

## Artificial jogging leg designed

McMaster University researchers in Hamilton, Ontario are employing ideas put forth by Terry Fox for designing a better artificial running leg for amputees.

Fox's ideas have been incorporated in a bid to create a prototype of a more natural jogging leg which will eliminate the need for the hop-skip running style, which Fox made famous in his efforts to run across Canada. The jogging leg, when completed, will be named for Fox.

Guy Martel, director of Chedoke McMaster Hospitals laboratory of prosthetics and orthotics, became interested in improving artificial jogging legs when he spoke with Fox during a stop in Hamilton to have his artificial leg adjusted.

"He told us about the dissatisfaction with the knee action and the response time of his leg, and said he wished he had something which responded much more to the movement of his sound side," said Mr. Martel.

To help others like him, Mr. Martel has been studying one of the several artificial legs with its sweaty and discoloured tennis shoe still attached that Fox used in his run to raise money for cancer research.

However, a more important model is likely to be the original "pogo stick" kind of design which Fox first tried and then discarded.

### Awkward style

Mr. Martel explained that the reason Fox ran with such an awkward gait is that his artificial leg did not bend and move forward quickly enough. The result was that he took two steps with his good leg to every one with the artificial one even after adding an elastic band to quicken the leg's return action.

"He used the prosthesis to vault himself along," said Mr. Martel.

With the help of a \$5 000 grant from the national office of the War Amputations of Canada and \$12 000 from the Hamilton branch of the War Amputations, Mr. Martel is working on a system which will more closely resemble the running motions of two-legged joggers. He and mechanical technologist Ted Eiler are perfecting a design which would allow the artificial leg to shorten and lock in place when weight is put onto it.

This would allow the amputee jogger to move the leg naturally forward without having to swing it out to the side.

But the key element in this very much more advanced "pogo stick", and the element which still is not completely worked out, is a mechanism which allows the leg to return to its normal length when the foot is moving back down to the ground.

This is important, because, according

to Fox's British Columbia prosthetist Ben Speicher, the original pogo stick-type leg proved impractical, "because Terry said it made him feel he was always running in a hole".

While the new artificial leg will not make amputee runners run faster, it will allow them to jog easier.

## Centre promotes trade between Canada and Japan



*The Canada Trade Centre in Tokyo, Japan is the site for trade fairs.*

The first ever Canada Trade Centre opened in January 1979 at the new World Import Mart in Tokyo, Japan. Its purpose is to provide an exhibition centre for Canadian companies to take advantage of the potentially lucrative and exciting Japanese market for quality Canadian industrial and consumer goods.

The 11-storey World Import Mart, in which the Canada Trade Centre is located, is in the Ikebukuro section in Tokyo, a rapidly expanding downtown area northwest of Tokyo's traditional centre. The World Import Mart is part of a greater complex known as "Sunshine City" which also includes a 60-storey office tower, the 1 200-room first-class Sunshine Prince Hotel, a 12-floor Culture Centre building (housing a bus terminal, additional display areas, museums, sports facilities, etc.), and numerous import-oriented specialty retail shops.

### Fairs held

The Canada Trade Centre is being used by the Canadian embassy in Tokyo to stage a continuing series of trade fairs. Each

show features ten to 15 Canadian companies in one specialized field and lasts three to five days.

In addition, when the Canada Trade Centre is not being used for a government-sponsored trade show, the embassy is prepared to offer to individual Canadian firms, or group of firms, the use of the facilities to exhibit their products. Past shows have covered such diverse areas as furs, jewellery, auto parts, ocean equipment, building products, computer equipment, fish products, floor coverings, outdoor/leisure wear, sports equipment, electronics, music, franchising, pulp and paper equipment and high technology equipment.

The Canada Trade Centre facility comprises 300 square metres of which about 260 square metres can be used for exhibits. The balance is taken up with storage, kitchen facilities and offices. The display system has been designed so that the layout configuration may be changed according to the number of companies participating, or according to the types of product to be displayed.