

Defence research helps civvy street

While scientists in the Department of National Defence do research in military defence, quite a lot of their findings become available for civilian use — in, for example, avalanche-control, freeze-dried foods and oil-spill control.

As for avalanche control, the Defence Research Establishment (DRE) at Suffield, Alberta, has come up with a method of detonating explosives from long range, which is being applied to control avalanches in the Canadian Rockies. It's considered a big step in helping to eliminate natural disasters.

At the Defence and Civil Institute of the Environmental Medicine (DCIEM) in Toronto, work on freeze-drying of foods has contributed to today's availability of camping and travel foods which don't need refrigeration, have long shelf-life and minimum weight and bulk.



The "slick-licker" mops up oil.

A defence research scientist at Esquimalt, British Columbia, invented the internationally famous "slick-licker", one of the first practical devices for mopping up floating oil in a continuous process.

Electronic stethoscope

On the medical side, DCIEM is continuing research on motion-sickness remedies and developing an improved drug with reduced side effects. And, under development, is an amplitude-to-frequency transformer for an electronic stethoscope which will reveal hitherto unheard sounds from an abnormal heart.

For the underwater enthusiasts, projects under development include a decom-

pression computer and a helmet-mounted gyro horizon, a compass which provides the diver with stereo sound indicating his direction relative to an intended bearing.

Civilian pilots will be interested in the peripheral-vision artificial horizon developed by military researchers. The device is designed to reduce greatly the workload of pilots flying on instruments and decrease aircraft accidents caused by disorientation. Studies of cockpit and instrument design are an on-going project.

For power in isolated areas a wind turbine is being integrated with an alternator and a lead/acid battery pack, which will be equally applicable to civilian use.

Many more inventions came from defence research scientists and countless others are under development.

Defence research story

Defence science was established formally in Canada when the Defence Research Board (DRB) was formed in 1947. Its role was to provide scientific advice to the defence minister, meet research requirements of the Canadian Forces, support research of defence interest in Canadian universities and industry and contribute to NATO's collective defence research efforts.

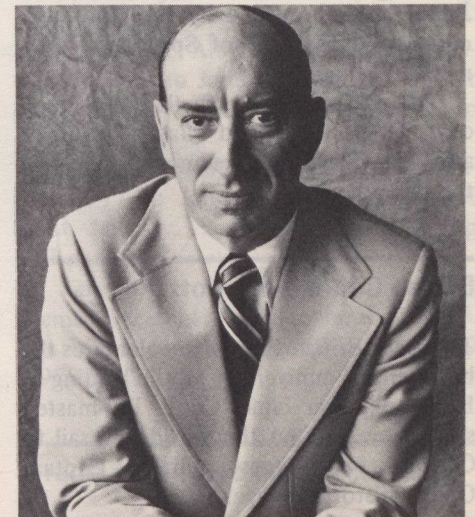
The work of the Board, under a chairman, appointed and *ex-officio* members, was carried out at its headquarters in Ottawa, at research establishments across Canada and at liaison offices in Washington, London and Paris. About 2,000 civilian and military scientists, engineers, technicians and other personnel formed DRB.

Basically, research was DRB's responsibility and the Canadian Forces were responsible for development. In April 1974, most of DRB was integrated with Canadian Forces, forming a new branch called CRAD — Chief of Research and Development. About 1,700 DRB personnel were amalgamated with CRAD, 130 were assigned to the Operational Research and Analysis branch at Defence headquarters and 25 remained with the restructured DRB.

CRAD's role is to conduct material and associated research and development activities for DND and control the programs of its six DREs. At present 1,600 people are employed in the CRAD organization — 1,555 civilians and 45 military personnel.

U.S. honours Marc Lalonde

The American Health Foundation has awarded the 1977 Dana Award to former Minister of National Health and Welfare, Marc Lalonde, now Minister of State for Federal-Provincial Relations. The award, which is given annually "to that individual who has made a singular contribution to the cause of preventive medicine", will be presented by the American Health Foundation in New York City this spring.



Marc Lalonde

The Foundation wishes to honour Mr. Lalonde for his work as Minister of National Health and Welfare from 1972 to 1977 in recognition of what the Foundation describes as his "outstanding leadership in developing a blueprint for a prevention-oriented medical care system, *A New Perspective on the Health of Canadians*". This publication, a parliamentary White Paper, was tabled in Parliament in May 1974.

Mr. Lalonde is the first non-medical person to receive the award. Previous recipients have included medical researchers and innovators Paul Dudley White, Henry Blackburn and Ancel Keys for their work in preventive cardiology and nutrition and Per Olaf Astrand and Samuel Fox III for their work in physical fitness.

The award carries with it a stipend of \$5,000. Mr. Lalonde has suggested that this be divided into two equal shares and donated to L'Association Canadienne de l'Ataxie de Friedrich, an organization which co-ordinates research of Friedrich's Ataxia and assists its victims, and to the Montreal United Workshop (Atelier Uni de Montréal), which works with the physically handicapped.