

Consultative meeting held

The second annual consultations between Canada and Upper Volta were held in Ottawa, October 13-15.

Pierre De Bané, Minister of Regional Economic Expansion and adviser for Francophone affairs to the Secretary of State for External Affairs led the Canadian delegation to the meeting. Félix Tiemtarboum, Minister of Foreign Affairs and Co-operation of Upper Volta headed the Upper Volta delegation to the second annual round of consultations on development co-operation.

The two parties discussed present and future co-operation programs which focus on four major areas: rural development, anti-desertification measures, the search for new energy sources and the development of transportation and communication infrastructures.

Mr. Tiemtarboum also held private talks with Mr. De Bané, who hosted a dinner on behalf of Mr. Tiemtarboum and the delegation from Upper Volta. The minister from Upper Volta also met with Minister of State for Finance Pierre Busières, and exchanged views with Marcel Massé, president of the Canadian International Development Agency.

During their meetings, the parties examined a number of new projects that would contribute to the future economic and social development of Upper Volta.

Gene machine of the future

A Toronto company is making inroads in the biotechnology fields with its "gene machine".

Bio Logicals Incorporated's futuristic "gene machine" synthesizes genes quicker and more efficiently than any process currently available, claims company president Robert Bender.

Synthesizing genes is a major tool for biotechnological research. It encompasses the process of gene-splicing which involves adding genes to the natural genetic make-up of an organism so it will accept the gene as one of its own and multiply. It is the creation of new life forms which will produce useful substances more cheaply and in much greater quantities than traditional methods.

Bio Logicals expects to sell about 50 of its machines by the end of this year and another 130 next year. So far there have been more than 700 inquiries about the machine as a result of the company's

first advertising campaign.

It is estimated that by 1988 the world-wide market for products created by biotechnological processes will grow to about \$27 billion compared with about \$25 million at present.

The Science Council of Canada estimated that there are more than 30 independent companies in Canada pursuing some aspect of biotechnology.

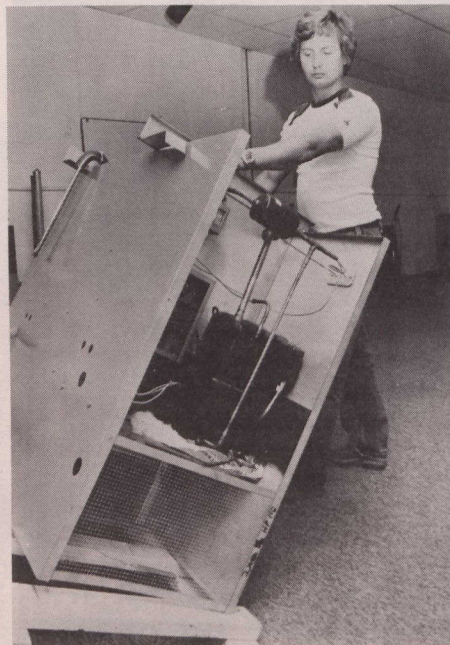
Outdoor furnace saves money

A Canadian company has developed a new kind of energy-efficient furnace but unlike a conventional furnace it is installed completely outside the house.

Gerry Vandervaart, president of Home Comfort Control Systems of Niagara Falls, Ontario, said his Kool-Fire unit works on a seemingly contradictory principle — "create a cold to absorb the heat".

In the wintertime, when the temperature dips, a gas-fired burner in the Kool-Fire heats refrigerant in subcooled coils near the heating unit. The cool refrigerant absorbs the heat from the gas burner and is pumped into a compressor, increasing its pressure and temperature. Heated air is drawn off into the house through a small pipe and distributed through the regular ductwork with the help of a blower or a fan.

The unit does not require a chimney and will run on propane if natural gas is not available. In the summer, like a conventional heat pump, the process is re-



Ottawa distributor Stuart Grant with energy-efficient Kool-Fire unit.

versed and cooled air is distributed through the house. Unlike a conventional heat pump, Kool-Fire does not need a supplementary gas, oil or electric furnace.

Vandervaart said the unit had been tested to minus 25 degrees Celsius and should still be able to heat homes at minus 40 degrees Celsius.

Kool-Fire has a seasonal efficiency of up to 98 per cent (for every \$1 spent over the year in heating or cooling the house the homeowner gets back 98 cents worth in heating or cooling value). Conventional furnaces can be only 50 to 65 per cent efficient, said Vandervaart.

Married people live longer

Married people have a higher life expectancy than single people, according to a Statistics Canada report.

The study by O.B. Adams and D.N. Nagnur, indicated that those who never marry or who lose their spouse through death do not live as long as married people.

Married men have a life expectancy of about 72 years, compared with a life expectancy of about 64 for lifelong bachelors and just over 60 years for widowers and divorced men.

Similarly, the life expectancy of married women is nearly 79 years, compared with a life expectancy of just 76 years for women who never marry and just 73 years for widows and divorcees.

The two authors compiled tables of life expectancy based on information from the 1976 census and records of marriages, deaths and divorces from other sources.

The Statistics Canada study includes other research that sheds further light on the ways the *mores* of marriage have changed in recent years.

For example, the study said the increasing popularity of marriage, evident since the early 1960s, was reversed between the time of the 1971 and 1976 censuses and continued to decline through 1979.

According to the study, the probability that a typical male will marry sometime in his life declined to 92.7 per cent in 1976 from 95.8 per cent five years earlier, and the probability for women dropped to 92.8 per cent from 95.5 per cent.

Meanwhile the likelihood of divorce among married persons increased significantly to 37.8 per cent for males and 36.2 per cent for females.

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