

canadian perspectives



LRC: THE TURBO TRAIN

FOR four days in August 1974 a sleek, sharp-nosed locomotive and passenger coach called LRC startled onlookers along the Montreal-Ottawa main lines in the first

of its demonstration runs. Today it is a familiar sight.

LRC—incorporating the first letters of lightweight, rapid and comfortable — is the joint effort of a Canadian consortium involving MLW Industries, Alcan Canada Products and Dominion Foundries and Steel.

The idea was born about 10 years ago when MLW's Montreal locomotive plant was appointed prime contractor for construction of the Turbo train designed by United Aircraft Ltd. Turbo was a radical departure from standard railway equipment embodying a new turbine power concept and aircraft-style body construction. MLW engineers reasoned that a train incorporating the same speed

and comfort features as the Turbo but based on standard motive power and parts would be simpler to build, operate and maintain. The LRC's major departure from conventional components is in its new coach suspension system which provides hydraulically-powered banking on curves. The standard-parts approach also kept development costs relatively low. The Federal Department of Industry, Trade and Commerce contributed \$2.5 million because of its interest in the export potential of the new train and the Ministry of Transport provided \$500,000 to help finance demonstration runs. The balance of the development costs — about \$2 million so far — was met by the builders.

PARABOLIC MIRRORS AND BOILERS

Experimental Engineering Equipment Ltd. of Niagara-on-the-Lake (Ontario) is making solar equipment to be used as instructional aid at universities. The firm has produced a solar power plant and flat plate collector which combines a parabolic mirror and sun-following mechanism with the latest advances in boiler design. "It is meant to illustrate the difficulty of creating solar power to the new generation of engineering students," says W.E. Jones, president of Experimental Engineering. The complete power plant, producing up to 1.8 kw thermal, is priced at \$5,000.



A GREAT IDEA

Not long ago Toronto graphic designer Burton Kramer impulsively wrote to the editors of the respected Japanese graphic magazine IDEA suggesting that a special issue be produced on Canadian graphic design. To Kramer's amazement, the editors accepted—on the basis that he organized an editorial committee to arrange for the material. The result is a majestic presentation of the varied and intriguing styles of 16 of Canada's top design houses. An added bonus was an exhibit prepared by the magazine, displayed in the prestigious Matsuya Department Store Tokyo.

SURGERY ON AUSTRALIAN GIANT

Dallas Presser, an Australian seven feet tall at age 14, came to Montreal to undergo surgery to arrest his growth. Doctor Jules Hardy, neuro-surgeon at Notre Dame Hospital, carried out the operation. As a result of a tumor of the pituitary gland, the boy was six feet three at 12 and had grown more than ten inches in two years.

In the case of Presser, the opera-

tion was a complete success.

Until recently it was sometimes necessary to remove the pituitary gland and the attached tumor to remedy this disorder. The classical method was to open the skull to get at the gland or tumor. It was a risky operation and there was always the possibility that the pituitary would be damaged or have to be removed. The Australian neuro-surgeon advised the boy's father to contact Doctor

Hardy, who had perfected a better surgical technique. His procedure for reaching the pituitary gland at the base of the brain without cutting into the skull is to make a small incision under the upper lip and go below the nose and through the sinuses, using tiny instruments and a small microscope. He can remove any tumor less than ten millimetres in diameter. He has already performed 80 operations of this kind.