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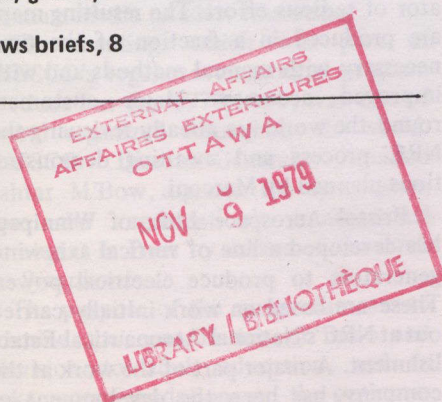
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Twelve-years ago this week...

Expo '67, the world exhibition in Montreal closed after a run of 185 days; attendance totalled 50,306,648.

Research and development major part of NRC's work last year

The National Research Council gave high priority to industrial research and development last year, when it committed \$21.1 million to the support of 284 projects in 209 companies.

According to the *Report of the President 1978-1979*, the Council, among its other activities:

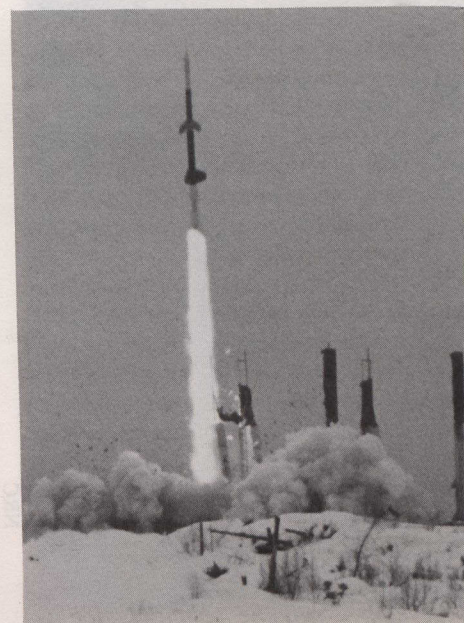
- made significant progress in the discovery and acquisition of new knowledge, notably in astrophysics, molecular biology, plant science, physical sciences and engineering techniques;
- developed a new and highly convenient portable meter for determining the efficiency of oil and gas burning furnaces which has been licensed for commercial production;
- continued its program of development and demonstration of solar and wind energy through industrial contracts, including the rebuilding of the 230-kW wind turbine on the Magdalen Islands in Quebec, which had been destroyed in an operational accident;
- made significant progress in advancing field peas as a viable legume protein crop in the prairie provinces;
- made significant advances in measurement and development of primary physical standards, notably for standards of time and length measurement;
- continued work on improved aircraft safety and technical aspects of air accident investigations;
- carried out in collaboration with a number of institutions in the United States a highly successful scientific study of upper atmosphere and ionosphere phenomena with rocket-launched probes at Red Lake, Ontario, during the February 1979 solar eclipse.

Major projects

Listed under major projects was the Canada-France-Hawaii Telescope, which opened September 1979. (See *Canada Weekly* issue dated October 24, P. 4.) The telescope, jointly sponsored by the National Research Council, le Centre na-

tional de la recherche scientifique of France and the University of Hawaii was constructed on the summit of Mauna Kea, one of the best observation sites in the world for optical astronomy.

The Remote Manipulator System — an "arm in space" — for the United States National Aeronautics and Space Administration Space Shuttle is being developed and constructed by a Canadian industry consortium under contract to the NRC. The mechanical arm, more than 15 m long, now scheduled for delivery in 1980, will enable astronauts to manipulate objects in space and could be used to place satellites into orbit as well as for repairing a malfunctioning satellite or transporting it back to earth. Its other possibilities include crew rescue and the grasp of special



During the solar eclipse in February 1979, NRC's Space Research Facilities Branch co-ordinated a major Canada-U.S. rocket launching program. In a joint effort with the U.S. National Aeronautics and Space Administration (NASA), it launched 35 instrument-carrying rockets from a temporary facility established near Red Lake, Ontario, to handle the exercise.

NRC

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tools to work on payloads such as Space-lab, the orbiting laboratory.

Industrial research and development

Among examples of research and development projects of the Council, undertaken with the support of its Industrial Research Assistance Program, are:

— Bach-Simpson Limited, of London, Ontario, has developed an instrument using ultrasound and Doppler techniques for the non-invasive examination of the heart. An ultrasound probe placed in the suprasternal notch at the throat is directed at the aorta to obtain information on blood flow in the aorta. It is a valuable adjunct to presently available echocardiographic equipment which has particular difficulty in assessing mitral and aortic insufficiency. Cardiac patients with structural abnormalities can be screened cheaply, safely and painlessly. After a long period of co-operation with seven hospitals and two universities, the instrument is now being put into production.

— Vortek Industries Ltd. of Vancouver, British Columbia, was formed in 1975 to



This specially constructed chamber at the National Research Council in Ottawa has been designed to determine safe exposure levels of microwave radiation on animal tissue. The project will assist government in establishing realistic safety standards for such common sources as radio transmitters, radar and domestic microwave ovens.

exploit commercially a plasma lamp developed by the Plasma Physics Group at the University of British Columbia. Under licence from Canadian Patents and Development Limited (the original work had been supported by an NRC grant), Vortek has developed a compact lamp employing a vortex-stabilized and liquid-cooled DC argon arc, with a rated power of 125 kW and luminous flux of six million lumens.

Industry/laboratory projects

Some of the contracts under the Program for Industry/Laboratory Projects include:

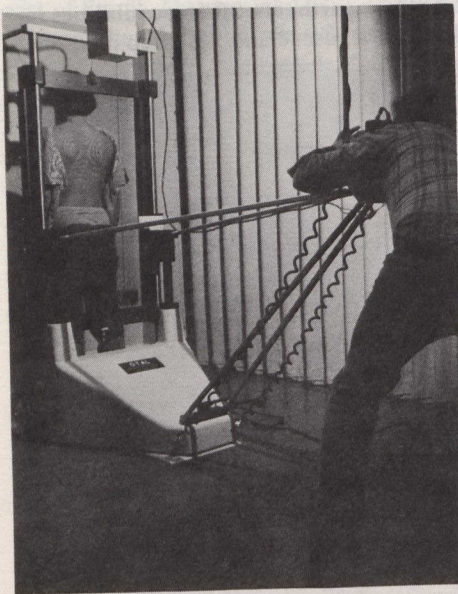
— Norpak Limited, of Pakenham, Ontario, in co-operation with the Division of Electrical Engineering, is developing a microprocessor-based Blissymbol graphics generator as a means of communication for verbally impaired children. Since many of these children are also physically handicapped, the equipment will include a variety of input switches, such as push button, joystick, and "puff and sip" (pneumatic), which can be selected to match the capabilities of the individual user. With this graphics generator, a non-verbal child will be able to select Blissymbols one at a time and build a complete message which will be displayed on a television screen for others to read. The equipment will also be able to transmit messages from one terminal to another, such as from a student's display to a

larger television monitor at the front of a class, or over the phone. The graphics generator will give the verbally handicapped child a better chance for normal intellectual and social development.

— The Canadian Marconi Company, of Montreal, is developing a commercial version of the NRC-developed photogrammetric instrument "Anaplot". Research in the Division of Physics has led to the development of new computer-aided methods of image reconstruction using stereophotos. The various corrections needed for such conditions as slant range, elevation and earth curvature are automatically made, thus relieving the operator of tedious effort. The resulting maps are produced in a fraction of the time necessary with manual methods and with improved accuracy. Major customers round the world are already reviewing the NRC process and awaiting demonstrations planned by Marconi.

— Bristol Aerospace Ltd., of Winnipeg, has developed a line of vertical axis wind generators to produce electrical power. These are based on work initially carried out at NRC's National Aeronautical Establishment. A major part of the work at the company has been the development of direct driven alternators and control systems to produce the maximum power over the normal range of wind speeds rather than using the usual maximum

(Continued on P. 8)



NRC

For the past two years, researchers at NRC's Division of Physics have worked to develop a suitable technique for detecting scoliosis (curvature of the spine) in children at the early stages of the disease. The method involves a screening device which operates by projecting "shadows" or moiré fringes on the back. If the patterns are symmetrical, on both sides of the spine, it is normal; if the contours are not symmetrical, the child has scoliosis.

Prime Minister Clark comments on Palestinian problem

Prime Minister Joe Clark said in a CBC television interview on October 8 that the grievances of the Palestinian people were legitimate and that Canada would be prepared with certain conditions, to consider the Palestine Liberation Organization (PLO) as their spokesman.

"I think that there is no question that Palestinian grievances have to be recognized as legitimate," said Mr. Clark.

"The problem," he said, "has to be to find a group that can speak with authority on behalf of the Palestinians. In my view with two conditions, we could be prepared to consider the PLO as that group."

"Those two conditions would be that they would renounce violence and terrorism as an instrument and secondly, that they would, without any equivocation or condition, recognize the right to exist of the State of Israel," said Mr. Clark.

The Prime Minister added that he would not "close the eyes of Canada to considering any option that respected the integrity of the State of Israel" and that would encourage peace and stability in the Middle East.

UNESCO meeting in Ottawa

The Canadian Commission for UNESCO (United Nations Educational, Scientific and Cultural Organization) held a symposium in Ottawa, from October 1-5 on the theme of "improving the contribution of the mass media to adult education".

The meeting, which was part of UNESCO's regular international program in education for 1979-1980, was one of several organized throughout the world. UNESCO Director-General, Amadou Mahtar M'Bow, opened the symposium from the organization's international secretariat in Paris by means of the satellite *Symphonie*.

The purpose of the symposium was to examine the contribution of radio and television to adult education, and to make recommendations on the optimum use of radio and television in adult education programs. Emphasis was placed on teaching and improving professional skills, encouraging public participation in cultural life, promoting the participation of

users in the selection and production of programs, and developing a critical understanding of social and cultural issues at the national and international levels.

Twenty experts from different countries attended the meeting. Among these were: Dr. Malcolm Adiseshiah, former Deputy Director General of UNESCO, Member of the Parliament of India and Chairman of the Madras Institute of Development Studies, India; Dr. Musari Al-Rawi, Director of the Arab Literacy and Adult Education Organization Baghdad, Iraq; Francis Billot-Piot, technical adviser on educational television, Ministry of Education, Abidjan, Ivory Coast; Dr. Mario Cabral, former Minister of Education, and now Commissar for rural development, Guinea-Bissau; Professor John Cairns, former head of UNESCO's adult education and literacy programs, and now Director of the Centre for International Programs, University of Guelph, Canada; Francisco José da Silveira Lobo Neto, Director of the Centre for Educational Technology, Secretariat of Education and Culture of Rio de Janeiro State, Brazil and Akio Nishiyama, Manager of the School Broadcasting Program Group, Radio Japan NHK, Tokyo, Japan. Observers from the International Council for Adult Education and from a number of Canadian agencies also attended.

The conclusions and recommendations of the symposium will be forwarded to UNESCO's international secretariat for use in planning the organization's programs and will provide background information for its specialists round the world.

Canadian assistance to Caribbean

Canada has pledged \$10 million in bilateral development assistance to the Commonwealth Caribbean, Secretary of State for External Affairs Flora MacDonald and Minister of State for the Canadian International Development Agency Martial Asselin have announced.

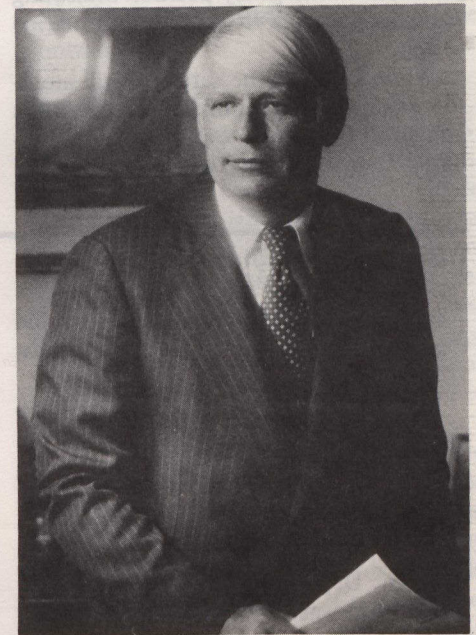
These pledges constitute Canada's contribution under the Caribbean Group for Co-operation in Economic Development (CGCED). The CGCED was established in 1978 under World Bank auspices to coordinate and strengthen external assistance to the Caribbean, and for reviewing national and regional activities related to economic development. The second annual meeting of the group was held in Washington in June.

Canada's pledges are:

- \$7 million for Jamaica comprising: \$4 million of a commodity line of credit to be disbursed between now and June 30, 1980; and \$3-million special loan for food to be disbursed between now and June 30, 1980. This pledge will also count as Canada's contribution to the "Friends of Jamaica" group (chaired by Britain) for bilateral balance-of-payments support to that country.
- \$1.5 million for the Leeward and Windward Islands for new projects with disbursements between now and June 30, 1980.
- \$1.5 million to Barbados for a new project with disbursements starting after April 1, 1980.

Canada is one of the leading bilateral donors to the Commonwealth Caribbean. Since the mid-1960s, over \$200 million in Canadian assistance has been disbursed to the region. About \$28.5 million bilateral economic assistance and \$7 million for a special food loan were provided in 1978-79.

New U.S. Ambassador to Canada



Kenneth Curtis, the new U.S. Ambassador to Canada presented his credentials to Governor-General Edward Schreyer on October 5. Mr. Curtis, a former governor of Maine, has been a member of the Canada-U.S. International Joint Commission for the last year. He replaces Thomas Enders, who has been reassigned in Europe.

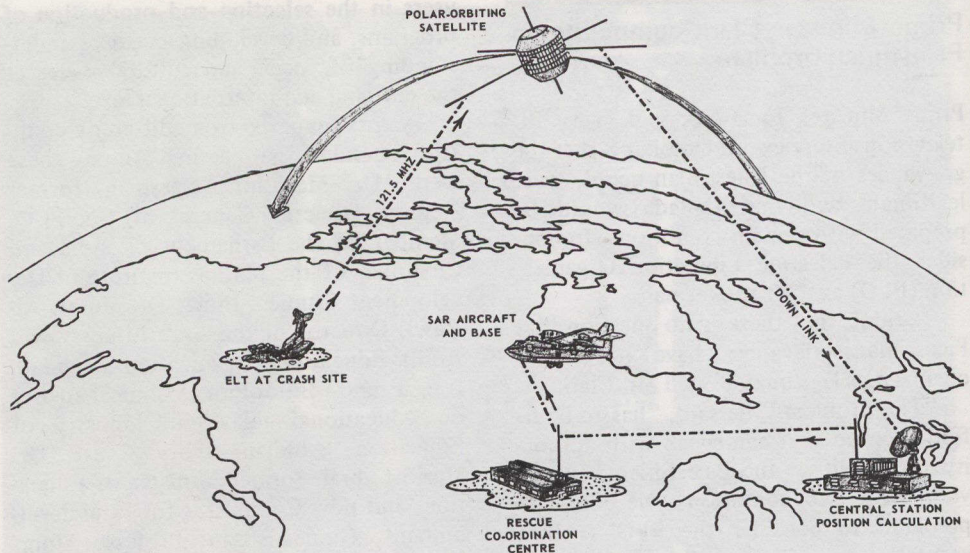
Canada, U.S. and France in satellite search and rescue program

In a continuing effort to improve search and rescue response capabilities, the Canadian Government has approved a \$13-million program to participate in the development and evaluation of an experimental search and rescue satellite system (SARSAT) during the next four years, Defence Minister Allan McKinnon has announced.

A fully operational SARSAT system would reduce the notification time of a mishap to a maximum of three hours and narrow a search to within 20 kilometres. The ability of the system to dramatically reduce response times to accidents gives it potential for saving lives and reducing loss of properties.

Canada, the United States and France are taking part in the initial stages of the experiment which involves equipping and launching three U.S. weather satellites with special electronic instruments called repeaters and processors. The experimental SARSAT system will use existing aircraft emergency locator transmitters (ELTs) and emergency position-indicating radio beacons (EPIRBs) found in marine vessels.

While in orbit, the satellites will monitor emergency transmissions from ELTs and EPIRBs and relay them to a ground-based terminal which will determine the



SATELLITE-AIDED SAR SYSTEM CONCEPT

origin of the distress signal. The terminals will disseminate the information to the appropriate Rescue Co-ordination Centre which would direct search and rescue resources to the site of the emergency.

Canadian participation in the international SARSAT program is being co-ordinated by the Department of National Defence, the major Canadian government contributor to the project. Also involved are the Ministry of State for Science and Technology, Department of Fisheries and Oceans, Department of External Affairs, Transport Canada and the Department of Communications, which is developing the SARSAT system technology in conjunc-

tion with the United States National Aeronautics and Space Administration and the Centre National d'Etudes Spatiales of France.

The Soviet Union, which intends to develop its own SARSAT system to be inter-operable with the Western system, is also co-operating in the program. A number of other countries have also expressed interest in the program.

The 15-month demonstration and evaluation phase is scheduled to commence in 1982. If the experiment is successful, it is expected to lead to international acceptance for implementing a fully operational SARSAT system world-wide.

Canadian space pioneer dies

John Chapman, the driving force behind Canadian satellite programs for the past 20 years, died recently in Vancouver.

Dr. Chapman, who was 58, guided Canada's entry into space by way of the *Alouette* and *ISIS* satellites.

"Canada has lost an extraordinary individual," Communications Minister David MacDonald said of the loss of his Assistant Deputy Minister for Space Programs. "He was known around the world for his drive, vision and competence."

Jeanne Sauvé, Communications Minister in the former Government, said Dr. Chapman had been known as Mr. Space.

"We owe to him to have broken down the isolation of the men and women living in remote areas, to have brought them the hope of access to education and medical services and to the innumerable means of communication which have

become so indispensable."

Born in London, Ontario, Dr. Chapman studied physics at the University of Western Ontario and McGill University and went to work as a senior scientist at the Defence Research Telecommunications Establishment near Ottawa in 1951.

He led the team that built *Alouette*, the research satellite launched in 1962 that made Canada the third country to develop and orbit its own satellite. The *Alouette* series was designed to do research on the ionosphere and was one of the most successful satellite series of its kind.

He was also instrumental in launching the *Hermes* satellite in 1976, a forerunner of the direct-to-home broadcast satellite that went into service recently in remote areas of Ontario.

Dr. Chapman was to have been honoured in Toronto with the 1979 McNaughton Gold Medal Award of the Institute of Electrical and Electronics Engineers.

B.C. sells coal to South Korea

Major coal sales contracts between three British Columbia suppliers and Korea Electric Company were signed recently in Seoul.

Under the three contracts, Kaiser Resources Ltd., Fording Coal Ltd. and Crows Nest Industries Ltd. will supply the state-run utility with a combined 800,000 tons of coal annually for five years, beginning in 1982.

The signing of the contracts at the South Korean Energy and Resources Ministry was timed to coincide with the visit of a seven-member economic mission from British Columbia led by provincial Premier William Bennett.

The 800,000 tons of Canadian coal are expected to meet about 30 per cent of the 2.7 million tons needed annually for a 560,000-kilowatt power plant south of Seoul.

News of the arts

Governor General's awards honour anniversary of women as persons

October 18 marked the fiftieth anniversary of the day women in Canada and the British Empire won the legal right to be recognized as persons.

This year, in commemoration of the anniversary, the first Governor-General's Persons Awards were presented to seven women in recognition of their efforts to advance the status of Canadian women. The awards are to be presented annually, said David MacDonald, Minister responsible for the Status of Women.

Recipients of the medals, who were recently honoured at Government House, were:

- Elizabeth Bagshaw of Hamilton, a general practitioner who pioneered efforts to provide women with information and advice on birth control;
- Thérèse Casgrain of Montreal, who was instrumental in obtaining the vote for women in Quebec and ensuring women's right to participate in municipal politics. She was later appointed to the Senate;
- Marion Royce of Toronto, who contributed to the education of women through volunteer work with the Young Women's Christian Association and membership in the United Nations Commission on the Status of Women;
- Grace MacInnis of Vancouver, who staunchly advocated women's rights in the House of Commons while serving as a member of Parliament from 1965-1974;
- Eileen Tallman-Sufrin of White Rock, British Columbia, who worked as a labour organizer to improve working conditions for Canadian women employed by banks, offices and retailers;
- Mary Two Axe Early of Caughnawaga, Quebec, founder and vice-president of Indian Rights for Indian Women, for her efforts to ensure rights for native Indian women and;
- Sophia Dixon of Saskatoon, past president of the United Farm Women, who worked in support of the co-operative movement and rural women's organizations.

Women's struggle to become "persons"

According to a British common law decision of 1876 women were "persons in matters of pains and penalties, but not persons in matters of rights and privileges". From the beginning of her appointment in 1916 as first woman police magistrate in Canada, Emily Murphy

knew that her office as a city magistrate in Edmonton, Alberta, was a privilege and not one she was legally capable of holding. Mrs. Murphy began a vigorous press campaign, using as her platform the eligibility of women to sit in the Canadian Senate. If the Canadian Government were to appoint a woman to the Senate, they would then be "persons" with attendant rights and privileges.

At the end of 11 years on the bench, with no further word from the federal administration, Judge Murphy decided that the ambiguous status of women needed to be clarified. She had discovered that any five interested persons had the right to petition the Government for a ruling on a constitutional point. She chose her four co-workers carefully for their ability to arouse public opinion. Henrietta Muir Edwards, Louise McKinney, Nellie McClung, Dr. Irene Parlby joined her in signing a petition requesting an amendment to the British North America Act to grant women "person" status and eligibility for the Senate.

"Persons case"

The ensuing legal case, known as the "Persons case" was heard in the Supreme Court of Canada and the decision handed down on April 24, 1928, held that women were not persons and as such were not qualified to hold public office.

The "famous five" as they came to be called met again and decided to try their last course, the Privy Council – the final court of appeal in the British Empire. On October 18, 1929, the Lord Chancellor, Lord Sankey, announced that women were persons, that the word "person" applied to either sex and that this decision was to apply to the whole British Empire.

However, the first woman Senator was not Emily Murphy, but Cairine Wilson appointed in 1931. (Emily Murphy, a Conservative was bypassed by the Liberal government of Prime Minister William Lyon Mackenzie King.)

In a private ceremony at the Supreme Court of Canada last spring, Lynn McDonald, president of the National Action Committee (NAC) on the Status of Women presented Chief Justice Bora Laskin with a scroll and a plaque of the silver medallion minted in commemoration of the "Persons case".

Technology trade show in Boston

More than 100 Canadian companies are displaying their products at the Canadian High Technology Marketplace show in Boston, October 30 and 31, in an effort to share in United States defence contracts worth about \$7 million.

The trade show, the largest ever undertaken by the Canadian Department of Industry, Trade and Commerce, is co-sponsored by the Canadian Consulate General in Boston as part of the Federal Government's Export '79 program. The program is designed to assist Canadian companies to increase their exports to the U.S. or to enter the U.S. market for the first time. More than 2,000 invitations were sent to leading U.S. buyers and procurement officials.

The New England area contains the second highest concentration of high technology industry in the United States, and New England companies receive a large number of defence and commercial contracts. Canadian companies are searching primarily for sub-contracts because most of the American representatives to the show are from firms already supplying defence products through prime contracts.

Duty free

Under the terms of the Canada-U.S. Defence Production Sharing Arrangements, Canadian companies can compete for most of this high technology business on an equal basis with U.S. manufacturers and virtually all Canadian products destined to defence contractors can enter the U.S. duty-free. Provisions of the "Buy American Act" have also been waived for a large range of Canadian supplies under the terms of these arrangements.

Although wages are usually slightly higher in Canada than they are in the U.S., the lower value of the Canadian dollar compared with the U.S. dollar may give Canadian firms a price advantage in this market. In addition, Canadian specialization in relatively short production runs of extremely advanced electronic components may also tempt potential buyers.

Products and technology being promoted at the show include: long-range patrol aircraft, new fighter aircraft, patrol frigate, the Canadair *Challenger*, and steel rolling mill and pulp and paper equipment.

Stamps salute children

Canada Post issued the 1979 Christmas stamps on October 17, followed by a stamp commemorating the International Year of the Child on October 24.

The issue date for the International Year of the Child stamp was selected to coincide with International Year of the Child Day in schools, an event which was co-sponsored by the Canadian UNICEF Committee and the Canadian Red Cross Society.



In keeping with the Year of the Child theme, the Christmas commemorative issues for 1979 are devoted to antique toys. The 15-cent stamp shows a painted wooden train from the National Museum of Man in Ottawa. A horse pull-toy from the Museum of Quebec is depicted on the 17-cent stamp, and a knitted doll, which is in the Royal Ontario Museum in Toronto, is shown on the 35-cent stamp.

Youth to get jury of peers

Juvenile offenders will face the scrutiny of their peers as well as a judge in an experimental courtroom program being started in Brandon, Manitoba this autumn.

Under the experiment, six juveniles will sit alongside Family Court Judge Brian Giesbrecht in cases involving non-violent incidents. Their role will be limited to suggesting appropriate penalties.

Judge Giesbrecht will continue to decide whether a delinquency actually has been committed. The judge says he will not be obliged to accept their recommendations, but he thinks their advice will be helpful.

"The main goal is to involve the community in the family court system," he says, adding that the young jurors probably will learn as much from the court experience as the youngsters who are brought before him.

Attorney-General Gerry Mercier says the project is designed to make the sentencing of delinquents more meaningful. "Sentencing by one's peers may have more impact," he says.

If the juvenile jurors follow a pattern established in Denver, Colorado, where student juries have handed out sentences to about 300 juveniles since the program began six months ago, offenders should not expect light treatment from their peers.

Charlene Shaffer, a counsellor in the Colorado program, says young jurors often are harder on their peers than family court officials would be.

"In a recent case we had a 14-year-old who had been caught in a burglary," she said. "We thought he should pay only half the amount taken, because there had been a partner involved who hadn't been caught. But the jury decided he should pay the whole \$55."

Canadian finalist in Australian architectural competition

An architect from British Columbia is one of five finalists selected by the Australian Government to receive \$133,000 (Cdn.) for his designs in the second stage of the competition for a design for Australia's new Parliament House.

Christopher Waite of Bowen Island, near Vancouver, is one of two overseas architects to be included in the group of five finalists. Nine-hundred-and-sixty-one architects registered for the competition; the five prize-winners were chosen from 329 entries.

The new Parliament House, due for completion in 1988 (to coincide with Australia's bicentenary celebrations) will be situated on Capital Hill, a central feature of the Canberra landscape.

Australia's Minister for Home Affairs, R.J. Ellicott, said the judges in the competition were "unanimously of the view that in the first stage they were selecting not so much buildings but architects who, in their design submissions had demonstrated a clear understanding of the problems posed by the construction of a Parliament House on Capital Hill".

Operation changes eating habits of obese patients

A rare operation by two Alberta doctors is drastically changing the eating habits of obese patients.

"I used to love eating, but I don't miss it at all," says Gordon Brinkhurst, 46, one of the first persons in Western Canada to receive a gastroplasty (stomach change) for the grossly overweight.

Brinkhurst's stomach was divided into two chambers. The first chamber is a small pouch that serves as a stomach. When it's full, Brinkhurst feels full and stops eating. The contents of this pouch drains through a small opening to the rest of the stomach and are digested. "I've lost all interest in my food," he says.

Since the operation in March, Brinkhurst's weight has dropped 30 pounds to 240. "I've been really overweight for 15 years. The reason is simply I don't burn off the calories I eat. I don't like to think I'm a pig, but maybe I am," he says.

Not any more. Brinkhurst sits down to lunch of a half-cup of chicken casserole. He eats a few teaspoonfuls, then leans back and sighs. He is full.

An orderly at the hospital in Cardston, 30 miles north of Lethbridge, Alberta, Brinkhurst asked Dr. John Hollingsworth whether there was some kind of operation available for his problem. He had tried weight clubs and special diets and nothing had helped.

Originated in U.S.

With Dr. Burns Larson, Dr. Hollingsworth researched an operation that originated about 13 years ago in the United States and had been performed a few times in Eastern Canada. They travelled to California to watch the operation and interview patients. So far, they have performed the operation on four obese patients.

The operation is major surgery and Brinkhurst cautions that it is not designed to be reversed. After the operation, patients supplement their meagre diet with vitamins and exercise to tone muscles and use energy.

Those who have the operation can expect to lose about 60 per cent of their excess weight in 12 to 18 months. Eventually the pouch will stretch to three times its size, allowing the patient to eat more than a few teaspoons of food at mealtimes.

News of the arts

Documentary photography in Canada 1850-1920



From Custom House, Montreal, Looking E. by William Notman.

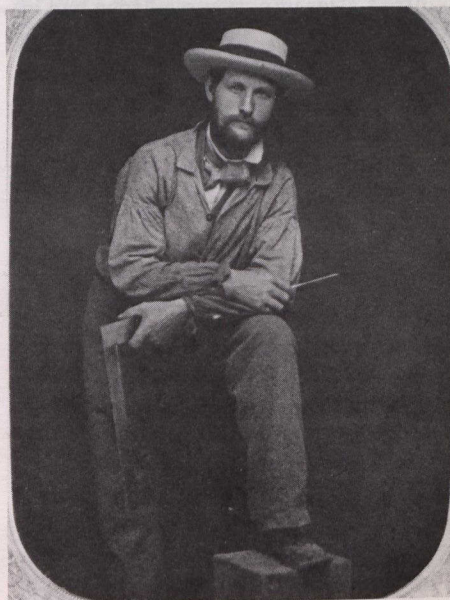
Documentary Photography in Canada 1850-1920, an exhibition of 89 photographs of Canadian views and Canadian portraits, was on view recently at the National Gallery of Canada.

It included the works of over 16 photographers: 14 Canadian, one American, one English and several anonymous photographers. Among the more familiar names of nineteenth century Canadian photographers in the exhibition were those of Humphrey Lloyd Hime (1833-1903); Samuel McLaughlin (1826-1914); William Notman (1826-1891); Alexander Henderson (1831-1913) and L.P. Vallée (1837-1905). The Hime photographs — both salted paper prints and albumen silver prints — were the result of Hime's engagement with the Assiniboine and Saskatchewan Exploring Expedition in 1858 and as such are valuable records of Canadian history. They include the stark images of the Prairies such as *View of Red River from St. Andrew's Church, four miles above the Stone Fort, 1858*; *Tents in the Prairie, west of the Settlement, 1858* and the sensitive portraits, *John McKay: A Plain-Cree Half-breed, 1858* and *Letitia Bird: A Cree Half-breed, 1858*.

The architectural and landscape photographs of Samuel McLaughlin, government photographer 1861-1893, include: *Winter Scene in Lower Canada* (from *The Photographic Portfolio 1858-60*) and *Par-*

liament Buildings, Side View of Main Tower, 1863.

Some of the more powerful portraits are those of William Ellison, a photographer who worked in Quebec City in the mid-nineteenth century. Also noteworthy is the daguerreotype portrait of Louis-Joseph Papineau, c. 1851, possibly the work of Thomas Doane, a daguerreotypist from Barrington, Nova Scotia. A daguerreotype is a photograph produced on a silver or silver-covered copper plate.



An anonymous daguerreotype picture of a carpenter, c. 1850.

Film magazine folds

The film magazine, *Take One*, has ceased publication, editor Phyllis Platt announced recently.

Founded 13 years ago by three members of McGill University's film society, the magazine reached a peak circulation of 35,000 late last year, making it the second-largest magazine of its kind in North America.

"But it would have required further promotional efforts to sustain and enlarge the circulation," Miss Platt said. "We decided it was just too costly."

About two-thirds of the magazine's sales were outside the country, mostly in the United States, England, France and Australia, Miss Platt said.

The magazine was a mixture of industry news, film reviews, personality pieces and essays for the general reader and film-goer. Articles dealt mostly with the international film world, but kept an eye on the developing Canadian film industry as well.

The three leading film publications still publishing in Canada in English are *Film World*, a trade newspaper published in Toronto, and *Cinema Canada* and *Cinemag*, both published in Montreal by the same company and both concentrating on the Canadian film industry.

Performing arts groups get Canada Council grants

Seventeen performing arts organizations and artists shared grants totalling \$234,300, made recently by the touring office of the Canada Council.

Among these grants, involving theatre, music and dance are: The tour of Toronto's Tarragon's Theatre successful production of the truckers' musical *18 Wheels* to Ontario, Manitoba, Saskatchewan and Alberta in the autumn of 1979; *Billy Bishop Goes to War* (Vancouver East Cultural Centre) and *Jacques Brel is...* (David Y.H. Lui Productions) to be presented on subscriptions by sponsors throughout British Columbia; the 71-concert tour for Jeunesses Musicales du Canada of the Maritimes, Quebec, Ontario, Manitoba and Saskatchewan by the Orford String Quartet, celebrating its fifteenth anniversary and the thirtieth anniversary of Les Jeunesses Musicales du Canada.

NRC research (continued from P. 2)

power high wind concept. Units have been installed for user demonstrations to allow prospective customers to evaluate the system and undertake cost/benefit analysis.

— Guildine Instruments Limited, of Smiths Falls, Ontario, is developing a lightweight portable model of the NRC salinity temperature depth (STD) probe. The company already manufactures a precision model of the instrument (also an NRC design) intended for great sea depths. Recent work at the Division of Physics has resulted in smaller sets of sensors and logic electronics, thus permitting the design of a portable unit suitable for use by small boats in shallow water (up to 200 m). While the smaller sensors are not as precise as those on the standard STD (effectively a world standard), accuracy is still high. Since the instrument will be used mainly inshore, two other NRC-developed sensors, for pH and dissolved oxygen, are being incorporated in the lightweight probe to increase its usefulness for this type of application.

International activities

Following its creation this year, the Natural Sciences and Engineering Research Council (NSERC), which succeeds NRC's former Office of Grants and Scholarships, is now responsible for the administration of programs of co-operation and exchange of scientists with the Soviet Academy of Sciences (U.S.S.R.); with the Czechoslovak Academy of Sciences; with the Conselho Nacional de Pesquisas of Brazil; with the Japan Association for the Promotion of Science; and with France, as part of the Cultural Exchange Agreement. The NSERC will also administer the program of Research Associateships established by the Canadian International Development Agency for scientists from developing countries.

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For its part, NRC will maintain a program of co-operation and exchange of scientists with the Centre national de la recherche scientifique (CNRS) of France.

NRC is the Canadian member for the International Council of Scientific Unions (ICSU) and for 16 of the 18 constituent unions, for six of the scientific committees and for four of the ICSU scientific associates: the International Federation for Documentation, the Pacific Science Association, the International Union of Quaternary Research and the International Federation for Automatic Control.

During the current year, NRC has accepted the responsibility of representing the Canadian scientific community in the International Union of Physiological Sciences and the International Union of Pharmacology, assuming a role that was formerly performed by the Medical Research Council of Canada. NRC will also participate in the activities of the International Mathematical Union, succeeding the Canadian Mathematical Society.

News briefs

Canada has concluded export restraint arrangements with Bulgaria, Pakistan, Singapore and Sri Lanka, whereby those four countries agreed to limit exports to Canada of several clothing and textile items, the Industry, Trade and Commerce Department reported. The items were not disclosed. The department said it entered into discussions with each of the four countries after import surveillance had indicated that their shipments to Canada of certain unnamed clothing and textile products would increase sharply this year.

Increases in cod and haddock quotas for Canadians fishing on Georges Bank have been announced by federal Fisheries Minister James McGrath. The new quotas are based on the percentage entitlements contained in the recent Canadian-U.S. East Coast fishing agreement. That agreement has not yet been ratified by the U.S. Senate, but Mr. McGrath said the Fisheries Department wanted to set quotas that resembled those set out in the pact. The new quotas involve an increase of 190 tonnes over quotas already set for 1979.

Industrial corporations had profits of \$4.57 billion in the second quarter of 1979, up 37.9 per cent from \$3.32 billion a year earlier, Statistics Canada reports. It was the ninth consecutive quarter in

A Canadian delegation, headed by the President of the National Research Council, attended the seventeenth General Assembly of the ICSU, which was held in Athens, Greece, in September 1978.

In engineering, NRC is the Canadian adhering member to eight international associations and shares with the Canadian Engineering Societies' Committee in the activities of the World Federation of Engineering Organizations (WFEO) and the Pan American Federation of Engineering Societies (UPADI).

There has been, in recent years, a development of organizations devoted to the interchange of scientific and technical information, policy development, and co-operation in research and development. Among the most important of these are the United Nations and its specialized agencies, the Organization for Economic Co-operation and Development (OECD), the North Atlantic Treaty Organization (NATO) and the International Energy Agency (IEA).

which industrial corporations' profits have shown a gain from those of a year earlier. Second quarter sales totalled \$95.7 billion, up 14 per cent from \$83.93 billion.

Eliza Beatty, 88, of Carlyle, Saskatchewan will represent Canadian motherhood at the national war memorial Remembrance Day ceremony in Ottawa, November 11. Mrs. Beatty and her late husband, Walter, lost two sons during the Second World War and a third son was wounded.

Quebec and the Federal Government have signed a new agreement on cost sharing of municipal development programs. The Federal Government will turn over \$47 million in grants to the province this year and another \$78 million in 1980. The province and the Federal Government will spend \$97 million this year on joint subsidy programs, which include improvement of community facilities, urban park development, high-density housing, installation of water systems, and water purification.

A 24-year-old native of Hudson Hope, British Columbia, won the world Wellie-hurling championship recently in London, England, when he flung a Size-8 gumboot 36.3 metres. Eugene Sturby, a student at University of Calgary, competed as Canadian champion and won £100 (\$265) worth of sports equipment.