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HOSPITAL INSURANCE AGREEMENT

What Health and Welfare Minister J. Walco Monteith termed "the first step in implementing the most significant development in the health field in Canadian history" took place in Ottawa last week when the first formal Hospital Insurance Agreement was signed with the Government of Ontario. The signing took place in the Parliament Buildings, with Mr. Monteith representing the Federal Government and Premier Leslie M. Frost signing for Ontario.

Under the Agreement the Provincial Government will operate a comprehensive hospital insurance programme available to all residents of Ontario. Costs of the programme will be shared, under the Hospital Insurance and Diagnostic Services Act of 1957, between Federal and Provincial Governments.

The Agreement consists of several parts, the first of which contains the basic contractual arrangements between the two governments. This part of the Agreement is more or less standard and will be in the same form for all provinces. Attached to this are a number of schedules, prescribed in the Act, relating to the Ontario programme specifically. These schedules will differ from province to province, since the Act permits variations in provincial plans provided they meet the basic provisions contained in the federal legislation.

Under the Agreement as signed, residents of Ontario who enter the programme will be covered for a wide range of in-patient benefits including accommodation and meals at standard ward level; necessary nursing services; laboratory, radiological and other diagnostic services; drugs, biologicals and related preparations; use of operating room, case room and anaesthetic facilities; surgical supplies; and radiotherapy and physiotherapy facilities. The Ontario agreement also provides for out-patient services for accident cases on an emergency basis.

It is expected that the Ontario programme will begin to provide benefits on January 1, 1959. It will be administered in Ontario by the Ontario Hospital Services Commission and members of the Commission were present at the signing ceremonies. Also in attendance were senior federal officials who had worked on the details of the plan.

REACTOR REFUELS IN OPERATION

The NRU reactor at Chalk River is the first reactor in the world to be refuelled while in operation.

All other reactors have to be shut down before they can be refuelled. This causes interruption of experiments and isotope production in the case of research reactors and the stoppage of electricity generation in the case of power reactors.

When reactor engineers and operators, under the direction of superintendent Gib James, successfully changed uranium fuel rods while the huge NRU reactor was in operation they passed an important milestone in the development of atomic energy. It was the first fully operational test of the fuelling machine. The NRU reactor first went into operation last November 3 and has been undergoing a series of tests before being put into routine operation.

The fuelling machine, which like all other components of the \$57,000,000 NRU except the heat exchangers was designed and built in Canada, is 43 feet high and weighs 240 tons, about twice the weight of a diesel engine that pulls a Canadian passenger train. The machine travels on rails and can be positioned within one hundredth of an inch over the top of the reactor. Some idea of the complexity of the machine can be gained from the fact that it has four control panels on which are some hundred colored indicator lights and a variety of instruments.

Much of the great weight of the machine is due to the heavy shielding required to protect engineers and operating personnel from gamma radiation given off by the fuel rods. This radiation creates so much heat in the rods that they must be cooled continuously while they are being removed, thus adding to the complexity of the fuelling machine. Seventeen pumps on the machine handle the cooling system. Heavy water cools the rod, ordinary water cools the heavy water, and then a refrigeration system cools the ordinary water.

The machine, carrying a fresh uranium rod within its tower-like structure, moves over the top of the reactor, pulls out a used rod, puts in a fresh rod, and then moves across a bridge to a point over a water-filled canal. The highly radioactive rod is lowered onto a carriage in the canal and is then moved into a large water-filled tank that looks much like a swimming pool. The rod is stored in this tank for six months to allow much of the radiation to die away and it is then chemically processed to recover unburned uranium and plutonium.

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FINANCIAL POSITION

The regular monthly statement of the Government's financial operations for January, 1958 and the first ten months of the current fiscal year showed that for January, budgetary revenues were \$457.3 million, expenditures were \$423.2 million and the surplus was \$34.1 million. For January last year, revenues were \$523.3 million, expenditures were \$348.1 million and the surplus was \$175.2 million.

For the first ten months of the current fiscal year, budgetary revenues were \$4,213.1 million or \$50.3 million more than for the same period a year ago, while expenditures, which included a payment of \$100 million to

the Canada Council, were \$3,891.3 million or \$264.8 million than a year ago. The surplus for the first ten months of the current fiscal year was \$321.8 million compared with a surplus of \$536.3 million for the same period a year ago.

Operations of the old age security fund, which are not included in budgetary transactions, resulted in a deficit of \$7.8 million for January, 1958 and an accumulated deficit of \$73.2 million for the ten months to January 31, 1958. Last year for the ten months to January 31, 1957, there was an accumulated deficit of \$15.3 million. The deficits were covered by temporary loans by the Minister under the terms of the Old Age Security Act.

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GOLD MINING INDUSTRY, 1956

Gold production in Canada declined 3.5 per cent in 1956 to 4,383,863 fine ounces from 4,541,962 in 1955, according to the Dominion Bureau of Statistics annual report on gold production. The value dropped 3.7 per cent to \$151,024,080 from \$156,788,528. Output of gold from base metal mines was up to 604,074 fine ounces from 597,217 in the preceding year, while that from auriferous quartz mines and placer deposits was down to 3,779,789 fine ounces from 3,944,745.

Production in 1956 was smaller than in 1955 for all producing areas except Newfoundland and Northwest Territories. Totals in order of magnitude were: Ontario, 2,513,912 fine ounces (2,523,040 in 1955); Quebec, 1,036,059 (1,154,522); Northwest Territories, 352,669 (321,321); British Columbia, 196,692 (252,979); Manitoba, 120,232 (123,888); Saskatchewan, 82,687 (83,580); Yukon, 72,001 (72,201); Newfoundland, 8,213 (6,337); Nova Scotia, 1,279 (3,880); and Alberta, 119 (214).

Average value per ounce of gold was \$34.45 in 1956, \$34.52 in 1955, \$34.07 in 1954, \$34.42 in 1953, \$34.27 in 1952, \$36.85 in 1951, \$38.05 in 1950, \$36.00 in 1949, \$35.00 in 1947-48, \$36.75 in 1946, \$38.50 in 1940-45, and \$36.14 in 1939.

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TRANSFUSION SERVICE EXTENDED

Extension of the Red Cross Transfusion Service to all the hospitals of Metropolitan Toronto and to many centres east and north of Toronto, with the assistance of federal health grants, has been announced by Mr. J. Waldo Monteith, Minister of National Health and Welfare.

A grant of \$30,000 has been approved for the purchase of equipment, supplies and materials. This will supply the hospitals of Toronto, Barrie, Orillia, Minden, Owen Sound and Collingwood to the north, and Ajax, Whitby, Oshawa and possibly Peterborough to the east. It is estimated that the Service will require 80,000 donors for the Toronto hos-

pitals alone and, when the service is extended to the other cities, it will have to produce 100,000 bottles of blood a year.

The first Blood Transfusion Depot was opened in Vancouver in 1947 and by the end of 1952 complete coverage was achieved in all provinces except Ontario, Quebec and Newfoundland. In 1949 a depot was established in Montreal for the area west of Three Rivers and it is

TRADE WITH FAR EAST

There is every indication that final 1957 figures will reveal that Canada's trade with the principal countries of the Far East topped the high level established in 1956, Mr. W. D. Wallace, Area Trade Officer for Asia, writes in the March issue of "Foreign Trade". More important, this was accomplished in the face of adverse economic conditions in many of these countries in the second half of 1957. On the basis of statistics for the first nine months of the year, Canada's exports to the area were running at an annual rate of \$192 million and imports at \$108 million. In the previous year, exports totalled \$167 million and imports \$106 million.

Japan continues to dominate our trade in the Far East, taking 80 per cent of Canadian exports to the area and supplying 57 per cent of our imports from these countries. The Philippines is the second most important market, followed by Hong Kong and South Korea. Malaya and Singapore come next to Japan as a source of Canadian imports, followed by Hong Kong and Mainland China.

The outstanding feature of Canada's trade with the Far East is that, although this area provides a market for a wide range of Canadian goods, a relatively few products - including wheat, barley, flaxseed, flour, iron ore and products, metals, asbestos fibres, pulp and paper, aluminium and fertilizers - make up the greater part of exports by value.

Here, country by country, are some of the highlights of Canadian trade with this area in 1957.

Japan-Canadian trade with Japan reaped the benefit of the economic prosperity that prevailed there throughout 1956 and the first half of 1957. Despite the recession that followed and that brought tighter credit and import controls, Canada's exports to Japan for 1957 will reach a record of over \$140 million and imports will be close to the 1956 record of \$60 million. Although we sell the Japanese a wide range of goods, our major exports include wheat, barley, flaxseed, iron ore, pulp and paper, metals and asbestos. We import from Japan mainly textiles, toys, pipe casings, plywood, oranges, and canned fish. Japan will continue to be an important market for Canadian foodstuffs and raw materials but a more cautious purchasing policy, with emphasis

expected that a depot will be opened in Quebec City for eastern Quebec at some future date. Plans have been made to extend the service to Newfoundland in the autumn of 1958.

The proposed extension of the Blood Transfusion Service to Toronto and points north and east brings within sight the original objective of a complete national coverage, Mr. Monteith said.

on quality and price, will be the guiding principle in this market.

South Korea-South Korea continues to offer a limited market for Canadian products such as fertilizers, newsprint, steel sheets, and synthetic fibres. Imports are financed mainly through United States aid and little change is expected in 1958.

The Philippines-Canada's second largest market in the Far East, the Philippines is an important buyer of Canadian flour, newsprint paper, fertilizer, and machinery. In July 1957 a new tariff code was introduced and in it the tariff on Canadian flour was more than doubled. Although the reduction in tariff preferences for United States goods will eventually mean greater opportunities for Canadian suppliers, it is Japan and other Asian countries that may dominate this trade. Economic conditions are adverse at present and Canadian exporters will be fortunate if they can maintain their shipments at close to the 1957 figure.

Taiwan-The foreign trade of Taiwan (the Nationalist Republic of China) continues to be closely associated with Japan and the United States. Japan supplies about 50 per cent of the island's needs and the United States through its aid programmes furnishes about 20 per cent. During the past year, Canada's exports to Taiwan almost doubled, with significant increases in sulphite pulp, electrical apparatus, asbestos fibres and aluminum. On the other hand, imports into Canada from Taiwan fell, mainly as a result of the drop in shipments of black tea.

Hong Kong-Canada's trade with Hong Kong continued to increase during 1957, but the pattern is changing. We are supplying larger quantities of raw materials for the colony's growing industries and are in turn buying larger amounts of finished goods. Because the colony is an important entrepôt centre for many of the countries in the Far East it offers a considerable market for various types of manufactured goods. This particular trade, of course, fluctuates, depending upon economic conditions in the other areas which purchase through Hong Kong. In 1958, prospects appear best for suppliers of raw materials for the various industries.

Mainland China-During the past year, Canada's exports to Mainland China have been confined almost entirely to shipments of fertilizer, wood pulp, kraft paper and acids; imports into Canada consisted mainly of peanuts, walnuts, fur skins and antimony. Although the China market is difficult to assess, it is estimated that 75 per cent of Chinese requirements are obtained from the Soviet Bloc countries; purchases from Western countries are placed at approximately \$500 million a year. Although this indicates a limited market, there are possibilities for Canadian firms to increase their sales to China.

Singapore and Malaya-Singapore and Malaya are more important to Canada as a source of supply of rubber, tin, palm oil and pepper than as an export outlet for Canadian products. Nevertheless, they offer a good market for flour, paper, asbestos, gas engines, automobiles and parts, and a variety of consumer goods. In the past year, Canadian trade with the area was apparently slightly below 1956, when exports reached \$3.9 million and imports \$28.5 million. Prospects for 1958 are that the combined trade will remain close to the present figure. The Federation of Malaya has become an independent sovereign nation and it is expected that the pattern of trade will shift gradually and that the Federation will do more direct importing and exporting and depend less upon the shipping facilities of Singapore.

British Borneo-Canada carries on a limited trade with the British colonies of North Borneo, Brunei, and Sarawak. This trade - chiefly in machinery, gas engines, and canned foods - is handled almost entirely through Singapore agents. As the development plans for this region progress and increase the demand for imported goods, prospects for Canadian products will no doubt improve.

Burma-Burma is a very small market for Canadian goods and the unfavourable rice crop and decline in foreign exchange reserves may mean further restrictions on imports during 1958. The chances for increasing Canada's business will depend upon whether orders can be obtained under the foreign aid that Burma may receive.

Thailand-Although Thailand buys a wide range of Canadian products, exports in 1957 were dominated by shipments of flour, asbestos fibres, files, and automobiles and parts. The business outlook for 1958 does not appear as bright as in 1957 and this will probably mean a general decline in imports.

South Viet Nam, Cambodia, and Laos-During the past year, there was little if any improvement in economic conditions in South Viet Nam, Cambodia and Laos, the former Indochina. The three countries rely mainly upon foreign aid programmes and will apparently do so for a number of years to come. There was some improvement in Canada's exports to this area

during 1957, but the possibility of boosting them further will depend on whether we can participate in the supply of goods for the development programmes.

Indonesia-Statistics show that Canadian exports to Indonesia for 1957 were well above 1956. This was accomplished in the first half of the year but during the last six months of 1957 trade fell drastically, reflecting political and economic difficulties that the country is experiencing. Prospects for an early improvement in trade between the two countries are not bright.

ATTACHES ON TOUR

A group of 29 foreign military attachés, representing 24 countries, have made a week-long tour of defence installations throughout Western Canada, it was announced by National Defence Headquarters.

The party travelled aboard an RCAF North Star transport, and the tour ranged as far west as Victoria, and north to Fort Churchill, Manitoba. They returned to Ottawa Saturday, March 8.

The tour is an annual event, and alternates between Eastern and Western Canada.

The touring group left Uplands airport, Ottawa, for the Canadian Joint Air Training Centre, Rivers, Manitoba, where they remained for two days, inspecting the Training Centre and nearby Camp Shilo. An airdrop demonstration was on the programme at Rivers, and tours of the Royal Canadian School of Artillery and the Canadian Provost Corps School were included in the Shilo visit.

They left Rivers on Tuesday morning March 4 for Fort Churchill for a 24-hour stay. While there they inspected the International Geophysical Year facilities and rode over the barrens in a snow vehicle.

At the RCAF Station Namao, outside Edmonton, the programme included a visit to the Leduc oilfields and to the RCAF School of Survival.

From Edmonton the party went to Victoria, where they visited HMCS Naden, HMC Dockyard, and Royal Roads Canadian Services College.

Returning east, the attachés stopped at Winnipeg, where they toured the RCAF station and the Air Observer School.

HOUSING SPURT

Starts on the construction of new dwelling units rose sharply again in January to 4,521 units from 1,931 in the corresponding month of the preceding year, according to advance figures released by Dominion Bureau of Statistics. Completions were down only slightly at 10,172 units versus 10,249 a year earlier. Owing to the sharp rise in starts, the number of units in various stages of construction at the end of January climbed 12 per cent to

X INTERNATIONAL CONGRESS OF GENETICS

The X International Congress of Genetics will be held at McGill University in Montreal August 20 to 27 inclusive, 1958. Registration will actually commence in the afternoon of August 19. This is the second International Congress of Genetics to be held in North America (the first was held in Ithaca, New York in 1932), and the first in Canada.

An invitation to hold this Congress at McGill University was extended at the last Congress (held in Bellagio, Italy) by McGill University and sponsored by the Genetics Society of America. It was unanimously supported by the Permanent International Committee for Genetics Congresses and approved at a plenary session of the Congress. Since then the following organizations have enlisted as co-sponsors: Genetics Society of Canada, Agricultural Institute of Canada, American Cancer Society, American Eugenics Society, American Genetic Association, American Society of Agronomy, American Society for Animal Production, American Society for Horticultural Science, American Society of Human Genetics, American Society of Naturalists, and Society for the Study of Evolution.

The Scientific Programme will consist of symposia, invited papers, contributed papers and demonstrations, exhibits, panel discussions and special meetings. The symposia will be plenary sessions during mornings and the contributed papers and demonstrations will be arranged into concurrent afternoon sessions. These afternoon sessions of contributed papers each 15 minutes in length, will be presented by members of the Congress in the language of their own choosing.

A very extensive exhibit, illustrating the numerous ways in which the science of Genetics has contributed to human progress and welfare is being prepared. There will be about one hundred booths, including many exhibits brought from Japan especially for the Congress, a number being prepared by the Department of Agriculture of the Government of Canada, some by the United States Department of Agriculture, and some by the Swedish Seed Association. The Japanese exhibits illustrate genetic and cytological work on morning glory, wheat, rice, radish, silkworm, goldfish, fowl and old documents. Exhibits on plant genetics include examples from studies of coffee, cotton, sorghum, watermelons, rubber, hybrid corn, crop improvement through crosses with wild relatives, etc. Studies on animal genetics will be illustrated by exhibits of the King Ranch Santa Gertrudis cattle; dwarf cattle, fur animals, sheep and poultry; and possibly of dogs, cats and swine. There will be an extensive section concerning the use of genetics in relation to medicine with such items as the use of inbred strains of animals, living chromosome maps of the mouse, immunogenetics

of tissue transplants, human cancer genetics, cancer in animals, twin studies and radiation biology. The Canadian exhibit will demonstrate aspects of the application of genetic principles to studies of wheat, oats, Lacombe hog, poultry, legume breeding, flower colour and tomatoes. Many other exhibits will refer to microbial genetics in preparation of pharmaceutical preparations, Drosophila - cytology and genetics, books on genetics, the use of the electron microscope in genetic studies, nuclear tools of the geneticist, and insect cytotaxonomy. The entire exhibit will be located at the McGill Winter Stadium and it will be open to the general public. Children must be accompanied by adults.

A number of tours have been organized for members of the Congress. A two-day trip to Ottawa will be available both before and after the Congress. The group visiting Quebec City will leave Saturday, August 23 and return in the evening of August 24. An inspection tour of the St. Lawrence Seaway will be arranged for Sunday, August 24. A short Canadian tour to Niagara Falls will leave Montreal on August 28 and return via the Muskoka Lakes and Ottawa on September 2. A longer tour of genetic laboratories and points of interest in the eastern United States will leave Montreal on August 28 and return on September 11. The latter tour will visit the Jackson Memorial Laboratories at Bar Harbor, Maine; the Massachusetts Institute of Technology and the laboratories of Harvard University in Boston; the Connecticut Agricultural Station; the Osborn and Gibbs laboratories of Yale University in New Haven; the Brookhaven National Laboratories, and the Genetics Laboratories of the Carnegie Institution of Washington and of the Long Island Biological Association, on Long Island; the Departments of Botany and Zoology of Columbia University in New York; and Genetic Laboratories of Cornell University at Ithaca, New York. Other special tours may be arranged directly with Tobin's Travel Bureau at 1240 Peel Street in Montreal.

The Proceedings of the Congress will be printed in two volumes. Volume I will contain the programme including information about exhibits, texts of invited papers, of the symposia, and of the public lectures, and the records of the plenary sessions. Volume II will contain the abstracts of contributed and demonstration papers. Contents of both volumes will be in either French or English and the volumes will be published by the University of Toronto Press.

Invitations have been extended to over sixty countries through the Department of External Affairs, in Ottawa. The General Secretary has extended personal invitations to over 230 individuals and about 300 institutions in many different countries. The res-

ponses to these invitations have been numerous and encouraging. The United States Finance Committee has raised over \$50,000 to be used in helping overseas geneticists to come to the Congress. Official delegates of 17 universities (or other organizations) have already been appointed and many more are expected. Countries which will be represented by these delegates include Italy, England, Switzerland, Japan, Netherlands, Poland, Greece, West Germany, the Union of South Africa and Australia.

HOW COLD IS IT ?

In order to dispel misconceptions about the weather in the Canadian North, the Department of Northern Affairs and National Resources had this to say about climate in its publication "This is the arctic":

"Voltaire once called Canada "a few acres of snow". Applied to the whole of Canada, this ranks among the all-time masterpieces of simultaneous understatement and overstatement, and only slightly less so when applied to the North.

"It would be too much to ask the most tender tenderfoot to believe that the Arctic is not cold in winter. It's chilly, of course, but the coldest place in Canada is a long way from the Arctic; it's a Snag, in the southern Yukon. The Eskimos are not God's frozen people: many are cold, but few are frozen. Canada's driest air is in the polar regions, and that makes the temperatures seem a lot higher than they really are. But when low temperatures are combined with high winds, don't depend on an extra suit of long underwear to meet the situation.

"Latitude isn't the only factor that decides climate, and the cold doesn't necessarily increase as you travel north. Mountains, valleys, plateaus, prevailing winds, and ocean currents play a big part in varying climate in the North, just as in any other part of the world. The average daily temperature in January at Resolute (latitude 74 degrees) is 29 degrees below zero. In Yellowknife, a banana-belt town 700 miles to the south, it's only three degrees milder. Winter in Aklavik is no colder than winter in Churchill, 600 miles further south. Average January temperature at Whitehorse, capital of the Yukon Territory, is actually warmer than at Winnipeg, just 70 miles north of the United States border. The main difference between Arctic and southern winters is in length. Winter lasts for eight or nine months.

"Climate in summer is another story. Fort Smith, a sub-Arctic community on the Slave River, has had temperatures as high as 103 degrees (above zero, that is). Even in Windsor, far below the forty-ninth parallel and Canada's most southerly city, the thermometer has never registered 103. Of course, Windsor's average summer temperature is much warmer.

HOUSING SPURT

(Continued from P. 4)

67,714 units from the year-earlier total of 60, 504.

Starts in January were higher in all provinces except Prince Edward Island, and completions were up in all provinces except Newfoundland, Ontario, Manitoba and Saskatchewan. Units under construction at month's end increased in all provinces except Prince Edward Island, Nova Scotia, New Brunswick and Manitoba.

"The average July temperature for Fort Smith is just about the same as for Edmonton (62 degrees). In Yellowknife, the July average is 60 degrees. That's about four degrees warmer than Aklavik, Canada's largest community above the Arctic Circle. Swimming and other traditional summer sports are popular near Yellowknife. Up in the High Arctic, people are inclined to other amusements, and it is said that no Eskimos are able to swim. Not that they couldn't find a place to learn if they felt the urge, because daytime temperatures in the 70's are not uncommon even in the Arctic Islands, and for a short while the thousands of glacial lakes warm up rapidly.

"The length of Arctic summers depends on a lot of things, including your definition of summer. If taken to mean the length of time when streams and mosquitoes are unfrozen, summer ranges from a maximum of five months or more at places like Great Bear Lake to about two months in the higher islands of the Archipelago. The length of the growing season is another yearstick, and so is the period when almost tropical temperatures occur at inland points. Where the summer sun strikes a dark, sheltered surface, and where there is no local reservoir of cold (a lake, bay, or ice-cap) to neutralize the sun's effect, snowballs don't stand a chance.

"The Arctic has been getting warmer. It's estimated that in some regions the climate has moderated at the rate of about one degree Fahrenheit in ten years. Walrus and white whales aren't travelling so far south as in the old days. Halibut and other fish are moving farther north. Glaciers are slowly melting. A few of the smaller glaciers have almost disappeared in the time since they were first seen by explorers. On the other hand, some glaciers are getting bigger, but that's probably because in the milder climate there is more rain and snow. Whether or not the Arctic will continue to warm up is another question, and it can't be answered for hundreds of years. But scientists say the world is still recovering from the last ice age. If so, the milder temperatures recorded in the past few years may indicate more than just a short term trend. Quite possibly there will be summer resorts on the Arctic Ocean one day, but don't rush to make your holiday reservations.