the citizens of Calgary thought it ought to be. Since there was no one with authority or bulls to move it back again, there it stayed, and the rest of the inhabitants followed suit, so as to have less far to walk when the mail came in.—*Steel of Empire* (John Murray Gibbon).

DEVELOPING CANADA'S RESOURCES

By GORDON M. HUTT, *Development Commissioner*

Since Confederation the young Dominion of Canada has risen rapidly to a place among the foremost nations of the world. Its progress largely has been, and in future will be, based on development of its natural resources. The story of the Canadian Pacific Railway closely parallels that of the Dominion, for neither truly can prosper alone. The Company both contributes to and benefits from the development of the country's resources.

In fact the Canadian Pacific's impact on that development is manifold. Its transcontinental and branch lines have opened up vast territories to the farmer, the lumberman and the miner. The Company's construction program was the result of a practical plan of land development. The very act of railway construction brought immediate prosperity to great areas, especially to those capable of supporting agricultural and sylvicultural activities, for the building and maintenance of a railway calls for vast quantities of all kinds of foodstuffs and equipment. Favorable freight rates enabled the products of the land to move to world markets, and advertising of Canada's opportunities helped focus the attention of the world on the country. Great land settlement schemes were put into effect without cost to the nation, and in Alberta this involved immense irrigation projects.

Timber, Coal and "Consolidated"

The Company has operated large timber and tie camps, and other enterprises, projects begun at times when other private capital was not prepared to take the investment risk. By purchase or production it largely is responsible for the coal output of the Crow's Nest area. The railway backed that great mining company that in itself is an industry, Consolidated Mining & Smelting Company of Canada, Limited, in the latter's early days, and still has a controlling interest.

It therefore is obvious that in every phase of its world-wide activities the Company is concerned primarily and dominantly with fostering the Dominion's growth through development of its natural resources. Each of these activities is interdependent, whether it be providing transportation, making favorable freight rates, or otherwise enabling materials to move.

One of the units of the Company designed to co-operate with the others in contributing to the development of these resources is the Development Section. It is distinct from the Company's Department of Natural Resources, which is concerned primarily with the administration of Company-owned lands and rights. Formed after the Great War as part of the Department of Coloniza-

tion and Development, since 1933 it has been associated with the Industrial Section in the Department of Industrial Development, a part of the freight traffic organization. In practice it works very closely with its sister section, the aim of which is the location of industries where best the Company's lines can serve them. The Development Section has offices at Montreal and Winnipeg, and through the Industrial Section has representation at Toronto and Vancouver as well as at London, England.

Creates New Traffic for Company

The section is charged with assisting in the development of Canada's natural resources by methods other than that of directly financing. The practical aspect of this is the creation of new traffic for the Company's rail, air and steamship services.

The section's primary function, therefore, is the study of the country's natural resources, learning where they are located, and how situated in relation to fuels, power, transportation and markets. It should be emphasized that the section's efforts are not confined to mineral resources but apply to all classifications, even to agriculture in the case of industrial crops, and to waste by-products of manufacturing concerns in the case of materials for which an industrial use might be found.

Now there are many organizations working along the same lines as ours. The Dominion and provincial governments maintain excellent departments of mines, forests, etc., and parts of these organizations have functions corresponding to those of the Development Section, which makes full and reciprocal use of their services. Some of these bodies did not exist when the section was formed. Some others were not long in existence and had not yet reached their full effectiveness. None is concerned specifically with Canadian Pacific territory except insofar as the railway's territory coincides with that of a specific government department. Thus reports received from such sources must be supplemented by information on traffic-producing possibilities, accessibility, etc., gathered by our own organization.

Because of this the section employs men with a background of chemistry, geology, mining engineering, forestry and other subjects. Their specialized training is necessary for the handling of some problems.

Must Keep Abreast of Market

The gathering of data on the country's resources is not enough. We must keep abreast of the market situation and market trends. We must keep posted on uses for various raw materials, and particularly on new uses. The study of manufacturers' specifications is important, for we must constantly keep their needs in mind. In this connection we must consider that waste industrial by-

products are raw materials, and try to find uses for them. Actually by direct contact and through the agency of other Canadian Pacific departments the Development Section maintains close contact with manufacturers, engineers, purchasing agents, prospectors and all those whose activities have to do with producing or using any of the vast number of raw materials this country does or can produce. It works closely with industrial development boards, chambers of commerce, boards of trade, chambers of mines and other such regional groups whose functions are to some extent similar to those of the section. Our own officers belong to such organizations and in some cases are members of government-appointed committees that are charged with fostering development of resources.

Information acquired by the section is not allowed merely to become a part of the files. It is used in one or more of several ways. Prospective producers are assisted in determining the possibilities of whatever materials they are interested in, and are put in touch with those who use the type of product concerned. Methods of production are suggested, and in cases assistance is given in working out a satisfactory process for improving the product. Conversely, manufacturers are put in touch with sources of supply of raw materials.

The section has facilities for chemical analysis and has assisted prospectors and others by making thousands of determinations of the values of samples offered, though it does not encourage this type of enquiry unless it is felt that a real service can be rendered in each specific case.

Develop From Small Beginnings

The section's efforts are not always successful when measured in terms of new business for the Company's lines. Probably hundreds of prospects are encouraged for each one that becomes a traffic producer. Again, some of those that have developed into important sources of revenue have taken years to grow from very small and sometimes seemingly futile beginnings. The value of the section's work when measured in terms of goodwill is extremely great.

Internally, the section co-operates closely with other company units on problems affecting rates, traffic potentials of new developments, branch line construction, etc. Similarly it receives from those other units that assistance that makes possible its contribution to the development of the country.

A few examples of the types of problems handled by the section will illustrate some of the foregoing statements.

An employee of the Company became interested in a deposit of barytes in western Canada, wrote the Company's suggestion bureau and was put in touch with the Development Section.

Through the section's efforts the property was sold to an operator, who brought it into production along lines recommended by the section. The new producer was in turn introduced to an eastern market which he still furnishes with crude barytes. Several western outlets also have been found for the product, either in crude or ground form. During the first year or two of its operation several production problems were solved by the section's staff.

Moulding Sand for Western Foundries

Very considerably due to the section's reports and development efforts production of granite in the Marathon (Peninsula) district of Ontario was brought about several years ago. The true nature of a clay-like material called bentonite in the Morden district of Manitoba was first recognized by employees of the section, and there is production at the present time. The section actually has produced moulding sand at Pilot Butte, Sask., for western foundries. Occasionally, and only after thorough investigation has shown the proposition to be sound, worthy developments have been put into touch with capital.

Mineral properties are examined for prospectors, and advice on putting them into shape for examination by mining companies given. Such services are generally in connection with non-metallic or industrial minerals.

Some of the section's work might properly be called industrial research. It has made an exhaustive and long-term study of Saskatchewan clays and of the economic factors affecting their development. These clays are destined some day to be the basis of large scale industries. Laboratory work done by the section first proved the true nature of the structure of stone quarried at Tyndall, Man., and indicated features of the rock's strength that had to be known before certain large contracts could be obtained. Contributions by the section's staff on blast sands and moulding sands are basic in Canadian literature on the subject. Yet all in all the bulk of the section's work is only in part technical and is designed for the use of Canadian businessmen.

In many cases the section has been able to find materials on the Company's lines for consumers who had been obtaining their supplies from sources from which we could derive no benefit. This must be done on the basis of price or of quality.

Surveys for Branch Lines

The section has made many surveys of the traffic-producing possibilities of natural resources in territories into which branch line building has been contemplated. Work of this type has been done in practically all parts of Canada.

World War II did not greatly change the type of work done by the section but did intensify and stress some phases of it. In the early part of the war the foreign exchange situation suddenly forced Canadian industry to seek domestic sources of supply of many raw materials hitherto imported in large volume. This situation was later intensified by enemy capture of important sources of supply, making it necessary in many cases to find alternative sources and to develop substitutes. This was the time that Development Section work done as much as 20 years before became of great importance. Canadian foundries were referred to domestic sources of supply, Canadian talc was found for the War Production Board, and many other materials were located for industrialists who needed them urgently. Much of the section's work was devoted to the search for minerals that were considered as strategic or critical, and its officers have been loaned freely to federal and provincial committees on reconstruction and on other specific problems. Since the cessation of hostilities the section has been able to devote its time to the handling of enquiries from private capital about the Dominion's resources.

Well Named the 'Scotland'

Board of Trade surveyors used to hold up the Empress of Scotland as an example because from captain to first officer her top command was filled by men holding squared rigged extra master's certificates.

There was Capt. James Gillis, C.B.E., commander of the "Scotland", who became general manager of Canadian Pacific Steamships Limited in London. Capt. Edmund Aikman, R.D., R.N.R., who became assistant to the chairman of C.P.S.S., was staff captain. Capt. R. W. McMurray, R.D., R.N.R., now managing director of Canadian Pacific Steamships in Montreal, was chief officer and first officer was Capt. R. N. Stuart, V.C., D.S.O., now general manager of C.P.S.S. in London.

All of them were Scots and it came to be a byword that the Scottish standard—red lion rampant—was flown at the stem head as much for the commanding personnel as for the ship's name.—*Staff Bulletin.*

CHIEF ENGINEER'S OFFICE

By JOHN E. ARMSTRONG, *Chief Engineer*

Since the early days successive, and at times concurrent, senior engineers and their staffs have played a major role in the history of the Canadian Pacific Railway, and have included many great engineering names.

Sir Sandford Fleming, while employed by the Government on surveys for the Canadian Pacific Railway, prior to the formation of the Canadian Pacific Railway Company, was the first engineer to survey a railway route through the mountains of Western Canada. He recommended the Yellowhead Pass route. He was a Director of the Company from 1885 to 1915, and the man primarily responsible for the introduction of Standard Time on the "Day of two noons" November 18, 1883.

Major A. B. Rogers was the engineer who discovered the pass which enabled the Company to build on the southerly route finally adopted instead of the longer northerly route through the Yellowhead Pass. Rogers Pass in the Selkirk Mountains, through which the railway operated for many years, is named for him.

Sir Collingwood Schreiber was in charge of construction on the line around the north shore of Lake Superior, including the famous "200 miles of engineering impossibilities." A division of the Algoma District, and the headquarters town of that division, bear his name.

Other engineers of the Company have left their mark, including such men as J. E. Schwitzer, who built the Spiral Tunnels; and J. G. Sullivan, who built the Connaught Tunnel and line diversion which replaced the longer and more tortuous line through Rogers Pass.

J. M. R. Fairbairn was the first engineer appointed to the position of Chief Engineer as that position now exists. His tenure of office from 1918 to 1938 coincided with the aftermath of World War I, the New Era of the 1920's, during which the Canadian Pacific system was greatly improved and extended, and the depression of the 1930's.

The Chief Engineer is a system officer reporting to the Vice-President of the Company. His staff includes an Assistant Chief Engineer, an Engineer of Track, an Engineer of Bridges, an Engineer of Buildings, and an Associate Architect, together with assistant engineers, draughtsmen and other assistants. He is available to all other departments of the railway for consultation, advice, and assistance on engineering problems.

The Chief Engineer is responsible for the preparation of plans and specifications for the multitude of things comprising the fixed property of the Company, including, among many other things, bridges, buildings, track and roadway. It is his duty to keep fully

informed of developments in railway engineering, and to use that information for the benefit of the Company.

In the early days the Company's engineers were mainly concerned with the construction of the main line across the continent, and the thousands of miles of feeder branch lines. In retrospect those were glamorous days, but at the time they were days of hard work, foresight, and daring. How well those early engineers did their work is not only a matter of history, but can be seen throughout the Canadian Pacific system.

Half a century hence the engineer's work of today may seem glamorous, but to the engineers of today (1946) it is essentially a constant struggle to maintain and improve the property during a persistent period of manpower and material shortages.

Many improvements in the fixed property which have been delayed by World War II must now be made promptly to accommodate the heavier train loads being handled at ever increasing speeds. Many other things must be done to permit of handling traffic ever more economically.

As conditions change, the Company's property must be revised or rebuilt to meet the new conditions. Just as the Yellowhead Pass location was abandoned for that through Kicking Horse Pass and Rogers Pass, and just as the Connaught Tunnel was built to replace the line through the latter, so are many engineering improvements constantly being made for the purpose of securing greater speed of, and economy in handling, the great volume of passengers and freight which the Company transports. The engineer's work is never completed.

First Western Excursion

The first excursion over the Company's western division was operated in 1884 for the British Association in Canada to demonstrate the potentialities of the West, from Winnipeg to Kicking Horse Pass.

One of the highlights of the excursion was the reception for the travellers at the Bell Farm at Indian Head, Man. There the manager, Major Bell, and Mrs. Bell received them hospitably and they saw a farm which consisted of 64,000 acres of excellent land of which 7,000 acres were under cultivation—5,000 in wheat and 2,000 in oats.

The tour was personally supervised by John M. Egan, who has been referred to as "the master-superintendent whose ability as a practical railroad builder was a great asset to the new enterprise" and who was one of the keymen brought from the United States by Van Horne.—*Staff Bulletin.*

AID TO AGRICULTURE

By L. C. McOUAT, *General Agricultural Agent*

When the Canadian Pacific Railway Company commenced the immense undertaking of building a railroad line across the Dominion, it soon became apparent to those having in hand the direction of the Company's affairs that agricultural development must precede the development of industry in the economic life of Canada.

The great open spaces in the Dominion at that time were obviously rich in natural resources and their development provided a challenge in order that the country might prosper on the widest possible basis. It was obvious that the ordinary needs of those actively engaged in farming operations would require great productive work in manufacturing, in supplying demands for building materials, tools, farm machinery, clothing, boots and shoes and household necessities of all kinds. For the transportation and distribution of the raw products of the farm, rolling stock, elevators, flour mills, warehouses and the like, all in turn would make demands for increased manufacturing activities and provide employment for countless numbers of people who were seeking a home in the new land.

It should be clear, therefore, that this company in the development of its widespread interests, should be keenly aware of the importance of the fullest development of the agricultural resources of the country and that they should be actively interested in associating themselves with and assisting in every manner possible, agricultural growth and development. The manner in which this assistance was provided in the past was subject to some variation in order to best meet the conditions of the moment and to expedite the development of whatever project was of most immediate importance. This method of operating and maintaining its relationship with agriculture may continue in the future, providing it is found that tangible accomplishments and benefits result therefrom.

At no time has the Company sought to develop a department of agriculture which would duplicate in any way the services being rendered by the well organized extension staffs of the provincial and federal departments of agriculture but rather they sought to co-operate very closely with all the recognized agricultural institutions and organizations engaged in agricultural development work.

A Distinct Contribution

The earliest agricultural work with which the Canadian Pacific Railway became associated was carried out in western Canada and was part of a plan to promote land settlement and to populate the immense territory adjacent to the Company's lines. In those days there were no provincial agricultural colleges or

well organized provincial departments of agriculture as exist at the present time, nor did the Dominion Government have its present well developed chain of experimental stations and farms scattered throughout the country. The Canadian Pacific Railway, therefore, organized its Department of Natural Resources under whose direction demonstration and supply farms and irrigation development work was carried on. A great many men in the Department of Natural Resources have made a distinct contribution to different phases of agricultural development in western Canada. In the development of Canadian agricultural resources the need for diversity in farming became more and more apparent as time went on. It has been necessary for many years to make definite and persistent efforts for recognition of this important principle and the Canadian Pacific Railway Company has worked zealously in this direction. From its own demonstration farms various projects were carried on to stimulate the ambition of new settlers by showing what could be done. These farms assisted in setting a standard of excellence through the farm practice which they followed and the livestock which they produced. Projects for the distribution of good pure bred sires of both beef and dairy type were based on the Company's farms and assistance to the extent of several hundreds of thousands of dollars was given through the loaning and distribution of this stock. The Company's farms at Strathmore became one of the front rank points of interest to agricultural visitors to western Canada. The value of this to the Dominion over a period of twenty or thirty years was readily seen in the fact that these visitors came from all parts of the world and were therefore in a position to widely disseminate information concerning Canadian opportunities. The pure bred Holstein herd at this farm, one of the largest of its kind on the North American continent, finally developed into one of first quality, both from the standpoint of production and type and was one of the chief points of interest to our visitors. Similarly at Coaldale, in the Lethbridge country, there was developed another irrigation farm which featured Aberdeen-Angus cattle. This herd likewise developed national and international fame and stock from there has been used in the development of the Angus breed of cattle in many parts of the Dominion.

Plan Further Co-operation

With the advance of time, however, and the continued development of agriculture and livestock raising throughout the Dominion, there have grown up in each province, under federal or provincial authority, large important institutions for conducting experimental, educational and extension activities in the agricultural field. With this in mind the conviction gradually developed in the minds of Company officials that the Company's policy should gradually dis-

associate itself from these more active and specific connections with farming and instead of maintaining what in one sense had become a duplication of services, that new means be found for co-operating with the recognized agricultural institutions and organizations of the country. With this in mind, the Holstein herd at Strathmore was dispersed at Markham, Ont., during April of 1943. This very successful sale was followed by the dispersal of the Coaldale Angus herd at Calgary in May of 1943 which was characterized by F. S. Crawford, secretary Canadian-Aberdeen Association as "the outstanding auction of Aberdeen-Angus cattle in Canada for 25 years and one of the best on the continent." The average is said to be the third highest for any breed in Canada since 1926. Eighty-one lots sold for a total of $48,895, or an average of $603.64, 18 bulls averaged $782.22 and 63 females $552.63—the top five head averaged $2,445.00 and the top 25 head $1,036.00. To give some idea of the distribution of stock from this sale, nine Ontario buyers took 15 lots at a cost of $18,205.00, or 37% of the sale total. Alberta secured 30 head, Saskatchewan 10, Manitoba four; British Columbia four; Oklahoma seven; Illinois four; Idaho four; Colorado two; Iowa, two. Thus the final chapter in the Company's active farming operations is concluded. In addition to the agricultural personnel of the Company employed, under the Department of Natural Resources, certain personnel operate under three other departments. The Department of Development—which in its agricultural activities deals chiefly with those phases of agriculture which may be more or less in the experimental stage, and which may be loaned a helping hand from the many resources of the Company that can be brought into play in their interests. The Department of Immigration and Colonization—through which the farming problems of settlers receive prompt and sympathetic consideration, and two agricultural agents, one in western Canada and the other in the East, through whom the Company maintains contact with agriculture generally and through whom they can be associated in a co-operative way with all agricultural institutions and organizations engaged in stimulating Canadian agriculture progress.

Instructions for Farmers

Although the original contacts with agriculture may be through the agricultural officers of the Company, the work of assisting agriculture, oftentimes extends far into the ranks of the organization involving important contributions from officers commonly regarded as being associated solely with matters pertaining to traffic and transportation. For a period of ten years or more, preceding the last war, agriculture institutions and departments of agriculture were seeking in every manner and means possible to emphasize the importance of lowering costs of production.

Various methods of extension work were in effect with this as their objective. The Canadian Pacific Railway realizing the importance of better production methods and lowered costs if Canada was to hold her own in world markets, endeavoured to support this valuable work in a practical way.

The lesson of good seed and better soil cultural methods was carried to the farmers in co-operation with the provincial and federal departments of agriculture. By means of seed trains, soils and crop trains operated throughout a certain territory with scheduled stops where lectures and demonstrations were given farmers were afforded an opportunity to inspect the exhibits prepared by the government departments carried in the train. Notable increases in the number of seed cleaning plants established in different sections of the country and the more widespread use of fertilizers are directly traceable to the interest aroused by these special trains.

The spread of the bacon hog production policy in Canada was hastened through the placing of bacon type sows in many districts where the pig stock lacked breeding—to such an extent that a great deal of time would have elapsed if the slow policy of grading up had been followed unaided. The Canadian Pacific co-operated in this important policy of expediting improvement in our pig stock by facilitating the placing of sows from special trains operated for the purpose. The importance and value of this work can well be appreciated now when we realize that the bacon ration in Britain in World War II was made possible by large shipments of bacon from Canada to Great Britain, culminating in the purchase of 446,000,000 pounds of bacon for export to Britain in 1945 compared with shipments aggregating 696,000,000 pounds in 1944. Although this is a rather large decrease, it is interesting to note that the 1945 figure exceeds exports of any pre-war year by almost 100 percent. During the war 1940-45—Canada shipped to Britain 3,135,500,000 pounds of bacon and hams and 233,788,000 pounds of other pork products—or a grand total of 3,369,288,000 pounds. The total value of the 1945 purchase of bacon and pork products for Britain was estimated at $107,100,000 against $167,100,000 in 1944.

The total beef export to Britain during 1945 was 211,600,000 pounds compared with 26,600,000 pounds in 1944, as well as 10,000,000 pounds of mutton and lamb exported during 1945.

In terms of live animals the above figures represent a production of 26,600,000 hogs, 719,000 cattle and 222,000 sheep and lambs during the six years of war, with an estimated value of $725,000,000.

The stimulus of the Great War on wheat growing in western Canada contributed to a vast extension in acreage devoted to this

crop and finally resulted in what many people regarded as an embarrassing wheat surplus. What at one time may have appeared to be an embarrassment has turned out a considerable asset in view of the food position brought about by World War II. The Company, although recognizing temporary disappointments and setbacks in connection with the marketings of our production, never believed in the policy of curtailed production in any way or form; as they were of the opinion that this essential food product would be required eventually and although seeking to develop a better plan and greater diversity in the agricultural program of western Canada, they also tried to render assistance to western Canada in finding ways and means of growing and harvesting their large crops.

The Canadian Pacific was the first railroad company to develop the harvest excursions and thousands of farm people from eastern Canada were moved westward to assist in the tremendous work of harvesting and many of these remained there to take up land and assist in the settlement of the country.

Educate Young People

In its attention to better crops, better seed and better livestock production, the Company has endeavoured to remember that the most important crop we have in Canada is the human crop on our Canadian farms. With an objective for the fullest development of an industrious, intelligent farm population, they have tried to associate themselves with other agricultural workers in the belief that the most rapid progress in bringing about improved production and marketing methods can best be accomplished by working through the young people of our farms—in other words—an indirect form of adult education. As a consequence of this belief, the development of boys' and girls' agricultural clubs has spread very rapidly. Early in the development of this work, the Canadian Pacific Railway showed its interest by contributing important prizes, trips and scholarships in connection with boys' and girls' club competitions, In view of the soundness of this junior work and the extent to which it caught the public's fancy, there was some danger that the maximum possibilities to be expected from it might not be achieved, through the desire of commercial business concerns and others to identify themselves in some manner or other with the movement. Consequently, this Company in cooperation with others has assisted in the organization of a national body which sees to it that all club work is prosecuted along sound agricultural production and marketing lines. For a number of years now commercial concerns interested in the movement have been able to make their contributions through this national organization.

It is felt that this more impersonal assistance to boys' and girls' club work will result in making this movement more valuable as an agricultural development agency and will amply repay whatever immediate loss may be incurred from the greater publicity achieved through the individualistic schemes associated with the junior farmer movement in the past.

Soil fertility is the basis of a profitable Canadian agriculture, and, although Canada is particularly favoured in this respect, it is important that this natural asset be conserved and supplemented with a view to ensuring a profitable agriculture for the future. In this field, it would appear as if the Company is in a position to make a really constructive contribution through the agency of one of its subsidiaries, the Consolidated Mining and Smelting Company, of Trail, B.C. The fertilizer being turned out by this company is a by-product of their smelting operations, and extensive tests conducted over a wide area have proven the value of this fertilizer and are suggestive of the revolutionary changes that it will effect, not only through increased quality and yield of grains, but by advancing the maturing date many days, it has decided value in minimizing the extensive losses incurred by rust and frost.

World-Wide Effort

It is of importance to realize that both in eastern and western provinces, there are large areas of fertile territory available and waiting to play their part in the striking progress which has characterized the earlier development of the settled areas. Although conditions for a time have not been such as to make active colonization and settlement work practical, it is significant to note the impetus to agricultural extension given by the colonization efforts of this Company.

The Canadian Pacific, profoundly interested in the development of Canada as a whole, has maintained a colonization organization in all provinces. As opportunity offered, the activities of that organization have been extended in many ways. The settlement of families and the placement of farm labor in Ontario, Quebec and the Maritimes, by the Company, have proved the extraordinary benefit of such activities in the vital work of agricultural extension. The guiding principle in relation to this important activity is the consciousness of our undeveloped natural resources, the knowledge that markets exist and others wait to be explored, so it is for us to appreciate and endeavour to fill the need for men and money to bring about the fullest possible development and probably at the conclusion of the present war, further opportunity will be provided for this organization of the Company to once more engage in active colonization and settlement work.

AUDITING FREIGHT RECEIPTS

By E. F. LAWSON, *Auditor of Freight Receipts*

Accountants, audit clerks, statisticians, keepers of records which tell the complete and final story of the Company's position in regard to freight revenues of its world-wide railways, steamships, lake and river and coastal steamers, are the 212 highly-trained men and women who comprise the staff of the Auditor of Freight Receipts.

The veritable bee-hive of industry where this large staff holds sway swarms on the fifth floor of Windsor Station, Montreal. No roar and hammer of typewriters, however, will lead you to the scene. A quick ear would catch the rustle of countless papers, the quick chattering of comptometer machines, and the scratch of nearly 200 pens. Generally speaking, though, the scene is one of orderly, intense application as the staff wrestles with complicated figures which would have untrained workers mentally reeling.

Out in the great main office some 200 clerks sit at as many desks checking waybills, compiling statistics and writing—everlastingly writing the story of the Company's freight earnings into the records which go into the vaults to be kept for the legal six-year period.

On another floor, away from the general office, is the record room where a further staff of 12 people sort, bind and note records, keeping monthly books which contain a complete story of freight receipts for that period.

5,000,000 *Waybills Yearly*

Some idea of the scope of the work handled by the auditor of freight receipts and his staff can be gained from the fact that this busy office—the largest on the Canadian Pacific system—deals with accounts from approximately 300 different railways other than the Company's own lines in respect to interline and overhead traffic, receives regularly accounts from 1,255 stations of its own, including lake and river steamers, and receives freight manifests from all of the Company's ocean-going steamships in all parts of the world. The office also handles northbound manifests of the Canadian Australasian Line between Australia, New Zealand and Victoria and Vancouver.

The office handles more than 4,000,000 local waybills in a year, more than 500,000 interline received and 500,000 interline forwarded waybills and more than 300,000 items of waybills covering overhead traffic. Overhead traffic, for the benefit of those who may be confusing it with that household nuisance known as "overhead expense," is traffic originating on one foreign line travelling to another foreign line over the Company's lines.

Not only are waybills accounted and audited, but certain information contained therein is totalled up for the Dominion Government's Bureau of Statistics. This information deals with the various commodities carried over the Company's lines and in what quantities, important data for the Government's statistical branch which thereby may keep industry and agriculture advised of the current health of the nation's business. There is no better criterion of general business, experts agree, than car loadings, weekly totals of which are supplied to the Government by the Company's transportation department, but it is equally important, statistically speaking, to know in what quantities various commodities are moving.

Machines play an invaluable part in this and other details of the freight accounting at Windsor Station.

In the Accounting Machine Bureau located in an especially bright, airy but sound-proof room, are machines called "punches," "sorters," "non-printing" and "printing tabulators," "summary punches," "multipliers," "reproducers," "interpreters" and "gang punches."

To say that these machines are human in skill and intelligence is grossly understating the case. They are actually superhuman, performing prodigies of involved arithmetic, sortation and compilation of records.

That their work is speedy, accurate and reliable is amply attested in the records they have been keeping for several years. The percentage of error on the part of these machines—or, for that matter, by the manual portion of the huge staff, is so small as to be almost invisible.

Machine Room

The machine bureau also performs similar duties for the Auditor of Passenger Receipts, the General Statistician, the Auditor of Agencies and the Auditor of Pay Rolls.

Entering the machine room, every local waybill is handled by an experienced operator on the "punching" machine. From the waybill which contains that information the operator punches out on a card specially provided for the purpose a cryptic record using code numerals which shows, to one who can read it, the originating point of shipment, its destination, weight of the shipment, whether it was L.C.L. or carload, amount collected by the agent in freight charges, or, inversely, whether charges were paid on pick-up or collected from the consignee, and to what commodity classification the shipment belonged. The last-named item, coupled with the code which discloses the weight, is used in compiling commodity statistics for the Government.

Cards punched in this manner, in the words of that haunting refrain, "go down and around" through the various machines,

totals obtained and printed on work sheets, to prove abstracts and card punching. Cards are then sorted together for forwarded and received traffic, in order to check correct reporting one to the other.

As an example:

Traffic for the month from Montreal to Toronto. The receiving station cards, namely, Toronto, are sorted in with the forwarding station cards (Montreal to Toronto). These cards are then in a neat pile and go through the tabulating machine, the tabulators' electric fingers manipulate each card, reading its message, and matching the received card to the forwarded card, and mechanically and dispassionately printing any differences as between the forwarding and receiving, thereby proving the correct accounting covering the traffic between Montreal and Toronto for that period. Likewise with all other stations.

In connection with the tabulating machine is what is termed a summary punch, the functions of which are as follows:—Certain reports and information are required to be grouped under certain headings in order to compile reports necessary for the Government and the Company.

The detailed cards which for one month's business represent something like 500,000 cards are run through the tabulating machine to which is hooked up a summary punch and these cards are then reduced to a matter of about 50,000 summary cards, these summary cards then being used to compile the various statements mentioned above.

Nothing could be more complete or systematic, upwards of 20,000 cards are handled in the machine bureau daily, and the work accomplished is nothing short of remarkable.

The cards, however, are merely a means to an end, they are by no means final records, but they do allow final records to be reached. During the process of handling these cards through the machine bureau a complete printed record has been obtained and becomes a permanent record.

Detailed cards are therefore of no further use and are bundled into packages and at stated periods of the year sold for scrap paper. There are always buyers, for the cards are of good, pure manila, since they must pass through electrically operated machinery and can contain no scrap of metal or foreign substance.

Waybills, however, constitute but one large item of the work. In addition, too, the office deals with freight manifests from the Company's ships on the Atlantic and Pacific and for that matter, in the general sense, on the seven seas.

In connection with local waybills, manual accounting and machines readily determine all factors of each shipment, readily establishing the important question: "Has the Company come out on the right side?" Painstaking as this work must be, it is not

a patch on the work involved in the auditing and accounting of a waybill on interline received traffic.

Five Railways Involved in One Shipment

The receiving company is also the accounting company, and must handle the waybill and properly apportion the amounts to be paid to all of the companies involved in the shipment. As many as five railways easily may be involved in the movement, for example, of a carload of lumber or produce from California to Montreal. Revenues to each of the companies involved must be worked out accurately and in accordance with uniform accounting rules applying to all Canadian and United States railways.

This work by its nature is confined to the manual staff and involves reference to innumerable volumes of tariffs and division sheets which are changed more or less frequently. There are thousands of these books in the office, which must keep on hand far more of them covering more divisions and connections than the freight traffic department itself. Anyone who takes the trouble to look over a waybill involving a shipment which has reached the Company's lines over several different railways is apt to earn himself a fine headache if he tries to figure out the percentages of revenue accruing to each of the companies. It is arithmetic plus!

'Opening the Throttle'

E. Stanley Johnson, Company agent at Onawa, Me., in *One-Track Mind*, published by the Canadian Pacific Staff Bulletin, wrote that: It would take too much time to list the various off-hours things that please me, but I think I'd put at the very top of the list my job as midwife!

My wife and I have, before a doctor could get here, delivered no less than 14 babies around Elliotsville Plantation (which includes Onawa).

The first baby, as you can imagine, was the hardest. I was scared to death. But I kept beside me the whole time a book called "Marriage and Motherhood," and I kept it open at the right place till everything was over.

I guess that helped. Anyway, the baby was a normal youngster and one of the big thrills of my life was giving that kid a smart spank on the bottom, according to the rules, and hearing it let out a lusty cry, according to schedule.

You don't know the full job of life on a railroad until you've helped put a backwoods youngster on the main track and have opened the throttle.

PASSENGER REVENUE ACCOUNTING

By C. B. GORDON, *Auditor of Passenger Receipts*

Passenger traffic might be described as a pay-as-you-enter arrangement, that is to say payment is exacted at the commencement of the journey and, to meet such a requirement, some document in acknowledgment of payment of the required toll by the payee must be issued to him. This document takes the form of what is known as a ticket, and it is essentially an undertaking on the part of the Company to perform certain service for value received.

As there are many kinds of traffic varying between simple short trips of a few miles and intricate transcontinental tours, many different forms of tickets are necessary.

The whole system of passenger travel, and, therefore, of passenger auditing and accounting, is based on tickets.

A fundamental necessity is that an accurate and up-to-date record must be maintained of all tickets printed, and the record must also show how the tickets printed have been disposed of. That is to say, whether such tickets are still on hand with the General Ticket Supply Bureau; whether they have been distributed to agents, and, if so, to which agents, and if distributed to agents, whether they are still on hand with the agents, or have been issued and properly accounted for.

Numerous forms of tickets are necessary for rail passage, including coastal and lake transportation, and there are also many other forms required for sleeping and parlor cars, dining cars, restaurants, excess baggage, parcel room receipts and milk.

Without going into extended detail, the procedure regarding tickets is on the following lines:

Tickets

All forms of rail tickets are ordered from printers by the General Ticket Supply Bureau, a branch of the traffic department, which bureau also arranges their distribution to the various agents requiring them, or, in the case of conductors, arranging that an adequate supply of the forms they require are on hand at supply stations.

As the ticket is our stock in trade, it is necessary that the audit office must have a definite source of information as to all tickets printed and this is provided by a requirement that printers' invoices or bills are not vouchered or paid until they have been noted by the audit office; thus, at the outset, ensuring the proper record.

Each ticket has a form number and a serial number, and, from the invoices, the forms and numbers of the tickets printed are recorded as a debit to the Ticket Supply Bureau.

Agents, when they require a supply of any form of ticket, forward a requisition to the Ticket Supply Bureau, which office, when supplying the tickets to the agent, also forwards an invoice in duplicate to him, one copy of which agent is required to return to audit office acknowledging receipt of tickets as per the invoice. A copy of the invoice is also forwarded to the audit office at the time tickets are shipped, and, from this invoice and agent's acknowledgment, we credit the supply bureau and debit the agent with the tickets involved.

All ticket-holding agents are required to forward periodical reports of tickets sold, and from these reports the agents receive credit for the tickets issued.

From time to time audits are made of the agent's stock by actual count of the tickets on hand, which should agree with the audit office record, and any differences must be reconciled.

Conductors receive their supplies through certain designated agents and the same procedure is followed.

Pursers requisition directly for their stock and the accounting procedure is the same as in the case of agents.

With regard to sleeping and parlor car conductors and dining car stewards, the accounting for tickets is the same in essentials as in the case of ticket agents.

Rail Accounting Classified

Our rail accounting is divided into the following sections:

1. Local traffic
2. Interline traffic.
3. Sleeping, parlor & dining car & restaurants.

Local Section

The local section is responsible for the auditing of tickets good for travel between points on our own system, which agents are required to account for on local ticket reports.

The agent's report shows particulars as to form, number, class and destination of tickets issued and the rate collected. The rate reported is audited to see that it is in accord with the requirements of the tariff under which the ticket was issued.

Generally speaking, tickets of the same kind to the same destinations are grouped in one entry but whether one ticket or a group is involved, the total value for each entry is extended to an amount column and all extensions are checked as is also the total of the amount columns of various pages of the report and also the total of the report.

The sales made by each office are then analyzed for the purpose of allocating the amount collected to the part or parts of the line over which the ticket may read; that is, eastern lines, western

lines, operated sections, etc. Where the Canadian Pacific-Canadian National passenger pool is involved, appropriate allocation is made.

Tickets collected and auditor's portion of cash fare receipts issued by conductors are forwarded with covering report at the conclusion of each run. To ensure that a report is received from every conductor, a record is maintained of all scheduled trains, and the movement of special trains is covered by reports from transportation and operating departments.

In addition to rail tickets, the local ticket reports also include revenue from excess baggage checks, storage checks, milk tickets, parcel office receipts and automobile checks.

When train earnings are required, it is from conductors' collections that the information is obtained—by the somewhat laborious process of listing and classifying the tickets and then valuing them.

The procedure in the audit of trip reports of train conductors and voyage reports of pursers is generally the same as in the case of ticket agents.

Interline Section

The interline section is responsible for the apportionment of revenue to other lines in Canada and the United States of tickets sold by our Company, which bear coupons reading over other lines, and for the auditing of proportions allowed to this Company on sales by other lines, reading over any portion of our system. A wide knowledge of tariffs, rate constructions, railway geography, and of the many complicated methods of dividing the revenue, is necessary in work of this kind.

Passenger accounting rules, as set forth by the accounting division of the Association of American Railroads, must be followed in the rendering of accounts and other matters pertaining thereto.

Agents' interline ticket reports are registered on receipt, and, after revenue has been apportioned to other lines and to the various Company accounts, statements are rendered to other lines of each and every ticket reading over such lines with its proportion of revenue accruing thereon. Settlement with other lines is made on a contra-account basis.

Foreign lines selling tickets good for travel over any part of our system, render statements to us of such tickets, showing our proportion of the through fare. Against these statements we check all tickets of other lines' issue received in collections.

Sleeping, Dining and Parlor Car Section

The Canadian Pacific differs from most of the United States lines in that we own and operate our own sleeping and parlor

cars. Sleeping and parlor car tickets are sold by agents and conductors and the audit of the covering reports and tickets is on the same general lines as in the case of local tickets and reports.

Sleeping car conductors and porters, on runs where a porter is in charge, submit reports known as diagrams, and forward to us ticket collections with diagram at the conclusion of every run. These tickets are checked against the entries on the diagrams to see that the proper accommodation has been given and that starting point and destination correspond. Likewise, cash fare receipts are checked to see that proper fare has been collected.

Cash collected by conductors and porters is deposited by them with the Treasurer, or certain designated agents, and receipt obtained both on the diagram and in the conductor's remittance book. The cash collected is entered in our cash book as a debit to the conductor concerned, and he is credited by showing the point and date where cash has been deposited. We verify that the cash has actually been accounted for.

Many tickets of the Pullman Company's issue are honored in our cars and these are billed each month against that company; also numerous Canadian National tickets are honored in our cars, especially in the pool zones, and they are dealt with in the same way.

The Pullman Company honors a great many of our tickets in joint sleeping car lines and renders a bill to us monthly for their value.

Dining car stewards submit daily reports and meal checks at the end of their run. The checks are scrutinized to see that the prices called for on the menu card have been collected. Similar procedure to that already outlined for sleeping car conductors is followed in accounting for cash collected, and this also applies to cash collected for meals served in various restaurants operated by the Company.

Many meal coupons of other companies' issue, such as tour companies, are honored in our dining cars and these are billed monthly against the issuing company.

Statistics

Under this heading the most important work is the accumulation of passenger fares and miles which, with the revenue, provide a basis for determining statistical data for comparative and annual report purposes.

Taxes

The accumulation of taxes collected on ticket sales for payment to the Canadian and United States governments is a responsibility of this department.

Government Traffic

Canadian and United States government traffic accounts for a considerable proportion of our revenue. This traffic covers naval, military and air force movements, and includes transportation, berths and meals. Government warrants are exchanged by agents for tickets covering the various services, such warrants being remitted to the Treasurer as cash. These warrants come to us for rating, after which they are billed to the government department concerned.

Consolidation of Accounts

The receipts, covered by the thousands of reports from agents, conductors, stewards, pursers, etc., and their distribution to appropriate accounts, are recorded and summarized in journals. In general, the credits to revenue and other accounts are debits to the agency or individual receiving payment for the particular service to be performed by the Company.

Ready-Made Farms

Half the subsidy for the railway was in land, and could be counted an asset only when it was sold. As early as February we find Stephen writing a letter to Rt. Hon. W. E. Foster, Gladstone's Chief Secretary for Ireland, suggesting a settlement plan with ready-made farms in Canada to be organized in co-operation with the British government so as to provide an outlet for the distressed Irish. Foster was interested, but Gladstone was opposed to the scheme. On April 7th Stephen wrote to Macdonald from London, saying that he would have to return to England in the Autumn in order to follow up his colonization plans.—*Steel of Empire* (John Murray Gibbon).

Troops to Northwest Rebellion

In the Northwest Rebellion of 1885 John Murray Gibbon writes in *Steel of Empire* that: Van Horne undertook to transport troops from Ottawa to Fort Qu'Appelle over the uncompleted tracks in 11 days on two days' notice, provided the Company had complete control over the movement. The first two batteries were delivered at Winnipeg four days after leaving Ottawa and four thousand troops followed with equal celerity.

PENSIONS

By F. J. CURTIS, *Superintendent of Pensions and Staff Registrar*

The Company established a pension plan for its employees in 1902, the Company bearing the entire cost of the pensions and no assessments were made on salaries or wages of employees.

After thorough investigation by a committee composed of officers of the Company and representatives of employees it was decided that, effective January 1, 1937, a contributory plan should be put into force which would adhere as closely as possible to the underlying principles of the original system and embody such other changes as were necessary to meet altered conditions.

Under the new plan participation was optional for eligible employees in the service prior to that date, but compulsory for those entering the service thereafter. For all participants the rate of contribution is three per cent of salary or wages earned. Contributions on the part of the Company remain voluntary.

At December 31, 1945, the contributions and income lying to the credit of the Trust Fund amounted to $33,487,169, which includes bond and bank interest totalling $3,057,178 and $7,580,073 contributed by the Company under Rule 13 for the purpose of increasing the proportion of the pension allowance which the Trust Fund would otherwise provide.

All funds are invested from time to time in Dominion Government securities or securities guaranteed by the Dominion Government.

An actuarial valuation of the Trust Fund was undertaken as at December 31, 1942, and it was found that the Fund is adequate for the purpose set out in the rules and regulations.

Because up to the present time only a small proportion of pensions arise from a comparatively short period of contributory service the withdrawals from the Fund have been quite small, therefore the Company is presently paying the bulk of the pensions.

In the year 1945 the Company's disbursements for payment of pension allowances amounted to $4,287,243, while the amount withdrawn from the Fund was but $132,728. The number of employees pensioned during the year was 1285.

After allowing for deductions owing to death and discontinuance from other causes, the total number on the pension payroll at the end of the year was greater by 883 than at the end of 1944.

Distribution by ages was as follows:

Under 60 years of age	348
From 60 to 64 years of age inclusive	855
From 65 to 70 years of age inclusive	3344
Over 70 years of age	2161
Total	6708

Donald Smith Helped the West

Somewhat in the background during these years, yet not without influence in the councils of the Company, stood Sir Donald Smith, sixty-five years old when the last spike was driven at Craigellachie, but still with nearly thirty years to run.

On Sunday afternoons after Stephen left for England there came to his house in Montreal, Van Horne, R. B. Angus and Shaughnessy, all four comprising the executive committee, to discuss plans and policies with more intimacy than in the board room.

The Hudson's Bay Company paid him the tribute of electing him governor in 1889, and in the same year he became chancellor of McGill University, but the summit of his ambitions was reached when he was appointed High Commissioner for Canada in London.

That a political plum of this nature should go to a man of seventy-five brought no little criticism on the Conservative Government, but the appointment was confirmed a few months later by Sir Wilfrid Laurier, the new Liberal Premier, who had a genuine affection for the old veteran.

That confidence was justified. What Canada needed most of all was population. The national policy of Macdonald had helped the manufacturers of the eastern provinces, but as many Canadians were leaving their farms for the United States as immigrants came in from Europe.

. . . The new high commissioner set to work on a campaign of propaganda for emigration such as Europe had never seen . . . In London itself his wealth and hospitality gave him a standing that Tupper could not obtain, and within a year he was elevated to the peerage as Lord Strathcona and Mount Royal. The House of Lords is to many self-made men a mausoleum to Strathcona it was a stepping stone to propaganda on a still greater scale.—*Steel of Empire* (John Murray Gibbon).

WINDSOR STREET HEADQUARTERS

By A. S. PIERS, *Manager, Real Estate Department*

Windsor Station, Montreal, with its bright and spacious concourse, commodious waiting rooms and numerous facilities dedicated to the care and comfort of Canadian Pacific patrons, is something more than a place to get off and on trains. It also serves as a symbol of the Canadian Pacific inasmuch as it embodies the Company's long-standing tradition of service and courtesy. In addition, it is the nerve centre of a great transportation system which has been faithfully serving its country and the Empire in peace and war for well over half a century and is the northern termini of two American roads the Delaware & Hudson and the New York Central.

Within the station's venerable stone walls are housed the executive offices where the Company's system-wide policies are shaped and directed, and the general offices whose personnel accounts for the great majority of Windsor Station's 2,500 employees. Of outstanding architectural beauty the towered edifice cannot fail to impress new arrivals to the city, while Montrealers have long regarded the station as a familiar and favorite landmark. The site it occupies has a special place in the history of the metropolis and of the Province of Quebec for it was there, on June 24, 1834, that the St. Jean Baptiste Society, a leading French-Canadian organization, was formed. At that time the land was occupied by the garden of John Picote de Belestre McDonnell.

Stepping off the train at any of the 11 tracks leading into Windsor Station, and into the vast skylighted concourse, the visitor finds his every need carefully anticipated from the time his grips are taken by an alert red-cap to the time he is whisked away in a taxi from the station entrance. If he wishes a meal, the visitor has his choice of the station's spacious restaurant or the coffee shop, both noted for delectable meals at reasonable prices.

Nor can the traveller fail to be impressed by the drama of everyday life that is continually being enacted in the big depot. In wartime, Windsor Station was the last temporary frontier of civilian life for thousands of young servicemen en route for embarkation points or training centres. It is the scene of happy reunions and touching farewells. For immigrants and war refugees, it is the introduction to a new life of hope and freedom.

Premises Expanded with Company

But it was a far less pretentious Windsor Station that greeted Canadian Pacific passengers in the early days. The original building commenced in 1886, and opened in February of 1889, was of stone construction and stood five and six storeys in height. In 1900 the Osborne street wing, consisting of four storeys, was

added to the original edifice, while a further extension westward in concrete construction, two storeys in height, was added in 1906. The power house at the corner of Mountain and St. Antoine streets was built in 1910.

As the volume of traffic continued to rise, the Company found it necessary to expand its premises still further, and in 1912 the eight-storey St. Antoine street wing and fifteen-storey tower and waiting room were added. During the following year the station concourse and train shed were erected, which proved adequate accommodation until 1922, when an additional storey was added to the westerly Osborne street extension.

A number of additional improvements have been effected since that time, particularly during the war years when traffic over the entire system reached record proportions. Not the least of these projects was the installation of the station's great loudspeaker system in 1942. Primarily installed for the improvement of train announcing, the system has also proved invaluable for announcing personal calls, paging, locating lost children, air raid precaution drills, and special events taking place in the station concourse. Its equipment consists of three 40-watt amplifiers, 65 loud speakers, and seven dynamic microphones. Since 1943 it has been used during the Christmas season to provide a background of music suitable to the season, an innovation much appreciated by travellers.

The year 1942 also saw the complete remodelling of the station's Osborne street front, already enhanced by the big canopy and neon shield installed in 1939, when Their Majesties, King George VI and Queen Elizabeth, made their tour of the Dominion. The remodelling programme gave the station additional entrance and exit facilities, bright new vestibules with terrazzo flooring, a modern lighting system and improved baggage and parcel checking facilities. Renewal of the concourse roof with its hundreds of sheets of wire-reinforced glass, was effected in 1940. Alterations in 1943 to the former station lunch room, which has been converted into a coffee shop, provide substantially increased seating facilities.

Installation for the first time in any Canadian railway station of self-operating or "magic" door controls at the Osborne street entrance was instituted during 1944, to the extent of two complete sets of doors leading from the street entrance into the vestibule and again from the vestibule into the station concourse. This has created efficiency and favorable public appreciation to a very considerable extent.

The establishment of quarters for the comfort and care of travelling personnel in the services, known as the "Welcome Room" was also carried out in 1944 and is operated under the auspices of Canadian Legion War Services. This centre with all its

adequate facilities has been greatly patronized and appreciated by numerous members of the navies, armies and air forces of the United Nations.

The lighting of the station concourse has been modernized and includes a novel system of individual fluorescent lighting of the track gates and of the curtain displaying the names of stations enroute of departing trains.

Numerous Public Services

Nothing has been omitted to ensure the comfort and safety of patrons of the Company at Windsor Station. Spacious waiting rooms for men and women, smoking rooms, public telephones, telegraph and cable office, wash rooms, barber shop, shoe shine parlor, are located on the premises. A modern barber shop with shower and bath facilities was established adjacent to the concourse level in 1942. Other convenient services include a branch of the Traveller's Aid Society, and one of the Association Catholique Protection de la Jeune Fille, a nursery with matron in attendance, information bureau, baggage room, Canadian Transfer office, check room, Canadian and United States customs offices, newsstand and soda bar, both added in 1945, a remodelled train bulletin board to record all inbound and outbound train movements, all of such services being staffed by uniformed employees.

Windsor Station is noted for its up-to-date and efficient ticket selling facilities. Several ticket cases located in the main waiting room behind marble counters, holding complete stocks of tickets, permit all wickets to remain open continuously during rush periods, greatly facilitating the sale and distribution of all rail, sleeping car, parlor car, and steamship tickets. Two impressive monuments, one dedicated to C.P.R. employees who gave their lives in the Great War is located in the station concourse, and the other in memory of Lord Mount Stephen, the Company's first president, stands at the south end of the main waiting room.

Of the 12 elevators serving the Company's Windsor Station offices and other portion of the premises, two operate between the station concourse and the St. Antoine street level, which provide a continuous service for patrons and the public alike. These giant lifts measure 11 by 9 feet in area and have a loading capacity of 7000 lbs.

As a wartime measure the formation of Windsor Station's own A.R.P. unit, known as Windsor Special Post, was established in 1942, complete with a special control room for the instantaneous handling of all emergency orders, and provision was also made for numerous air raid shelters and wardens' posts throughout the premises. An excellent rifle range, for the use and training of the Company's special unit of the Victoria Rifles of Canada, was also provided.

The operation and maintenance of the Windsor Station premises are under the administration of the building superintendent, who has under his direction a complete staff of skilled artisans, including carpenters, painters, engineers, cleaners, plumbers, electricians, firemen, oilers, steamfitters, elevator operators, janitors and helpers. The staffs of the building's mail room and telephone service are also under his control.

Six to Eight Thousand 'Phone Calls

The Company's telephone requirements are served by its own complete installation consisting of a main switchboard handled by 16 operators and supervisors. There are 50 main trunk lines, and the service to the offices alone requires the use of some 678 telephones. Six to eight thousand incoming telephone calls are handled daily, and the Company's own long distance business service is handled through the same exchange over its own wires covering all principal points on its system across the entire continent from Halifax to Vancouver.

The Company's power plant is served by three 400 horsepower boilers, operation of which requires several thousand tons of coal per year. In addition to supplying all necessary heat for the premises, and also for furnishing steam supply and air for trains requiring to be so supplied while held in the train shed, the engineer's department is also responsible for the cooling and filtering of drinking water throughout the premises, the operating and maintenance of the 12 elevators, the refrigeration service to the kitchen and restaurant quarters, and also for the furnishing of emergency power supply in the event of failure from the regular source.

The services and maintenance handled by the building's forces are many and varied, as an example there is the immense task of cleaning and changing over between 3,500 and 4,000 double windows every Spring and Fall as well as the storage of same in their individual racks in a special storeroom. A complete carpenter shop under its own foreman and fitted with power driven tools is provided, as well as a separate paint shop with foreman in charge. The electricians under the chief electrician are constantly occupied with regular maintenance and repairs to equipment such as lamp renewals, ventilating fans, numerous motors for various services, panel boards, storage batteries for power driven baggage and express trucks, and the supervision of the transformer rooms. Numerous electric clocks are distributed throughout the premises, all synchronized with a master clock to at all times ensure accuracy and uniformity.

Windsor Station well deserves its reputation as one of the finest railway terminals in North America, and is a worthy monument to the world's greatest travel system and the country it so faithfully serves.

WORLD SERVICE FOR WORLD WAR

By JACK MAUNDER, *Press Relations Officer, Montreal*

World transportation for world war was the most important single service rendered by the Canadian Pacific from September of 1939 to the end of December in 1945, when the repatriation movement was still in full swing.

On land, over its more than 17,000 miles of rail lines, it moved 307 million tons of freight and 86 million passengers, including more than 150,000 soldiers for Europe and nearly 130,000 Army and Air Force repats handled in special trains. Thousands more, among them many sailors, rode extra sections of regular trains to and from war.

At sea the 22 ships it made available to the Admiralty steamed from the Arctic to Australasia and 12 were sunk by the enemy —German, Jap and Italian alike—one was lost by misadventure and one was burned in drydock. War mileage for 11 of its passenger liners was 2,206,710 miles, during which they carried 865,486 passengers and its five Beaver freight boats did 406,234 miles.

In the air it pioneered the transatlantic flight of bombers to Britain over the "Atlantic Bridge", helped to open up Canada's strategic Far North and shared in the air training plan.

Only the world's greatest travel system could have handled so complex a transportation assignment and then only with the highest efficiency and devotion to duty from its 83,500 officers and employees.

Their performance was such as to fully merit the public tribute of D. C. Coleman, Chairman and President, that "no body of workers can have served the nation more loyally and more effectively."

Nor was the Company satisfied with the role of a war carrier only.

Tanks for Russia and naval ordnance and marine engines for the Battle of the Atlantic and D-Day rolled from its shops as part of munitions department's contracts representing total value of more than $135,000,000.

D-Day Decided on in Chateau Frontenac

Its world-famous Chateau Frontenac is where D-Day's place of invasion in Normandy was actually decided upon in the first of two Roosevelt-Churchill conferences at Quebec City as Canada's guests.

And, when D-Day dawned, a member of the Southampton staff in the Company's European organization was commandant of one of the pre-fabricated ports used in the landings.

The transportation department made some dramatic entries on its train sheets, as when a freight train, loaded with planes for the Battle of Britain, came close to the best passenger time in a dash from the Pacific Coast to Montreal.

More than 37 million telegrams were sent and over nine million cables were handled by the communications department and C.P.R. lines between Sudbury and Winnipeg and in parts of British Columbia made trans-Canada phone calls possible.

Canteen needs of British service personnel were supplied through the Company's purchasing department as buyers for the Navy, Army and Air Force Institute—"Naafi" to British fighting men and women.

Special names grew up for cars, as, for instance, the "bacon and egg cars", the refrigerator cars which carried, and helped to cure, bacon for Britain and transported shell eggs to seaboard.

Ten hospital cars for war-wounded were turned out by the mechanical department, and, in July of 1944, Col. J. L. Ralston, then defence minister, called the car he was inspecting "as perfect as it can be."

Twelve commissary cars were developed in which 500 officers and men on troop trains could be fed quickly, and, in these, and regular diners, 11,000,000 meals were provided for service personnel.

Over 20,000 C.P.R. people answered the call to the colors and of that number 658 were killed on active service. Close to 200 officers and employees were loaned for special Government war work.

On the home front no patriotic appeal ever lacked for support with the subscription of $204,719,100 by the Company and its personnel in the nine victory loans as an outstanding example.

In the light of C.P.R. history in war it was to be expected that the Company's contribution in this most terrible of conflicts would be outstanding.

Armed Uprising First Proved Company's Worth

It was an armed uprising in Canada—the Northwest Rebellion of 1885—which first proved the C.P.R.'s worth to the nation when troops were rushed to the West over the still unfinished railroad.

The Company served again in the Boer War and a director and one of the founders, Lord Strathcona, electrified England by the raising of the famed cavalry troop bearing his name.

Again in World War I Canada's pioneer transcontinental road was on the job, as the only railway company "whose lines extended under a single management from coast to coast," as Mr. Coleman reminded shareholders in 1943.

In assessing the magnitude of the Company's contribution in World War II on the part of the railroad it must be remembered that the job was done with much new help.

As of August 31, 1945, there had been more than 12,000 enlistments from the railroad and almost a thousand from the express service. This means greater labor turnover. In 1943 for instance labor turnover was more than three times the normal rate and the training of inexperienced employees was a serious problem.

The loss of those seasoned railroaders who enlisted came at a time when the Company's requirements in steel and other strategic materials for new rolling stock were inferior in priority to those of munitions plants.

That the railroad gave such a smashing performance in the face of these difficulties speaks volumes for its flexibility.

Cars were loaded heavier and travelled farther and engine miles per day were increased. Ninety-eight per cent greater freight car utilization was noted in 1945 when compared with 1938, the last year completely free from war. Passenger mileage 277 per cent greater than in 1938 was handled with an increase of only 26 per cent in passenger train miles. During the same period engine miles per day increased 54 per cent.

Mechanical Department Extended Life of Power, Rolling Stock

The mechanical department played a big part in this transportation tailored to war's requirements by extending the life of existing engines and cars. Such expedients as working three shifts daily instead of one reduced to a minimum the time engines were off the line for servicing, checkup or overhauls in roundhouses, and back and main shops.

Some notable mileage marks were set up by locomotives, as for example, the 19,053 miles wheeled by a Royal Hudson in one month on the Montreal-Chapleau run.

It must be remembered too that the regular routine was dislocated seriously, if necessarily, by munitions work.

Angus Shops in Montreal, for instance, gave up much space to the munitions department and at Ogden Shops in Calgary the entire locomotive shop—including erecting, boiler and blacksmith shops—was taken over for war work.

When Ogden passed out of the locomotive repair picture it was necessary to place on smaller shops in the territory the light repairs usually handled at Ogden while heavy repairs looked after there before had to go to Weston Shops in Winnipeg, and, in some cases, to Angus.

Conversion was another way in which the mechanical department served. Nineteen parlor cars were converted to first-class passenger coaches when parlor cars were withdrawn to get more accommodation from existing equipment.

Special silk cars which used to flash through from Vancouver were made into baggage cars on regular runs and two diners serving troop installations in the Maritimes were given accommodation for four more persons.

Materials in short supply were jealously conserved. Eight hundred and fifty tons of steel plates were saved by the introduction of plywood sheathing on box cars, a form of construction later adopted by railroads and car builders in the United States.

Rubber was reclaimed when burst sections of signal hose were spliced together and tin consumption was drastically reduced after the Japs seized Far Eastern supply bases. Coal requirements were cut by 14 per cent. through a vigorous system-wide campaign.

Traffic capacity was increased by an extensive electric automatic block signal installation program with 360 miles of eastern lines and 285 miles of track in the west so equipped.

Women were employed in fields as predominantly masculine as engine wiping and track work to help take up the slack caused by heavy enlistments.

The traffic department had to evolve such schemes as "rationed waiting" to handle the business. As it worked at Winnipeg this plan called for a numbered card to be given to patrons who were served when their number was called.

Special movements of great importance had to be worked into transportation schedules with the heavy travel in connection with the Quebec Conferences and President Roosevelt's vacation trip to northern Ontario in 1943 being two outstanding examples.

Extensive Arrangements at Moment's Notice

This visit by the United States' chief executive shows the difference between war and peace transportation when compared with the Royal Tour of 1939. Preparations for the King and Queen to cross Canada could be made months in advance. For President Roosevelt exactly similar arrangements as to transportation and security had to be made at almost a moment's notice.

The Government of Canada itself officially confirmed the great place the Company has filled in the nation's war effort in the New Year's Honors List of 1944 when W. M. Neal, the Vice-President, was created a Commander of the Order of the British Empire, highest degree short of knighthood. The citation read "for outstanding service in the field of war transport."

On the oceans of the world every sort of Merchant Navy assignment was discharged by the more than 6,000 men and 18 ocean, two British Columbia Coast and two Canadian Australasian Line vessels which went over to the Admiralty from the Company.

Eighty-five decorations or mentions in despatches for gallantry at sea were won by Company sailors, with six of them going to C.P.S.S. men in the Royal Navy.

In ships lost the price of Admiralty is shown to be: Empress of Britain, Montrose, Niagara (Canadian Australasian Line), Beaverford and Beaverburn, sunk in 1940; Beaverdale and Beaverbrae, sunk in 1941; Duchess of Atholl, Princess Marguerite (B.C. Coast) and Empress of Asia, sunk in 1942; and Empress of Canada and Duchess of York, sunk in 1943. The Beaverhill went down in 1944 victim of a marine accident and the Empress of Russia was burned at drydock in 1945.

Honors won in battle include the swastika painted on the bridge of the Duchess of Bedford which sank a German submarine and put another to flight.

Sixty-six hundred child war guests brought from Britain in the Dunkirk-darkened days of 1940 are included in cargoes carried by these once-gleaming vessels in their grim, grey dress of war.

Iron-nerved Courage Under Fire

The terse entry "services" covered such iron-nerved actions under fire as heaving overboard a 500-pound unexploded bomb, braving flames to make a human bridge where a companion ladder had been blasted away and freeing a boat which saved at least 30 lives in the sinking of the 42,000-ton "Britain", largest merchant ship to go down in World War II.

In war miles steamed the "Asia" could stand for the fleet off her 30,000-mile voyage of five months' duration in 1941 when she picked up survivors from the Greek and Crete campaigns.

Steamships people where among those whose specialized knowledge greatly aided Government agencies when they served on loan to the British Ministry of War Transport of which Sir Edward Beatty, long chairman and president of the Company, was first Canadian representative and George Stephen, Vice-President of Traffic, assistant representative.

First M. McD. Duff and then Captain Edmund Aikman served as director of the Ministry's operating department when assistant to the chairman of C.P.S.S. and George Wood, comptroller of C.P.S.S., was director of finance for the Ministry.

From the steamships side of the railroad traffic organization came William Baird, steamship passenger traffic manager, as first director of the Ministry's secretariat while W. M. Kirkpatrick, retired foreign freight traffic manager, headed the freight department.

Others from the steamships and railroad who served the Ministry include D. K. Buik, who became director of the general division; P. D. Sutherland, general passenger agent, cruises; and Captain W. L. Heeley, general superintendent, C.P.S.S.

The European organization provided beach landing officers for the North African and Italian campaigns and the pre-fabricated port of which a Southampton staff officer was commandant on D-Day in Normandy was "Arromanches."

In the air the Company pioneered in all three fields of trans-atlantic plane ferry service, training of airmen and the development of the Far North.

Threatened to Fly Back "U wanted" Plane

One of the brighter stories of the war tells of exasperated Capt. Ian Ross shouting "fill the damn thing up with gas and we'll fly it back" at puzzled port officials in Stranraer, Scotland.

This was in September of 1940 and the "damn thing" was a Catalina flying boat he had brought from Newfoundland in 15 hours for the infant C.P.R. ferry service, which was to grow into a bridge of bombers for Britain and be taken over by the Royal Air Force.

That first flight was made two months after the British Ministry of Aircraft Production had asked the Company to inaugurate such a service.

Until then Atlantic flying had been considered as stunt stuff and it was estimated that it could be made practical in another decade. The Company, in conjunction with the R.A.F., Royal Canadian Air Force and British Overseas Airways, clipped nine years from that estimate.

In the training of airmen one of Canadian Pacific Air Lines' seven civilian-operated schools was the first air observers' school to actually open under the British Commonwealth Air Training Plan.

This was the school at Malton, Ont. Like all the others it was operated on a non-profit basis and the Company was the largest civilian organization connected with the plan. In 1944 over 56,000,000 training miles were flown at the Company's six air observer schools.

Operation of five engine overhaul and aircraft repair plants on contract with the Department of Munitions and Supply was another important phase of the air contribution.

As a transport medium the Company's planes had a leading part in the emergence of the Alaska Highway, the Northwest Joint Defence Air Route, the oil wells and pipe lines in the Far North, by providing the transportation service needed to get them started.

Served Shipshaw and Aluminum Development

Likewise in the gigantic power development at Shipshaw much preliminary freighting was done by air and there was air connection with Bagotville, which services the great aluminum town of Arvida.

Approximately 65 per cent of the Company's traffic and air cargo was closely connected with war work and its north-south routes were particularly vital links in the defence chain.

The Company's munitions program at Angus Shops, Montreal, and Ogden Shops, Calgary, was so outstanding as to elicit high praise from Canada's Minister of Munitions and Supply, from the Soviet Government and the British Government.

Undertaken after arrangements with the Canadian Government were completed by Mr. Coleman it was brilliantly carried out by the munitions department, under the direction of H. B. Bowen, chief of motive power and rolling stock.

At both Angus and Ogden much of the equipment turned out was of a type never before made in this country.

Production at Angus of over 1,400 Valentine tanks for Soviet armies in Russia was the first big contribution to the fight against Fascism. These tanks were ready for action within 45 minutes of the tying up of the ship in a Russian port.

Explaining this, Mr. Coleman told a Montreal audience in 1944 that "the tanks for Russia went forward complete with repair parts, and an initial fuel supply, carrying with them full typed operating instructions and an inventory of parts, in the Russian language."

Russians Call Valentines Best of Imported Tanks

Major General I. A. Belayev, Chairman of the Soviet Government Purchasing Commission in the United States, was quoted by Munitions Minister Howe as saying the Valentine tanks "have proved themselves the best of all our imported tanks."

Even before the last tank had been completed preparations were under way at Angus for the next job—the production of marine engines for corvettes, frigates and invasion barges on a one-a-week schedule.

Proceeding there at the same time was construction of range finder directors, range transmission units and director control equipment for the Royal Navy, with some of these units being used in the Normandy invasion.

On one naval device under construction at Angus it was necessary to send experts of the munitions department to the United Kingdom to study advanced methods of construction and testing at the British plant producing this unit.

From Ogden Shops there was a steady delivery of naval guns, Ack-Ack gun mounts, gun barrels and sights, breech housing mechanisms, sub-detecting equipment and gear for aircraft carriers on contract with the Royal Navy, Royal Canadian Navy and United States Navy.

Of one contract at Ogden a special adviser to the Department of Munitions and Supply said the finish on one of the products was "equal to any production of this type in Canada and very near, if not equal, to the peacetime products of a government arsenal in the United Kingdom."

The Company's munitions engineers not only did what they were asked on all contracts, but, in many of them, improved on the methods of their predecessors.

An outstanding example was the Valentine tank contract. One-piece cast armor turrets and unit nose castings were developed by the Company in place of built-up construction involving the fitting of many individual parts.

Saved Nearly Million Dollars and Much Precious Time

It was the most important of a series of innovations which saved hundreds of thousands of working hours, the most important factor in those black days of "too little and too late", and nearly a million dollars in labor and material expenditure on the tank job.

Following this trail-blazing move casting was widely adopted in place of built-up construction on other types of tanks and ordnance equipment in Canada and elsewhere.

At Ogden, for instance, it was possible to eliminate much fabrication of steel when Mr. Bowen's design was approved to apply the casting method on gun mountings under contract in the Calgary works.

On one important contract the munitions department served not as a manufacturer but as an inspector, packing supervisor and re-erection expert.

This was in connection with 437 locomotives ordered in Canada for the Indian State Railways and which played a major role in the offensive from there.

Outside locomotive plants in Montreal and Kingston were given the contracts to build these engines but it was specified that the Company was to apply its own specifications, standards and methods to tests on them as they were built.

Then when the engines were knocked down for packing the Company again had to check them and a C.P.R. erection engineer went to India to see them re-erected and giving satisfactory service.

It was the first time that a railway company other than the railway company purchasing the equipment or a regular inspection company had been chosen for such a job.

In any recital of the Company's wartime accomplishments there is perhaps nothing more in the grand manner than the

Chateau Frontenac's part in the Quebec Conferences of August, 1943, and September, 1944.

Here was one of the world's great hotels taken over, lock, stock and barrel, as the work centre of the meetings between President Roosevelt and Prime Minister Churchill with Prime Minister King as host.

The registry of guests read like a combined Burke's Peerage and Who's Who. The decisions taken were history-making, with the big one at the 1943 conference, being the naming of the place invasion was to strike nine months from then in June of 1944

Churchill Praised Choice of Conference Locale

For Mr. Churchill "no more fitting and splendid setting could have been chosen than we have here in the Plains of Abraham, in the Chateau Frontenac and ramparts of the Citadel of Quebec."

And it was a brother-to-brother arrangement which set this stage for history. The conference on the taking over of the hotel in 1943 was between the Chairman and President and his younger brother, Dr. E. H. Coleman, C.M.G., K.C., Canada's Under-Secretary of State.

How well the Chateau discharged its responsibilities can be judged by the letters of commendation received. Such service was in the best tradition of the Company's country-wide hotel chain which provided accommodation and relaxation for inspection boards, military missions and servicemen on leave.

On that "plane freight" which set up such excellent time from Vancouver to wharfside in Montreal, with aircraft which Britain so desperately needed then, the transportation department's records show that the run was made in 87½ hours.

It was in May of 1940 that this dramatic dash was made and the best passenger time on Summer schedule that year was 82½ hours from station to station, Vancouver to Montreal, and not from Vancouver to a waiting ship as in the plane movement.

The Company had to fulfil many transportation requirements it had never been called upon to meet in peacetime. "High and wide" shipments were among the special problems.

Corvette boilers, transformers for war plants grown up in the bush and other requirements in war industry often were manufactured miles from where they would be used. They were awkward shipments which prot ided over the edges of cars and close to the maximum passage allowed under bridges.

Huge depressed-centre flat cars in the Company's rolling stock solved this transportation problem, along with a co-ordinated effort by operating, engineering and transportation departments.

Loads had to be jacked up or lowered as circumstances demanded to get them by permanent installations and in some cases installation had to be temporarily removed.

The special movement technique was one which was copied by other roads in Canada and the United States to the benefit of the war effort and some of the depressed-centre flats were loaned at one time to the Milwaukee Road to serve the Kaiser shipyards.

The war brought special traffic to an already well-burdened rail system as in the tens of thousands of cars of British Columbia lumber which went to the Atlantic seaboard by rail.

In peacetime this lumber was moved by water. Fitting its movement into wartime schedules was another place where the transportation department showed a fine grasp of the whole picture.

By arrangement with American roads the same cars which came from west to east over Company lines loaded with lumber went back to shipyards in the State of Washington loaded with steel. They were kept rolling twice across a continent with full loads except for the short haul from Washington to British Columbia.

Passenger equipment also operated in a "shuttle service." Late in 1945 the same cars which carried Canadian repats from the German War to their homes in British Columbia from New York took back American veterans of the Jap War from Seattle.

Supply dumps established at strategic locations throughout the country on Company property and the export permit control system were other invaluable aids in keeping the freight moving.

Storage of war materiel in the supply dumps cleared factories of all but the material for immediate production and created a stockpile to service war on many fronts.

Export permits were required before freight could be moved and were issued only when shipping space was available.

Both systems assured that cars would be kept rolling and not used as storage warehouses on wheels.

The communications department demonstrated its versatility by not only discharging the heavy load laid upon it but by developing special devices for war use.

In its everyday operation one of communication's great services was to lay down for a waiting world the news of the war through its handling of cabled and wired despatches to newspapers and radio broadcasts from the fronts.

The purchasing department served more than "Naafi", of which B. W. Roberts, general purchasing agent, was director of purchases in Canada. It did purchasing for the Government within its own organization and loaned leading officers for war service.

One such was John Eaton, O.B.E., assistant general purchasing agent. He was created Officer of the Order of the British Empire

in June of 1943 while serving in Ottawa as director general of purchases, Department of Munitions and Supply.

W. E. Wilford, purchasing agent at Toronto, also served in Ottawa as director of purchases, Department of Munitions and Supply, while S. V. T. Jeffery, purchasing agent at Vancouver, was in Edmonton for a year as president of Northwest Purchasing Limited, a Crown company to procure supplies for the Alaska Highway.

All three have since returned to the Company and Mr. Wilford has retired.

Handled "Fixings" for British Bacon And—

In the matter of food shipped to Britain nothing tells the story better than the homely "bacon and eggs" and the fixings for that dish were handled by Company equipment.

Overhead refrigerator cars, of which there were 498 among the Company's 4,259 units of freight and express refrigerator equipment at December 31, 1945, had a big part in the bacon movement.

They were specially suited to continue the cure of bacon in transit to the seaboard from interior meat packing plants, and from plants closer to tidewater, including the Company's own Eastern Abattoirs in Montreal.

In like manner all Company "reefers" filled the bill for the movement in heated cars, during the Winter of 1944-45, of the first Canadian eggs in the shell which Britain had had since early in the war, when dried eggs were substituted to save ocean shipping space.

Provision of hospital cars to give an air-conditioned welcome to troops off hospital ships in Canada and the United States was a sample of the way the Company made everything count.

There was no steel available for new cars and the converted equipment which drew the defence minister's high praise was turned out from a compartment-observation car of the Mount class.

The performance of the dining car department in feeding troops can be gauged best by a comparison. In 1945 there were 4,432,852 meals served on Company diners. That was over three million more than were served in the war-free year of 1938. Military meals some years ran as high as 60 per cent of the total.

The record of Company people in enlistments speaks for itself with the final report to the Office of the Vice-President, on August 31, 1945, showing nearly one-quarter of total personnel had volunteered for active service.

20,742 Enlisted for Active Service

Broken down into four main divisions that report revealed 12,822 had enlisted from the railroad and 6,680 from the

steamships, while express and air lines had 989 and 251 enlistments respectively for an over-all total of 20,742.

Distribution of those enlisting from the railroad was as follows:

	Army	Navy	Air Forces	U.S.A. Forces	No Details	Total
Eastern Lines...	3,715	739	979	206	237	5,876
Western Lines...	3,662	1,433	1,526	31	107	6,759
Europe and Asia.	129	23	33	1	1	187
Total.....	7,506	2,195	2,538	238	345	12,822

At that time also 1,380 spare-time soldiers had served in the Reserve Army, 651 of them from the West, 624 from the East and 105 from the express company. An all-Canadian Pacific company in the Victoria Rifles of Canada, an historic Montreal unit, was part of this total.

Serving on loan to Government or Government enterprises on July 31, 1945, were 21 employees with the R.A.F. Transport Command, 66 on special duties, 39 with N.A.A.F.I. and 27 in the British Ministry of War Transport.

In the midst of the machines and metal making up modern warfare's establishment it is difficult to achieve the personal touch, but, Mr. Coleman did it, and most gracefully, for a thousand Company people on active service in Great Britain.

This was in May of 1943 when he "stood treat" at two mammoth dinners in London for C.P.R. servicemen over there. The invitation was for all who could get leave and rationing restrictions made it necessary to stage the dinner on two nights—500 being served each time.

A great tribute has been paid to the Company by the important offices to which executives have been called.

Such an appointment was that of Mr. Neal in October of 1944 as Canadian representative on the Transportation Equipment Committee of the Combined Production and Resources Board.

Other committee members were Brigadier General G. D. Young, the chairman and American representative, who is vice-president of the Pennsylvania Railroad; and General Sir Walter Venning, who represented Great Britain.

They recommended where materials and equipment needed to maintain and re-establish rail, port and inland waterway transportation in areas outside the three member nations could best be supplied and produced in the United States, Great Britain and

Canada. When this committee's work was done Mr. Neal became chairman of a Canadian committee by the same name first for Department of Munitions and Supply and then for Reconstruction and Supply.

Headed Military District at Montreal

Major-General E. de B. Panet, C.M.G., D.S.O., L.d'H., V.D., chief of the department of investigation, gave distinguished service as district officer commanding Military District No. 4 with headquarters in Montreal until the Summer of 1943 when he returned to the Company and took on extra duties as fuel controller for the Province of Quebec.

J. C. Patteson, European general manager, served the British Ministry of Supply from 1940 until September 30, 1944, and was Canadian representative of the Ministry at Ottawa when he resumed his post in London.

J. Hugh Campbell, manager of the department of public relations, left the post of press representative, western lines, at Winnipeg and served in Washington for the Wartime Information Board of Canada and the Combined Production and Resources Board until his return to the Company in 1945.

George Hodge, O.B.E., manager of the department of personnel, and W. A. Newman, M.B.E., manager of the department of research, were honored in the King's Birthday List of June, 1943, while on loan for war service.

Mr. Hodge was a member of the advisory committee of the National War Labor Board in Ottawa when he was made an Officer of the Order of the British Empire and Mr. Newman was made a Member of the same Order for his work with Federal Aircraft Limited, a Crown company, in Montreal.

Mr. Newman, when he returned to the Company in 1945, was in charge of Canada's entire aircraft industry as president of Federal Aircraft, aircraft administrator for the Wartime Prices and Trade Board, aircraft controller for the Wartime Industries Control Board and retained these positions mainly in a consulting capacity.

A. Hector Cadieux, deputy chief of the department of investigation, and C. R. (Peter) Troup, general supervisor of schools for the air lines, also were created O.B.E. in June of 1943.

Mr. Cadieux was acting chief of the department during the period that his officers had a share with other Company personnel in the capture of 15 escaped Nazi prisoners. Mr. Troup organized and managed that first air observers' school to open at Malton under the air training plan.

Family Chats Opened Loans

There was all-out support on the home front. Starting with the Fifth Victory Loan in the Fall of 1943 the Company was

"called together" every loan opening over one of the most extensive private broadcast hookups in the history of Canadian communications as Mr. Neal spoke to Company people from the Atlantic to the Pacific.

The Vice-President keynoted five campaigns with these family chats, the first of which was delivered just after he had flown back from a trip to Britain on official business with Mr. Roberts.

By loans the subscriptions of the Company and its personnel have been: First Loan, $12,654,050; Second, $13,971,100; Third, $17,275,350; Fourth, $21,385,150; Fifth, $25,471,200; Sixth, $25,117,950; Seventh, $28,264,200; Eighth, $27,859,550; Ninth, $32,720,550.

The grand total of $204,719,100 for system and employees was made up of $65,927,100 by employees and $138,792,000 by the Company and the pension fund and express pension fund.

The payroll deduction plan which was widely used for the Victory Loans also was the method by which many War Savings Certificates were purchased with a report showing 24,000 officers and employees participating at the end of 1945.

Hundreds of gold badges for 10 or more donations were won by Company people who have been going to Red Cross blood banks, including the one at Angus Shops, one of the first private clinics in Canada.

From its establishment in July of 1942 to its close in September of 1945 there were 5,880 donations at Angus and many qualified for gold badges.

Among the more unusual drives sponsored by Company people was the Golden Aircraft Fund in which old gold donated in a system-wide campaign was sold to buy two Spitfires for the R.C.A.F.

Named "Canadian Pacific I" and "Canadian Pacific II" these aircraft were the personal ships of five R.C.A.F. aces when they won the Distinguished Flying Cross.

Collection of salvage was actively pressed with more than a million tons of scrap metal handled by reclaim docks and old Company files were cleaned out to aid the waste paper drives.

Women's services formed within the Company gave of their time and energy to provide comforts for the fighting services and the Merchant Navy.

Facilities for the use of travelling servicemen and the reception of war-wounded were made available for operation by the Canadian Legion and Canadian Red Cross in Windsor Station's welcome room and in receptions centres at Winnipeg, Vancouver and Victoria.

Company's Own Legion Branch Started

A branch of the Canadian Legion itself was started for Company people in Montreal in 1944 with Alex. Lyle, assistant to the vice-president, as president and with Mr. Coleman as patron and Mr. Neal as honorary president.

In all respects the Company's showing in its second world war of a quarter-century was a remarkable one, and in the light of its performance some figures on the contribution made in World War I are interesting.

Steamships records show that a million troops, four million tons of war supplies and thousands of horses and mules were transported to the fighting fronts between 1914 and 1918.

Angus Shops, then as now, had a big hand in munitions making with shells and case cartridge turned out there.

There were 11,340 enlistments in navy, army and air force (flying corps) in that first struggle against Germany of which 1,116 were killed and 2,105 wounded. Two received the Victoria Cross and 385 others were decorated for gallantry. Of those enlisting 7,573 were re-employed along with 13,112 other returned soldiers.

Loans and guarantees made by the Company to the Allies up to the time of the Treaty of Versailles amounted to nearly $100,000,000.

Twelve Company steamships were lost by enemy action in the world's first taste of unrestricted submarine warfare and three others were lost by misadventure. They were part of the fleet of 37 vessels of 329,960 tons which served.

Most notable steamships record set up during the Great War was the 300,000 sea miles steamed by the Alsatian, later Empress of France, as flagship of the famous Tenth Cruiser Squadron.

Mr. Coleman's Tribute

D. C. Coleman, the Chairman and President, in the course of an address to the Canadian Club in London, Ont., on September 22, 1943, said the tremendous war carrying job done by the Company "could not have been accomplished simply as a result of the present day efficiency of railway management.

"The achievement has its roots in the long years during which pride of service has been built up among the members of the Company's staff," he continued.

"Whether the generals in this particular struggle have been competent or not, I must leave to others to say.

"As far as this transportation battle has been a soldier's fight, I am in a position to tell you that it has been fought with the highest efficiency and devotion to duty—so much so that I am convinced that no body of workers can have served the nation more loyally and effectively than the employees of the Canadian Pacific Railway."

SAFETY

Safe operation has always been a prime consideration with the Company in reaching its leading position in the transportation world.

The methods of getting the message of safety techniques and practices across has varied down the years with the one constant being the repetition of the need for co-operation and teamwork.

Challenges to *think safety* have been made to all employees visually through posters and orally through discussion groups.

The safety organization is patterned after the operating setup insofar as the main territories of Eastern Lines, Western Lines and the eight districts are concerned.

Eastern Lines and Western Lines each has a General Safety Agent reporting direct to the general managers at Toronto and at Winnipeg. Each of the eight districts from New Brunswick to British Columbia has a safety agent who reports to the general superintendent.

At Windsor Station headquarters there is a Safety Bureau to co-ordinate the reports from the field, to distribute literature and data and be a clearing house for matter designed to improve safety technique and practice.

All Company employees share in the drive to remove hazards and keep machines, tools and equipment, as well as methods, safe.

Safety committees all over the system number in their ranks all branches of the Company services. Starting with district committees a breakdown of these groups shows also division committees and local departmental and shop committees functioning at most points.

Regular meetings are held at which frank forum-type discussions consider hazardous conditions or methods of work and the corrective action necessary.

Accident investigation on the spot with recommendations for corrective action and periodic plant inspection to search out hazards are other phases of safety committee work in close conjunction with the local supervision.

Films and slides are used to tell the safety idea and the different committees search out local talent, some as entertainers at the large meetings and others as speakers to describe the operation of their particular department from the standpoint of safety.

Monthly and yearly statements from the Safety Bureau tell the story of injuries and train accidents at a glance. All of them are comparative, indicating progress made.

Taking 1945 as an example of safety activity there were 1,843 meetings held. Employees' safety suggestions over the same period numbered 2,831 of which 1,858 were adopted.

The friendly rivalry which keeps interest high in safety matters is looked after by the award of trophies to the leading district and division by the Vice-President of the Company. Eight other trophies also go to the best division on Eastern Lines and Western Lines respectively in the running trades, maintenance of way, maintenance of equipment and station and sheds.

All members of the safety organization are qualified conductors of the Job Instruction Training and Job Safety Training courses sponsored by the Government.

Jim Hill in St. Paul

In a snowstorm on his way south from Fort Garry to St. Paul as he was hurrying to Ottawa with his report on Louis Riel, Donald Smith first met Jim Hill, with whom he was eight years later to take over from the Dutch bondholders the St. Paul and Pacific Railroad, and ten years later to be associated with in the promotion of the Canadian Pacific Railway as a private company. They were travelling in opposite directions by dog teams.

Born in a log house on the Canada Company's lands in the year 1838, Jim Hill worked in a grocery store at Guelph till at the age of eighteen he went to New York planning to ship as a sailor, and thus get to Calcutta. Disappointed in this, he conceived the plan of working his way to the Pacific coast by way of the Red River, but reached St. Paul to find the last brigade for the north had already gone. He therefore took a job as clerk in the shipping office of a Mississippi steamboat company, dreaming all the while of the day when he himself could run a line of steamboats on the Ganges. Here he was found two years later by Henry Beatty, another young Canadian, who spent a year in a hardware store at St. Paul before making the greater venture to California . . .

. . . Hill was also not blind to the Report on Pacific Railways, presented by a committee of the American Senate which stated that: "The opening by us first of a Northern Pacific Railway seals the destiny of the British possessions west of the ninety-first meridian. They will become so Americanized in interests and feelings that they will be in effect severed from the new Dominion, and the question of their annexation will be but a question of time."

Hill had no particular love for the promoters of the Northern Pacific, and was shortly to come in sharp conflict with them over the control of the St. Paul and Pacific Railroad, the nucleus of the system which he eventually built up into the Great Northern.—*Steel of Empire* (John Murray Gibbon).

BOOKS FOR FURTHER READING

THE WESTERN AVERNUS
by MORLEY ROBERTS
(J. M. Dent & Sons—Everyman Library, Toronto)

A HISTORY OF THE CANADIAN PACIFIC RAILWAY
by H. A. INNIS
(McClelland & Stewart, Toronto)

STEEL OF EMPIRE
by JOHN MURRAY GIBBON
(McClelland & Stewart, Toronto)

THE ROMANCE OF THE CANADIAN PACIFIC RAILWAY
by R. G. MACBETH
(Ryerson Press, Toronto)

LIFE AND WORKS OF SIR WILLIAM VAN HORNE
by WALTER VAUGHAN
(The Century Company)

RAIL LIFE
by ALFRED PRICE
(Thomas Allen, Toronto)

REMINISCENCES OF A RACONTEUR
by GEORGE H. HAM
(The Musson Book Company, Toronto)

ANNUAL REPORTS OF THE C.P.R.

INDEX

Abbott, Sir John J. C. 60, 61, 122
Admiralty 44, 116, 229, 273, 276
Admiral Scheer 5
Aikman, Capt. E. 249, 277
Air Board Act 159
Air Training Plan 5, 9, 161, 278
Alaska 3, 9, 49, 142, 144, 186
Allan Line 30, 40, 117
Alberta 3, 32, 204, 237, 245, 254
Alberta Ry. & Coal Company . . 21
Alberta Ry. & Irrig. Co. 241
Algoma 250
Algonquin Hotel 31, 164, 166, 171
Allison, W. E. 76
All-Red Route 9, 206
Alyth, Alta. 83
Anderson, Rt. Hon. Sir John . . . 46, 61
Angus, Richard B. 16, 17, 38, 60, 61, 115, 151, 218, 268
Angus Shops 43, 172, 214, 217, 222, 228, 275, 279 287
Annapolis Valley . . . 22, 153, 164, 167
Archduke Franz Ferdinand 157
Archibald, A. G. 90
Arctic 32, 160, 273
Armstrong, John E. 77
Arromanches 124, 278
Arvida 161, 278
Athlone, Earl of 44
Atlantic Bomber Ferry 273, 278
Atlantic Service 23, 30, 40, 116, 119, 152, 161, 260
Atlantic Cable 205
Atlantic & North West Ry. 21
Australia 3, 9, 100, 111, 116, 126, 135, 141, 187, 205, 258, 273
Axis 161

Baillie, G. H. 77
Baird, William 77, 277
Baker, Edwin G. 46, 61
Banff Springs Hotel 18, 106, 163, 164, 165, 169
Bank of Canada 47
Bank of England 55
Bank of Montreal 36, 45, 47, 48 49, 52, 56, 57, 72, 151
Baring Brothers & Co. 55
Baring & Glyn 104
Battle of the Atlantic 4, 116, 273
Battle of Britain 274
Bay of Fundy 3, 9, 31, 152, 171, 183, 186
Beatty, Sir Edward 36, 37, 40, 59, 61, 118, 158, 162, 277
Beatty, Dr. H. A. 89
Beatty, Henry 17, 19, 40, 289
Beaumont, H. B. 76
Beaver boats 5, 7, 117, 277
Beaverbrook, Lord 59
Beique, Hon. Frederick, L. 61
Belayev, Maj.-Gen. I. A. 279
Bell Farm 251
Bell Telephone Co. 48
Belnap, LaMonte Judson 47, 61
Bishop's University 41, 42, 44, 49
Black, W. A. 61
Blaylock, Selwyn G. 61
Bonfield 13
Bosworth, G. M. 117, 118
Bowen, H. B. 43, 77, 279, 280
Boy Scouts 42, 44, 54
Bramley, F. 76
Brandon 17, 18, 221
British Advisory Atomic Energy Committee 46
British Association in Canada . . . 251
British Columbia 3, 9, 13, 14, 16, 31, 50, 63, 71, 72, 73, 88, 92, 116, 144, 155, 158, 168, 183, 186, 205, 220, 239, 254, 274, 282
British Commonwealth 3, 142
British Empire 13, 33, 42, 44, 141, 164, 167, 171, 205, 206
British Ministry of Supply . . . 124, 285
British Ministry of War Transport 41, 277
British Overseas Airways 278
Brothers, Frank 20, 158
Brown, David E. 23
Brown, George 90
Bruce, Hon. Randolph 158
Brydone-Jack, H. D. 77

Cadieux, A. Hector (O.B.E.) 285
Calgary 13, 18, 19, 31, 54, 107, 115, 164, 173, 179, 220, 228, 237, 241, 254, 275, 279
Calgary & Edmonton Ry. 22, 64
California 140, 261, 289
Cambie, Henry I. 20
Campbell, Sir Alexander 72, 90
Campbell, Admiral (V.C.) 44
Campbell, J. Hugh 77, 285
Canada Company 289
Canada Central Ry. 21, 60, 180

Canada Northwest Land Company..... 35
Canada Colonization Association.....82, 234
Canada Southern Ry. Co..... 22
Canadian Airways Ltd..... 45
Canadian Australasian Line....5, 32, 45, 140, 143, 258, 276
Canadian Broadcasting Corporation..... 93
Canadian Industries Ltd..... 56
Canadian Legion.....45, 54, 270, 286
Canadian National Railways...31, 41, 159, 165, 264
Canadian Pacific I and II..... 286
Canadian Pacific Ocean Services.. 117
Canadian Ry. War Bd..... 53
Canadian Senate..... 41
Carleton Place.....8, 21
Carter, F. B. T..... 90
Carter, G. E..... 76
Cartier, George E..... 90
Cartier..... 19
Castle Mountain..... 221
Catalina Flying Boat..... 278
Central Canada Ry..... 22
Chateau Lake Louise....31, 163, 165, 166, 168
Champlain, Samuel de..... 148
Chamberlin, Chief R. G..... 86
Chandler, E. B..... 90
Chapais, Jean G..... 90
Chapleau..... 275
Chase National Bank..... 57
Chateau Frontenac....5, 31, 39, 43, 45, 164, 166, 171, 273, 281
Chateau St. Louis..... 171
Chicago.....110, 151, 175, 187
Chicago & Alton R.R..... 38
Chicago & Pacific Ry..... 60
Chief of the Iron Trails..... 44
Churchill, Prime Minister Winston.43, 59, 90 164, 273, 281
Coaldale Farm.....239, 254
Cockburn, James..... 90
Cockshutt, Hon. Henry..... 61
Coleman, D. C.....8, 36, 37, 42, 43, 44, 46, 61, 76, 91, 118, 225, 273, 274, 279, 281, 284, 287
Coleman, James..... 42
Coleman, Dr. E. H. (C.M.G., K.C.).....43, 281
Coles, George..... 90
Coldwell, William..... 154
Collins, I. R. G..... 76
Columbia & Kootenay Steam Navig. Co..... 155
Columbia River.....144, 156
Columbia & Western Ry. Co...11, 64
Combined Production & Resources Board.....53, 284
Confederation....8, 39, 71, 90, 116, 154, 232, 245
Connaught Tunnel.....24, 250
Conservatives.....72, 268
Consolidated Mining & Smelting Co.....11, 31, 45, 51, 52, 56, 245, 257
Consolidated Plate Glass Co..... 51
Cooke, J. R..... 60
Cook, Thos..... 110
Coppermine River..... 3
Cornwallis Inn.....31, 164, 167, 172
Cotterell, E. D..... 77
Coulter, J. E.....190, 201, 202
Cox, Donald..... 95
Cox, Hon. George A..... 42
Craigellachie.....13, 17, 19, 99
Creelman, Adam R.(K.C.)..... 61
Cresswell, H. C. P..... 77
Crete..... 277
Cross, Richard J..... 61
Crow's Nest Pass Line.....21, 245
Crump, N. R..... 77
Curley, G. N..... 77

Dafoe, Dr. John W..... 44
Dalhousie Station.....20, 231
Davies, Theo. H. & Co.....140, 142
D-Day.....124, 273, 278
Dennis, Col. J. S.....233, 241
DesBrisay, N. R..... 76
Detroit.....21, 175
Devil's Gap Lodge.....164, 170
Dew, G. C..... 76
DeWolfe Wharf..... 154
Dickey, R. B..... 90
Digby, N. S.....22, 31, 143, 152, 164, 167, 172, 186, 200
Digby Pines Hotel...31, 164, 167, 172
Doherty, Mary Jane..... 42
Dominion Atlantic Railway....22, 53, 82, 104, 113, 143, 152
Dominion Bank.....50, 51
Dominion Bureau of Statistics.... 259
Dominion Express Company..... 190
Dominion Textile Company..... 49
Drayton-Acworth Report..... 75
Drinkwater, Charles..... 60
Drummond, D..... 77
Drummond, George A..... 61
Duchess Boats.....5, 116
Duff, M. McD.....122, 277
Duke of Newcastle..... 154
Duluth, South Shore & Atlantic Railway.....29, 32, 104

Dundas, J. A. 76
Dunning, Hon. Charles (P.C.[C.]) 48
Dunkirk 277
Dunsmuir, Hon. James 61

Eagle Pass 19, 20
Eastern Abattoirs Ltd. 53, 82, 283
Eastern Canada Coastal Steamships 53, 56
Eastern Townships of Quebec 22, 189, 236
Eastman, J. B. 63
Eaton, Sir John C. 61
Eaton, John (O.B.E.) 282
Edmonton 22
Egan, John M. 17, 20, 251
Eisenhower, Gen. Dwight D. 221
Elder Dempster Co. 30
Emerald Lake Chalet 108, 163, 165, 166, 168
Employees Suggestion Bureau 89
Empress Hotel 31, 164, 167
Empress liners 4, 5, 116, 119, 123, 131, 132, 136, 249, 277, 287
England 8, 15, 48, 142, 187, 206, 268
Esquimalt & Nanaimo Ry. 22, 104, 145, 240
Europe 8, 100, 119, 123, 125, 134, 141, 184, 186, 194, 233, 236, 268
Evans, F. C. S. 76

Fairburn, J. M. R 250
Far North 9, 273, 278
Fascism 279
Fathers of Confederation 90
Fenwick, Maj.-Gen. C. P. 89
Field, B.C. 10, 162, 169
Fiji Islands 3
First Board of Directors 60
Fisher, Charles 90
Flanagan, Tom 11
Fleming, Sir Sandford . . 20, 61, 154, 250
Flint, The W. B. 23, 116, 131
Forget, Hon. L. J. 61
Fort Garry 20, 35, 185, 289
Fort Vancouver 144
Fort William 11, 15, 18, 25, 42, 148, 205, 210, 221
Foster, Rt. Hon. W. E. 266
France 16, 119, 129

Galt, A. T. 90
Galt Mines 239
General Motors 51
General Safety Agent 288
Geoffrion, Aime (K.C.) 48, 61
Germany . . . 5, 118, 129, 134, 273, 277
German War 59
Gibbon, John Murray 115, 122, 151, 158, 180, 231, 244, 266, 268, 289
Gillis, Capt. James (C.B.E.) 249
Gillis, H. W. 76
Glacier House 165
Gladstone, Rt. Hon. W. E. 266
Golden Aircraft Fund 286
Gordon, G. Blair 49, 61
Gordon, Sir Charles Blair 61
Grand River Ry. 98, 104
Grand Trunk Ry. 14, 72
Gray, Colonel 90
Gray, John H. 90
Great Britain 5, 9, 33, 41, 46, 53, 104, 106, 111, 119, 134, 136, 139, 141, 144, 184, 187, 195, 206, 233, 234, 255, 268, 277, 283
Great Lakes 3, 9, 11, 14, 30, 40, 93, 106, 117, 142, 148, 151, 183
Great Northern Ry. 289
Great War 3, 41, 47, 86, 106, 118, 131, 157, 159, 166, 245, 255, 271, 274, 287
Greece 277
Greeniaus, H. A. 77, 96
Grenfell, Pasco du P. 17, 60, 61
Griffin, A. 35, 77, 237

Hailey, Capt. A. J. 118
Halifax 14, 22, 59, 122, 143, 152, 164, 187, 200, 272
Hall, Grant 61
Hall, W. S. 77
Hamber, Col. The Hon. E. W. . . 50, 61
Hamilton 42, 57, 154
Haney, M. J. 20
Harnden, William 191
Harris, George R. 20, 61
Harvest Excursions 256
Hastings Sawmill Co. 50
Haviland, T. H. 90
Hawaii 3
Hector, Sir James 221
Hector, Dr. 225
Hedges Dr. James B. 232
Heeley, Capt. W. L. 277
Heinze, F. Augustus 11
Henry, W. A. 90
Hiam, G. 76
High Commissioner for Canada . 13, 268
Hill, James J. 1, 16, 17, 38, 60, 289
Hill, Rowland 188
Hobbs, John Wilberforce 51, 61
Hodge, George (O.B.E.) 77, 285
Holland 129, 236, 289
Holt, Sir Herbert S. 61, 244

Holyrood..... 231
Hong Kong....23, 26, 117, 119, 131, 133, 136, 187
Honolulu.....119, 133, 140, 231
Honors List.....53, 57, 59
Hosmer, C. R..... 23
Hotel Palliser.....31, 164, 167, 169
Hotel Saskatchewan.31, 164, 167, 170
Hotel Sicamous..... 166
Hotel Vancouver.....31, 164
House of Commons..... 49
House of Lords..... 268
Howe, Hon. C. D..... 279
Howe, Joseph..... 13
Huddard, James..... 141
Hudson's Bay Co.....14, 35, 45, 48, 144, 268

Ilsley, Hon. J. L..... 57
Imperial Bank..... 51
Indian State Railways..... 280
Insurance Fund..... 80
Intercolonial Ry..... 14
International Nickel.....11, 52, 56
International Postal Union..... 188
Interstate Commerce Commission.103, 112, 230
Ireland.....26, 39, 126, 195, 266
Italy.....134, 273

Jackfish Bay.....13, 19
Japan.....5, 116, 131, 273
Jap War.....59, 282
Java..... 5
Jefferson, C. E..... 76
Jeffery, S. V. T..... 283
Jesuit Order..... 149
Job Instruction Training..... 289
Johnson, E. Stanley..... 261
Johnston, John M..... 90
Jones, J. C..... 77

Kaiserin, Auguste Victoria..... 118
Kaiser, Henry..... 282
Kamloops.....12, 13
Kennedy, John S.....16, 17, 60
Kenora.....11, 164, 170, 190
Kentville, N.S.....164, 167, 172, 221
Kettle Valley..... 155
Kicking Horse Pass and River...12, 24, 225, 251
Kimpton, J. R..... 77
King, Prime Minister W. L. Mackenzie..43, 90, 164, 221, 281
King George VI.....210, 270, 276
King William IV..... 207
Kirkpatrick, Sir George A..... 61
Kirkpatrick, W. M..... 277
Kittson, Norman W..... 38
Klondyke Rush.....23, 158
Kohn, Reinach & Company...17, 122
Kootenay.....21, 43, 155

Labrador.....3, 49
Lachine Canal..... 25
Lacombe, Father..... 115
Lake Erie & Northern Ry..98, 104, 113
Lake Louise.....107, 142, 168, 221
Lake boats..... 116
Lake-of-the-Woods..... 18
Lake Superior....2, 12, 14, 16, 19, 39, 250
Lakeside Inn.....31, 167, 172
Langevin, Hector L..... 90
Last Spike.....13, 17, 19, 158
Laurier, Sir Wilfrid..... 268
Lausanne..... 128
Leiser, Simon..... 145
Leslie, Eric A..... 76
Lethbridge....11, 21, 24, 85, 204, 241, 253
Lethbridge Collieries Ltd..... 239
Liberals.....72, 268
Liddy, S. J. W..... 76
Lockheed Hudsons..... 161
London, England....6, 13, 15, 18, 24, 46, 51, 55, 81, 85, 101, 104, 119, 121, 125, 129, 194, 206, 246, 249, 268, 284
London, Ont....42, 51, 185, 200, 287
Louise Bridge..... 11
Lower Canada College.....41, 50
Lyle, Alex.....76, 287

MacBeth, R. G.....45, 90, 154, 225
Macdonald, A. A..... 90
Macdonald, Sir John A.....11, 14, 15, 60, 72, 90, 122, 221, 266, 268
MacKay, Clarence H..... 61
MacKay, J. I..... 77
MacKay, John W..... 61
Mackay, Hon. Robert..... 61
Mackenzie, Hon. Alexander..... 14
Mackenzie River.....3, 160
MacInnes, Hon. Donald..... 61
Macnabb, T. C..... 77
Macpherson, D. L..... 122
Madagascar..... 4
Maine..... 21
Main, H. J..... 77
Mallandaine, E..... 20
Malton, Ont.....278, 285
Manila.....26, 119, 136
Manitoba....3, 14, 16, 21, 29, 44, 188, 221, 237, 254
Manitoba & North Western Ry. 22

Manitoba South Western Colon. Ry. ... 21, 64
Manson, W. ... 76
Maritimes ... 56, 142, 171, 172, 232, 257, 276
Martinsen, R. V. ... 61
Mather, W. A. ... 77, 237
Mathews, H. F. ... 77
Matthews, Wilmot D. ... 61
McAdam Hotel ... 166, 172
McAdam, N. B. ... 221
McConnell, John W. ... 61
McCracken, E. S. ... 77, 96
McCully, Jonathan ... 90
McDonnell, Jean Picote de Belestre ... 269
McDonnell, T. E. ... 190
McDougall, William ... 90
McGee, Thomas D'Arcy ... 90
McGill University ... 41, 44, 57, 226, 268
McIntyre, Duncan ... 16, 17, 60, 122, 180
McKenna, Rt. Hon. Reginald (P.C.) ... 61
McKeown, T. M ... 77
McKenzie, Dugald ... 20
McLaughlin, Robert Samuel ... 51, 61
McMaster, Ross H. ... 52, 61
McMaster University ... 42
McMurray, Capt. R. W. ... 249
McNeill, D. I. (K.C.) ... 76
McNeillie, R. G. ... 76
McNicoll, David ... 61
McTavish, John H. ... 18, 20, 35
Medicine Hat, Alta. ... 19, 85
Mediterranean ... 4, 5, 118, 144, 199
Meighen, Maj.-Gen. Frank Stephen (C.M.G.) ... 61
Meighen, Robert ... 61
Merchant Navy ... 276, 286
Meredith, Sir Vincent ... 61
Michigan Central ... 22
Miller ... 20
Milwaukee Road ... 38, 282
Mineral Range Railroad ... 104
Mitchell, Peter ... 90
Moberly, Walter ... 20
Moffitt, T. H. ... 76
Molson, Frederick W. ... 61
Monel metal ... 58
Mont ships ... 4, 117, 132, 277
Montreal ... 3, 8, 10, 13, 17, 23, 25, 36, 40, 48, 52, 54, 56, 88, 101, 107, 121, 125, 137, 151, 152, 161, 166, 173, 179, 185, 193, 199, 218, 228, 231, 237, 240, 246, 260, 268, 269, 274, 275, 279, 281, 283, 284
Montreal Canadiens ... 45
Montreal Light Infantry ... 13
Montreal & Ottawa Ry. ... 21
Montreal Trust Company ... 59
Montreal West ... 21
Moore Corporation Ltd. ... 46
Moose Jaw ... 21, 24, 54, 161, 173, 179, 221, 240
Moosejaw Creek ... 17
Morgan, Pierpont ... 60
Morton, George ... 60
Morton, Hon. Levi P. ... 60
Morton, Rose & Company ... 17, 122
Moscow ... 194
Mount Eisenhower ... 221
Mowat, Oliver ... 90
Munitions and Supply ... 43, 161, 219, 278, 283

Naismith, P. L. ... 237
Nanton, Augustus M. ... 61
National Hockey League ... 45
National Research Council ... 83
National War Finance Committee. 57
National War Services Advisory Board ... 55
Navy, Army and Air Force Institutes ... 274
Navy League ... 44, 54
Neal, William M. (C.B.E.) ... 53, 61, 76, 81, 276, 284, 285, 286, 287
Neil, W. D. ... 77
Nelson ... 43
New Brunswick ... 13, 152, 196, 236
New Brunswick Cold Storage Co. Ltd. ... 82
New Brunswick & Canada Land & Ry. Co. ... 207
New Brunswick Publishing Co. ... 55
New Brunswick Ry. ... 21, 90
New Brunswick Telephone Co. Ltd. ... 55
New England ... 107, 154
New Hampshire ... 60
New York ... 34, 57, 60, 107, 110, 118, 142, 151, 187, 191, 194
New York Central ... 22
New Zealand ... 3, 9, 26, 100, 111, 116, 126, 140, 142, 206, 258
Newcomen Society ... 44, 58
Newfoundland ... 90, 161, 194, 206, 278
Newman, W. A. (M.B.E.) ... 77, 285
Niagara ... 5, 143, 277
Niagara Falls ... 142, 185
Nippon Yusen Kaisha ... 135
Normandy ... 4, 124, 273, 278, 279
Nor-Wester, The ... 154
North Africa ... 4, 124, 278
North America ... 1, 33, 90, 122, 124, 126, 141, 181, 189, 199, 272

North Bay....42, 54, 94, 221
Northcliffe, Lord.... 6
North Saskatchewan River.... 24
North Shore Ry.... 21
Northcote, Henry Stafford (Baron)....17, 60
Northern Alberta Rys. Co....22, 32, 45, 53, 82, 159
Northern Pacific Ry....71, 289
North West Joint Defence Air Route....9, 278
North West Passage....8, 116
North West Purchasing Limited. 283
North West Rebellion....13, 19, 39, 40, 266
North West Territories....160, 188
North West Transportation.... 40
Noslo, Ont....13, 19
Nova Scotia....13, 90, 143, 152, 196, 221, 236

Oak Lake, Man....18, 190
Oblate Order.... 115
Ogden, I. G....60, 220
Ogden Shops....218, 220, 222, 228, 275, 279
Ogilvie Flour Mills Co. Ltd.... 48
Okanagan....21, 22, 30, 66
Olds, C orge.... 24
Onderdonk, Andrew....19, 20, 72
One-Track Mind.... 261
Ontario....13, 16, 18, 21, 90, 98, 154, 164, 170, 188, 232, 236, 254, 257
Ontario and Quebec Ry.... 21
Ontario Jockey Club.... 52
Order of the Bath.... 46
Order of India.... 46
Order of St. John of Jerusalem..41, 44, 50, 54, 89
Order of St. Michael and St. George....39, 57, 59
Order of St. Olaf (Norway).... 41
Order of the British Empire....41, 53, 276, 282, 285
Order of the Silver Wolf.... 42
Order of the Star of India.... 46
Orient....8, 23, 39, 100, 111, 116, 131, 134, 148 168, 186, 199, 276, 280
Oshawa....51, 52
Osler, Sir Edmund B.... 61
Osoyoos....22, 66
Oswald, Colonel.... 13
Ottawa....21, 299
Ottawa River.... 21
Owen Sound....17, 20, 106, 148
Oxford University.... 55

Pacific Coast and Ocean....14, 38, 107, 116, 117, 131, 205, 273, 282, 289
Pacific Railway.... 14
Pacific Service....23, 30, 39, 116, 132, 133, 134, 195, 258
Pacific Speedway.... 119
Palliser, Capt. James....39, 221, 225
Palmer, Edward.... 90
Panama Canal.... 142
Panet, Maj.-Gen. E. de B. (C.M.G., D.S.O.)....77, 285
Parallel Skiing.... 171
Paris....60, 128
Patteson, J. C....77, 285
Patterson, W. R.... 76
Peacock, Sir Edward (G.C.V.O.)....55, 125
Peace Conference.... 159
Peace River.... 22
Peninsula and Oriental Steam Navigation Co.... 134
Pennsylvania.... 154
Pennsylvania-Ontario Transportation Co.... 82
Pennsylvania Ry.... 284
Pension Fund.... 6
Perth.... 8
Philippine Islands....136, 138
Piapot.... 44
Piers, Arthur....20, 23, 117, 158
Pile o'Bones.... 11
Pilgrim Fathers.... 60
Pipestone Extension.... 64
Place Viger Hotel.... 166
Plains of Abraham.... 281
Pointe Fortune.... 21
Pope, Hon. John Henry.... 15
Pope, W. H.... 90
Port Arthur....11, 12, 13, 17, 50, 106, 148, 150
Port McNicoll....148, 149, 151
Port Moody..10, 12, 13, 20, 116, 131
Post Office Department....185, 195
Powell, Harriet.... 40
Prairie Provinces....32, 107
Prescott.... 20
Prince Arthur's Landing....15, 18
Prince Edward Island....14, 90, 196
Prince of Wales.... 157
Princess Steamers....5, 31, 145, 147, 152, 277
Princeton University.... 58
Provincial Superior Council of Labor.... 50
Pullman Company....175, 265

Qu'Appelle Indians.... 44

Quebec....3, 5, 13, 49, 122, 142, 154, 160, 171, 189, 229, 257, 269, 281
Quebec Central Ry.....22, 53, 82, 104, 113, 189
Quebec Central Transportation Co..... 189
Quebec City....59, 90, 123, 164, 171, 210, 273
Quebec Conference....43, 90, 164, 276, 281
Quebec, Montreal and Occidental Ry..... 21
Queen Elizabeth.....210, 270, 276
Queen's University.....41, 48, 55

Railway Association of Canada.. 53
Ralston Col. J. L..... 274
Rationed Waiting..... 276
Rat Portage.....11, 18, 19, 190
Raymond, Alta.....204, 241
Ready-Made Farms.....18, 269
Red Cross.....50, 54, 59, 219, 286
Red River.....14, 18, 154, 289
Regina....18, 19, 31, 44, 164, 170, 234
Reid, Robert G..... 61
Reinach, Baron J. de.....17, 61
Report on Pacific Railway..... 289
Repatriations Commission..... 118
Reserve Army..... 50
Revelstoke, B.C.....10, 104, 156, 165, 221
Richardson, J. A..... 61
Riel Rebellion.....19, 39, 289
Rigaud..... 21
Roberts, B. W.....77, 282, 286
Robinson, Howard P.....55, 61
Robinson, Capt. Samuel.....118, 140
Rockies....9, 12, 13, 15, 19, 24, 38, 71, 162, 167, 210
Rogers, Maj. A. B.....20, 151, 250
Rogers Pass..... 250
Romance of the C.P.R..45, 90, 154, 225
Rome Institute..... 85
Roosevelt, President Franklin Delano.43, 59, 164, 273, 276, 281
Rose, Charles D.....17, 60, 61
Rosebery..... 156
Ross, Capt. Ian..... 278
Ross, John K..... 61
Royal Alexandra Hotel.....31, 164, 166, 170
Royal Air Force...9, 41, 50, 161, 278
Royal Bank.....56, 58
Royal Canadian Air Force...161, 278
Royal Canadian Army Medical Corps..... 179
Royal Canadian Mounted Police. 87
Royal Canadian Naval Volunteer Reserve..... 41
Royal Canadian Navy.....219, 279
Royal Exchange Assurance.....53, 56
Royal Hudson.....209, 275
Royalite No. 4..... 239
Royal Navy..... 277
Royal Train..... 210
Royal Trust Company.....45, 52, 56
Royal Victorian Order.....38, 40, 55
Royal Visit..... 276
Royal York Hotel.31, 41, 164, 167, 170
Russia.....119, 194, 273, 279

Safety Bureau..... 288
San Francisco..... 142
Saskatchewan.....85, 248, 254
Sask. Co. Op. Elevator Co..... 48
Sault Canal..... 150
Sault Ste. Marie.....2, 25, 51, 200
Savonas Ferry, B.C..... 13
Schreiber, Sir Collingwood..... 250
Schwitzer, J. E..... 250
Scotland.....19, 26, 36, 38, 148, 151
Scott, R. W..... 96
Scott, Hon. W. L..... 61
Scottish Trust Company..... 45
Seattle..... 122
Seigniory Club.....45, 48, 82
Selkirk.....12, 17
Selkirk Mountains....13, 19, 1 1, 250
Shanghai.....6, 119, 133, 136, 138
Shaughnessy, T. G. (Baron)...12, 13, 17, 36, 37, 39, 61, 86, 145, 268
Shaughnessy, Tom..... 39
Shaughnessy, William J. (K.C.).. 61
Shea, Ambrose..... 90
Sherbrooke.....22, 189, 200
Shimidsu..... 133
Shipshaw, P.Q..... 278
Shuswap and Okanagan Ry..... 21
Sicamous, B.C.....19, 21, 66, 166
Singapore..... 5
Skinner, Sir Thomas..... 61
Smith, Donald A.....13, 16, 20, 38, 61, 151, 158, 221, 274, 289
Smith, Marcus..... 20
Soo Line.....21, 32, 104
Souris Branch..... 64
Southampton.....119, 134, 273, 278
Southern Minnesota RR..... 17
Southern Ry. of Gt. Britain..... 130
Soviet Gov't.....43, 279
Spinney, G. W. (C.M.G.).....56, 61
Spiral Tunnels.....24, 250
Spitfires..... 286
Spitzbergen..... 4
Spokane International Ry..... 104

Standard Time..... 250
Staff Bulletin....34, 66, 75, 88, 98, 130, 151, 154, 172, 189, 204, 221, 251
Stanley, R. C.....57, 61
Steel Company of Canada..48, 52, 56
Steel of Empire....115, 122, 151, 158, 231, 244, 266, 289
Steeves, W. H..... 90
Stephen, George (Baron Mount Stephen)....1, 12, 13, 15, 16, 17, 36, 37, 38, 39, 60, 61, 72, 115, 151, 221, 266, 268, 271
Stephen, George.....76, 81, 277
Stonewall.....18, 190
Stonies..... 221
Stockdill, C. E..... 76
Stout, W. S..... 190
Stranraer..... 278
Strathmore Farm.....238, 254
Stuart, Capt. R. N. (V.C., D.S.O.) 249
Sudbury.....11, 19, 94, 200, 274
Suez Canal....111, 131, 133, 134, 142, 199
Sullivan, J. G..... 250
Swift Current..... 13
Sydney, Australia.....141, 206
Syndicate Canadian Pacific....11, 17, 122
Saint John, N.B.....21, 42, 55, 122, 143, 152, 164 172, 186
St. Andrews and Quebec RR. Co. 207
St. Andrews-by-the-Sea, N.B.....31, 154, 164, 166, 171
St. Jean Baptiste Society..... 269
St. John Ambulance Assn..... 54
St. Lawrence and Ottawa Ry.... 22
St. Lawrence River....3, 25, 161, 171, 188, 218
St. Paul, Minneapolis and Manitoba Ry.....16, 39
St. Thomas..... 21

Taber, Alta..... 85
Tache, Etienne P..... 90
Tasmanian Sea..... 5
Taylor, H. C..... 77
Tenth Cruiser Squadron..... 287
Thomas, General Samuel..... 61
Thomson, D. S..... 77
Tilley, Samuel L..... 90
Tilley, W. N. (K.C.)..... 61
Tirpitz..... 118
Toronto....21, 40, 50, 51, 53, 101, 107, 149, 157, 173, 190, 193, 200, 210, 229, 246, 283
Toronto General Trusts Corporation..... 50
Toronto, Grey and Bruce Ry..... 18
Toronto, Hamilton and Buffalo Ry.....21, 32, 45, 53
Toronto Terminals Ry. Co....45, 82
Trafalgar Square.....123, 125
Trail, B.C.....11, 257
Trans-Canada Air Lines..... 160
Trans-Pacific Passenger Confce... 137
Transport Act..... 103
Transport Commission.....103, 230
Transport Equipment Committee.....53, 284
Transprovincial Highway..... 156
Trieste..... 134
Troup, C. R. (O.B.E.)..... 285
Trust Fund..... 267
Truth..... 16
Tupper, Sir Charles..15, 90, 221, 268
Turnbull, John..... 61
Turner Valley..... 239
Tuttle, Lucius..... 105

Union S. S. Co.....141, 142
United Church of Canada..... 49
United Nations..... 271
United States....3, 8, 12, 14, 16, 32, 42, 52, 60, 99, 102, 108, 135, 139, 144, 151, 157, 181, 185, 194, 205, 208, 234, 235, 251, 264, 268, 271, 276, 279, 282, 289
Université de Montréal..... 226
University of Alberta..... 42
University of British Columbia.. 50
University of Manitoba.....44, 51
University of Nebraska..... 47
University of New Brunswick..42, 56
University of Toronto.....40, 42, 51
University of Western Ontario.. 42
Unwin, L. B.....76, 81
Upper Canada College.....40, 55

Valentine Tanks.....4, 219, 279, 280
Vancouver....3, 10, 11, 19, 39, 42, 50, 59, 101, 119, 121, 131, 133, 140, 143, 160, 165, 168, 173, 179, 185, 194, 210, 221, 229, 239, 241, 258, 272, 276, 281, 287
Vancouver Island....3, 22, 88, 130, 160, 165
Vancouver and Lulu Island Ry... 104
Van Horne, Sir William....12, 13, 16, 17, 18, 19, 36, 37, 38, 39, 40, 45, 83, 105, 115, 116, 122, 158, 190, 221, 251, 268
Vaudreuil..... 21
Venning, General Sir Walter.... 284
Vermont..... 189
Versailles, Treaty of..... 287

Vickers Express..... 18
Victoria....3, 23, 31, 50, 88, 119, 122, 133, 140, 144, 160, 165, 167, 239, 258, 286
Victory Loan....6, 23, 31, 47, 48, 54, 285, 286
V-J Day..... 3
Von Hohenlohe, Count Hermann 115

Wainwright, W. A..... .118
Walker, George A. (K.C.)....76, 237
War Savings Certificates.....6, 286
Warren, Ian..... 76
Wartime Information Board..... .285
Wartime Industries and Controls Bd..... 285
Wartime Prices and Trade Bd.... 285
Washington, D.C..14, 26, 47, 229, 285
Washington, State of..... 282
West Kootenay Power and Light Co..... 45
Western Irrigation Section..... 241
West Indies..... 9
Weston Shops....218, 219, 220, 222, 228, 278
Whelan, Edward..... 90
Whiddett, F. J..... 77
White, Capt. Leonard..... 156
White Empresses..... 117
Whyte, Sir William.....61, 85
Wilford, W. E..... 283
Wilson, Hon. J. Marcelin..... 61
Wilson, Morris W. (C.M.G.)..58, 61
Wilson, Tom..... 20
Wilson, W. J. Blake..... 61
Windsor, Ont.....21, 130
Windsor Special Post..... 271
Windsor Station....94, 258, 269, 286, 288
Winnipeg....8, 11, 12, 13, 17, 18, 19, 23, 25, 31, 34, 38, 42, 85, 92, 101, 106, 147, 159, 164, 166, 170, 173, 185, 190, 218, 228, 234, 237, 251, 274, 285
Wisconsin Central Ry..... 32
Wolseley Expedition.....19, 39
Wood, E. R.....42, 55
Wood, George..... 277
Woodstock, Ont..... 21
World War II....3, 41, 50, 53, 56, 86, 89, 99, 115, 119, 123, 131, 144, 219, 228, 249, 255, 273

Yarmouth, N.S.....31, 57, 152, 167, 172, 200
Yellowhead Pass.....12, 250
Yokohama.....23, 116, 131, 231
Yokohama Earthquake.....118, 138
Young, Brig. Gen. G. C..... 284
Yukon.....3, 23, 160, 188