

In order to obtain the soft focus effect when Narcissus dances with his double a special technique was applied: first each picture was exposed for one second while the dance was being performed; then, using an optical printer which can control the photography picture by picture, the movement was slowed down even further by a series of dissolve mixes resulting in a dreamlike effect. It was the first time the soft focus technique had been used this way in the cinema.

Another technique, the flicker effect seen in one of the sequences, was obtained by alternating between frames with pictures and frames without pictures in various combinations.

During his career, Norman McLaren has produced some 59 films, many of them with the National Film Board of Canada, where he was associated for 42 years. At the Film Board he was able to be among the first to use and popularize the optical image and the drawing-on-film technique, to design sound tracks and to explore three-dimensional animation.

As a pioneer and innovator of animation film he has become renowned throughout the world and has received many prizes including a Hollywood Oscar for his 1952 production of *Neighbours*. In 1973, he was named a companion of the Order of Canada, the country's highest order.

## Stamps

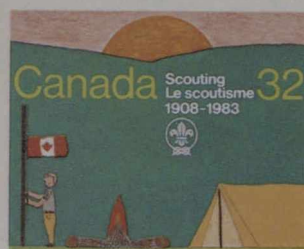
### Stamp honours Scouts

Ten million Canadian Scouts and former Scouts were honoured last summer in a stamp issued by Canada Post commemorating 75 years of Scouting in Canada.

The stamp was officially launched at a ceremony on 6 July 1983 during the Fifteenth World Scout Jamboree held in Kanaskis Country, Alberta, some 80 kilometres west of Calgary. The July 4-14 Jamboree was the culmination of celebrations marking the seventy-fifth anniversary of Scouting worldwide. Some 15 000 Scouts from about 100 countries attended the Jamboree,

the second Canada has hosted.

The design for the commemorative stamp was selected through a nationwide poster contest on the theme 'What Scouting Means to Me', organized by Canada Post for all scouts between the ages of 5 and 17. The winning poster, drawn by Scout Marc Fournier, aged 12, of Edmundston, New Brunswick, illustrates an evening flag-lowering ceremony at an overnight camp.



This poster was used by Montreal graphic designer François Dallaire to prepare the stamp design. The poster entry of Beaver Michael Timms, aged 6, of Delta, British Columbia was selected for the first day cover cachet design.

A full-colour reproduction of Marc Fournier's poster was used for a special post card issued by Canada Post to commemorate both the anniversary of Scouting in Canada and the Fifteenth World Scout Jamboree.

### Dalhousie Law School

Canada Post issued a new stamp on October 28 to mark the one hundredth anniversary of Nova Scotia's Dalhousie Law School, the oldest continually operating Common Law School in Canada.



The stamp design, by Denise Saulnier of Halifax, characterizes both the persevering spirit and the rich tradition of Dalhousie Law School by featuring the school coat of arms (the phoenix over the traditional symbols of justice) against a deep blue background.

The school's first dean, Dr Richard Weldon, introduced the

system whereby students attend classes for three years and, following graduation, must serve a one-year apprenticeship period before being admitted to the Bar and allowed to practice law. This system has been adopted by all law schools across the country.

## Technology

### Heavy lift dirigible

The LTA 20-1, a lighter-than-air vehicle that can service the increasing demand for a reliable, efficient, vertical take-off and landing vehicle with a true heavy lift (22-110 tonnes) capacity has been developed and validated by Van Dusen Commercial Development Ltd of Ottawa, Canada. The spherical dirigible was designed by Canadian industrial designer Frederick D Ferguson who formed the company, and the design was refined by Professor James De Laurier of the Institute for Aerospace Studies at the University of Toronto where the Van Dusen vehicle concept was wind tunnel tested and validated. A six metre scaled prototype was constructed and flight tested during the summer of 1981 at Canadian Forces Base Uplands in Ottawa.



Six metre prototype being tested at CFB Uplands in Ottawa during summer of 1981

Designed from the outset to overcome the problems of ballasting and controllability which plagued early airships, this aircraft is radically different from any previous design. It utilizes a spherical lifting envelope with a gondola rigidly supported from an axle passing through the horizontal axis of the sphere. Thrust engines mounted at either end of the sphere's axle can be vectored between the vertical and horizontal to provide vertical take-off and landing capability. Controlled individually, they can

also provide forward or reverse thrust. The spherical shape of the LTA 20-1, unlike its torpedo-shaped predecessors, allows the vehicle to turn quickly and manoeuvre similarly to a helicopter. To adjust the vehicle's buoyancy in flight or on the ground, an internal air ballasting system is used to pressurize the helium, reducing its lift while simultaneously adding air weight to the internal ballasting sphere.

The design also utilizes a little used aerodynamic principle known as the Magnus Effect. As the vehicle translates from the take-off mode the Magnus Effect begins to generate aerodynamic lift through rotation of the sphere around its horizontal axis. This additional lift increases payload capacity without necessitating a corresponding increase in ballast when the vehicle is offloading. In addition, the rotation of the sphere in combination with the shape of the gondola helps reduce base drag substantially less than that of a non-rotating sphere. Further, aerodynamic stability is achieved due to the sphere's rotation.

This craft, unlike any other airship built, can address external conditions precisely (ie gusting winds etc), as well as providing strong structural design.



The prototype is seen here in an aircraft hangar during testing

Production of the Van Dusen LTA 20-1 is expected to begin in 1986. Studies on lighter-than-air vehicles reveal numerous potential applications which include, pipeline construction and maintenance, movement of heavy equipment, oil and gas drilling production, logging, heavy or light rise construction as well as military heavy-lift applications.