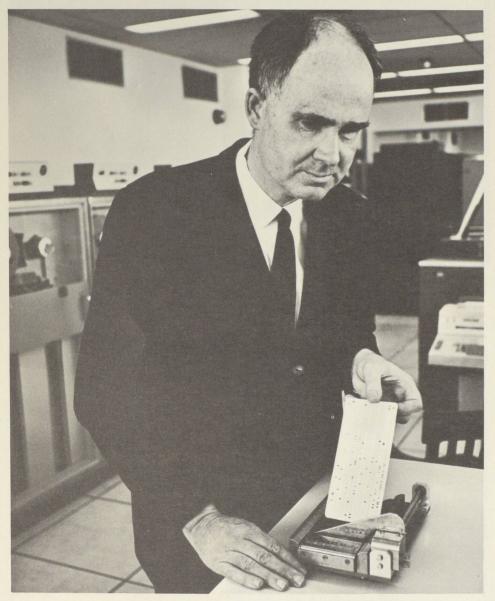# punched-card reader

A manually-operated reader for punched cards enables blind computer programmers to read a single punched card in a matter of a few seconds. With present readers it takes blind programmers several minutes to perform the same task

James Swail feeds punched card into his newly developed, manually-operated reader.

M. James Swail et son lecteur à opération manuelle pour les cartes perforées.

Each year an increasing number of blind persons are becoming economically self sufficient – thanks to the computer.

Hundreds of sightless persons have found employment in computer programming or related fields since the computer came into common commercial use. Most of these are in the United States, where an acute shortage of skilled personnel in a field which can be highly automated so as to tie in with a blind person's abilities, has led several universities and at least six commercial schools to institute courses of instruction for the blind. The major computer companies have contributed by making their instruction manuals available in Braille.

The field of computer operation thus presents a rosy job placement picture for the blind both in the U.S. and Canada, where progress has not been as swift as south of the border. However, the situation is improving in Canada and the University of Manitoba now offers a one-year course to train sightless persons as computer programmers. A dozen or so persons have been trained since the inception of the course in 1965.

To date most of the special instrumentation required by blind programmers has been provided by the major computer manufacturers. Conversion kits have been made available to produce Braille instead of print from computer printers. These kits can be installed or removed quickly and easily, and thus do not interfere with normal use of the facilities by other personnel. One company also makes a program available to convert their computer output to the condensed (grade II) Braille code (i.e., instead of letter for letter translation). Special photocell devices have been designed to make it possible to read the lights on the instrument panel.

One aspect which has been somewhat neglected is the production of a device which will enable the blind programmer to read a single punched card