



## CANADIAN NATIONAL DAY

*Below : The Canadian High Commissioner, Mr. Maybee and his wife with Vice-President Jatti at the National day celebration. At left : Mr. Ross Nichol, Olympic Liaison Officer at the Canadian High Commission, presents an Olympic pin to Mr. B.S. Ahuja, Manager of Sita World Travels*

Canada celebrates its national day on July 1, but in Delhi, the Canadian High Commission celebrates the event during the more pleasant time of spring, that is, on February 15, a day which coincides with the Canadian Flag Day.

This year, Canada day was celebrated with a reception held in New Delhi on February 21 which was attended by the Vice-President of India and other VIPs.



## THE MAPLE LEAF FLAG

The maple leaf flag became the National Flag on February 15, 1965, replacing the Canadian Red Ensign which, for a number of years, had been authorised by the government as the appropriate flag to be flown within and without Canada when ever place or occasion made it desirable to fly a Canadian flag.

The national flag was proclaimed by the Queen of Canada following the adoption of resolutions recommending the new flag in both Canadian Houses of Parliament.

Red and white are the official colours of Canada while the maple leaf has long been a Canadian emblem.

## Wind - Powered Turbine

A new design for a wind-powered turbine conceived by two researchers at Canada's National Research Council has contributed to the search for energy sources other than fossil fuels.

Increasingly, attention has turned to renewable energy resources such as wind, tidal, solar and geothermal power. Wind power is particularly attractive since it can be tapped as direct mechanical energy, with none of the loss involved in thermal conversion processes.

However, exploitation of wind energy has been slowed by design problems. New NRC's National Aeronautical Establishment has

developed a simply, designed, ruggedly constructed wind turbine that surmounts the problem of orienting the turbine's blade with wind direction.

Already in commercial production, this vertical axis omni-directional wind turbine promises to be an energy conversion system especially significant for developing countries lacking extensive and technologically sophisticated industrial resources. It is useful for electricity generation and direct mechanical power such as pumping for irrigation systems.

Essentially the turbine comprises two or three (depending on design)

convex blades of narrow-chord symmetrical cross-section, attached to a vertical shaft. Wind, striking a blade, generates a certain amount of lift (acting in a horizontal direction) but since the blade is fixed to the vertical shaft the net result of the lift force is to cause the blade to rotate about the vertical axis. At the point of maximum diameter of the turbine, the blade speed can be several times the windspeed. The whole arrangement is supported by means of guy wires, providing a simple, cheap and easy-to-erect system.