

The Canadian firm comes under the able administration of Vice-President & General Manager Robert F. Hunt, a longtime Dowty hand, while the engineering activities are guided by Director of Engineering Ian M. Hamer, who was recently elected to the company's board of directors.

Mr. Hunt became associated with Dowty Equipment Limited some 15 years ago, after first training in aeronautical engineering at North Gloster Technical College. For four years during World War II he was on loan to the Ministry of Aircraft Production, operating a hydraulic testing machine.

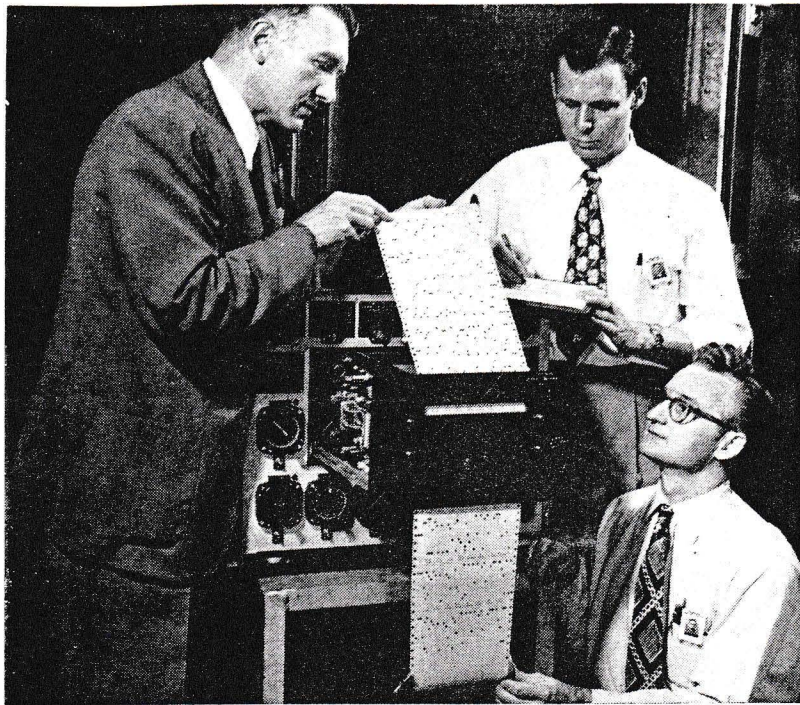
ARROW HAD FIRST
"FLY BY WIRE" IN
1958

After the war Mr. Hunt's technical qualifications in aeronautical engineering were recognized in 1946 when he was appointed to the position of Chief Engineer. In this position he remained until 1949, when he came to Canada to organize the new Canadian company.

Group of Nine: The world-wide organization of nine companies, of which Dowty of Canada is a part, last year saw its oldest member, Dowty Equipment Limited, celebrate its 21st anniversary at Cheltenham. It was in 1931 that G. H. Dowty, who previously had been an aircraft designer with many of the leading companies in England, made a very modest start. In fact, his first activities involved the plant space of a small garage and employed the skills of four or five employees.

Mr. Dowty was at that time the owner of several patents covering an internally-sprung wheel for aircraft. This item proved eminently satisfactory and was successfully fitted to many famous early aircraft, including the Gloster Gladiator. The company grew rapidly and by 1938 several hundred people were employed in a modern and up-to-date factory. By this time the organization was designing and producing complete retractable undercarriages and associated equipment.

During the war years the parent company produced undercarriages, hydraulic gear, pumps, and many other items, for more than 80% of the aircraft in use by the RAF, and at a peak period more than 40,000 people were employed in England in production of Dowty equipment.



NO HANDS

Automatic Flight Control

A new device developed for the USAF which enables an aircraft to perform all sequences of a flight, including take-off and landing, without the aid of human hand, has been announced jointly by Minneapolis-Honeywell Regulator Co., and the USAF's Air Research & Development Command.

The development was described as another step towards completely automatic flight. It opens the way, M-H says, to automatic long-range flights.

The device, a highly intricate electrical "brain" called an Automatic Master Sequence Selector (AMSS), operates on the familiar punched-tape principal to program the functions of the autopilot and the airspeed control. When used with this other electronic equipment, the brain fulfils the function of a robot pilot which practically places the human pilot in a monitoring role throughout an entire flight.

The engineering model of AMSS is now undergoing flight test with the Flight & All-Weather Testing Directorate at Dayton, Ohio. It was this USAF unit that made flight history in 1947 by flying a C-54 across the Atlantic without the aircraft's controls being touched by human hands.

According to M-H, AMSS can be regarded as the next major step in automatic flight beyond the 1947 achievement.

M-H visualizes AMSS as the forerunner of equipment which will be required in the foreseeable future, when automatic control and sched-

uling of aircraft will be a prerequisite of flight navigation. Increasing congestion at major airports and growing complexity of aircraft will mean that a flight will not take off until it is cleared through for landing at its destination, M-H opines.

The starting point of automatic flight with AMSS is a flight plan. By means of a specially developed device (see picture), the plan is punched into tape from either oral or written information.

The plan is divided into separate sequences, varying in length from a few seconds for taxiing and take-off to as much as an hour during straight flight time. The plan is put into operation by pushing a start button and from that point, the aircraft goes through all the normal manoeuvres automatically, including take-off, retraction of undercarriage, climb, course setting, level-off at cruising altitude, and so on.

During the flight, a rigid time schedule is maintained by another Honeywell device—an Off-Schedule Distance (OSD) computer. This device, working from the navigation computer, measures the distance the plane is ahead or behind its schedule. It then relays instructions to the automatic power controls to regulate the speed of the airplane accordingly.

As destination nears, a series of sequences bring the aircraft to where it can take advantage of the airport's automatic approach and landing system. By means of accurate control to these radio beams, the airplane lets down to the runway and finally is braked to a stop.