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DEPARTMENT OF
TRADE AND COMMERCE

CANADA

A FACT A DAY ABOUT CANADA

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DOMINION BUREAU OF STATISTICS

ELEVENTH SERIES

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No. 213. Tues. May 1, 1945 -- Pacific Salmon

All Canadian salmon belong to the one family, but there are different species of them - five on the Pacific coast and one in Atlantic waters. The Atlantic fish is classified scientifically as belonging to the genus Salmo and the species name is Salmo Salar. On the other hand, all of the Pacific Salmon come within the genus Oncorhynchus. By species they are known popularly as the Sockeye, the Spring, the Coho, the Pink, and the Chum. Immature Coho are often spoken of as Bluebacks. Rated according to marketed value of annual production, salmon canning is the most important single branch of the Canadian fishing industry and practically all of its material comes from British Columbia waters. Very little Atlantic salmon is canned.

Like the salmon of the Atlantic coast the British Columbia species are hatched in fresh water but spend much of their life at sea, returning at maturity to the rivers to spawn. However, the Pacific salmon spawn only once and then die on the spawning grounds while Atlantic salmon spawn several times. Though all are members of the one genus, the several kinds of British Columbia salmon differ somewhat in length of life cycle, in appearance, and in average weight at maturity. There is also some measure of difference in their protein content, fat content, etc., though all rate high in food value.

Commercial catches of salmon are made by British Columbia fishermen on most parts of the provincial coast. The fish are taken in coastal areas as they make their way from the sea toward the spawning grounds. Total catch fluctuates, of course, from year to year but in 1942, for example, the landings were 162,200,000 pounds. Two of the species, the Spring and the Coho, will take the fly and in suitable areas offer good sport fishing. The Chum, Sockeye and Pink, however, are taken in commercial fishing only.

Much of the greater part of British Columbia's salmon catch is used by the canning plants. Some of the fish, however, are marketed fresh or frozen, some mild-cured, and a few may be kippered or pickled. In normal times quite a substantial part of the catch is used for dry salting, but this branch of operation was discontinued during the war. Some salmon livers are used for making vitamin oil, and industrial oil is extracted from cannery waste.

No. 214. Wed. May 2, 1945 -- Plowing

With many different soils to plow and many kinds of plows, no definite rules can be laid down as the best method for all soils. New and more efficient types of implements have been made for cultivating soils. Poor and faulty types of farm management have created conditions that require drastic changes in working soils under certain climatic conditions where lack of rainfall produces soil drifting. These and other considerations have led some to condemn plowing, as in "Plowman's Folly", which advocates tillage without plowing.

But where there is adequate rainfall, a good jointer plow in the hands of a skilled plowman will prepare sod land for a suitable seed bed, better than can be accomplished by any other means, states the Dominion Department of Agriculture. Plowing properly done increases the water holding capacity of the soil, destroys weeds, insects, and the nests of rodents. Its crushing and grinding action uses less energy to make certain soils friable than other implements of cultivation which all have their place in preparing the soil for seeding. Plowing is one of the best means of incorporating waste vegetation and manure with the soil to form humus, a most valuable ingredient for all soils.

In working land for seeding out with grain after potatoes or hoed crops, the plow should seldom be used either in the autumn or spring. These lands produce better crops when the connection between the subsoil and the topsoil remains compacted to permit moisture to rise by capillary attraction. These lands are always very thoroughly cultivated during the season that produced the hoed crops and are easily made ready for seeding the following spring. The pulverizing action of the plow is not required and, if used, the soil must be compacted again to produce a full crop.

Early autumn plowing is economical because horse and manpower, which is at a premium during seeding and haymaking, is usually available. The heat from the sun in August and September hastens the decomposition of sod and other vegetable matter which properly plowed under and rotted will supply plant food for the crops of the following year. Plowing and ridging can be continued late in the fall because the frost of winter, nature's own wonderful soil pulverizer, will correct errors and mellow baked and water logged soils.

According to the records of the Dominion Bureau of Statistics there were 35,695 plows manufactured in the Dominion in 1943 with a factory selling value of $1,921,000. Of the plows made in 1943, 23,676 were the horse-drawn type, 11,667 tractor-drawn, and 352 were other types of breakers.

No. 215. Thurs. May 3, 1945 -- Granite

Large areas in Canada are underlain by granite. Producing properties are situated in Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba and British Columbia. Granite for monumental use is produced in the Maritime Provinces and in Quebec, Ontario, Manitoba, and British Columbia. Early in 1939 an appreciable amount of foreign stone, principally of the black and red varieties, was imported, mainly from Finland and Sweden. Black granite has been quarried in Canada, notably in the vicinity of Lake St. John, Quebec, and from quarries along the north shore of Lake Superior, and stone from these areas should find a ready market for monumental use. Other deposits of 'black granite' in the Maritime Provinces, Quebec, Ontario and Manitoba show promise of yielding stone of good quality.

Much of the granite produced in Canada is used for foundations for highways; for the permanent ballasting of railway roadbeds; for heavy aggregate in large concrete structures; for the filling of breakwaters; and for bridge piers. Granite from quarries in Quebec has been used in the construction of public buildings in different parts of Canada, in competition with local stone. Most operations in which granite is used have been greatly curtailed during the war.

Some granite is being imported from the United States for monumental use, but Canadian granite is being used to an increasing extent for this purpose. Stone for monumental use which has enjoyed a steady market for a number of years may later be completely superseded by another variety. At present the so-called 'black granite' and the 'grey' varieties seem to be in most demand for monuments, although the various shades of reds are still popular in many districts.

In the building trade, coloured granites are being used to an increasing extent, in the form of thin polished slabs for trim for buildings in which the main colour scheme calls for contrast. Canadian granites are suitable for all the purposes for which granite is used and with persistent advertising there is no reason why this industry should not have a flourishing future.

Production of granite in Canada declined during the war, the 1943 total amounting to 780,000 tons as compared with 1,102,000 in 1939. Although the

aggregate value fell from $2,120,000 in 1939 to $1,522,000, the average price per ton was slightly higher in 1943.

No. 216. Fri. May 4, 1945 -- Limestone

Limestone is the most widely used of all rocks because of the great variety and importance of its industrial uses and because of its widespread occurrence. It is quarried in all provinces of Canada except Prince Edward Island and Saskatchewan, but by far the greater part of the production comes from Ontario and Quebec. The 1943 production of limestone for all purposes, including the manufacture of lime and cement, constituted about 90 per cent of the total production of Canadian stone.

Limestone is available in great bedded formations and in massive highly metamorphosed deposits, the former being much more common and yielding most of the production. At present almost all Canadian limestone is won by open pit methods, though underground mining of the rock has been adopted by several companies producing limestone for chemical and metallurgical uses and for making lime. Underground mining will undoubtedly become more common particularly for the production of high-grade stone for chemical purposes, as the readily accessible parts of deposits become worked out.

For industrial use limestone is marketed in a variety of forms ranging from huge squared blocks of dimension stone used in construction, to extremely fine dust used chiefly as a mineral filler. Some of the products are processed little if at all from the condition in which the rock is obtained from the quarry (as, for example, limestone used in the wood pulp industry), but the bulk of the output is crushed and screened for use as road metal, concrete aggregate, railroad ballast, and as flux in metallurgical plants. Large quantities are used in the manufacture of Portland cement, lime, and various chemical products.

The great bulk of limestone used in chemical and metallurgical industries is of the high-calcium variety, but dolomite is rapidly increasing in importance as an industrial raw material. Argillaceous dolomite is used for the manufacture of rock-wool, a widely used insulating material. Pure dolomite is now an important source of magnesia and magnesium metal.

A use for limestone that is capable of enormous development is in agriculture. Though the necessity of applying limestone or lime to agricultural land in order to maintain or increase soil fertility has been emphasized for many years by authorities on agriculture, the quantity so used in Canada is still very small, whereas if the proper quantity were applied it would constitute one of the principal outlets for limestone.

Limestone in blocks of large dimensions for sawing into building stone is quarried in Quebec, Ontario, and Manitoba. In Quebec, quarries at St. Marc des Carrieres, Portneuf county, produce grey limestone, and several in and near Montreal yield limestone of similar colour. In Ontario, two quarries near Queenstown in the Niagara Peninsula yield silver-grey limestone as well as small quantities of buff and of variegated buff and grey. At Longford Mills, near Orillia, buff, silver-grey, and brown limestone for use as marble and as building stone is available, but has not been quarried for the past several years. The Manitoba quarries are near Tyndall and yield mottled buff, mottled grey, and mottled variegated limestone. Beside these large quarries, the products of which have a wide shipping range, small quarries producing building stone for local use are worked near Quebec City, Montreal and Hull in Quebec; and at Ottawa.

Limestone production in Canada recorded a substantial increase during the war years, advancing from 4,150,000 tons valued at $3,818,000 in 1939 to 6,265,000 tons valued at $6,106,000 in 1943.

No. 217. Sat. May 5, 1945 -- Marble

Marble quarries are operated in Quebec, Ontario, Manitoba and British Columbia. The products include squared blocks for sawing into slabs and for making monuments, and broken marble for rubble and for making terrazzo, stucco dash, whiting substitute, poultry grit, marble flour, and artificial stone. Waste from some of the quarries is sold for chemical uses and for road metal.

In Quebec, several varieties of clouded grey marble and also a black marble are quarried at Phillipsburg. Some brown marble used for counters and wainscotting is obtained from the building stone quarries in the Trenton Limestone at St. Marc des Carrieres, Portneuf County. Dolomitic white marble is quarried and crushed in Pontiac County and Labelle County, for the making of terrazzo chips, stucco dash, poultry grit, artificial stone, and for chemical and ceramic uses. A small quantity of dark red marble has been quarried at Cap St. Martin near Montreal, chiefly for making tombstones.

In Ontario, black marble in beds up to 40 inches thick is quarried at St. Albert, near Ottawa. White marble is quarried at Marmora and at Haliburton, for making terrazzo chips, poultry grit, stucco dash, and artificial stone. Buff, red, white,green, and black marbles are quarried north of Madoc for use as terrazzo.

In Manitoba, a number of highly coloured marbles are available, but there is only a small production to supply terrazzo and building rubble. In British Columbia there are many deposits of marble, but there is only a small production of white marble from near Victoria and from Texada Island for use as terrazzo, poultry grit, marble sand, and whiting substitute. Many known deposits of beautifully coloured marbles have never been fully investigated, chiefly because the present demand in Canada for marble of any one colour, other than for a staple variety, such as white, is comparatively small.

The war has adversely affected the Canadian marble industry, for in 1943 most of the buildings erected were of the industrial type in which little or no standing marble was used. Few of the quarries were in active operation and such shipments as were made of block or slab marble were from stock. Some of the operators have recently taken on as a side line the production of terrazzo and poultry grit from waste marble. Most of the terrazzo previously originated in Europe but now a good range of colours is available in domestic material. Colours that are still in short supply are deep reds and some shades of yellow.

Production of marble in Canada fell from 14,000 tons valued at $200,000 in 1939 to 11,800 tons valued at $68,000 in 1943.

No. 218. Sun. May 6, 1945 -- Whiting Substitute

Whiting substitute, as the name implies, is a material that may be used in place of chalk whiting, all of which originates in England or in continental Europe. It may be made from white limestone or white marble, marl, lime, or the waste calcium carbonate sludge resulting from the manufacture of caustic soda. The products made from white marble or white limestone are pulverized to various degrees of fineness. In the past a whiting substitute made from white dolomite was produced in Eastern Canada for making putty.

The principal differences between whiting made from chalk and whiting substitute made from marble or limestone are that the latter is usually whiter, has a low capacity for absorbing oil, and the individual particles are subangular rather than rounded. Most of the whiting substitute made in Canada is made from white marble.

Marl suitable for making whiting substitute should be white or nearly so, be nearly free from grit and clayey material, and have a very low content of organic matter. This last-named constituent, which is present to some extent in all deposits of marl, renders the product unsuitable for use as a filler in products such as putty and paint where it will come in contact with oils. The oil-absorptive capacity of whiting substitute made from marl is usually greater than that of whiting, but in other respects the physical characteristics of the two products are much the same. Two plants have been built to make whiting substitute from marl, but only one was in operation in 1943. The output of that plant was utilized entirely as a filler for newsprint.

By-product precipitated chalk, made from waste sludge resulting from the manufacture of caustic soda from soda ash and lime, is classed as a whiting substitute, but its usefulness is restricted by the fact that it almost invariably contains a small amount of free alkali. The raw materials for the manufacture of by-product precipitated chalk are available, but it is not yet being made in Canada.

No separate record is kept of production of whiting substitute, but it is known that the industry has experienced a steady growth in recent years because improvements in grinding equipment and the maintenance of close technical control have enabled products to be marketed that are very consistent in chemical and physical properties. Many manufacturers now use the domestic products with entire satisfaction in place of imported whiting, and with all European sources of whiting cut off because of the war the domestic industry is largely supplying the Canadian market.

Whiting substitute made in Canada is used mostly in the manufacture of oilcloth, linoleum, in certain kinds of rubber products, in putty, in explosives, and as a filler in newsprint, book, and magazine paper. In lesser quantities it is used in the manufacture of moulded articles, cleaning compounds and polishes, as a ceramic glaze, and for a number of other purposes.

No. 219. Mon. May 7, 1945 -- The Pines

Nine species of pines occur in Canada. The white pine is the tallest and most stately of all the conifers in the Eastern part of the Dominion. Its wide-spreading roots and deep tap-root make it very wind-firm and, as a rule, it is only the much-exposed mature trees that are overthrown. For many years white pine was the most important timber tree in Canada, but for some time it has been exceeded in output by spruce and Douglas fir. The wood is easily seasoned, holds its shape and takes nails well. These characteristics and its easy working qualities make it highly prized for pattern making and ornamental carving as well as a wood of general utility. The wood of the Western white pine is a trifle heavier and harder than that of the Eastern white pine but, in general, it is used for similar purposes.

The red pine is found from Nova Scotia to Lake Winnipeg but reaches its best development in Ontario. The wood is generally darker and more resinous than that of the white pine. The softer grades, however, can scarcely be distinguished from it. It is soft, light, tough, moderately strong, straight-grained, and easy to work. Being heavier and stronger than white pine, it is more valuable for structural timbers. It has a deep sapwood readily penetrated by creosote and for this reason is used extensively for poles and piling.

The Ponderosa or yellow pine is confined to the drier portions of the southern interior of British Columbia. The wood of this pine is light, soft, strong in proportion to its weight and works very easily and smoothly, without splintering or splitting. It offers a fine smooth surface and has a very attractive grain. It seasons well, being free from warping and checking. Once seasoned it holds its shape without shrinkage or swelling. It makes a suitable lumber for outside use, especially for siding and sash and doors. Considerable quantities are cut into the ordinary dimension material used in building construction, such as rafters, joists and studding, etc. It has very much the same texture and other qualities as white pine and is used extensively for interior trim, foundry patterns, turnery, kitchen furniture, agricultural implements, cooperage and boxes.

In 1943 the amount of white pine lumber produced was 279,456,000 board feet, jackpine and lodgepole pine 174,330,000, red pine 81,289,000, and Ponderosa or yellow pine 19,271,000.

No. 220. Tues. May 8, 1945 -- Manufacturing Industries of Canada

The gross factory value of the products of the manufacturing industries of Canada in 1943 was by far the highest in the history of the Dominion, reaching a total of $8,732,861,000, an advance of 15.6 per cent over the preceding year, and 151 per cent more than in 1939. The number of persons employed in 1943 totalled 1,241,068, recording an increase of 7.7 per cent over 1942 and 89 per cent over 1939. Salaries and wages paid in 1943 aggregated $1,987,292,000, showing an increase of 18.1 per cent over 1942 and 169 per cent over 1939.

The increase in the value of production was mainly due to the continued expansion in the chemical, iron and non-ferrous metal products industries whose output consists mainly of war equipment and materials. Industries producing consumers' goods recorded but moderate increases over 1942, with textiles and textile products actually declining by 0.3 per cent. In all, there were 27,652 establishments which reported in 1943, representing a capital investment of $6,317,167,000 in fixed and current assets as compared with $5,488,786,000 in 1942 and $3,647,024,000 in 1939.

The greatest expansion in production in 1943 over the preceding year, as measured by the number of persons employed, was reported by the iron and its products group with an increase of 20.8 per cent. This was followed by the non-ferrous metal products group with 20.4 per cent, miscellaneous industries 13 per cent, vegetable products 1.5 per cent, animal products 1.1 per cent, and non-metallic mineral products 0.9 per cent. Employment in textiles and textile products declined by 4.5 per cent, wood and paper products 1.2 per cent and chemicals and allied products 0.8 per cent.

As mentioned previously the number of persons engaged in manufacturing in 1943 totalled 1,241,068, of whom 193,195 were classed as salaried employees and 1,047,873 as wage-earners. Compared with the previous year there was thus an increase of 88,977 employees. The increase in the number of male employees totalled 36,089 and female employees 52,888. To meet the shortage of manpower, more and more women are being absorbed in industry. Indicative of this trend is the increase in the proportion of women workers engaged in manufacturing. Whereas in 1939, out of every 1,000 workers employed 220 were females, in 1943 this figure jumped to 282. Earnings also increased, the average of salaries and wages paid advancing from $1,120 in 1939 to $1,600 in 1943.

A prominent feature of Canadian manufacturing development in recent years has been the growth of non-ferrous metal smelting and refining. This industry based on

mineral resources has taken its place among the leading manufactures, along with the industries based on forest, agricultural and live-stock resources. The pulp and paper industry, although of comparatively recent development in Canadian industry, had by 1933 displaced flour milling as Canada's most important manufacturing industry. In spite of recent vicissitudes it held that position up to 1935, when it was displaced by the non-ferrous metal smelting and refining industry.

The incidence of the war resulted in rearrangement in the rank of many industries. Industries producing supplies and equipment for the armed forces naturally advanced while those industries producing for the domestic consumers' market declined in relative importance. To supply the raw materials needed by the industries engaged principally in war production, it became necessary in many cases to restrict or prohibit the manufacture of many products such as pleasure cars, radios, washing machines, electrical equipment, household appliances, agricultural implements, etc. Many industries were thus forced to change over to war-time production.

No. 221 Wed. May 9, 1945 -- Canadians and Other Nationals

There is a prevalent impression abroad that the Canadian Census does not deal with nationality or citizenship -- defined as "the country to which a person owes allegiance". This impression is not in accordance with the facts. It arises through the failure of many persons to distinguish between the term "nationality or citizenship", which is a legal term, and "racial origin", which cannot be changed at will or by legal process. Racial origin, as used in the census signifies descent from a common ancestor, and this implies a combined biological, cultural and geographical inheritance.

The Dominion Bureau of Statistics has issued a bulletin on "Canadian Nationals", The product of a question on "nationality or citizenship" which was asked in respect of every person in Canada at the date of the Census of 1941. The bulletin shows that 11,210,310 or 97.4 per cent of the population of Canada at the date of the census declared their nationality to be Canadian. Full explanations as to what constitutes a Canadian national are given in the bulletin.

The bulletin shows that in respect of nationality the people domiciled in Canada at the date of the census were divided into three classes: first, Canadian nationals; secondly, other British subjects, who have not been domiciled in Canada for the five years necessary for them to be legally entitled to the status of Canadian nationals; thirdly, aliens, whose number has considerably diminished since the Census of 1931.

In the ordinary course of life most of our people do not have to worry about their nationality. A test of legal nationality, however, is applied when a person has to apply for a passport to travel in foreign lands. In such circumstances a Canadian national would carry a Canadian passport, a British subject other than a Canadian national would have to carry a passport from the government of his own country -- probably the United Kingdom or, possibly, Australia. An alien, however, would have to carry a passport from the country of his allegiance, whatever that might be.

The total number of aliens domiciled in Canada at the date of the census, as reported to the census enumerators, was 274,340, being about 2½ per cent of the total population. The largest single group of aliens in Canada were the citizens of the United States who numbered 72,016. The next largest group were citizens of Poland who numbered 42,884; the citizens of China numbered 25,961. About 1,500 persons stated at the census that they were aliens but failed to supply information regarding the country of their allegiance.

No. 222. Thurs. May 10, 1945 -- Alfalfa

Alfalfa has been grown in Persia (Iran) from time immemorial and is perhaps the oldest forage plant in the world. It was brought from Persia to Greece in 500 B.C., and has since spread all over the hemispheres. It was introduced into Spain by the Arabs in the 7th century A.D. Most authorities agree that the name alfalfa is a Spanish version of the Arabian word Alfacfacah, which means "the best sort of fodder". Other scholars attribute the origin of the name to the Arabian word Al-chelfa, meaning "that which grows after something else", and is a name generally applied to plants which thrive after the spring growth has disappeared. That would signify the ability of the plant to grow during the hot summer, or perhaps it might refer to the plant's power of producing many crops during a season. However, it is generally considered that the Alfacfacah derivative is the correct one, because in the 15th century the Spanish Alfalfa was identified with the Arabian Alfacfacah by Fray Pedro de Alcala, a prominent specialist in the Arabian language.

In Europe, alfalfa is always called Lucerne. The origin of this word is uncertain. It has nothing to do with the Swiss state of that name, because the plant was used long before the plant was known in Switzerland. Nor is it likely that the name Lucerne as applied to alfalfa was derived from the Lucerna valley in northern Italy. There was another old Spanish name for alfalfa, namely Userdas, which authorities think may possibly be identical with the name Louzerdo, used in southern France. More than likely the name Lucerne comes from lucerno, which is an old Provencal word.

Alfalfa is an important forage crop in Canada, the tonnage produced in 1944 amounting to 3,788,000 as compared with 3,891,000 in 1943. Ontario is the largest producer, the 1944 crop totalling 2,036,000 tons.

No. 223. Fri. May 11, 1945 -- Juvenile Delinquency in Canada

Juvenile delinquency in Canada in the twelve months ended September, 1944, showed a further decline, according to figures released by the Dominion Bureau of Statistics. In 1944 the number of juveniles brought before the courts throughout the Dominion was 11,554, as compared with 12,225 in 1943 and 13,802 in 1942. Despite the improvement shown, the 1944 figure was still substantially higher than in 1939, when 9,497 juveniles appeared before the courts.

Fewer juveniles were convicted of breaches of the law during 1944 than in the two previous years. The actual number of convictions in 1944 was 9,917, representing a decrease of 3.7 per cent from 1943 and 15.6 per cent from 1942. However, the 1944 total was still 30.3 per cent more than in 1939, the year preceding the war. The total for 1942 was the highest ever recorded since statistics of juvenile offenders were first compiled in 1922.

A marked decrease in the number of juvenile convictions in the Province of Quebec accounted for most of the decline in the Dominion total as between 1943 and 1944. Slight declines were also noted in Nova Scotia and Manitoba, but increases occurred in Prince Edward Island, New Brunswick, Ontario, Saskatchewan, Alberta and British Columbia. The total for Quebec declined from 3,196 in 1943 to 2,259, or by 29.3 per cent, while that for Ontario rose from 4,178 to 4,428 or by six per cent.

Convictions for major offences totalled 6,529 in 1944, recording a negligible increase of one-half of one per cent over the 1943 figure of 6,494, a decrease of

5.7 per cent from the peak year 1942, but an increase of 30.1 per cent from 1939. Convictions for major offences increased over 1943 in Prince Edward Island, New Brunswick, Ontario, Alberta and British Columbia, with decreases shown in Nova Scotia, Quebec, Manitoba and Saskatchewan. The 16.7 per cent decrease in Quebec neutralized increases in other provinces. Major convictions in Quebec declined from 1,455 in 1943 to 1,212, while the Ontario total advanced from 2,804 to 2,901.

Convictions for minor offences during 1944 numbered 3,388, or 10.9 per cent lower than the 1943 total of 3,802, but 30.6 per cent higher than the 1939 pre-war total. The decrease from 1943 was accounted for mainly by the 39.8 per cent reduction in Quebec. Prince Edward Island, Nova Scotia and Manitoba also recorded decreases from 1943, with New Brunswick, Ontario, Saskatchewan, Alberta and British Columbia showing increases. Convictions in Quebec in 1944 totalled 1,047 as compared with 1,741 in 1943, and in Ontario 1,527 as compared with 1,374.

No. 224. Sat. May 12, 1945 -- Public Hospitals of Canada

One out of every nine of the general population of Canada received care in the public hospitals in 1943, according to a report issued by the Dominion Bureau of Statistics. A total of 1,199,100 persons were under care in these institutions during the year, an increase of eight per cent over the preceding year, and 23.1 per cent more than in 1940. The daily average number of patients under care in 1943 was 39,548. The total days' care of all separations in 1943 was 13,660,134 days, of which 12,045,930 were of adults and children and 1,614,204 were of the newborn, which gave an average stay in hospital of 12 days for adults and children and 10.2 days for newborn. The total patient days of all persons under care was 14,434,751.

Discharges from public hospitals during 1943 totalled 1,124,402, which represented 94 per cent of the total number under care. Deaths in hospitals numbered 39,539, of which total 11,709 took place within 48 hours of admission. The death rate of adults and children per 1,000 under care was 3.4 and of newborn under care 26. Of a total of 289,816 births in Canada in 1943, 172,550 or 59.5 per cent took place in public hospitals. Of the Dominion births, 97.6 per cent were live births and 2.4 per cent still births; live births in hospitals constituted 97.4 per cent of total births and still births, 2.6.

The 596 hospitals which reported to the Bureau had a total bed capacity of 50,544 beds and cribs and 7,035 bassinets. Based on the total population of Canada over four years of age, the number of beds per thousand of the general population was five. The number of beds per thousand of the general population by provinces in 1943 was: Prince Edward Island, 3.0; Nova Scotia, 4.6; New Brunswick, 3.6; Quebec, 4.7; Ontario, 4.3; Manitoba, 5.2; Saskatchewan, 4.7; Alberta, 6.8; and British Columbia, 6.8. It will be observed that Manitoba, Alberta and British Columbia were the only provinces to exceed the Dominion average of five beds per thousand of the population.

There were on the staffs of public hospitals 337 full-time doctors and 276 on a part-time basis, or a total of 613 receiving salary. The number of interns reported was 796; and the number of technicians was 660. The number of graduate nurses was 8,679, an increase of 537 over 1942, while the student nurses totalled 9,452, an increase of 297. Probationers numbered 1,754 as compared with 1,814. The number of graduate dietitians was 292, and student dietitians 93, a decrease of 19 from the number reported in 1942.

With reference to organized services in public hospitals, X-ray, general medicine, general surgery, and obstetrics head the list in almost every province.

Organized services in public hospitals show an increase of 187 over the number reported in 1942. Some of the most notable increases were: X-ray, 21; obstetrics, 18; general medicine, 16; paediatrics, 14; general surgery, 13; bacteriology, gynaecology, clinical laboratory and physiotherapy, 12. Others which show increases were tuberculosis, seven, pathology, seven; venerology, seven; and contagious diseases, seven. Including organized and unorganized services, 490 or 82.5 per cent of all public hospitals had X-ray facilities, 287 or 50 per cent had clinical laboratories, and 241 or 40.5 per cent had physiotherapy services.

No. 225. Sun. May 13, 1945 — Canadian Vocational Training

Canadian Vocational Training provides the following types of training: (1) Pre-employment classes in vocational schools for men and women about to enter war industry; (2) Part-time classes, principally for the upgrading of persons already employed; (3) Training plant schools; (4) Special classes for foremen and supervisors; (5) Training of enlisted men as tradesmen for the Navy, Army and R.C.A.F.; (6) Rehabilitation training for persons discharged from the Armed Forces in the present war and referred for training by the Department of Veterans Affairs; (7) Assistance to certain categories of university students whose services are needed in connection with the war effort.

Canadian Vocational Training is carried on under agreements made by the Dominion Government with each province. The administration is decentralized with a Regional Director in each province. Training is given in technical schools, special training centres and in industrial plants. The provinces and municipalities supply the shop facilities of the technical schools to the Programme free of charge. Provincial Governments also pay certain administrative costs and share with the Dominion in the cost of machinery and equipment purchases. All other costs are paid by the Dominion with funds from the War Appropriation.

From its inception up to April 30, 1945, the gross enrolment under Canadian Vocational Training has been as follows: Training for Industry, 262,784; Army Tradesmen, 48,305; Navy Tradesmen, 9,019; R.C.A.F. Tradesmen, 65,208; Rehabilitation (Discharged persons from the Forces), 10,136; Students, 7,649; Total, 403,101.

While trades training for the Armed Forces is at a minimum currently and in fact has stopped for the Air Force, the rehabilitation training of persons discharged from the forces continues to grow, which shows the desire of returned personnel to become better qualified to take their place in the business world of the post-war period. Training facilities will be provided as required to meet this growing need.

Likewise, in industry, management and supervisory staffs are concerned with their efficiency in the post-war period, with the result that our supervisory training program continues to grow in favour. It is not so much the giving of short intensified courses provided by the department, but the introduction of organized training programs to meet specific needs, and the continuing use of the principles taught in the intensified course that produces the result.

In August, 1942, the Minister of Labour was authorized to enter into agreements with the several provinces to provide financial assistance for vocational training projects covering a three-year period ending March 31, 1945. The provinces having expressed a desire for a renewal of the agreements for a further period, the Federal Government on May 1, 1945, authorized an extension for the fiscal year ending March 31, 1946. The Department of Labour has appropriated the sum of $500,000 for Youth Training to be allotted among the provinces as follows: Prince

Edward Island, $12,000; Nova Scotia $25,000; New Brunswick, $35,000; Quebec, $135,000; Ontario, $75,000; Manitoba, $15,000; Saskatchewan, $35,000; Alberta, $65,000; British Columbia, $60,000; Unallotted, $43,000.

No. 226. Mon. May 14, 1945 -- Fur Farms of Canada

Revenues from the sale of live fur-bearing animals and pelts from the fur farms of Canada in 1943 totalled $9,846,000, an increase over the preceding year of $2,690,-000, or 38 per cent. The sale of pelts accounted for $8,959,000 as compared with $6,739,000, and the sale of live animals $887,000 as compared with $417,000. Revenues from the sale of live animals and pelts of all types of foxes amounted to $5,779,000, and mink, both live and pelts, $4,053,000. Average prices for both live animals and pelts were generally higher in 1943.

The number of operating fur farms declined from 7,835 in 1942 to 6,973 in 1943. The reduction was common to all provinces. In many cases the declines occurred in the smaller farms or in cases where fur-bearing animals were being kept as a side line of general farming. The difficulties which have been experienced in securing meat for feeding and necessary extra labour made it hard for the smaller enterprises to be operated economically.

The value of property concerned with fur farming, including land, buildings and live animals increased from $13,913,000 in 1942 to $17,403,000, despite the decline in numbers of farms. The increase in capital was largely in the value of animals which has risen in sympathy with higher values for pelts. Quebec takes first place with regard to the capital value of fur farms, having a value in 1943 of $3,744,000. Ontario followed with $3,630,000, and Alberta third with $2,627,000.

Foxes are the most popular type of animal raised, with 72 per cent of the farms reporting this type. Mink were reported on 32 per cent of the farms. Many farms reported both fox and mink. Raccoon was the next most popular type but was reported on only 61 farms, or less than one per cent of the total.

The number of fur-bearing animals on farms at the end of 1943 was 219,257, of which 98,425 were fox, made up of the following types: 74,514 silver; 602 cross; 535 red; 1,985 blue; 3 white; 5,447 platinum and 15,339 white marked; and there were 118,659 standard and 607 mutation mink. Numbers of all other kinds totalled 1,566.

No. 227. Tues. May 15, 1945 — Co-operative Associations

Co-operative business ogranizations in Canada occupy an important position in the marketing of agricultural products, purchasing of farm supplies, and in operating co-operative stores. For the year ended July 31, 1943, in comparison with 1942, the value of grain marketings increased from $87,000,000 to $134,000,000, live stock from $40,000,000 to $63,000,000, dairy products from $39,000,000 to $44,000,000, fruits and vegetables from $15,000,000 to $19,500,000, and poultry and eggs from $7,000,000 to $11,000,000. According to reports received in 1943, shareholders and members financially interested numbered 585,826 and total business exceeded $350,000,-000. The members equity amounted to $62,850,226 consisting of paid up share capital of $13,325,560, and reserves and surplus of $49,524,666. From 1942 to 1943 total working capital increased from $20,000,000 to $25,000,000.

In Canada early expansion of co-operative activity took place most rapidly and to the greatest degree in the marketing of farm products. Presumably this field offered the farmer the greatest opportunity to effect and to provide needed services.

However, in recent years with the establishment of co-operative wholesales in nearly every province, the purchasing of farm supplies and household needs on a co-operative plan has shown a marked increase.

Out of the 1,675 co-operative associations reporting in 1943, a total of 518 handled food products to the value of $12,000,000 and 229 associations handled over $2,000,000 worth of clothing and home furnishings for their members and patrons. These associations included the business of approximately 330 urban consumer societies. Petroleum products, handled by 500 associations, were valued at $10,000,000.

In order to increase crop and live-stock production, farmers of 625 associations purchased $19,000,000 worth of feed, fertilizer and spray material on a co-operative basis.

Credit unions are active in all provinces of Canada. At December 31, 1943, there were 1,780 credit unions chartered in Canada with a membership of 374,069. More than $154,000,000 has been lent to the members of the various credit unions in Canada during their period of operation. Loans in the year 1943 totalled about $17,000,000.

A mutual fire insurance company was formed in Ontario in 1836 and several others,still functioning as farmers' mutuals, were organized between 1850 and 1860. To-day there are about 400 such companies in Canada with net assets of over $12,000,000 and insurance at risk amounting to over $1,000,000,000. These have a long history of successful operation.

Approximately 105,000, or 6 per cent, of the telephones in Canada are operated by rural co-operative companies in which there is a total investment of $22,000,000.

Societies have been formed by fishermen on both coasts for the purpose of canning and marketing fish and buying gear on the co-operative plan. During 1942, 67 fishermen's co-operative societies in Nova Scotia, Quebec and British Columbia with a membership of 4,826 did business amounting to $2,628,380.

Co-operative housing and co-operative hospitalization and medical service are other forms of newer co-operative ventures that are operating successfully.

No. 228. Wed. May 16, 1945 -- Fish Livers

Fish livers were worth big money to British Columbia fishermen last year, and all because the livers have vitamin content tucked away inside them. All told, the liver landings brought the provincial fishermen a little more than $3,481,000, an increase of $1,700,000 over the 1943 return. The 1943 valuation of $1,733,000 was a great deal more money than British Columbia fishermen were making from liver sales only a few years earlier. Since those earlier days the fisheries scientists have discovered vitamins in fish livers where they were never known before to exist.

Oils produced in British Columbia from the 1944 landings, including some oil from vitamin-bearing viscera of halibut and one or two other kinds of fish, was valued on the market at nearly $4,650,000. Some of the livers, moreover, were probably used in oil-making outside the province so that $4,650,000 does not represent the entire value of the vitamin oils made from the year's "crop".

In 1944, as in 1943, the liver of the dogfish, or grayfish, represented much the greater part of the total dollar return to British Columbia fishermen from liver sales, and accounted for much the greater part of the marketed value of the vitamin

liver oils produced. The year's landed value of these livers amounted to more than $2,661,000. The average price received by the fishermen was higher than in 1943 and this fact combined with increase in landings to explain the sharp rise in landed value total. It may be noted that although there are dogfish on both of Canada's coasts, Nature has not put much vitamin content into the liver of the Atlantic species.

In point of aggregate dollar return to the British Columbia fishermen last year, Ling cod livers came next after dogfish livers and then those of Soupfin shark and halibut livers. Ling cod livers were worth about $276,600, as landed, Soupfin over $218,300, and the halibut livers $202,200.

Other livers entering into the year's landings included those from Black cod, Red cod, Mud sharks, ratfish, Gray cod, salmon, skate, and soles. Sole livers, - the quantity was small - were newcomers in the business, at least under their own name although perhaps some of them may have been included in the "miscellaneous" class in other seasons.

No. 229. Thurs. May 17, 1945 -- The Maples

The maple tree, the leaf of which is Canada's emblem, is dear to the hearts of Canadians. Seventy species of maple occur throughout the world, ten being found in Canada, of which the sugar maple is one of the most important. It is one of our tallest hardwoods and, in the forest averages 80 to 90 feet in height and two to three feet in diameter. It ranges from Newfoundland westward to the Lake of the Woods, but not north of the height of land dividing the watershed of the Great Lakes from that of the Hudson Bay.

Although the sap of all maples contains sugar, it is the sugar maple that is tapped commercially and forms the basis of the maple syrup and sugar industry. The wood is hard and strong and is used for furniture, floors, veneer, vehicle stock, agricultural implements, and in most uses where a strong hardwood is required. The wood is also used in large quantities for firewood and wood distillation.

The wood of the black maple is of the same character and has the same uses as the sugar maple. It grows in the St. Lawrence Valley. The Manitoba maple is a hardy tree of rapid growth and is popular for shelter-belt planting on the prairies, and is used extensively as a shade tree in the towns and cities of the Prairie Provinces, where it is native. The wood is used locally for boxes and rough construction.

The broad-leaved maple is common to British Columbia where it grows along the coast and on the islands of the province. Its wood is utilized for the manufacture of flooring, furniture, implements, interior finish, and for uses where a hardwood is preferred.

In 1943 the cut of maple lumber ran to 56,515,000 board feet, while the production of maple syrup and maple sugar amounted to 2,058,000 gallons and 2,416,000 pounds, respectively. The combined value of these products of the maple trees was in the close neighborhood of $8,376,000 in 1943.

No. 230. Fri. May 18, 1945 -- Poison Ivy

Of all skin-irritant plants in North America, poison ivy is one of the worst, and it finds most victims in the summer time. It grows under a variety of conditions. wet or dry, shaded or exposed, and in any soil from fine sand or rocky ground to rich

soils in woods. It is seldom found in cultivated land but it is plentiful in stretches of unoccupied areas, or in secluded nooks and corners which children love to explore.

When picnickers happen upon what seems to be an ideal spot in an open space by the shores of a wooded lake, their first thought should be of the possible presence of poison ivy. Some people are immune to its poison some of the time but all people are not exempt from infection all of the time. Poisoning is the result of contact with any part of the plant - leaves, flower, and roots - or from clothing, boots and tools that have the oily juice of the ivy on them.

The initial stage of poisoning is a mild itchy sensation, followed by the development of blisters which on breaking become painful oozing sores. The treatment is to wash thoroughly with strong laundry soap in running water as soon as possible after suspected contact. Use plenty of soap. By washing immediately before the oil of the ivy has had time to penetrate the skin, poisoning may be avoided. Otherwise, when the irritation becomes apparent, medical aid should be obtained as soon as possible.

No. 231. Sat. May 19, 1945 -- Births

The history of birth rates in most countries in the years just prior to the War was one of decline, although consequent reductions in the rates of natural increase have been partly offset by synchronous declines in the death rates. Since 1939, however, available statistics would seem to indicate that the rapid and consistent decline in birth rates generally has been arrested.

The crude birth rate for England and Wales, for example, was 25.1 in 1910 and, though it rose to 25.5 in 1920, it fell quite rapidly by almost continuous stages to 14.4 in 1933. The lowest figure recorded was 14.2 in 1941, since then it has risen to 15.8 in 1942 and 16.5 in 1943.

In France the crude birth rate moved from 19.6 in 1910 to 21.4 in 1920, 18.0 in 1930 and 13.0 in 1941. It is rather surprising that there the rate rose to 14.3 in 1942 and 16.0 in 1943.

In Germany the crude birth rate was 29.8 in 1910, 25.9 in 1920, 17.6 in 1930. Following the rise of Nazi domination the birth rate rose quite sharply and in 1940 the rate was 20.0 per 1,000 population. In 1941 it dropped to 18.6 and in 1942, the latest year for which figures are available, it had slumped to 14.9.

In the United States the crude birth rate was 23.7 in 1920, 18.9 in 1930 and in 1933 reached the low point of 16.6. It rose to 17.9 in 1940 and to 21.9 in 1943.

In Canada when the registration area was established in 1921, the crude birth rate was 29.4; by 1931 the rate had declined to 23.2 and by 1937 to 20.2. In 1941 and 1942 the rate stood at the comparatively high figures of 22.2 and 23.4, respectively, and in 1943 increased slightly to 24.0. The recovery during the past few years has been fairly general in all provinces, with variations ranging from the low rate in British Columbia of 20.9 to the high rates of 28.3 in New Brunswick and 28.6 in Quebec in 1943.

During the eighteen-year period 1926-43, out of a total of 4,348,866 recorded confinements in Canada, 51,258 or one in 84.8 were multiple confinements. Of these 50,791 were twin and 463 were triplet confinements, while one, in British Columbia in 1931, was a quadruplet confinement from which all the children died within a few hours of birth. A multiple confinement resulted in the birth of quintuplets in 1934.

In 1937 there were two quadruplet confinements in Quebec, all children being born alive. In the years 1942 and 1943 one confinement in every 92 and 91, respectively, was a twin confinement, a proportion that is fairly representative for the other years of the period. There were 26 triplet confinements in 1942 and the same number in 1943. In 1942 and also in 1943, of the children born (alive or dead), one child in every 46 was a unit of a multiple birth.

No. 232. Sun. May 20, 1945 — Marriages

The marriage rate in most countries is influenced appreciably by the general economic prosperity level. Immediately following the declaration of war, sudden abnormal rises were apparent all over the world. These high marriage rates, for the most part, have been maintained under existing war conditions with its impetus of full employment and high ratio of enlisted population.

In Canada, marriages reached a peak in 1929 after which recession was steady until 1932; in 1933 the decline was arrested slightly (by 2 per cent); in 1934 a definite improvement was apparent (17 per cent), and was maintained until 1939 when the marriages jumped 66 per cent over those occurring in 1932. In 1941, 1942 and 1943 the increases were 95 per cent, 104 per cent and 77 per cent, respectively, over the 1932 low point. Provincial marriage trends have been consistent with that of the whole Dominion.

The average age of all bridegrooms in the Dominion in 1941 was 28.9, in 1942 29.0 and in 1943,28.9, while that for all brides was 25.1 in 1941 and 25.2 in 1942 and 1943. The average excess of the bridegroom's age, was therefore, 3.8 years in 1941 and 1942 and 3.7 in 1943. Out of each 1,000 bridegrooms in 1942, 951 were bachelors, 38 widowers and 11 divorced men; out of each 1,000 brides 960 were spinsters, 28 widows and 12 divorced women, while in 1943 there were 943 bachelors, 44 widowers, and 13 divorced men and 955 spinsters, 33 widows and 13 divorced women.

When the registration area was established in 1921 the majority of marriages solemnized in the western provinces were between persons born outside of Canada. This situation has rapidly reversed as the percentage of foreign-born bridegrooms and brides show a general reduction. Both Canadian-born brides and bridegrooms are now in the majority in each province, while in the Maritime Provinces, Quebec and Ontario they show a marked predominance. Taking Canada as a whole, 88 per cent of all bridegrooms and 92 per cent of all brides in 1941, 1942 and 1943 were born in Canada; the 1943 figures are the highest percentage shown for any year of the period covered by the statistics.

The distribution of the marriages solemnized in 1942 and 1943, respectively, according to religious denominations, is roughly the same as that for the total population. The ratio of grooms marrying brides of the same denomination in 1943 was over 50 per cent with the exception of Anglicans, Baptists, Lutherans and Presbyterians, which showed percentages of 49.25, 43.04, 42.78 and 34.64, respectively. On such a percentage basis, the Jewish faith ranks first with 93.01 per cent of the grooms marrying Jewish brides, the Roman Catholics are a close second with 90.42, while Greek Catholics, United Church and Eastern Orthodox have each between 60 per cent and 70 per cent.

No. 233. Mon. May 21, 1945 — Dissolution of Marriage (Divorces)

For many years subsequent to Confederation, the number of divorces granted in Canada was very small, 1883, with 13 divorces, being the first year in which the number attained two figures, while 1903, with 21 divorces, was the record year up to that time. Thereafter the numbers grew more rapidly, 1909 showing 51 divorces and 1913, the last pre-war year, 60 divorces. This number was, however, less than one per 1,000 of the marriages contracted in Canada in each of these years.

One effect of the War of 1914-18 was to increase divorce. The causes were the generally unsettling psychological influences of the war period, and the long separations between men on active service and their wives. The provision of new facilities for obtaining dissolution of marriage was another factor in the numerical increase of divorces granted. A decision of the British Privy Council in 1918 gave jurisdiction to the Prairie Provinces for granting dissolutions of marriage, so that Ontario, Quebec and Prince Edward Island were then the only provinces in which the applicant for divorce had to secure a private Act of Parliament. In 1930 an Act of the Dominion Parliament gave jurisdiction in divorce matters to the Supreme Court of Ontario.

In 1918 there were 114 divorces granted in Canada and from then on they grew steadily in number to 608 in 1926, 700 in 1931, 1,570 in 1936 and 2,369 in 1940. In 1941 divorces granted in Canada numbered 2,461; in 1942, 3,089; and in 1943, 3,263. These numbers, for the most part, cover final decrees of dissolution of marriage which alone constitute divorce. Annulments and legal separations have been eliminated. Coincident with the transfer of jurisdiction in divorce matters in Ontario from the Parliament of Canada to the Supreme Court of the Province there was a decrease in the number of divorces. This was occasioned by the delay between the granting of the decree nisi and the decree absolute. In 1938, however, the number of divorces granted passed the two-thousand mark, the increase for the most part, was in Ontario and British Columbia. From 1921 to 1941, 1942 and 1943, respectively, there were increases of 341 per cent, 454 per cent and 485 per cent.

No. 234. Tues. May 22, 1945 — General Death Rates

Disregarding the effects of wars and their aftermath, the past century has seen a decline in the death rate in most countries of the world. Perhaps the most impressive index of this decline is found in the mortality statistics of Sweden, where the crude death rate declined from an average of 27.4 per 1,000 in the decade 1751-60 to 14.3 in the decade 1911-20, and to 11.7 in 1931-40.

In England and Wales, the crude death rate which was 18.2 per 1,000 in the 90's of the past century, declined to 15.4 in the first decade of the present century and 12.1 in the third; in 1941 it was 12.9; in 1942, 11.6 and in 1943, 12.1. In Scotland the average rate was 22.1 in the 60's, 18.6 in the 90's, 15.1 in the first decade of the present century, and 13.7 in the third; it was 14.5 in 1941 and 13.3 in 1942 and 1943.

There will always be years of specially high mortality, for instance 1918, when the death rate in Ontario, the most populous of the provinces of Canada, was 15.3 per 1,000 owing to the influenza-pneumonia epidemic, as against 12.0 in 1917 and 11.9 in 1919. Over a period, however, these abnormalities are reduced to negligibility.

Deaths in Canada as a whole declined steadily for the period 1931-34, but

for 1935, 1936 and 1937 there were substantial increases. The figure for 1937 was 113,824, an increase of more than 9,000 over 1931. For 1938 there was a noticeable reduction of 106,817, but increases were again shown for the next three years, to 114,639 in 1941. In 1942 there was another decrease to 112,978 but 1943 increased to 118,635.

There has been a similar definite downward trend from the crude death rate of 11.5 per 1,000 population in 1921 to 10.7 in 1930 and 9.8 in 1940. The rate rose slightly to 10.0 in 1941, dropped in 1942 to 9.7 and in 1943 rose again to 10.1. Six of the provinces showed increases in death rates, the exceptions being the three Maritime Provinces. The increase in the number of deaths, and the death rate in 1941 and in 1943 was due to a higher mortality rate for certain communicable diseases. Numerically speaking, for both sexes, the greatest number of deaths occur during the first year of life, although some startling reductions have been made in recent years. The averages of decedents have been increasing steadily and that,for the most part, the ratios of deaths over 60 years have not diminished. On the other hand, striking reductions have been apparent in the earlier years of life, particularly under 30 years of age. While much has been accomplished through the methods of therapeutic and preventive medicine, it must be remembered that the declining death rate in the younger ages is in a large measure responsible for the ageing of the population in Canada.

No. 235. Wed. May 23, 1945 — Infant Mortality

In recent years a great part of the energy designed to effect a decline in the general death rate has been directed at infant mortality and with a large measure of success. That Dominion, provincial and municipal health authorities, together with the private welfare agencies, have all taken part in the struggle to reduce infant mortality is reflected in the figures for the period 1921 to 1943, which show a fairly constant improvement each year. In fact any fluctuations in the general downward trend have been caused by the presence of epidemic diseases. In 1921 the infant death rate for Canada was 102 per 1,000 live births. Figures for 1942 and 1943 show the lowest rate since the registration area was established, viz., 54 per 1,000 live births. New Brunswick had the highest rate, Quebec, the second highest and Nova Scotia the third. In other words over 13,000 young Canadians were added to the population of Canada in 1942 and in 1943, who, under conditions prevailing in 1921, would have died before their first birthday.

Nine principal group causes of death accounted for between 92 and 89 per cent of the infant mortality in the Dominion during the years 1931 to 1943. It is worthy of note that four diseases present at birth, viz., premature birth, injury at birth, congenital debility and congenital malformations, accounted for over 46 and 49 per cent of the infant deaths in 1942 and 1943, respectively. The percentage was 41 in 1926 and 42 in 1930, but the rate of infant deaths has declined over 18 per cent in the interval between 1936 and 1943. The decline in infant death rates is indicative of the improvement in pre-natal, intra-natal and post-natal care.

During the years 1942 and 1943, 52.2 per cent and 55.1 per cent of all infant deaths occurred before the children had reached one month of age, and 38.3 per cent and 41.4 per cent, respectively, before they had completed one week of life.

No. 236. Thurs. May 24, 1945 -- Rates of Natural Increase

The rate of natural increase of the population of Canada declined steadily from 17.9 in 1921 to 13.3 in 1926 and 12.2 in 1929. In 1930 the rate increased to

13.2, but from then to 1937 it declined steadily to 9.9. In 1938 the rate was 11.0, in 1941 it was 12.2 and in 1943 it reached its highest point since 1925, viz., 13.9.

Among the provinces the trends, generally, followed that of Canada with minor variations. The Province of Quebec is considered to have one of the highest rates of natural increase per 1,000 population of any civilized area. The rate for Quebec in 1921 was 23.4 and while it gradually reduced in line with common experience to a low point of 12.8 in 1937, it has since recovered and stood at 16.5 in 1941, 18.0 in 1942 and 18.5 in 1943, the highest point since 1925. Saskatchewan has usually approached Quebec in the matter of natural increase; in fact for the years 1926-30, 1934 and 1935 the rates for this prairie province actually exceeded those of Quebec, although for later years the recovery has been less pronounced, with a rate of 14.1 in 1942 and 14.1 in 1943. Alberta has followed Saskatchewan fairly closely, except that the recovery since 1938 has been more pronounced with a rate of 15.8 in 1942 and of 16.2 in 1943. The high rates of natural increase in the two prairie provinces are largely due to their relatively younger populations and lower crude death rates.

Canada compares quite favourably with most countries in the matter of rates of natural increase. In 1943 the rate in Canada was 13.9, in Denmark 11.7, in the United States 11.0, in Northern Ireland 10.8, in New Zealand 10.7, in Australia 10.4, and Eire 7.6, in Scotland 5.6, and in England and Wales 4.4.

No. 237. Fri. May 25, 1945 — Finances of Provincial Governments

The aggregate or ordinary and capital revenues and expenses of provincial governments of Canada reached a new high point in their respective fiscal years ended nearest December 31, 1943. The total of ordinary and capital revenues advanced from $347,088,000 in 1942 to $366,623,000 in 1943, or by 5.6 per cent, and ordinary and capital expenses from $300,780,000 to $310,184,000, or by 3.1 per cent. For the second consecutive year the revenue of every province exceeded the total of its ordinary and capital expenditure. Over-all surpluses of the provinces aggregated $56,439,000 in 1943 as compared with $46,308,000 in the preceding year. The surplus in 1943 represented 18.2 per cent of combined expenditure as compared with 15.4 per cent in 1942.

There was no major change in the provincial revenue structure during 1943. Further declines in gasoline tax revenue and in amounts collected on arrears of provincial income and corporation taxes were offset by increases in the amounts received from the Federal Government under the terms of the Dominion-Provincial Taxation Agreement Act. The revenue from liquor control, which was second in importance only to the tax agreement subsidies, increased by 8.2 per cent to a new high of $64,986,000 — almost double the 1939 yield. Increases were recorded in every province except British Columbia where there was a marked decline of 14.7 per cent. Quebec's "Retail Sales" tax and Saskatchewan's "Education" tax both produced increased revenue in 1943. Revenue from the Saskatchewan Education tax, which is ear-marked for educational purposes, exceeded that Province's total educational expenditure.

The decline of $2,122,000, or 3.3 per cent, in net debt charges, exclusive of debt retirement, from the preceding year's record high of $64,140,000 reflected the improvement in provincial finances. This reversal of a consistent long-term rising trend has been due for the most part to debt retirement and a reduction in the average rate of interest paid. In Saskatchewan, however, gross debt charges were slightly higher but net debt charges declined by $616,000 as a result of an increase of $736,000 in interest received from the Farm Loan Board. Increased

expenditures for education and public welfare were quite general and accounted for almost all of the rise in provincial expenditure in 1943. Net educational expenditure declined only in Manitoba and welfare expenditure, exclusive of relief, increased in all provinces. The marked increase of $3,152,000, or 25.4 per cent, in the cost of old age and blind pensions was due more to the fact that pensions were increased to offset the rise in the cost of living, than to the natural increase in the number of pensions paid.

In the year under review total gross provincial direct liabilities, exclusive of reserves and deferred credits, decreased by $47,182,000, or 2.3 per cent. At the same time cash and investments held in capital, revenue and sinking funds increased by $41,808,000, or 18.4 per cent. This general strengthening of the provincial balance sheet position was due not only to the existence of record over-all surpluses but also to the fact that the collection of loans and receivables was facilitated by improved economic conditions. Gross indirect liabilities decreased by $3,462,000 or 1.8 per cent.

No. 238. Sat. May 26, 1945 -- Canadian Banks and the War Effort

Because they operate for the most part on a nation-wide scale, the chartered banks of Canada from the first have been in a position to exercise an extraordinarily potent influence on Canada's war effort. The experience, resources and organization of these banks, with their thousands of branches throughout the country, have been placed unreservedly at the disposal of the Dominion Government, and have been of great assistance not only in carrying out much of the administrative work connected with the control of measures necessary for the maintenance of financial equilibrium but also for the services of experts to assist in operations connected with the financing of war operations.

To-day, the volume of business handled by the banks is on a level phenomenally higher than at any time in their history, yet their staffs of experienced men are much smaller than in peace-time, owing to the fact that nearly 7,000 of their younger men are serving in the Armed Forces. These men have had to be replaced by women, quickly and intensively trained for their work.

The most onerous war work devolving on the chartered banks has been the administration of the regulations of foreign exchange control. These regulations, which are numerous and complicated, entail much extra work by the staffs of the leading offices, involving as they do explanations to customers, advice as to procedure, the filling out of forms and full responsibility for all the innumerable international transactions involved.

Other war work includes handling details connected with the offering and sale of Victory Bonds; selling war savings certificates and war savings stamps; ration-coupon banking; establishment of branches at military camps; cashing of innumerable cheques for Government employees and members of the Armed Forces and their dependents; the cashing of coupons for the hundreds of thousands of holders of Victory Bonds; the administering of much detail of Canada's cheque stamp law; the collecting and clearing of millions of income tax certificates relative to coupons, cheques and other items cashed and received for deposit.

No. 239. Sun. May 27, 1945 -- Canada's Atlantic Naval Record

Canadian warships escorted 25,343 merchant ships carrying 181,643,180 tons of cargo from North American ports to Great Britain during the course of the war. This

figure does not include the many thousands of ships escorted on the return trip to North America and in local movements along the North American coast and in the Caribbean Sea.

For nine months prior to discontinuance of trade convoys in the North Atlantic all trade convoys between North American ports and the vicinity of Newfoundland were escorted by Canadian warships; and three out of four of all convoys proceeding across to the United Kingdom were protected by ships of the R.C.N.

The main objective of Canadian Naval forces from the very beginning of the Battle of the Atlantic was to ensure the safe and timely arrival of vital materials in Great Britain. The first convoy to sail from Halifax, on September 16, 1939, was escorted part way across the Atlantic by two of the six destroyers owned by the R.C.N. at the beginning of the war. From this small beginning, additional ships were soon to be put into operation and by the Spring of 1941 the first corvettes began to make their appearance. Many more destroyers, frigates, corvettes and minesweepers followed until at the end of the Battle, the R.C.N. had a total of 254 sea-going escort ships engaged in ensuring the safe arrival of supplies to Great Britain.

Because of the nature of its task, the R.C.N.'s part in the Battle of the Atlantic was primarily defensive. The object was to ward off U-Boat attacks on convoys so that merchant ships could reach their destination. Despite this fact, Canadian ships were involved in about 165 actions with known U-Boats, entailing many hundreds of attacks. In many cases the time required to bring these actions to a successful conclusion was not warranted because of the necessity of keeping the convoy on its way fully protected. However, Canadian warships were successful in disposing of 23 enemy submarines known sunk and 8 probably sunk. In addition, there were a great number of promising attacks in which evidence was not sufficient to confirm a kill. Most of the R.C.N.'s successes against U-Boats were obtained in the latter part of the war when sufficient ships could be spared from convoy groups to form offensive groups whose main object was to hunt out and destroy submarines.

By 1943 the R.C.N. had assumed an important share of convoy escort work in the North Atlantic and in March of that year a Canadian Officer was appointed as Commander-in-Chief, Canadian Northwest Atlantic. This command entailed general operational charge over the escorting of all trade convoys between the British Isles and New York and ports North of New York while in the Northwest Atlantic. This area can be defined as extending from North American shores north of New York to approximately mid-ocean.

From April to the middle of September, 1944, during the critical period preparatory to and following the invasion of Europe, the R.C.N. took over the task of escorting all trade convoys between North America and the United Kingdom and this was despite the fact that the R.C.N. had placed 60 of its escort ships under the control of the British Admiralty to assist in invasion operations. It was during this period in July, 1944, that the largest trade convoy in history consisting of 167 ships carrying over 1,000,000 tons of cargo made the Atlantic crossing escorted entirely by Canadian warships, without the loss of a single merchant ship.

No. 240. Mon. May 28, 1945 -- Facts of Interest

Felt is a material made from wool, hair, fur, or mixtures, the invention of which is sometimes ascribed to the Oriental shepherds. Felting is probably older than weaving, the cloth having been used for tents, clothing and other purposes from remotest times. Wool has the best qualities for felting because of the many barbs on each fibre. Fur or hair from the ox, goat, hare, rabbit and beaver are readily

felted. Large quantities of felt are manufactured in Canada every year, and the largest consumer is the paper-making industry. Felt produced in Canada in 1943 was valued at $5,591,000, of which that intended for use in the process of paper-making amounted to $2,730,000.

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Canada's natural resources in salt are abundant and the production of the mineral is one of the Dominion's oldest non-metallic industries. Early in the 19th century the Hudson's Bay Company obtained its local supplies from the brine springs of the Mackenzie Basin. However, the real birth of the industry occurred with the discovery of salt in Ontario in 1866. Salt is produced from wells in Ontario, Manitoba and Saskatchewan, while in Nova Scotia the mineral is mined as rock salt. The production of salt in Canada in 1944 amounted to 717,000 tons valued at $5,921,000.

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Cotton is called the universal fibre because of its many uses in industry and households. It is a vegetable product obtained from the pod of the cotton plant. It has been known from remote times, as is shown by the writings of early historians. Columbus found cotton growing in the West Indies and the natives making cotton cloth. Cortez, on invading Montezuma's kingdom in Mexico, found the natives weaving beautiful and richly coloured cotton fabrics. Canada has a highly developed cotton textile industry, including both spinners and weavers, and a very wide range of fabrics and goods are produced. In 1943, the industry gave employment to 27,000 persons and had a gross value of production amounting to $150,000,000.

No. 241. Tues. May 29, 1945 -- Facts of Interest

Textiles are fabrics produced by the weaving or knitting of materials into cloth. This is probably one of the oldest known industries; older than man, in fact, since it was practised by spiders, caterpillars and birds before the advent of the human race. At the dawn of history, wool, cotton, silk and flax were being woven in the East with great skill, while in North and South America, the Peruvians, Incas and Mayas of antiquity produced textiles of beauty and fineness. Today this industry is highly developed in many lands. The production of textiles and textile products constitutes an important branch of Canadian manufacture, the gross value of which amounted to $793,305,000 in 1942. The war years have witnessed a striking expansion in the Canadian industry, the value in 1939 having been $392,658,000.

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Garden asparagus is a native of the north temperate zone of the old world. Since Greek and Roman times the young shoots have been in high repute as a culinary vegetable. Today it is grown extensively in Canada in private gardens as well as for the market. Most of the tender shoots are eaten fresh but large quantities are canned and otherwise prepared. During 1943 the commercial pack of asparagus in Canada amounted to 2,999,800 cans, the net weight of the contents of which totalled 2,870,000 pounds.

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Charcoal burning is an ancient art, the technique of which has been handed down from father to son. Different woods yield different qualities of charcoal, the variety employed for the manufacture of gunpowder, for example, being made from willow, alder and dogwood. Charcoal used by artists consists usually of a charred vine twig. Many Quebec farmers make charcoal in their spare time. They use sound hardwood, which they char in circular kilns built of brick and lime reinforced with iron hoops. The production of charcoal in Canada in 1943 amounted to 83,742,000

pounds, including 59,030,000 made in the wood distillation industry and 24,712,000 in the charcoal burning industry.

No. 242. Wed. May 30, 1945 -- Facts of Interest

Tungsten is one of the most important of the war metals. For many years the chief source of supply was China and Burma, but shortly after war broke out, and later when Burma was taken by the Japanese, the tungsten situation in Canada became serious. Tungsten ore was known to occur in some gold mines, and steps were taken to recover wherever possible the tungsten from this source. Hand sorted ore was shipped to the Bureau of Mines, Ottawa, for treatment. In addition, a treatment plant was built at the Hollinger mine, to which other mines could ship their ore. Sheelite ores were also treated at Val d'Or, Quebec, and at Little Long Lac mine in Ontario. Intensive efforts were made to recover tungsten ore in all parts of Canada, and the ultra-violet lamp was brought into use by mine managements and prospectors. Production of tungsten concentrates in 1944 amounted to 881,000 pounds as compared with 521,000 in 1942 and 12,000 in 1940.

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All through the warm summer months the honey bee will be found feverishly gathering the nectar from the blooms of flowers which abound in the fields and gardens. In most cases they store away far more than their requirements for the coming winter and the surplus honey is taken from them and used as human food. The bee has figured from ancient times in our proverbs. It competes with the ant as a symbol of industry and perseverance. Increased interest in beekeeping has been in evidence in Canada since the outbreak of war in 1939, the total number of beekeepers rising to a record figure of 40,676 in 1944. The average number in the five years preceding the war was 26,860.

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Almost one-third of the gainfully occupied males in Canada were engaged in agricultural operations in 1941, according to the census of that year. The proportion in this occupation has been decreasing steadily since the beginning of the century. The proportion in manufacturing industries, on the other hand, has been increasing. Females were employed in appreciable numbers in clerical occupations and in manufacturing in every province, but by far the largest numbers were found in the service occupations. Considerable proportions were employed in such professional occupations as teaching and nursing, and in such personal service occupations as domestic service, housekeeping and as waitresses.

No. 243. Thrus. May 31, 1945 -- Facts of Interest

A generation ago the kerosene oil lamp was the principal means of illuminating our homes, as it is in many homes even yet. It superseded the candle for general use, until kerosene itself was displaced by gas, to be followed by electric light. It is perhaps not generally known that a Canadian geologist invented and developed the process for making kerosene, or coal oil as most of us call it now. The discoverer was Abraham Gesner who was born at Cornwallis, Nova Scotia, in 1797. He made his discovery in 1852 at the age of 55. The 1941 census of Canada showed that 69.1 per cent of all occupied dwellings in the Dominion were lighted by electricity, 30.5 per cent by kerosene or gasoline, and 0.4 per cent by gas. The proportion of homes without electric light was considerably higher in farm communities than in urban areas.

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The wood of the poplar tree is soft, tough, clear, light in weight and colour, tasteless and odourless. Because of these qualities it has been widely used for the manufacture of berry boxes, baskets and crates. It is also used extensively in the manufacture of excelsior. Basket sides, rims and handles are made chiefly from birch. According to the records of the Dominion Bureau of Statistics, fruits and vegetable baskets and crates were produced to the value of $1,849,000 in 1942.

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Douglas fir is the largest tree in Canada. It usually attains a height of from 150 to 200 feet, and a diameter of three to six feet, but it is sometimes found reaching heights of over 300 feet and diameters up to 15 feet. The trunk is straight and free of limbs for 70 feet or more. It has the heaviest bark of any tree in Canada, sometimes 10 to 12 inches thick. In Canada this tree ranges from the east slope of the Rocky Mountains in Alberta through to the coast in British Columbia, but the best commercial stands are on Vancouver Island and the adjacent mainland. As a source of the largest-sized structural timbers in commercial quantities, this species is unsurpassed. Douglas fir is obtainable clear from defect in large dimensions and has a wide range of uses - particularly as a structural timber. Flooring for dwelling houses and for heavy dock construction, general building purposes, water-pipes, silos, veneers and plywoods are some of its various channels of utilization. Production of Douglas fir lumber in Canada in 1943 amounted to 1,233,953,000 feet board measure valued at $38,113,000.

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