and newly developed specialized procedures in dentistry. In addition, advanced instruction is provided in highly technical aspects of the profession.

RETAIL FOOD CHAINS: Sales of Canada's retail food chains during 1947 rose 26 per cent in dollar volume over the previous year, aggregating \$308,826,700 as compared with \$245,278,100 in 1946, according to the annual survey by the Bureau of Statistics. There were 64 retail food chains operating an average of 1,261 units in 1947 as against 65 chains with an average of 1,262 stores in 1946. Thus sales per store showed a similar increase to aggregate sales, averaged \$244,906 as against \$194,357 the previous year.

Sales increases were shown during the year in all regions of the country, with gains ranging from 13 per cent in Saskatchewan to 29 per cent in Ontario. Other increases were: Alberta, 14 per cent; British Columbia, 18; Manitoba, 20; Maritime Provinces, 26.5; Quebec, 29 per cent. There were no major changes in the number of stores in the province.

Indicative of the growth in the supermarket type of new chain food stores as well as of price and general volume increase, there were 165 stores in 1947 with sales volume over \$500,000 as compared with 96 stores in 1946. These stores accounted for 40 per cent of the total food chain business in the year as against 25.5 per cent in the preceding year. Increased dollar volume of business raised the number of chains with sales over \$1,000,000 to 24 from 20 in 1946.

AID FOR CRIPPLED CHILDREN: Increased medical services for crippled children in northern Ontario are being planned and will be financed with funds from the federal Covernment's health grants.

This was announced on January 19 by the Minister of National Health and Welfare, Mr. Martin, who said that the federal Government had concurred in a project submitted under the terms of the crippled children's grant of the National Health Plan by Hon. Russel T. Kelley, Ontario's Minister of Health.

The plan calls, first of all, for a survey of the more remote areas of the northern section of the province to determine the number of children suffering from crippling diseases. Then a clinic team will be sent to strategically located centres to examine crippled children from that district and to advise on proper treatment.

Each clinic team will consist of an orthopedic surgeon, a neurologist and a nurse.

When the plan is fully in operation, a schedule of regular visits will be worked out. This program will extend a service formerly carried out sporadically by the Ontario Society for Crippled Children.

The new development, Mr. Martin pointed out, will serve areas hitherto largely untouched and will no doubt be of great service and assistance to private medical practitioners and social agencies in that area by making specialized consultative services regularly available to them.

Costs will be met out of the \$158,777 annually allotted to Ontario out of the federal health grants for extending medical services to crippled children.

WAGES AT HIGH: Average weekly wages of the hourly-rated personnel employed by leading Canadian manufacturers rose to a new high figure of \$41.16 during the week ending November 1. This was 48 cents higher than the October 1 figure of \$40.68, previously the maximum, and \$4.82 in advance of the November 1, 1947 average of \$36.34, according to the Bureau of Statistics.

A new high figure was also shown for hourly earnings, the general average for the week of November 1 standing at 95.5 cents as compared with 94.6 during the week of October 1 and 84.7 a year ago. Revisions in the wage rates in animal food products, lumber products, beverages and other industries, together with the release of lower-paid seasonal labour in canneries, contributed to the increase over October 1.

Wage-earners worked an average of 43.1 hours during the week ending November 1 as compared with 43 hours in the week of October 1 and 42.9 a year earlier.

PAYROLL SAVINGS RECORD: A new Payroll Savings record of \$118,000,000 was achieved in the sale of Canada Savings Bonds Series Three, it was announced on January 19 by the Minister of Finance, Mr. Abbott. The Payroll Sales record, coupled with general sales totalling more than \$121,000,000, brought the total of Series Three Bonds sold in 1948 up to nearly \$240,000,000. In all, 815,000 individuals had purchased these bonds up to December 31, including 566,000 who subscribed on the Payroll Savings Plan.

The fact that Payroll Sales were higher than in either 1946 or 1947, Mr. Abbott said, could be regarded as testimony to the desire of Canadians to continue the habit of thrift which was so widely developed in this country during the war years. He pointed out that, for the third year in succession, the number of applications received through the Payroll Savings Plan represented more than 40% of all employees in those establishments which made the plan available. No other country offering similar savings plans has enjoyed such substantial participation from its citizens.

It is expected that the Third Series will remain on sale until the summer of 1949. Mr. Abbott stressed the special opportunity which

a great many people will have during the next few months to increase their holdings of Canada Savings Bonds by investing the proceeds of redeemed War Savings Certificates and the substantial payments of refundable taxes which will be distributed toward the end of March.

Sales of the Third Series for the period ending December 31 were as follows:

•	No.	No. of Applications Amount	
Payroll Savings Plan General Sales TOTAL	*. *. *	565,953 248,441	\$117,964,800 121,563,800 \$239,528,600

SUMMARY OF STRIKES: Time loss through work stoppages arising from industrial disputes in Canada during 1948 was only a little more than one-third of the total time loss in 1947, it was shown by a preliminary summary of strikes and lockouts for 1948, issued on January 19 by the Minister of Labour, Mr. Mitchell.

Preliminary figures show 148 strikes and lockouts in 1948 involving 41,234 workers, with a time loss of 898,405 man-working daysadrop in time loss of 1,498,935 man-work days from the 1947 figure. There were 236 strikes in 1947, involving 104,120 workers and a time loss of 2,397,340 days.

The demand for increased wages was the principal issue in 85 per cent of all work stoppages in 1948. Three major strikes during the year--coal miners in Alberta and British Columbia, furniture factory workers in the province of Quebec; and automobile parts factory workers at St. Catharines, Ontario-accounted for about 60 per cent of the total 1948 time loss.

ELECTRICITY OUTPUT: All-Canada production of electric energy by central electric stations was slightly greater in November than in the corresponding month of 1947, while in the 11 months to the end of November it was slightly less than in 1947. Among the principal power-producing provinces, Quebec and Manitoba showed decreases in the month; in the 11 months, Quebec alone registered a decline, the Bureau of Statistics reports.

Total for the month amounted to 3,638,095,-000 kilowatt hours compared with 3,780,796,000 in October and 3,613,726,000 in November, 1947. The cumulative total for the 11 months ending November was 40,931,797,000 kilowatt hours as compared with 41,256,633,000 in the similar period of 1947.

PACIFIC WEATHER-REPORTING: Andrew Thomson, O B E., Controller of the Meteorological Service of Canada, will be Canada's representative in the Meteorological Section of the Pacific Science Congress to be held in New Zealand early in February. Canada's top weatherman

leaves January 19 and on his arrival in Auckland, N.Z., will lead the discussion in the Congress on the problem of trade winds in the Pacific.

"Development of trans-Pacific aviation will proceed more economically when the mysteries of the atmosphere over the wide expanse of the Pacific Ocean are solved", Mr. Thomson states. "A great deal is known about the winds at sealevel, but at flying heights the information is less exact. Just as the trade winds were so vital to the early development of ocean shipping, now they are an essential factor in the establishment of across-the-ocean flying." Canada's weatherman is an outstanding authority on the atmospheric circulation over the Pacific area and has done much to establish the present knowledge of Pacific trade winds.

"The Pacific Ocean is also a tremendous blank on world weather charts", he continued, "and although this difficulty is not serious in working out forecasts from day to day in Canada, most weathermen are convinced that the inter-exchange of air across the equator from one hemisphere to the other will give some clues to the problem of forecasting for a whole season ahead. Therefore, the Meteorological Section of the Congress will tonsider the establishment of an improved weather-reporting network not only along the airlines but over the whole Pacific Basin."

Mr. Andrew Thomson is one of ten scientists who will serve as official delegates from Canada at the Seventh Pacific Science Congress. About 400 scientists from all countries interested in the Pacific Basin will attend the meetings in Auckland and Christchurch, N.Z., from February 5 to February 22.

CIVIL AVIATION: Canadian scheduled and nonscheduled air carriers both had credit balances in their September operations, according to figures for the month released by the Bureau of Statistics.

Earnings of scheduled carriers amounted to \$2,826,450, showing an increase of 32 per cent over the September, 1947 figure of \$2,138,550. Operating expenses also increased but by a smaller amount and net operating revenues were increased from \$14,544 to \$251,578:

COAL PRODUCTION UP: Canadian production of coal rose sharply in 1948 to reach the highest annual total in the past six years. The increase over 1947 was 15.8 per cent, due largely to advances in Nova Scotia and New Brunswick. Imports were up moderately over 1947.

According to preliminary figures released by the Bureau of Statistics, output for the year amounted to 18,377,000 tons as compared with 15,869,000 in 1947, and 18,865,000 in 1942, the previous high annual total. Imports in 1948 totalled 31,050,000 tons compared with 30.564,000.