Personalities . . .

IN THE HELICOPTER INDUSTRY

Presenting . . . ***Floyd W. Carlson***

A SELF-TAUGHT helicopter pilot, Bell Aircraft Corp.'s young executive—Floyd W. Carlson—obtained the third Civil Aeronautics Authority helicopter rating in this country and is now one of the few men who hold ratings in conventional aircraft, jet propelled aircraft and helicopters.

Recently promoted to director of Helicopter Flight Safety for Bell, the 30-year-old pilot is credited with establishing the flight technique for Bell helicopters. He has operated the company's helicopters through a great number of flight acrobatics to provide a workable and safe flight pattern for future helicopter pilots. He has become one of the best salesmen in behalf of this stability and safety. In the past two years, he has given rides to over 1,500 passengers at the Niagara Falls Municipal Airport and by demonstrating helicopter flight to numerous dignitaries, including Harry S. Truman, a few days before he became President.

Carlson's aeronautical background is a thorough one. He learned the practical phases before the theory as an airport manager and flight instructor. Since he grew up with the helicopter development at Bell, he has been inculcated with rotary wing aircraft from the small scale model stage.

Carlson has been closely associated with helicopters since July, 1942, when he was assigned to the Bell helicopter project from his post as experimental test pilot for Bell. He made his first flight in a tethered helicopter in December, 1942, and the first free flight in July, 1943. Both flights were in the company's first full-scale helicopter model.

Many problems confronted the young aviator when he was first testing helicopters, as he encountered problems in helicopters which had not been considered important in conventional aircraft. The controls and the response of the controls, as well as such phases as vibration and stability, were major problems in the beginning and frequently required extreme care and skill in piloting. And Carlson's flight testing was not without personal hazard, because of mechanical failures to be reckoned with in the experimental equipment.

In May, 1944, he made the first indoor flight in this country with a helicopter at the request of the Civil Air Patrol, when he operated a two-place, enclosed cabin helicopter inside the 65th Armory in Buffalo, N. Y. Two months later, before a crowd of 42,000 attending a July 4th celebration, he piloted a different helicopter model through a series of intricate maneuvers in Buffalo's Civic Stadium.

Although Bell helicopters on flight status were solely experimental machines until March 8, Carlson participated in two noteworthy "mercy missions." In January, 1945, he carried a physician to the aid of an injured man who was stranded in an isolated farm house near Lockport, N. Y., suffering from badly frozen feet. When the ambulance carrying the physician could not progress beyond a point almost three miles from the farm house because of heavy snow drifts, Carlson landed a helicopter on the road near the ambulance, took on the doctor as a passenger and transported him over the deeply drifted fields to the yard of

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the farm. From there, the physician was able to enter the house and administer much needed aid to the injured man.

In March, 1945, Carlson and the same helicopter were called upon to make a more spectacular rescue. Thawing ice on Lake Erie near Buffalo trapped two ice fishermen and threatened them with extreme exposure and very possibly death. When called, the Coast Guard could not reach the pair either by boat or ice sled. A telephone call to Bell from the Coast Guard brought a helicopter to the scene and Carlson rescued the two men in two trips. He flew out over the honeycombed surface and hovered the helicopter, with its wheels just touching the slushy ice, while the men clambered aboard one at a time and were flown to the shore and safety.

In his five years of flight testing, the veteran flyer has not encountered any major trouble in any helicopter. In connection with the safety of helicopter flying, he has definitely proved the theory—and greatly improved the technique—of auto-rotation. Auto-rotation is that technique which permits a helicopter pilot to bring his aircraft safely to rest on the ground in the event of engine failure, and as it permits the rotor blades to revolve freely, thus giving sufficient lift to keep the helicopter from making too rapid a descent. Thus, the pilot is able to maneuver the ship safely to the ground at a rate no faster than the speed of the modern elevator. Carlson's improvement of this technique greatly enhances the safety of future helicopter pilots and passengers.

In his new capacity as director of Helicopter Flight Safety, Carlson is a persistent missionary of safe flight technique as well as a strong adherent of competent maintenance practices. He makes frequent visits to operators of Bell helicopters in promoting flight safety, acts as a general consultant to all operators on all matters pertaining to helicopters, and works closely with the company engineering department and flight research staff in emphasizing the continued development of helicopter safety.

Floyd Carlson was born in Jamestown, N. Y., May 4, 1917, and now resides in Williamsville, N. Y., with his wife and two sons, Blair, 6, and Todd, 4. He is one of the only men, if not the only man, who has used a helicopter over an extensive period of time to commute between his home and his office.

For long weeks in the winter of 1945-46, Carlson flew an experimental helicopter back and forth from his home to the Bell plant adjacent to the Niagara Falls Municipal Airport, parking his aircraft in his own yard at night. Even when Buffalo experienced the worst snow storm of its history in the winter of 1945, and on mornings when his neighbor's automobiles were almost entirely submerged in snow drifts, he merely brushed the snow from the rotor blades, started the engine, and was off to work some 18 miles away.