THE FLYING PIONEERS

By HAROLD E. MOREHOUSE

WALTER E. JOHNSON

Walter E. Johnson was born at Pittsford, near Rochester, New York, on September 7, 1888. Son of a physician, he graduated from East High School, Rochester, in 1908. There he was an active leader in various sports. In the fall of 1908 he entered the College of Applied Science in Civil Engineering at Syracuse University, where again he was active in sports, winning letters in both track and football, and became a member of Zeta Psi Fraternity. After two years in college Johnson became so interested in aviation he decided to quit school and get into the flying game.

As a result he started to work for Glenn Curtiss as a mechanic at Hammonsport, New York in June 1910. Johnson was eager to learn to fly but did not get his opportunity to do so at this time. However, while working with Curtiss and watching him fly he did learn how to move the controls and make various maneuvers in flight.

Johnson soon heard that the Thomas Brothers had an experimental aeroplane at Hornell, New York and wanted to get someone to fly it. He contacted them, and as a result, left Curtiss and joined the Thomas Brothers as their first pilot. It was a new and untried machine, using a Kirkham automobile engine, and Johnson had to teach himself to fly, starting with the usual grass cutting practice on the Page farm near North Hornell. Fortunately the plane was so underpowered it would barely take off when it hit a slight rise in the ground, then settle back to earth. This practice continued through August, and in this way Johnson learned to handle the plane on the ground and control it during its short hops. By the end of August he had souped-up the engine enough so that he had sufficient power for sustained flight. As a result, Johnson made his first real flight, and a circle, there on September 7, 1910, his 21st birthday.

During September the Thomas Brothers were continually changing and developing this plane and Johnson was gradually making more extended flights. In October they accepted an invitation to fly exhibitions at a fair, held at Stow Park, Binghamton, New York. Johnson made his first public exhibition flights there on October 10 and 11, 1910. He had a minor smashup when he struck one of the tents on a takeoff but was not injured.

About this time the Thomas Brothers moved their operations from Hornell to Bath, New York, as the Kirkham engine was made there. Following the exhibition engagement at Binghamton, they arranged to make flights at the Broome County Fair in Rochester, New York. Since this was Johnson's hometown he wanted to make a flight over the city but did not succeed in doing so. However, he did make a number of successful flights from Genesee Valley Park for the fair. After this engagement, they returned to Bath where the plane was rebuilt into a Headless Type, and a new Kirkham engine was installed. Test flying was resumed in December as Johnson began flying from the ice on nearby Lake Salubria with runners on the plane.

Tests continued through the winter months, and on March 6, 1911 Johnson took a local young lady, Miss Florence Scrafford, for two flights from the ice, to become quite possibly the first lady passenger to make a flight in New York State. Miss Scrafford later became Mrs. Johnson. In March Johnson and the Thomas Brothers left Bath for New Orleans, Louisiana for a two months exhibition tour of Louisiana and Mississippi. There Johnson made many successful flights at fairs and carnivals, but he soon learned that more power was needed to operate out of small fields under adverse conditions.

As a result, the Thomas Brothers returned to Bath and started the construction of an all new plane with a 6 cylinder Kirkham engine. Johnson completed the southern contracts and returned to Bath on May 11, 1911. Following test flights on the new plane later that month, Johnson made the first successful aeroplane flights in the vicinity of Buffalo, New York, when he flew at Fort Erie Beach during the week of June 7th, and then for the week of June 19th at Ontario Beach Park.

Johnson returned to Bath for more test flights, and then gave an exhibition at Warren, Pennsylvania on July 4th. August 6th he flew from Savona, New York to Hammondsport to pay Glenn Curtiss a visit, then returned to Savona. On August 7th he started a week's exhibition engagement at Dansville, New York; August 19th he was at Lake Lodore, Pennsylvania and on August 23rd at Butler, Pennsylvania. Starting August 28th, he made daily flights at Hornell, New York, then appeared at Carlisle, Pennsylvania on September 27th.

During the late fall of 1911 preparations were made to start a flying school, and in January 1912 Johnson began instructing off the ice of nearby Lake Salubria, using a machine fitted with a novel dual control arrangement for training. The instructor and student each had his own seat, with identical complete controls side-by-side, but separated by some two or three feet. His first students were Earl Beers, Frank Burnside, Charles Niles, Ralph Brown and D. C. Patmore. That spring floats were fitted to this plane and hydro instruction was also given.

The school grew, the company started to build additional planes, and in the spring of 1912 Johnson again flew exhibitions while Burnside took over as instructor at the school when Johnson was away. The new plane proved very efficient, and at times Johnson took up three passengers. One of his first exhibition dates of the 1912 season was at Middleboro, Kentucky from May 24th to 26th. He then flew at Geneva, New York on July 30th; at Walden, New York August 7th for the Wallkill Valley Farmers Association; and at Kingston, New York August 13th and 14th at a grangers' field day. The next date was at Monticello, New York August 28th to 30th at a county fair. He also flew for the Democratic National Convention at Baltimore, Maryland that summer.

About this time the company brought out their first tractor biplane with fuselage, and Johnson assisted with the development and tests of this machine. September 4, 1912 he was back at Kingston, New York, where that day he flew for his F.A.E. Pilot License No. 164, on a Kirkham-powered Thomas Biplane. He then flew at the New York State Fair, Syracuse, New York for one week beginning September 9th. Also flying there were Beckwith Havens, Charles Niles and William Hemstrought. Johnson made a wonderful showing at the fair, winning first place in races on two days and first in a bomb dropping contest. That month he also flew at the Herkimer County Fair at Herkimer, New York, exhibited at Lock Haven, Pennsylvania on October 12th and 13th before huge crowds, and also carried authorized mail.

On October 31st Johnson established a new American Endurance Record with passenger, of 3 hours, 51 minutes, at Bath, New York, flying a 6 cylinder, 65 hp Thomas Biplane. The previous record had been made August 19,

1911 by George Beatty during the Chicago Meet. Johnson carried Arthur Blasiar, a mechanic and student at the Thomas School, as his passenger. Neither man was dressed in warm clothing for the flight and both suffered from the cold.

That fall the Thomas Bros. Aeroplane Company of Bath, New York was incorporated to manufacture planes by W. T. Thomas, Oliver Thomas, Cummings M. Cox and Walter E. Johnson. In a few months Johnson had taught himself to fly, become an instructor, a chief test pilot and now was a member of the firm, certainly a creditable achievement. During 1912 Johnson also assisted in training Earl Fritts, Glenn M. Tait and Arthur Blasiar. In the fall Ralph M. Brown became assistant instructor, and Johnson started the winter school, again training from the ice on Lake Salubria.

Johnson started the 1913 exhibition season at a flying carnival held by the Aeronautical Society of New York from May 30th to June 1st on Staten Island. Also flying in the event were H. B. Brown, C. M. Wood and Cecil Peoli. Late in 1912 the Thomas Brothers had started development of a flying boat and this work was resumed in the spring of 1913. This resulted in their entering a plane to be flown by Johnson in the AERO & HYDRO Great Lakes Flying Boat Cruise from Chicago to Detroit, starting July 8th. This race, which followed the shore lines of the Great Lakes, via the Straights of Mackinac, was easily the most notable competitive flying event of that year.

The Thomas Brothersentered a new machine especially designed for the contest, with the first all-metal hull ever fitted with wings. This plane, equipped with a 65-70 hp 6 cylinder Kirkham engine, received its first flight tests on June 19th at Lake Conesus. Additional testing followed, carried out by Johnson and Fred Eels, after which it was shipped to Chicago where it arrived about July 1st. Also entered in this event were Tony Jannus in a Benoist, Beckwith Havens in a Curtiss, Glenn Martin in a Martin and Roy Francis in a Paterson-Francis. Each plane was to carry a co-pilot who would also act as mechanic, and Johnson selected Earl Beers as his assistant for this event.

One of the worst storms in many years in the Chicago area almost put an end to the entire event on the afternoon of the starting day. Jannus was first to start at 12:44, followed closely by Havens. Johnson was unable to get off with his passenger because his engine developed magneto trouble. He finally took off alone at 2:50 PM and climbed to considerable altitude in an endeavor to escape the storm. After severe buffeting for some time he made a safe landing and put in at Robertsdale, Indiana just outside of Chicago. Later there was considerable alarm for his safety and life boats were sent out to search for him before word came that he was safe at Robertsdale. Martin and Francis had mechanical troubles and did not start. Jannus was forced down near Gary, Indiana and was taken ashore by a tug boat. Havens reached Michigan City, Indiana safely. Due to magneto trouble and continued rough weather Johnson was unable to attempt another start until July 12, when he immediately had the misfortune to hit some floating wreckage which so badly damaged his hull that he was forced to discontinue the race. Martin and Francis abandoned the race at Pentwater, Michigan, and Havens and co-pilot Verplanck won the event by finishing at Detroit on July 18th.

On August 18th Johnson started a one-week flying engagement at Put-in-Bay, Ohio at a Perry Centennial Celebration. He used a Thomas Flying Boat with an Austro-Damlier engine. Also flying there were Tony Jannus, Beckwith Havens, William Bleakley and Frank Burnside. Here they also experienced bad weather and rough water which seriously hampered their operations. Johnson flew at Rome, New York September 3rd to 5th, then at Herkimer, New York September 9th and 10th. His next exhibition was at Conneaut, Ohio on Labor Day. On September 20th he flew from Grantz, Pennsylvania to Elizabethville, Pennsylvania, via Millersburg. He exhibited at Elizabethville, then flew to Lykens, Pennsylvania for a date there. At this time Earl Beers was serving as his mechanic and flew with him on cross country flights. Johnson exhibited at Dunkirk, New York October 15th to 18th, using a "Curtiss-motored" Thomas Hydro. There he made two 20 minute flights daily. At Paducah, Kentucky on November 20th he made two flights using the Thomas Flying Boat with the Austro-Damlier engine. From there he went to Louisville, Kentucky where he made daily exhibitions until December 16th. Another Thomas student, Charles Herrman, was with him there as his mechanic.

Walter E. Johnson: Early Thomas Brothers Pilot and Instructor.

Apparently Johnson severed his connection with the Thomas Brothers Company at that time and made plans to go into the flying school business for himself. He proposed to start a winter school in Florida at once, then return to New York State in the spring for summer operations. After purchasing a Thomas Flying Boat he left for Florida in January 1914, and operated a school and carried passengers during the winter months at Jacksonville. He returned north in the spring and in early May made daily flights at Greenwich, Connecticut for two weeks. On May 30, 1914 he started the Walter E. Johnson School of Aviation at Conesus Lake, Livonia, New York, using a dual control Thomas Hydro and the flying boat he had been using in Florida. With him in the venture were his former Thomas students, C. A. Herrman and W. H. Minnerly. The school started with five students and the prospects of a promising summer resort passenger carrying business. Johnson also took on some exhibition work that season and flew at Owasco Lake, Auburn, New York on June 30th and at Ludington, Michigan July 3rd and 4th at a harbor celebration.

Johnson continued to operate his school and passenger business at Livonia through the 1914 season, but evidently discontinued it that year, for during the early spring months of 1915 he became a pilot for the Curtiss Company at Hammondsport. During 1914 Curtiss had made some short test hops with the original Langley plane

which had been sent to Hammondsport from the Smithsonian Institution to see if it would fly and to determine its flying and handling characteristics. Floats had been attached and brief hops made by Curtiss with the original Manly engine. With the added weight of the floats it would barely rise from the surface of Lake Keuka, being considerably underpowered. As a result, later in 1914 a Curtiss 80 hp engine was installed, and during the late fall further test hops were made by Doc Wildman and Gink Doherty. This work was resumed in the early spring of 1915, the pontoons were removed and skids attached. With this combination Johnson made several flights with the Langley plane from the ice during March 1915. Later that season both Johnson and Doherty made many additional flights with this historic plane with floats installed.

As the early spring training season started Johnson was made Chief Instructor at Hammondsport, and in his first class that year were several students who went on to considerable renown in aviation. Several notable wealthy sportsmen bought Curtiss Flying Boats and as a result, Johnson taught Robert Glendinning and Clarke Thompson of Philadelphia, E. K. Jaquith of Chicago and B. H. Kendrick of Atlantic City. The school had an active class that spring but by mid-summer Curtiss sent Johnson to Russia with Tony Jannus to deliver an order of Model "K" Curtiss Flying Boats to the Russian Admiralty at Sevastopol on the Black Sea. This assignment involved assembly and preparing the planes for flight, their acceptance tests and the training of Russian military officers to fly them. Johnson remained there for some months, and upon his return Curtiss sent him to Marblehead, Massachusetts where he conducted the initial flight tests on a new dual control, tandem training hydro-aeroplane for the Navy during February and March 1916 at the Burgess Aeroplane Company factory.

In April 1916 Johnson left the Curtiss Company to take charge of the Philadelphia School of Aviation at Essington, Pennsylvania. This school had just been organized by Robert Glendinning, wealthy Philadelphia banker, clubman and aviation enthusiast who had been taught to fly by Johnson at Hammondsport the previous spring. The school opened on May 15, 1916 with seven students, using two hydro aeroplanes and one flying boat. There Johnson put in a very active summer, averaging six to eight hours a day in the air while he trained and graduated a number of students.

In early 1917 the Government took over the Essington School as a military training base and sent four additional planes, with Captain William Ocker as Government Representative and Supervisor, but Johnson was retained as Chief Civilian Instructor. The school operated during the summer season of 1917 but in the fall it was moved to Lake Charles, Louisiana.

Johnson was stationed there for a short time only, then he and some of the other former Essington instructors were sent to Brooks Field, San Antonio, Texas. This was an advanced training base, and he soon was placed in charge of acrobatic instruction. About this time Johnson was instrumental in introducing the GOSPORT SYSTEM of training into the service, which was then being used in Europe. Johnson Americanized the System procedure and edited a booklet on this type of flying instruction, which was published by the Government and used as a standard text in the Services for some time. Johnson remained at Brooks Field through 1918 and about the time of the Armistice accepted a commission as First Lieutenant in the Aviation Branch of the Signal Corps.

After World War I Johnson gave up flying and went into the banking business with Redmond and Company, Philadelphia, Pennsylvania as a stock broker, where he remained until 1927. At that time he moved to Bridgeport, Connecticut and went into the automotive brake lining business with a former friend and aviation colleague. He was at Bridgeport in this venture until 1935 when he returned to Philadelphia and joined the Camden Trust Company as Trust Officer, where he remained until his retirement. After a lingering illness Johnson passed away on April 12, 1961 at the Urologic Clinic, Philadelphia, at age 72. He was survived by his wife, two sons and a daughter. Burial was in Colestown Cemetery near Haddenfield, New Jersey.

Flying Pioneer and Early Bird, Walter E. Johnson was truly one of the real pioneers of early American aviation history, and he richly deserves great credit for his many noteworthy contributions to its growth and development. Starting at the time aviation was an extremely hazardous experiment, he taught himself to fly and went on to become one of America's most renowned exhibition, test and instruction pilots. During World War I he was an outstanding flying instructor and taught scores of men to fly who later became well known in military aviation.

ROLAND ROHLFS

Roland Rohlfs was born in Buffalo, New York on February 10, 1892, son of the noted writer Anna Katherine (Green) Rohlfs. He attended Buffalo public schools, Nichols Private School, Lafayette High School and Technical High School. Mechanically inclined Rohlfs designed, built and raced motorcycles before entering aviation.

During the fall of 1914 the Curtiss Company found it necessary to expand its business and decided to move part of the operations to Buffalo. Arrangements were made to occupy floor space in the E. R. Thomas Motor Car Company plant, and very shortly advertising appeared in the Buffalo papers for a work force to start operations. At that time Rohlfs was an assistant chemist for the Lumen Bearing Company. The Curtiss ad interested him and he answered it, resulting in his acceptance of employment with Curtiss as a mechanic, first at Hammondsport and then at Buffalo in the spring of 1915.

The Curtiss Buffalo Division grew rapidly, first on wing and flying boat hull construction then, by May 1915, in making JN training planes. About June 1, a water flying school was started and later a land school was opened. The company developed new model planes and engines at a rapid pace and soon Rohlfs was on his way to an aviation career.

By mid-summer 1915, the Curtiss Buffalo division was reported to be the leading experimental station on

Roland Rohlfs: Early Curtiss Test Pilot and Altitude Record Holder.

aviation developments in the United States. In the late fall of 1915 the Company established a mid-southern training school at Newport News, Virginia, known as the Atlantic Coast Aeronautical Station. It was under the management of Capt. Thomas S. Baldwin, veteran airman and close friend of Glenn Curtiss. Plans were laid to instruct on both land and water craft, and equipment was sent to start operations.

Rohlfs was sent to Newport News on a special project and offered the opportunity to take flying instruction by Mr. Curtiss. Rohlfs was delighted and received his preliminary training on a Curtiss Tractor from company instructor Victor Carlstrom. He proved an apt pupil and quickly grasped the knack of flying although he did not solo at that time.

During 1916 Rohlfs continued his duties as a mechanic for the company on various assignments and became more closely related with many of the well known Curtiss pilots while getting as much additional flying experience as possible. That summer he took additional flight instruction from Phil Rader at the Curtiss Field on Bright's Farm, which comprised an area that is now part of Hialeah, Florida. While there Rohlfs made an unintentional solo flight on December 15, 1916. During the spring of 1917 while on assignment to the Miami, Florida school, Rohlfs flew for his pilot license, No. 699, dated April 25, 1917. Later that season, after the tragic death of Victor Carlstrom, he was made a full time experimental test pilot for the Curtiss Company.

From the beginning of Curtiss WW I military aviation developments, Rohlfs was a member of their experimental staff that turned out many new planes for both land and water use. The company also developed new and more powerful engines which received their first flight tests in the new model airplanes. Rohlfs' work on this program soon led to many of the notable flying achievements of his aviation career. During early 1918 the the Curtiss Company formed a new Engineering & Experimental Development Division at Garden City, Long Island and he was transferred there.

During the spring months Rohlfs began flying a new advanced military fighter plane which showed great promise. This machine, called the Wasp, was a triplane, using the new Curtiss-Kirkham K-12 400 hp engine, and was designed as a two-place fighter to be at least equal to the small single-seat foreign planes of that time, in speed and maneuverability. The early tests of this plane commanded immediate military attention, and its performance was easily far ahead of any machine being produced in the U. S. for World War I service. During 1918 Rohlfs demonstrated the Wasp before the Aircraft Board at Dayton, Ohio with full military load, showing a level flight speed of 163 mph and a climb to 20,000 feet in ten minutes. On December 23rd he established a speed record of 141 mph at the Naval Air Station, Rockaway Beach, Long Island on a Curtiss HA Hydro Tractor with Liberty engine.

On April 13, 1919 Rohlfs carried Mrs. George McManus, Broadway actress and wife of the celebrated cartoonist, over the Polo Grounds during a field day for the Actors Fund of America in a Curtiss training plane. At 300 feet she dropped a baseball she had autographed and which was auctioned off for the Fund.

After the flight test work in 1918, the company realized its was possible to establish a new altitude record with the Wasp and arrangements were made to attempt it. On July 25, 1919 Rohlfs climbed to 31,100 feet to break the year-old American record of 28,900 feet held by R. W. Schroeder. The world record was then 33,100 feet, held in France. On July 31st Rohlfs climbed to 31,700 feet. On September 13th he made a third flight to 34,200 feet to set a new world record, and on September 18th, a fourth flight was made to 34,610 feet, the climb being made in 1 hour, 53 minutes, with 35 minutes to descend. These tests were all made at Roosevelt Field, Long Island and were observed by Augustus Post for the Aero Club of America, Sidney Viet of the F.A.I., Col. Archie Miller for the Army, Prof. C. L. Poore of Columbia University and a group of military officers. What made these altitude flights all the more remarkable was the fact that the K-12 engine was not supercharged, whereas all other altitude records of that time were made with supercharged engines.

In addition to this Rohlfs had also been assisting with several other Curtiss post-war programs, including the MF Flying Boat, the Oriole, the tri-motored Eagle 8-passenger transport, the first U. S. Navy fighter plane, the HA, and the Seagull Flying Boat. On July 10, 1919 he made a flight from Buffalo to New York City in an Oriole carrying 200 copies of the NC trans-Atlantic flight history to be presented at a dinner given in New York by Glenn Curtiss for the NC pilots and crews. In late August he flew in the New York-Toronto race, winning third place. On September 27th he made a series of public demonstration flights with the new Curtiss Eagle biplane, carrying many well known aviation dignitaries.

In April 1920 Rohlfs established a speed record of 138 mph at the Naval Air Station, Rockaway Beach, Long Island, flying a Curtiss Wasp triplane on floats, with Curtiss C-12 engine. That year the Curtiss Company designed and built a special high speed racing plane and made formal entry in the Gordon Bennett Trophy Race to be held in France during the fall. This plane, built for Mr. S. E. J. Cox of Houston, Texas, was christened the Texas Wildcat, and Rohlfs was selected as the pilot. It was a small biplane which could be converted to a monoplane if proven advisable and was powered by a C-12 400 hp Curtiss engine. The plane was taken to France by Rohlfs and crew, but they were unable to bring the Trophy back to America due to insufficient test and development work prior to the competition.

In January 1921 Rohlfs left the Curtiss Company to join Aeromarine Airways, one of the first scheduled airlines in the United States, as Operations Manager. He was located at their Miami, Florida base for the winter season, then alternated between there and the Detroit-Cleveland area for the summer months. This continued until 1924. During 1924-1925 he was with the Fairchild Aerial Camera Corporation on experimental work. From late 1925 through 1928 Rohlfs was Sales Manager for Claude Neon Lights of New York City. While there he developed and patented a system whereby neon tubes could be attached under the wings of a giant plane and used for night flying advertising. The plane he had specially constructed was at that time the largest flying in the United States.

Following this Rohlfs obtained Transport Pilot License No. 3628 and became New York City Operations Manager for Metropolitan Air Ferries, a subsidiary of Curtiss-Wright Flying Service, Inc., until 1933 when he went with the Pitcairn Autogiro Company of Willow Grove, Pennsylvania. He was with them about one year before joining the Heart Island Transportation Corp. as Operations Manager of their autogiro and fixed wing facilities. In 1938 he became Chief of the Technical Section, U. S. Air Safety Board in Washington, D. C. Upon reorganization of the Air Safety Board in 1939 Rohlfs started a series of activities, all in the C.A.A.--embracing Private Flying Specialist; Assistant Superintendent War Training Service, Region I; Chief (Army Section) W.T.S.; Superintendent W.T.S., Region I and Assistant to Regional Administrator for Personal Flying Development, Region I--until his retirement in 1953.

Early Bird, Flying Pioneer extraordinary, Roland Rohlfs has devoted the major portion of his active life to aviation in many phases. His are memories of valuable and noteworthy accomplishment in the history of American aviation development progress. Richly deserving of great credit, he became one of the stalwarts of the early Curtiss organization and then went on to devote his energies and experience to other fields of aviation. A member of the Early Birds and other aviation groups, Rohlfs now lives quietly in retirement at his home in Manhasset, Long Island, New York.