

News on the DOT

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THE FRIENDS OF DOT

THE gentleman whose portrait graces the cover of this issue is Hon. Leon Balcer, Q.C., who has come up in a whirlwind career wearing seven-league boots.

Now filling the shoes of Minister of this Department, he is the subject of our lead story on page 3.

By sheer coincidence the rest of this issue is almost entirely devoted to people who are not members of the Department of Transport but who play important roles in the department's work.

The largest group of these "friends of DOT" is formed by Canada's 1,350 voluntary weather observers. Their unpaid service, so valuable to the meteorological branch, is discussed by M. K. Thomas of the climatological division on page 4.

On page 7 Syd Roberts, from whose pen flow many of the writings published by the Department of Northern Affairs, describes the newly-opened National Aviation Museum. The story of flight in Canada will be of interest to many DOT-ers.

Another government department, that of National Health and Welfare, saved a northern DOT establishment from disaster when a flu epidemic threatened Coppermine—which is the story E. R. Hughes has to tell on page 16.

The same department provides the civil aviation branch with its medical division. The work of Dr. W. A. Prowse, chief of the civil aviation medicine division, is the subject of an article by the editor of News on the DOT on page 14.

Finally, outside help has even invaded the roster of DOT suggestion award winners. The fattest award to a DOT man this time came from another department. That story and a round-up of other winners can be found in "Builders of Progress" on page 18.

It is now clearly up to the distaff side to make sure that at least the ode to the ideal secretary on page 20 does apply to girls on the DOT payroll!

WORK IN PROGRESS— AND WHAT YOU CAN DO

IT'S kind of tricky to predict what you will see in the next issue of News on the DOT. Kind contributors may have promised us a story on this or that, but pressure of work, a sudden trip to some trouble spot or sickness may prevent the most well-meaning writer from delivering on the deadline.

However, if all goes well there will be an article on lighthouses in the March-April issue, one on the maiden voyage of the CMS *Camsell*, one on interior decorating

in new air terminals, and several other stories.

But to make News on the DOT a better magazine we need *your* help. If you have a story like Capt. Bullock's article on oil pollution prevention in the November-December issue, or like E. R. Hughes' account of the flu epidemic at Coppermine in this issue, please send it in.

Your fellow readers are interested in what your division or section or station is doing, in any unusual happenings wherever you are, such as a fire or a visit from Gina Lollobrigida, and in any outside activities. If your boss is a male ballet dancer, or the girl in the next room a (female) belly dancer, if you or one of your colleagues collects antique cars, designs fashions, hunts buffalo or does anything out of the ordinary, let News on the DOT know about it.

News on the DOT is also in need of illustrators—good ones.

Surely there must be some accomplished artists among our 14,000 staff members across the country.

If you think you would like to do an illustration for News on the DOT, please let the editor hear from you. Our rates of pay have just won the "Lowest in the Universe" award at the triennale in Zagreb and we are now striving for that highest distinction in the publishing business: having contributors pay *us* for the honor of appearing in the world's finest staff magazine.

However, for the time being we won't charge a cent for your contributions, so take advantage of this offer to achieve fame and recognition free.

Seriously though, if you like illustration, let us have a sample of your work and perhaps we can relieve the endless procession of photographs by some of your artwork.

News on the DOT

Staff magazine for the
Department of Transport
Published under the authority
of the Minister,

Hon. LEON BALCER, Q.C.

by the Information Services Division,
Ottawa.

Vol. XII No. 1

January-February 1961



The Shoes fit nicely,—smart and neat
They look, young sir, upon your feet.

New Face On The Flight Deck

THE Honorable Leon Balcer, Q.C., the new Minister of Transport, is a striking example of the interest shown by former servicemen in public affairs.

It was in 1949, just following the last war, that Mr. Balcer was first elected a member of Parliament; he was 31. At the age of 39, he became one of the youngest members to be sworn to the Privy Council and to obtain a portfolio in the Diefenbaker Cabinet of June 10, 1957.

Thus, within eight years, Mr. Balcer made his way from a new member of Parliament to holder of a portfolio in the Cabinet and in the meantime secured valuable political experience.

It may look like a rapid and easy ascent. It was rapid indeed, but not easy. In fact, from his primary education on very little was easy for the member for Three Rivers.

Mr. Balcer is the son of the late Leon C. Balcer, a bank manager in Three Rivers. The last of five children, he was hardly seven months old when his father died at the age of 37.

With calm and determined courage, his mother alone took charge of the family.

Young Leon performed all kinds of work to pay for his education, plying, among other trades, that of stevedore. He obtained his B.A. degree from the Three Rivers Seminary and subsequently studied law at Laval University in Quebec City. He became a member of the Quebec Bar in July 1941.

At 24, as he was ready to take up law practice, Mr. Balcer put aside his chosen career to enter the Navy. He spent four months at the Halifax Naval School where he obtained the rank of sub-lieutenant. At that time, the armed forces were in need of lawyers, but Mr. Balcer managed to avoid being appointed in this capacity and boarded a supply vessel.

In his childhood, he had been fascinated by the majestic course of the St. Lawrence River and by stories of ships carrying explorers, traders and missionaries from far-off countries to the vast areas of the West.

But, as a sub-lieutenant, he experienced for himself the sad venture of war at sea with its hidden and latent dangers, the bitter cold and rough climate.

From November 1942 to June 1943, he was one of the two officers aboard a Fairmile motor vessel which was responsible for patrol work off the coast of Newfoundland. The Fairmile had been a remarkable type of vessel in its original service which consisted in patrolling the coasts of the English Channel. But Mr. Balcer recalls with a shudder how this ship was inadequate in the paralyzing cold and the rolling sea off Newfoundland.

From the Fairmile, he was assigned to the frigate HMCS *Annan*, based at

Londonderry and, till the end of the hostilities in 1945, he performed the duties of deck officer aboard this submarine chaser. The ship was patrolling the North Atlantic, the North Sea and the western approach lanes: the English Channel and the area south of Ireland.

Discharged with the rank of lieutenant in 1945, Mr. Balcer took a three months' course in labor relations at the University of Montreal. However, he practised his profession without specializing in labor cases despite the special studies.

Mr. Balcer became interested in politics as a child. His mother awakened his interest in these matters and encouraged discussions on politics at home. The family thus became naturally interested in the subject. One uncle, the late Dr. L. P. Normand, was a Minister in the Meighen Cabinet of 1926. Mr. Balcer's father-in-law, Hon. Elisé Thériault, a Liberal, was a member of the Quebec Legislative Assembly from 1916 to 1929 and a member of the Quebec Legislative Council till his death in 1959.

Mr. Balcer started his political activities with the Progressive Conservative Party. From simply a member he successively became the National President of the Young Progressive Conservative Association of Canada, his party's organizer in the Province of Quebec and the National President of the Progressive Conservative Association of Canada.

As stated previously, Mr. Balcer was first elected a member of Parliament in 1949. He was re-elected in 1953, 1957 and 1958. On June 10, 1957, he was called upon to serve in the Cabinet as Solicitor General. When Hon. Henri Courtemanche was appointed to the Senate in January 1960, Mr. Balcer succeeded him as Acting Secretary of State, and on October 11 last he was appointed Minister of Transport.

In 1952, the year he was named a Queen's Counsel, he was a delegate of the Canadian Parliament to the Sixth Session of the United Nations in Paris. Three years later he returned to Paris as a delegate of the NATO Parliamentary Association. In November 1958 he represented the Government of Canada at the funeral of Pope Pius XII in Rome. In October 1959, he headed the Canadian delegation to the Fifteenth Session of the Conference of the signatory countries to the General Agreement on Tariffs and Trade, held in Tokyo. One month later, in November 1959, he was entrusted by Prime Minister Diefenbaker with leading the Canadian delegation to the Ninth Plenary Conference of the member countries of the Colombo Plan in Djakarta, Indonesia.

Mr. Balcer was married on September 8, 1943, to Geneviève Thériault. They have two children: Pierre, 14, and Nicole, 13.

Faithfully recording weather data
twice a day without pay,
1350 men and women across the country
help the department as

CANADA'S VOLUNTARY WEATHER OBSERVERS

By M. K. Thomas

Climatological Division

PERHAPS that neighbor of yours with the white box in his backyard is not a beekeeper at all. He may be a volunteer weather observer co-operating with the meteorological branch in our own Department of Transport.

His beehive or bird cage is actually a thermometer shelter. It has louvred sides so that the air can circulate through the box but no direct sunshine or rain can fall on the thermometers. The shelter and a small copper raingauge sitting on the ground nearby identify him as one of Canada's 1350 co-operative weather observers.

Farmers, doctors, ranchers, bankers, school-teachers, editors, pensioners—in fact, people from all walks of life are represented among them.

These men and women send in monthly reports from such places as Horsefly Lake, Seven Persons, Yellow Grass, Dog River and Rattling Brook Depot as well as from better known localities such as Chatham, Cornwall and Nanaimo.

The co-operative observation stations are spread across the settled portions of the country and in fact are most densely located in a few of the large urban areas. In cities like Victoria, Vancouver, Regina, Winnipeg, Toronto and Ottawa, meteorological branch employees have volunteered their services for the establishment of quite extensive networks to measure precipitation and temperature.

On a provincial basis, Ontario leads with 290 co-operative stations followed by British Columbia with 228.

Co-operative observers receive no pay from the department for taking their twice daily observations and sending in a monthly report. However, all instruments, report forms, envelopes and postage are paid for by the meteorological branch, while the observer agrees to take twice daily observations.



Opposite page: A weather observer checks his rain gauge. Above: A typical co-operative observing station at Brownfield, Alberta.

During periods of sickness or absence on holidays, the observer is usually able to arrange for a replacement so that his record will be complete.

Compared to those taken by professional observers at air, marine and northern weather observing stations, the actual observations taken at co-operative stations are relatively simple.

Most co-operative observers take an observation at 7 a.m. and a second about 6 p.m. At each observation they read and re-set both the maximum and minimum thermometers, measure any rain or snow that has fallen since the last observation, measure the depth of snow on the ground and usually make a few notes regarding the character of the weather during the day.

Most observers also record the times of beginning and ending of precipitation and some also observe and record cloud amounts, humidity and wind information. At the end of each month, the

observer completes a monthly report form and mails it as soon as possible to a regional processing centre.

Such centres are located at Victoria, Edmonton, Regina, Saint John and Torbay. In Quebec, all forms are first routed to a Montreal office of the Quebec Department of Hydraulic Resources, while in Ontario and Manitoba all co-operative observation forms are sent directly to meteorological headquarters in Toronto.

Since 1953, the meteorological branch has made annual awards to twenty co-operative observers for outstanding work. Accuracy and completeness of report, along with the length of service are the main factors taken into consideration when making these awards, and the prizes are usually books.

The Canadian Oxford Atlas has been given for the past three years, and after being suitably inscribed, is a token of our gratitude to these men and women.

There were co-operative weather observers in Canada before the formation of the meteorological service, and even before Confederation.

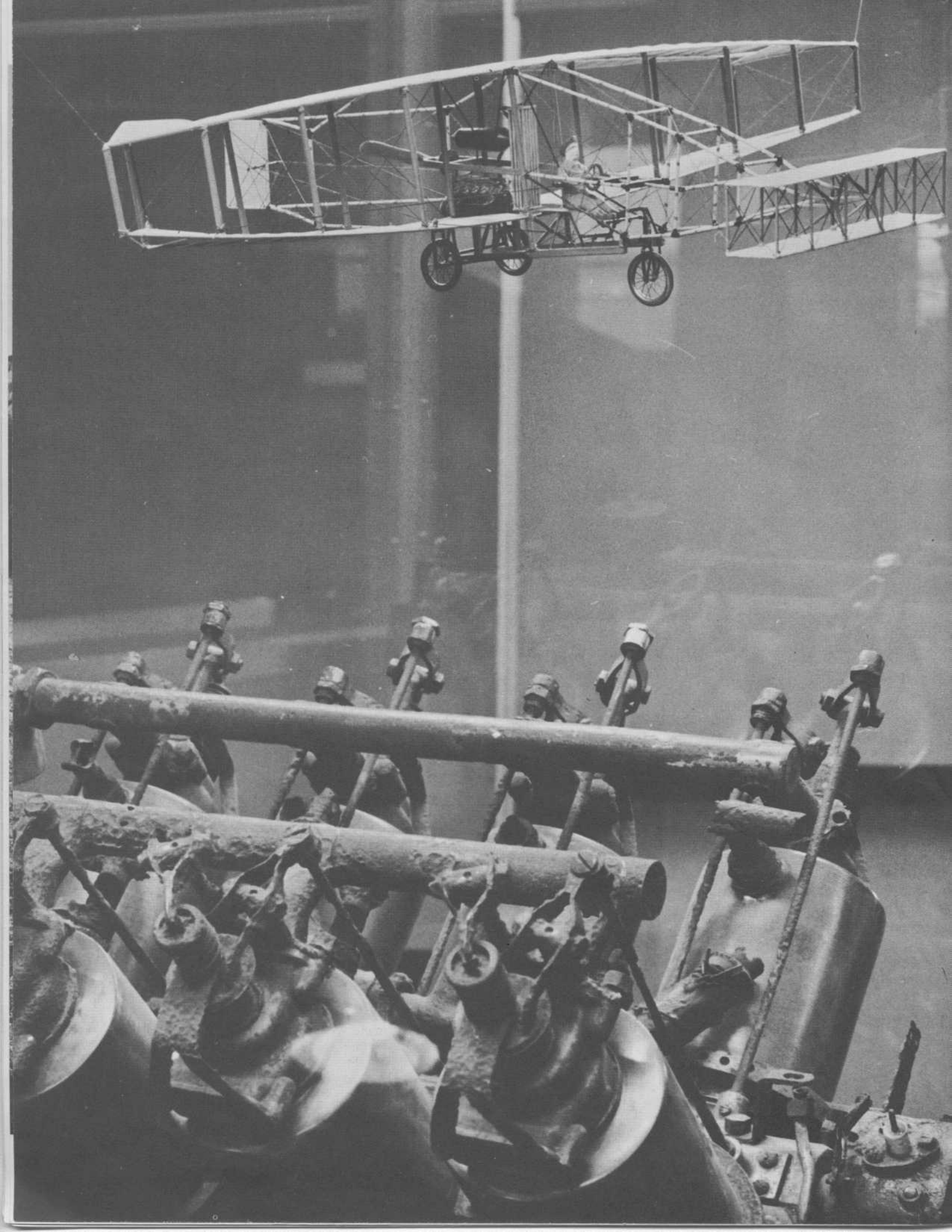
The earliest weather journal in Canada extending over the period of a year is one from Quebec City in 1765-1766, while the earliest long period records which we have on file are those taken by the Rev. C. Dade in Toronto during the 1830's and Dr. Smallwood at Montreal in the 1850's.

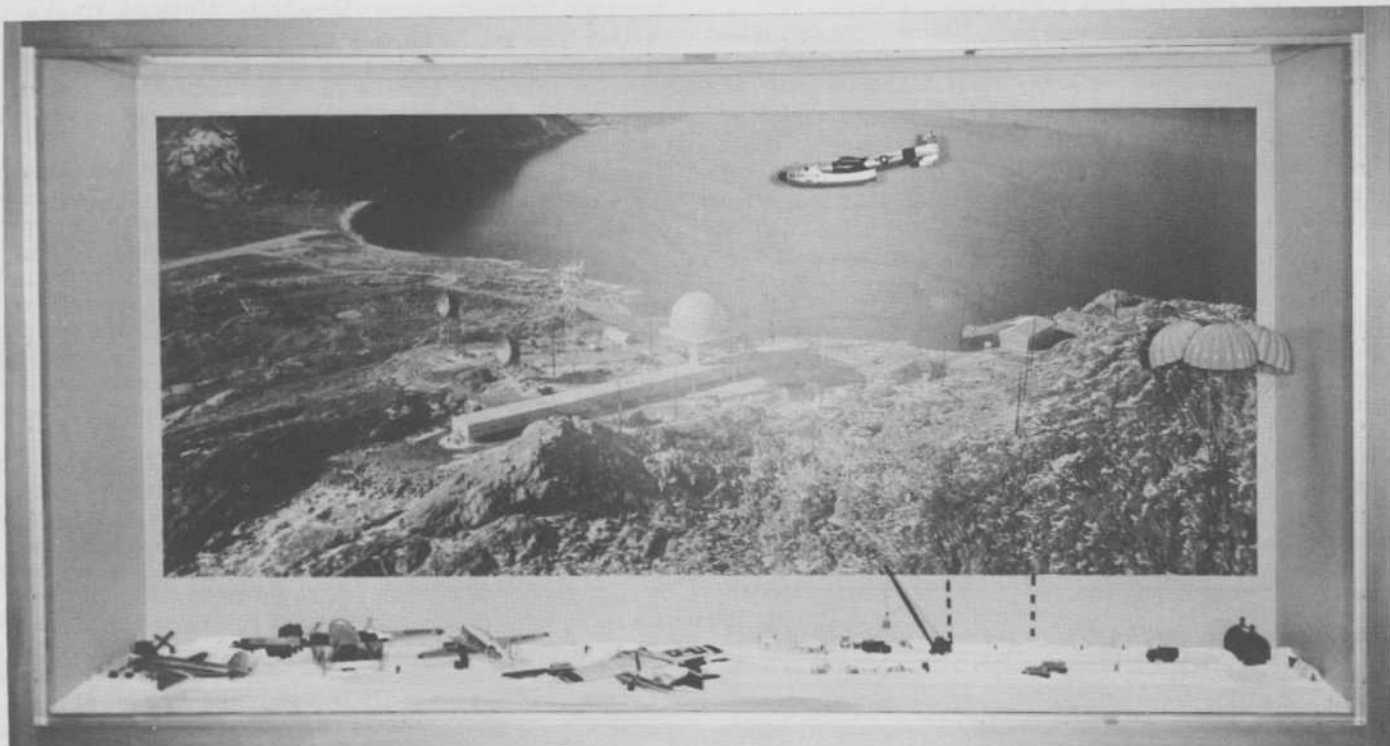
The first meteorological observatory with professional observers was established at Toronto early in 1840 and by Confederation in 1867 there were approximately 100 co-operative observers in action in Canada under the leadership of the Toronto office which was then sponsored by the Government of Upper Canada.

Since then the number of co-operative observers has grown

Continued on page 15







CANADA'S OWN MUSEUM OF FLIGHT

By S. L. Roberts

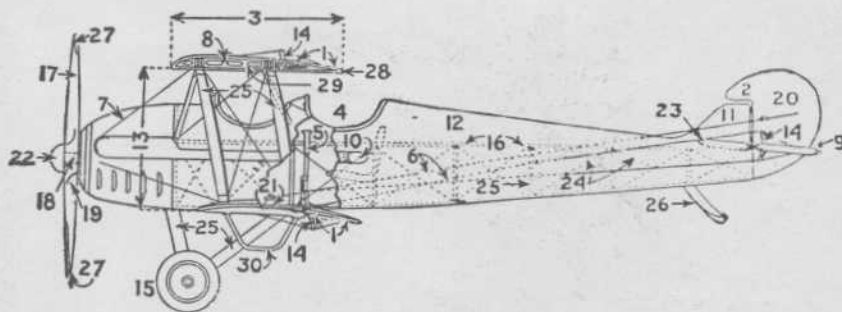
(Editor's note: Aviation is part of the Department of Transport's stock in trade and the opening of a National Aviation Museum should be of interest to every DOT employee.)

The following article describing the new museum was kindly contributed by an information officer of the Department of Northern Affairs, which administers the museum.)

*From the flight of the Silver Dart in 1909
to DOT's radiosonde network,
the National Aviation Museum tells
the story of how Canada took to the air.*

ONE of the major public attractions of the Ottawa Airport terminal building is the National Aviation Museum, a permanent exhibition presenting comprehensively the story of Canadian aviation from the flight of the Silver Dart in 1909 to cosmic-ray studies of the present space-conscious age.

When Fisheries Minister J. Angus MacLean pushed a button opening the museum on October 25, a dream became reality after almost 40 years of patient effort by J. H. Parkin, the National Research Council scientist who is one of Canada's senior aeronautical engineers. Mr. Parkin brought a number of models of aircraft and windtunnels and some historic aviation relics when he came from the University of Toronto to the N.R.C. in 1929. This material, together with other items donated on condition that they be



Opposite: A model of the Silver Dart hangs above the plane's original engine in the museum's pioneer section. Above: DEW-line activities and models of the aircraft used to supply the stations are shown in this display in the operations section.

preserved and displayed to the public, was arranged in a small aeronautical museum of the N.R.C. in 1932. When World War II came, the museum was closed and it was not until the 1950's that the subject of a National Aviation Museum was revived.

The present museum is the result of several years' planning by an N.R.C. associate committee headed by General A. G. L. McNaughton and including representatives of the R.C.A.F., the N.R.C., the Department of Northern Affairs and National Resources, and the aviation industry. The national co-ordinating council, which planned the 1950 celebrations of the golden anniversary of flight in Canada, strongly recommended the establishment of the museum to the federal government. The problem of a location, which had been the main obstacle to the museum, was solved when Hon. George Hees, then Minister of Transport, offered space in the terminal building.

Nine Fascinating Sections

The National Aviation Museum offers several fascinating hours of study to even

a person only casually interested in aviation. There are nine sections of displays—the pioneers, piston-engines, supporting services, operations, jets and rockets, research and development, manufacturing, aviation's contribution to Canada, and a novel "children's aviation museum."

The pioneer section holds most of the historical items. The original engine and propeller of the Silver Dart, an early Duryea engine and the Gibson engine that was the first aircraft engine made in Canada, variable-pitch propellers designed by their Canadian inventor, Wallace R. Turnbull, a model of the first University of Toronto wind-tunnel—these are among the items displayed here.

Next is the piston-engine section dominated by fine specimens of a radial and a rotary engine sectioned and operative so that their working principles may be observed. Models of the piston-engined aircraft that are part of aviation history are displayed nearby. Placards giving the performance details of each aircraft are projected photographically on a central

screen when a button is pressed. Propellers, the camera-mounted nose of a Vickers Vedette, various types of skis and combination ski-floats, carburetors, and other material from the piston-engined era are included.

In the supporting services are displays such as the DOT exhibit of the radiosonde network*, the RCAF display of aerial photography, the Mines and Technical Surveys display showing the ways aircraft are used in mapping and surveying, and numerous other exhibits on search and rescue, survival, DOT airport control, the use of aircraft in the construction of the DEW and Mid-Canada Lines, and radio communications.

From the operations section, which shows the various uses made of aircraft in everyday life, a visitor reaches jets and rockets where a Chinook jet engine and a mock-up of the Velvet Glove air-to-air guided missile are displayed.

Research and development and manufacturing are illustrated by a cosmic-ray indicator, complex structures required for high-speed flights, and displays of instruments, welding and glues, aircraft parts and accessories.

Children's Museum

The children's museum is equipped with demonstrations of hydraulics, the operation of spark plugs at varying air pressures, aerodynamics and other simple physics lessons that children can operate themselves. They also have their own landing field equipped with aircraft models they can play with freely.

As a modern scientific museum, the N.A.M. is fitted with a number of supplementary aids. Besides the projectors that flash additional information on screens and the large number of devices that can be operated by the visitors themselves, many of the displays have speakers that play back a recorded narration in French or English.

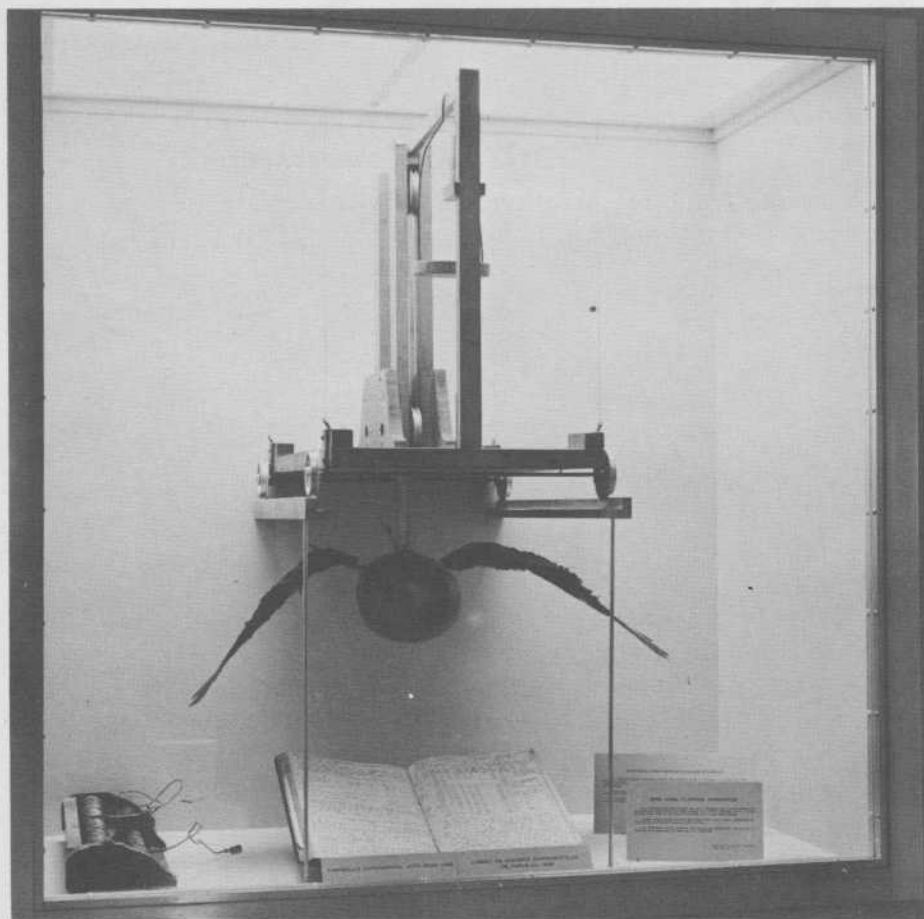
The museum is open 8:30 a.m.—11:00 p.m. weekdays and 2:00—11:00 p.m. Sundays. In addition to the displays within the museum, an operating model of a Napier Sabre engine and the replica of the Silver Dart built by the RCAF are shown in the terminal's display area. The museum is administered by the Department of Northern Affairs and National Resources and its curator is K. M. Molson of Toronto, a former ground engineer with Avro.

*The radiosonde display was designed, built and installed by the meteorological branch. It displays on a three-dimensional plastic map the Canadian radiosonde network of observing stations, and a selected series of actual radiosonde instruments used in the past and at the present time.

Tape recordings in French and English narrate the radiosonde story, and a leaflet entitled "Sounding The Upper Air" is also available to museum visitors.

The designer of the display is Norman Steinhaur of the instrument division at meteorological headquarters.—Ed.

Below: W. R. Turnbull, Canadian inventor of the variable pitch propeller, measured lift, drag and thrust with this crude "bird's wing flapping apparatus" shown in the new Aviation Museum. He used crow's wings because crows were easy to get: local boys caught them for him for 25 cents each.





Above: Three-dimensional map of radiosonde network and actual instruments form DOT display. Below: Equipment and models in piston-engine section.





Ultra-swank VIP room in new Montreal terminal boasts hi-fi, Eskimo art. First distinguished guest to use room was Crown Princess Beatrix of the Netherlands, on her way to Ottawa friend's November wedding.



Main international waiting room, where opening throughout building could seat 1,500 people.



Terminal provides many services ranging from bank to hospital. Shown is quiet reading room on first floor.



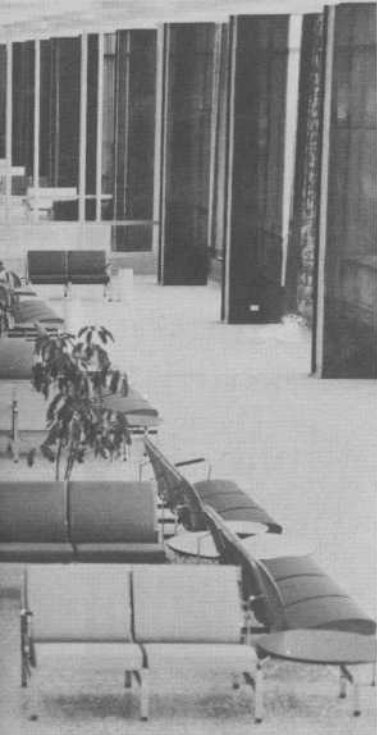
Some 15 airlines are represented along U-shaped ticket concourse. Shown is centre part occupying about one third of total counter length.



Marine-aeradio tape relay centre in terminal converts typewritten messages into punched tape for fast relay. Communicators, from left: Miss L. Bedard, Miss E. Neville, Y. Clement, J. Ouellet, J. M. Paquin.



Area traffic controllers in darkened radar room keep track of all aircraft in vicinity on radar and by direct interphone to other centres.



emony was held. Combined waiting rooms



Aerial photo shows ramp by which departing travellers arrive at building. Parking lot accommodates 1,500 cars. Aeroquay behind building serves all overseas and all jet flights.

\$30,000,000 BEE HIVE COVERS FIVE CITY BLOCKS



Rotating baggage dispensers speed up luggage handling in international section. Similar conveyors serve domestic travellers. At right is long line of customs counters designed to minimize delay.

THE main building of the department's new terminal at Montreal International Airport has four storeys. The ground floor is for arriving air travellers, the first floor for departing passengers. The second and third house ATC, telecom, and weather services, dining rooms, kitchens, airlines' and other offices.

The two lower floors are also divided vertically: the right half (coming in from the street) is for domestic passengers, the left side for international travel.

Boarding and deplaning occurs at three locations: two "fingers", one each for flights to and from the U.S. and for domestic service by prop and turbo-prop aircraft, and a separate aeroquay for all overseas and all jet flights. There are a total of 23 gate positions.

The giant bee hive cost some \$30,000,000 to build, employs 2,300 persons, covers an area of five city blocks, seats 400 in its main dining room and 200 in the main restaurant, sports 30-odd waiting rooms, requires an electric power supply sufficient to light all Montreal streets twice over, takes 2½ times as much fuel to heat as the Queen Elizabeth Hotel, has a parking lot for 1,500 cars and accommodates 100 taxis simultaneously near the front entrance.

The aircraft apron serving the building is paved over an area equal to 20 miles of double-lane highway and has nine miles of piping for hydrant refuelling buried under it.

In 1959 a total of 234,570 aircraft landed at or took off from Montreal International Airport. That is 650 a day.

More photos on p. 12, story cont'd on p. 15 11



Three-legged chairs and soft lighting are found in spacious room provided especially for international travellers waiting for flight connections.



Conical chairs and bar stools are feature of cocktail lounge on second floor.



Above: Small waiting rooms like this one are located at each of terminal's 23 gates. Left: Weather office in new building is Canada's largest, makes marine and aviation forecasts and provides all weather services for province of Quebec.

DOT'S NICE!

NOT WITNESSED BEFORE

Four marine services employees have been complimented on the "kindness and courtesies" they displayed when an American industrialist's yacht ran aground in Lake Superior last summer.

In a letter to the Minister, Robert F. Carr, executive vice-president of the Dearborn Chemical Company of Chicago, has expressed his thanks to *Fred Francis*, lighthouse keeper on Michipicoten Island, *Gordon Dawson* of the Quebec Harbour station, and *Capt. Jerry Massales* and *First Mate Jack Kennedy*, both of the *CMS C. P. Edwards*.

Mr. Carr was cruising Lake Superior with his family when he ran his yacht, the *Aquila*, hard aground off the northwest corner of Michipicoten Island.

He was able to get Messrs. Francis and Dawson, but they could not move the boat. They contacted Port Arthur and were told the *CMS C. P. Edwards* would reach them the following morning.

When the *Edwards* arrived, *Capt. Massales* fastened a two-inch hawser around the *Aquila's* hull and this got the yacht off.

The only hull damage turned out to be a worm shoe and a bronze stem piece torn off.

Writes Mr. Carr: "The presence, kindness and courtesies of the two gentlemen from the lighthouse and *Captain Massales* is something I have never had the opportunity to witness before.

"Their work and assistance will never be forgotten."

BEYOND THE BOOK

Under this title an editorial in the October 1960 issue of "Western Wings" pays tribute to the department's air regulations controllers and mentions in particular Edmonton Regional Controller *F. W. Bone*.

The unsigned editorial points out that some controllers don't go beyond conscientiously quoting regulations while others like Mr. Bone interpret each case in the light of their own aviation experience.

Relating his own experience as the operator of a fledgling charter service some 15 years ago, the writer mentions Mr. Bone as one "who had also flown 'the bush' and could sympathize with my problems.

"Although never one to sanction unsafe principles, he would not hesitate to slash red tape.

"In his present position as regional controller in Edmonton, *Freddie Bone* has not changed," says the writer, concluding that "we can be thankful that in every aviation region in Canada there are officials like *Freddie Bone*, men who can see beyond the print in the 'book'."

CHIEF ENGINEERS HAVE FIRST GET-TOGETHER

The chief engineers of 14 departmental ships attended a three-day conference in Ottawa recently.

Representing 58 ships from 10 marine agencies across Canada, they engaged in across-the-table talks with their Ottawa superiors to discuss ways of improving the operation of the DOT fleet. It was the first such get-together ever held.

The engineers indulged in ship-shop-talk on the pros and cons of 'self-refit' and maintenance by a ship's own force and a program of progressive maintenance being developed.

They also discussed such subjects as the need for accurate, written reports in disciplinary matters and how salaries are established.

The result was that all had a look at each other's problems and a good idea of the thinking behind the course that headquarters is steering.

Chief engineers attending were *R. Briscoe* of the *CMS Labrador*, Dartmouth; *J. A. W. Chretien*, *CMS Grenville*, Prescott; *J. Crossan*, *CMS N. B. McLean*, Quebec; *J. Firth*, *CMS C. D. Howe*, Quebec; *J. Gilmour*, *NSV Nanook*, Dartmouth; *J. Goode*, *NSV Puffin*, Quebec; *L. Kitchen*, *CMS Thomas Carleton*, Saint John; *L. Lachaine*, *CMS Verendrye*, Sorel; *J. McMorran*, *CMS d'Iberville*, Quebec; *D.*

MET BRANCH ON TV

The Canadian weather service was the subject of a weekly series on 7-0-1, an early-evening television program seen five nights a week over CBC stations in Kenora, Toronto, Ottawa, Montreal and Quebec City.

The program originates in the CBC studios in Toronto and *Percy Saltzman* of the meteorological branch is the show's regular weatherman.

The director of the branch, *P. D. McTaggart-Cowan*, was interviewed on October 31 and the series featured hydro-meteorology, weather instruments, satellites, radiosonde observations of the upper air, professional staff training, research in ozone and radiation, communications, meteorological data processing, weather forecasting and other facets of the branch's work once a week.

The presentation was mostly on film and through interviews with meteorological staff.

Taylor, *CMS John A. Macdonald*, Dartmouth; *M. Visser*, *CMS Wolfe*, St. John's; *W. White*, *CMS Simon Fraser*, Victoria; *J. L. Wilson*, *CMS Saurel*, Charlottetown; and *R. Zvejnieks*, *CMS Alexander Henry*, Parry Sound.

Reg. J. Schroeter of Training and Welfare led the conference.



—Barron, *Victoria Daily Times*

"Too bad the designers are out to lunch . . . they could fill you in on the problems they ran into . . . this authentic moat, for instance . . ."



FLYING DOCTOR—Dr. Prowse standing in front of a Department of Transport Lockheed Lodestar at Ottawa Airport.

THEY'RE THERE TO KEEP 'EM FLYING

By John de Bondt

IN the labyrinth called No. 3 Temporary Building in Ottawa is one door marked in small letters

CIVIL AVIATION MEDICINE CHIEF DR. W. A. PROWSE

The small room behind it serves as national headquarters for an agency that keeps a double check on the physical fitness of all who are engaged in non-military flying in Canada.

The first check is setting the medical standards for most civil aviation careers, ranging from pilots and flight engineers to air traffic controllers and airport fire fighters.

These standards are in accordance with international ICAO recommendations and differ from group to group. Ice observers, for example, must have good color vision to distinguish between the subtle shades of ice.

The second check is the actual examination of individuals, both upon entering the employ of the department and when they come to get or renew their licences.

Seven medical consultant boards, six regional medical officers and some 440 doctors across Canada (the latter two groups in a part-time capacity) conduct and evaluate about 26,000 medical examinations a year for the division.

The Aesculapius who heads the division and whose name appears on the Ottawa door is a soft-spoken, 47-year-old physician who has been interested and active in medicine applied to aviation for some 14 years.

One of the first in the world to hold a diploma in space medicine (from the USAF Aerospace Medical Center at Brooks Air Force Base in San Antonio, Texas), Dr. Prowse is technically a member of the Department of National Health and Welfare. (In the government telephone book his name appears as "Dr. W. A. Prowse" under the Health Department and as simply "W. A. Prowse" under Transport.)

Apart from setting the medical standards and evaluating fitness tests, his work includes a host of duties, such as advice on oxygen requirements at various altitudes,

air transportation of ill persons and the medical aspects of aircraft accident investigations.

He also co-ordinates all research on civil aviation medicine in Canada and some years ago made a survey of all aircraft types used in Canada to see how they could be fitted with stretchers for civil defence purposes.

"Medical requirements for most aviation professions are not as high as they used to be," he says. As one example he cites a 1957 ruling lowering both the eye sight and hearing requirements for commercial pilots following an ICAO conference in Paris two years earlier.

"Pioneers like McCurdy, who were exposed to the elements when perched on the frame of those early planes had to be rugged men," Dr. Prowse explains, "and even the bush pilots weren't half as com-

LITTLE SPACE IN SPACE (Opposite)—While getting his diploma in space medicine in San Antonio, Texas, Dr. Prowse got a taste of how cramped one can be in outer space when he sat down in a gadget-filled experimental space chamber at Brooks Air Force Base.

fortable as today's jet captain on his heated, air-conditioned, insulated, cushioned and pressurized flight deck."

On the other hand, Dr. Prowse points out, the mental stress on the modern pilot is much greater. The instruments he and his engineer have to watch are more critical, he has more (and more complicated) regulations to follow and often he is responsible for the safety of dozens of people.

Too, everything happens much faster nowadays and there is no time for guesswork. The time when an aviator could find his way by buzzing a water tower or a railway station and read the place name off its sign is past.

"Perhaps you had to have a daring, venturesome streak, perhaps you had to be different in the days when flying was done by the seat of one's pants," says Dr. Prowse, "but today you have to be a pretty level-headed fellow to bear the stress and responsibility for piloting a plane or controlling air traffic at a busy airport."

Airlines and other companies employing flight personnel often include psychological tests in their pre-employment examinations. The medical check for DOT,

licences is still limited to the applicants' physical fitness, except where there are obvious signs of mental imbalance.

Says Dr. Prowse, "With pilots and other civil aviation personnel in more protected physical environments but put under ever greater nervous strain as air traffic increases, more emphasis on the mental side of fitness exams is bound to come . . ."

One wall of Dr. Prowse's office is covered with diplomas and certificates; on another wall are an old print of a horse-and-buggy doctor and a photo of a DC-8 jet aircraft.

"My uncle was a doctor in Ottawa in the horse-and-buggy days," he explains. "The two pictures, side by side, remind me that I am in aviation, but a physician in the first place."

His office, usually lighted by a fluorescent desk lamp only, has a well-worn rug with Persian motif on the floor ("It's a discard from someone else's office") and has a general air of cosiness about it.

"That's to inspire confidence," he says. "Pilots and other applicants for licences come here to talk about their intimate problems. We want them to feel at ease. We're not here to take pilots out of the air, we're here to keep 'em flying!"

BEE HIVE

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During the same year 902,084 passengers arrived at the airport and 904,388 left from it. For each passenger there were 2.7 other persons welcoming him, seeing him off or just visiting.

That means that, with a normal increase in traffic, the new building might well see 6,000,000 people tramping through its 3½ miles of corridors this year.

WEATHER OBSERVERS

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steadily until at the beginning of the present fiscal year out of 1900 stations of all kinds 1350 were manned by volunteers.

Although these observations are not usable in the regular weather forecasting program, the climatic data built up over the years from these volunteer stations have provided the basic knowledge of the climate of Canada upon which the different forecast regions have been based.

Using information obtained from these stations, thousands of requests for climatic data are handled annually, and the basic data behind such articles as the one on the climate of Canada which appeared in the 1959 *Canada Year Book* are only made possible by the observations taken and reported by these volunteers.

Most co-operative observers obtain no material gain from their activities but find weather observing an interesting hobby. However, there are many who take observations, or have them taken by their employees, on their farms or in their company because they find weather information of value to their business.

Many weather observers enjoy a certain amount of notoriety as the local weatherman and local newspapers often carry weather stories from information provided by these observers. On occasion, weather observers go into court to give evidence regarding the weather on certain days in the past.

Meteorological branch officers administering the co-operative network occasionally come across interesting notes and letters from co-operative observers. Such notes as "raingauge attacked by grizzly bear—please send replacement" and "thermometers taken inside because of the cold"—are perhaps extreme examples of the notes received from these people.

Most meteorological inspectors enjoy visiting these co-operative stations, but one veteran inspector, while expressing appreciation to the co-operative observers for their generous hospitality and the provision of slices of pie and cups of tea, does admit that he has been chased and even bitten by more dogs than he cares to remember.





Coppermine Eskimo couple



Arctic intersection . . .

THE DAY THE FLU

By E. R. Hughes

APRIL 1, 1960 will long be remembered by the staff of the DOT station at Coppermine, for on that date a severe influenza epidemic struck this northern settlement and before it was brought under control almost all of its two hundred-odd inhabitants were afflicted.

In a matter of hours it was found that at least one member of almost every Eskimo family had contracted the disease. The department, which has two Eskimos on its staff as steady employees, soon found itself shorthanded as resident nurse Mary Ann Dawson reported both on the sick list.

It was soon apparent that the virus was spreading to the regular staff as well when radio operator Paul Takahashi, cook Jim St. Marie and I began to feel the effects. This left radio operator Lorne Hawrelak, met. mechanic Carl Starlinger, and radio-sonde operators Bob Schultz and Ed Miller to look after the running of the DOT station.

The timely arrival of Dr. Elizabeth Cass from the Dept. of National Health and Welfare, Fort Smith, brought a large

measure of reassurance to the many ailing members of the community.

Under her guidance a temporary hospital was set up in the school to handle the many cases that were being discovered almost minute by minute.

On her request for aid the department supplied a large quantity of bedding for the temporary hospital as well as food and much needed oxygen for the more serious cases. The DOT tractor was also put at her disposal for hauling water and other necessities.

Most of the work in setting up the hospital, including the adjusting of the oxygen cylinders, wiring of the emergency kitchen and hauling the water, was done by DOT Maintenance Manager Carl Starlinger. Although still suffering the effects of the flu, cook Jim St. Marie managed to keep the hospital well supplied with fresh bread.

At the height of the epidemic two Otter aircraft arrived with assistance in the form of medical supplies, four nurses from Health and Welfare, and several RCMP reinforcements to help cope with the burden that had been placed on the few who were not affected seriously.

Radio operator Sandy Tran arrived from Yellowknife to relieve Lorne Hawrelak who had spent some ninety-odd hours at the microphone keeping communications to the outside open.

Rev. Father Duchasal, H. B. C. Manager Bill Munroe and School Principal Jim Robertson kept the soup pots boiling in the

The cook had the flu but kept working, the only radio operator who wasn't ill spent 96 hours on the microphone and mothers were too sick to care for their babies . . .

temporary hospital. Dr. Cass and Archdeacon Sperry kept an eye on the outpatients, and resident nurse Mary Ann Dawson with the help of the new arrivals looked after the more serious cases at the nursing station. The RCMP were kept busy taking care of the numerous Eskimo dogs whose masters were too sick to feed them.

My wife spent most of her time looking after a sick Eskimo baby whose foster mother had been too sick to take care of it. She also looked after Mrs. Hawrelak's five-month-old baby when the latter became ill.

Although the epidemic was very severe it failed to result in a single fatality. Most of the credit must go to Dr. Cass and her staff whose knowledge, leadership and

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Mr. Hughes was officer-in-charge of the Coppermine radiosonde station at the time of the epidemic. He has since left the department to enter university and take up aeronautical engineering in his native Ireland.



DOT Mess at Coppermine



Unloading air cargo

STRUCK COPPERMINE



BUILDERS OF PROGRESS



"PROGRESS," says Dr. Clarence Henry McGregor of the University of North Carolina, "is made only when someone becomes dissatisfied with things as they are and does something about them. When self-satisfaction and complacency take over, progress ceases and decay sets in."

During the past few months dissatisfaction—and doing something about it—paid off for these decay fighters:

Gets \$250 From Other Department

HANS A. PEDERSON, former airport manager at Frobisher Bay, received \$250 from the Department of Northern Affairs for his suggestion—of particular use to that department—for a time-saving sewage disposal method for northern establishments.

Improves Loran Receiver—Gets \$80

DENBIGH H. BAYLIS, a radio aids technician at Victoria, received a cheque for \$80 for his suggested modification to Sperry Mk2 Loran receivers to reduce maintenance time and increase reliability.

Makes \$45 With Echo Control Idea

DON R. VROOM, radio technician instructor at Ottawa's air services school, won \$45 with his suggestion for improvement of control over spurious echoes in airport and airways surveillance radar.

Streamlines Letterheads—Wins \$40

A cash award of \$40—well in time to help her out with her Christmas shopping—went to Miss W. E. SMIRLE, secretary to the executive of the telecommunications branch.

Her suggestion was to standardize the various government letterheads and re-

sulted in the dropping of at least 12 different types in DOT alone.

"Power"-ful Idea Pays \$35

RONALD E. BUSS of Edmonton, a radio technician, received \$35 for his suggestion that a power outlet be incorporated in future emergency switchgear so that electrical power for a trouble lamp or soldering iron would be available when work on the panel is necessary.

Wins \$35 With Charge-Out Cards

A suggestion to use permanent charge-out cards as a control measure for personnel records paid JOHN J. DAVY of Personnel, Ottawa, \$35 in cash.

Is Given \$30 For Photo Idea

Radio Technician C. A. BAMBRICK of Strathburn, Ontario, received \$30 for his suggestion that monitoring stations photograph unidentified sweeping type signals in the spectrum for investigation by headquarters staff.

Saves Typing Time—Receives \$30

Mrs. AMELIA STOREY of Toronto was awarded \$30 for a suggested change in the pilots' licence renewal certificate, saving considerable typing time.

Wins Two Awards, Including \$25

Officer-in Charge JAMES O. MARTIN of the Clear Creek, Ont., aeradio station won two awards. He received \$25 for his suggestion that a standard method of determining barometer pressure be circulated to radio and TV stations to ensure the broadcast of accurate information, and chose an electric alarm clock as his award for suggesting that more publicity be given to the availability of technical texts through the departmental library.

Simple Idea Saves Money—Wins \$25

Meteorological Technician R.J. GRAUMAN of Edmonton won \$25 for his suggestion that a line be painted on the floor of radiosonde balloon inflation buildings to mark the centre of the doorway, and guide the man carrying a balloon, thus reducing the danger of a balloon bursting against the door jamb.

Advocates Floodlights—Gets \$15

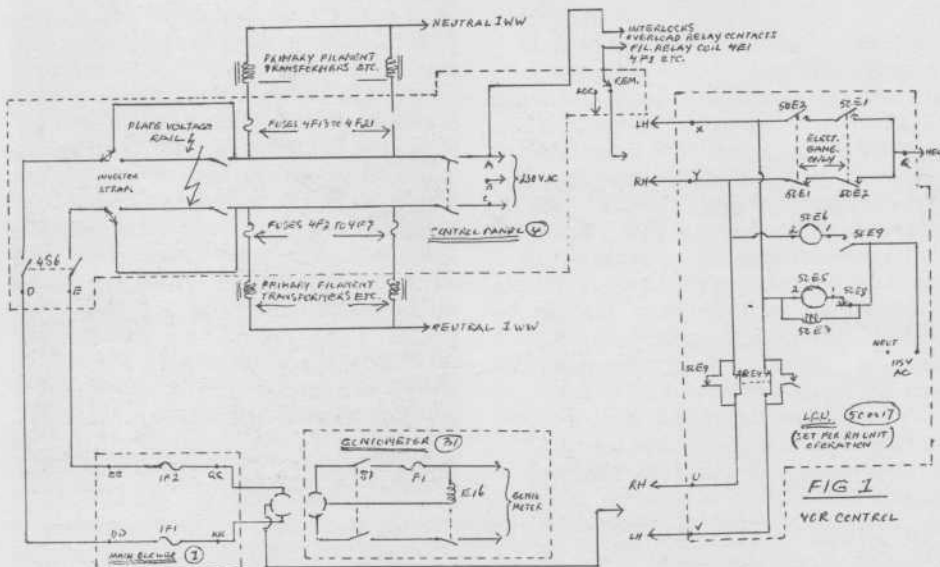
Aircraft Mechanic J. WALSH of Ottawa airport was awarded \$15 for his suggestion to install floodlights in front of a particular hangar.

Reinforces Exam Papers

RONALD A. PECKHAM of the Toronto regional office selected a dipless pen set as his award for his method of reinforcing airmen's and maintenance engineers' examination papers so they cannot tear or get lost.

Boost Morale With Colors

JOHN G. GRAHAM, a radio technician at the Port Hardy, B.C., airport, received a Radar-lite for his suggestion



FILAMENTS, RELAYS AND SUCH—P. Moore's suggestion to modify VOR equipment was so technical it gave engineers complete analysis.

that the regulations limiting colors in departmental dwellings be relaxed in order to boost morale.

Fosters Public Relations

Airport Maintenance Foreman VICTOR M. POLAND of Killaloe, Ont., received a walltype barometer for suggesting that airport maintenance foremen, if in charge of airports, be called airport managers to improve public relations and lend prestige.

Limits Use of Form

A power driver was presented to L. CREVIER, superintendent of the Ste. Anne Canal, for his suggestion to use form 356, "Monthly Record of Quantities Issued," for fast-moving stock only.

Suggests Protective Fuse

ERVIN R. FRASER of Moncton, a radio technician, received a power driver for suggesting that a protective fuse be installed in the input lead to the mechanical filter primary on the Collins radio receiver type 51-N-7.

Improves Competition Posters

LLOYD G. COPE of radio regulations, Ottawa, won a pen set for his idea to include on competition posters a statement reminding applicants that they must relate their past experience to the duties of the position advertised.

Devises Oil Drum Harness

C. T. MacFARLANE, a Moncton engineer, selected a power driver as his award for devising a harness rig to facilitate the transportation of oil drums over difficult terrain.

Lockmaster Gets Three Awards Simultaneously

IT isn't often that an employee receives more than one suggestion award at a time, but the department has a clever lockmaster at the Kirkfield lift lock on the Trent canal who won himself three of them in one shot!

Don J. Smith of Kirkfield, Ont., not only suggested three time-saving and hazard-reducing changes, but he built two of them with his own hands and helped fashion a third.

One of his by-the-way-I've-already-fixed-it suggestions was to make retainers for the four heavy valve weights on his lock, so

they will stay up when work on the valves is necessary. Formerly, the 160-lb. weights had to be removed in case of repairs to the valves.

Mr. Smith's second effort was to build a carriage for the power chain saw used to cut ice in the lock pits in spring to prevent damage to the lock.

With this improvement the operator does not inhale the motor exhaust fumes any longer, he can make a more precise cut and the ice can be cut in half the time.

Finally, the ingenious lockmaster suggested that the detachable crank handles on the hand rails of the reach gates be lowered. All eight of them had to be removed and replaced again for each lockage—and there were 1,135 lockages in 1960!

If the cranks were not removed each time, they would catch on the aqueducts, causing damage to the shaft and the hand rail. In their new, lower position the handles can stay on during lockages; as a matter of fact they are permanent now so the public cannot remove them as it had done at times.

Gordon W. Stead, assistant deputy minister, marine, commented that "the ingenuity Mr. Smith has displayed in improving the efficiency of canal operations is indicative of his sincerity and interest in our operations."

Mr. Smith received a barometer, a power driver and an electric clock for his ideas.

Suggests Diagrams

A power driver was also presented to Ottawa Radio Technician J. J. REID for his suggestion that the manufacturer's electrical wiring diagram be obtained with each new radio interference car for use of field staff.

Saves Engineers' Time

P. GALE MOORE, a radio operator at Port Harrison, Que., suggested a certain modification to VOR equipment. It was not possible to adopt his idea as presented, but his analysis of the problem was correct and greatly assisted in arriving at the final accepted modification. Mr. Moore's efforts also made it unnecessary for engineering staff to devote any more time to it, thus saving money. For that he was awarded a two-burner camp stove.



HOW SUGGESTIONS VARY—Award-winning suggestions range from simple "why-didn't-I-think-of-that" ideas to ingenious solutions and highly technical studies. Above, right, is Kirkfield lockmaster Don Smith at a lowered handle that won him one of three awards. Above, left, is Moncton Engineer C. T. MacFarlane with the oil drum harness he devised. The top photo on the left shows how the rig fits around a barrel, the one below it illustrates how it tightens when pulled by tractor or horse.



calling it a day

The employee with the longest service of anyone in the department retired last November.

She is Miss *M. Evelyn Goth*, secretary to Marine Works Director W. J. Manning.

Miss Goth joined the department some 39 years ago. Before that she was with the post office, making her total civil service record 42 years and seven months.

Her colleagues presented her with a watch as a farewell gift.

Another old-timer retiring in November was Miss *Annie F. Bennett* of radio regulations, who served the government for 43 years. She was given a dinner party and presented with a set of lightweight luggage.

Also calling it a day in radio regulations was Mrs. *Kay McCartney* secretary to W. A. Caton, controller of radio regulations. Mrs. McCartney, who retired in September, had been with the department for 19 years.

She is the wife of *Don McCartney* of telecommunications' technical policy and co-ordination division.

She received a set of crystal from her colleagues.

A man well known to Ottawa employees retired in October. He is *A. Ernie Cournoyer-Morin* of training and welfare.

Mr. Morin joined the department in 1954 and very actively assisted in the administration of the DOT group insurance plan. During his term of office the number of

mr. & mrs. hees write

Deputy Minister J. R. Baldwin has received letters from both Hon. George Hees, former Minister of Transport, and Mrs. Hees, in which they express their gratitude for the presents given them on the occasion of Mr. Hees' transfer to the Trade and Commerce Department last October.

Mrs. Hees writes, "We were very thrilled with the wonderful presents and even more thrilled by the spirit that prompted all of you to give them."

Mr. Hees writes: "The drawing of the flag is one of the cleverest things I have seen for a long time. It will make one of my most valued possessions for the future and a reminder of the wonderful people I worked with in Transport for over three years.

"The very handsome travelling case will also be a treasured reminder of the wonderful trips we took together on the many occasions when we visited various parts of Canada.

"Again, many thanks to all of you for your thoughtfulness in giving me two such fine reminders of our happy association together."

subscribers to the plan rose from 2,000 to more than 4,500.

Hundreds of Ottawa DOTers will recall his courtesy and willingness "beyond duty" in processing their claims.

Mr. Morin was presented with a small gift on his retirement.

on things and offered help in every way he could.

"He supplied us with bedding, both mattresses and blankets, when we were short in the emergency hospital. He also supplied us with the most necessary thing—water. We were desperate for water and had only a small tank. He gave orders that the tractor should supply the school with water.

"Not only that, when we were short of oxygen he ordered the oxygen cylinders to be put to our use and as weather delayed the plane with drugs and oxygen I am quite sure that Mr. Hughes' assistance saved the lives of several babies. Without this oxygen they surely would have died."

Hail to the secretary who
Knows where things are, knows what to do,
Knows names and faces and, by tone,
Knows rare-heard voices on the phone,
Knows when to talk and when to clam,
Knows when to stay and when to scam.

Come, doff your hat and give a bow
To one who always knows just how
To put in commas you've omitted,
To make you feel that you're sharp-witted,
To cheer, to sympathize, to shine,
To look as fresh at five as nine.

Yes, hail to such a secretary,
Without a blemish or vagary,
Who's never sour and never sick,
Who's never late, who's always quick,
Who's loyal, unobtrusive, willing,
Who stands a pace that most find killing,

A workhorse, yet a sex-appealer.
If you have one, I'd like to steal her.

—Richard Armour

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COPPERMINE

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strenuous efforts were so successful in combating the epidemic, but all were good enough to express their deep, appreciation to officers and employees of the department for the assistance we were able to give them.

(Editor's note: Dr. Cass later wrote the department about the assistance she received from the various members of DOT staff. Of writer Hughes she had this to say: "Mr. Hughes, his wife and child had a very severe attack of influenza, in fact they were some of the worst cases we had, but in spite of that Mr. Hughes kept a strict eye