The tricycle is the newer invention of the two. Looking like a rather sleek soap-box winner, it was recently on display at a University of Ottawa science exhibit — the invention of a team of mechanical engineering students. Built mostly from standard bicycle parts, it is scientifically designed to put human strength to best advantage.

Student engineer Gary Webster said in an interview that it could do 30 m.p.h. on the flat and climb hills that stop a two-wheeler cold. Downhill it will go "as fast as your nerves can stand." It consists of a low-slung aluminium frame built around a reinforced plastic bucket seat: braced in the seat, the cyclist can deliver tremendous power from the legs and back muscles to the forward pedals. It has a 10-speed gear mechanism.

The students have been working more recently on a three-pound plastic dome to protect the tricyclist from rain and cold. They are considering having the machine mass-produced and put on the market.

The Ginkelvan is comparatively nearer to public use in the town and its inventors believe that the current fuel shortage may speed up its introduction into public service. With seating for 20 passengers and capability of carrying 20 more as strap hangers in rush hour, it is no bigger than a large luxury car.

The Van Ginkels, whose firm was involved in designing Expo 67 and the Montreal International Airport, originally designed it to lure motorists out of their cars in downtown traffic jams in cities like Montreal and New York. It attracted considerable attention when first exhibited at a world transportation fair in Washington in 1972 and has since drawn inquiries from all over the world. Because it is easy to get into (just six inches up from the curb) and a safe ride, one has been ordered by a Montreal hospital for transportation of wheelchair patients. It is already the main form of transport for skiers in Vail, Colorado, a United States resort town whose builders wanted to discourage the use of cars.

The Van Ginkels say that the shape of the Ginkelvan is the logical outcome of going back to the first principles of automotive design and "only an architect would do that." Why eight sides? Because, says project designer Glen Tennent, "that is the closest thing to a circle, which is the strongest design possible." Large windows on both sides and at the back of the bus are also safety exits in the event of emergency. It has a steel cage hoop between two layers of fibreglass as roll-over protection. The engine can be quickly replaced by a new one when repairs are needed by the simple removal of 12 bolts.

The firm turned down a chance to produce the bus in the United States because they wanted it to be an all-Canadian vehicle. Production plans in Montreal are for 250 vehicles by the end of the year.

British brain machine saves Canadian journalist

Canadian journalist Clive Baxter recently described in *The Financial Post* how a British electronic machine, installed last year in the Montreal Neurological Institute, had saved his life — "at least as I know it." It did so by detecting a tumour on his brain that was growing and was perhaps one-eighth of an inch from the part of the brain that controls the ability to speak.

Baxter was tested on the machine at his own request, having seen stories about it in a number of daily papers. He had been undergoing tests for brain trouble since the autumn of 1969, when he passed out in a convulsion at the end of a weekend of hard work and long hours. But the tests had been inconclusive and, up to last December, he was "one of thousands of Canadians kept on pills and subject to the odd bout of brain trouble."

Then he read about the new machine in the Montreal Neurological Institute. It had been installed there at the request of the institute's chief director, Dr. William Feindel, one of the world's outstanding brain surgeons.

Dr. Feindel heard of the machine and went to see it working in a London hospital when he was attending a conference in Oxford just over two years ago. Designed by Godfrey Hounsfield of EMI, it takes some 28,800 readings of a patient's head, transmitting them to a computer which measures the structure of the brain and prints its own photo reports. Dr. Feindel recalls, "One had only to look at it a very short time to realize that — if it worked the way they thought it would — it would give us a hundred times more information than we were then able to get. I began to realize that we were looking at probably the biggest advance in brain examination work in 30 years."

Baxter went in for the test last December. He describes the half hour on the machine as "painless — if anything, a little boring." Then, after 20 minutes reading magazines, he was called in by Dr. Feindel and told, "I am afraid you have a tumour on your brain. Come and look."

They looked, and there it undoubtedly was — as Baxter describes it: "Big, white, a picture that a teenager could have identified."

An operation was urgently needed and Dr. Feindel performed it on January 4. It took eight hours and was completely successful. The key to its success, Dr. Feindel explained later, was being able to refer to the print from the machine which gave the exact design of the brain.

Baxter could not talk for two weeks, as predicted, and months later reading and talking were more work than they used to be. "But what matters, and why I write this at all, is to point out what that test meant. Without it, finding the tumour might have been impossible — at least for another eight to 10 months, by which time the speaking mechanism of my brain might have been destroyed."

Other machines are now being installed in Toronto and Hamilton and possibly in Vancouver. The United States have 50 on order. Meanwhile, there has been an outstanding success rate in the detection of brain problems at centres where these machines are already working — London, Montreal, Boston, and Rochester, Minnesota.

Indian represents the Crown

An Indian has been appointed for the first time to represent the Crown as Lieutenant-Governor of a Canadian province. He is Ralph Steinhauer, 68, former chief of the Saddle Lake Indian band near St. Paul, Alberta. He has taken over from Grant MacEwan as Lieutenant-Governor of Alberta.

Ralph Steinhauer is a Cree Indian, known in Alberta as an activist in native and agricultural affairs, and his appointment surprised provincial officials. He farms 700 acres on the Saddle Lake Reserve and has been active in farm affairs since he joined the United Farmers of Alberta in 1923. He and his wife, a school teacher from Buffalo, New York State, started farming on their own in 1928 with a team of horses, a borrowed plough and a wagon. Their small farm survived the Depression and they went on to become successful farmers with a family of four daughters and a son.

Mr. Steinhauer is no stranger to politics; in 1963 he ran as Liberal candidate in Vegreville and came third. He says his friends urged him into politics because "I talk quite a lot and I guess I opened my mouth too much." He was a member of the Chamber of Commerce in St. Paul and Two Hills and was named a council member of the Northern Alberta Development Council last year.