



OX5 AVIATION PIONEERS TEXAS WING NEWSLETTER

George Vose, Editor/Secretary
PO Box 908, Alpine, Texas 79831
March, 2015 **No. 64**



From the Editor/Secretary

I did not expect to write this sort of message in this March 2015 Newsletter: But here it is:

The gradual physical weakness that accompanies advancing age (nearly 93 years for me) hovers close by. But I love the OX5 Aviation Pioneer organization, and plan to support it as long as I can.

On Saturday, January 10th, at my Taurus Mesa fly-in residence fifty-five air miles south of Alpine, I accidentally fell one evening at seven p.m. Unable to get up, I spent seventeen long hours on the floor until discovered at noon time the next day. A couple of days later I traveled by Native Air ambulance, Pilatus, to an Odessa hospital for six days of testing. Then, by ground ambulance, to Fort Stockton for therapy, and I am now improving.

If re-elected, I plan to continue my Texas Wing posts of Secretary and Newsletter Editor. I encourage all Texas Wing members to pay their 2015 National Dues. And I also invite new members to join the OX5 organization. (This group includes the hundreds of pilots that I have trained, and my many well-wishers).

Perhaps an OX5 **brochure/membership** application is enclosed with this newsletter. If, so, please complete it and return it to me with your \$30 annual dues, and I will proudly forward it to OX5 National HQ. In any event, I would be pleased to hear from you.

Regards, George Vose

From the Wing President, Cade Woodward



Here in the west Texas Big Bend Country, it has been an unusual winter, just as it has been in most of the U. S. While we will never match Boston's nearly 100 inches of snowfall, here in Alpine on February 12th we have six inches of snow on the ground and a low overcast -- so no flying today.

But days like this are helpful by giving me time to catch up on office work and paper work, including these words to OX5 members that George Vose has been reminding me to do. George is doing well in rehab in Fort Stockton, still edits the newsletter, and we look forward to his speedy return to Alpine.

This winter has been one of the wettest that I can remember, which is great for our ranch livestock and wildlife, but it has caused numerous delays in my wildlife surveying. I have just completed an assignment for the Texas Parks and Wildlife Department on mid-winter waterfowl and sandhill crane surveys. The surveys consist of flying transects one hundred feet above the ground, carrying two or three biologists who count the birds. The surveys were made in east Texas, south Texas and along the Texas gulf coast.

I am looking forward to the annual Texas Wing OX5 meeting in Lubbock this year, probably in July, and I hope to see everyone there.

Sincerely, Cade Woodward

WING OFFICERS, 2014-15 Cade Woodward, President Colton Woodward, Vice President George Vose, Secretary
Michelle Lawrence, Treasurer Hazel Fehmel, Historian

GOVERNORS (*Expiration dates shown*) Jack Brouse 2016 Robert Clark 2016 Barbara Kraemer 2016
Michelle Lawrence 2015 Jack Nelson 2015 Cade Woodward 2015
George Vose 2015

THIS ISSUE'S "Mystery Airplane"



It's an unusual looking high-wing, radial engine monoplane, but in its day it was a popular flyer. It is

- A. A Stinson Detroiter
- B. An American Eagle D-470
- C. A Curtiss Robin
- D. A Fairchild KR-34

(Answer with information, page 6)

Flight instructors during WWII (Mostly in Texas)

NOTE: At least nine Texas Wing members flew as civilian or commissioned flight instructors during World War II. They were: H. B. "Benny" Benninghoff, George Chandler, Fritz Kahl, George Vose, Linley Wright, Tom Frye, Gene Clark, Robert Taylor and Edna Gardner Whyte (If there are other Texas Wing members who instructed during WWII, please let us know). This newsletter issue includes the story of **EDNA GARDINER WHYTE**. Five others have been published: (Chandler, Vose, Wright, Benninghoff and Kahl). The others will follow in subsequent newsletters.

EDNA GARDINER WHYTE 1902-1992



Edna Gardner Whyte was not born in Texas (she was born in Garden City, Minnesota). But, as the Texas saying goes, "She got here as soon as she could". She became a licensed pilot in 1928 and then received her commercial (transport) and flight instructor certificates.

At the start of World War II she began to instruct Army Air Force cadets at Meacham Field in Fort Worth, and continued this flying service throughout the training period of WWII.



After the war and at the same Meacham Field, she started "Aero Enterprise Flight School", and trained G.I. Bill and civilian flying students. At age 44 Edna fell in love with one of her instructors and married George Whyte and together they ran the operation into the 1970s.

After George's death in 1972 she opened "Aero Valley Airport" in nearby Roanoke. Her work there consisted of flight instruction and the selling of residence tracts adjacent to airport runways. She had selected the picturesque name of "Aero Valley Airport", but this appropriate name did not last. After her death the new owner renamed the airport with the non-descript title, "Northwest Regional Airport", as it is listed on current air charts and publications. The Texas OX5 Wing held a fun summer "Brat Fest" reunion there in 2004.

As a woman pilot Edna had to overcome many hurdles in her early flying days. Perhaps the first hurdle was her insistence on taking the private pilot flight test in 1928 from a CAA inspector who told her that he had never licensed a woman pilot and did not want to start. He had taken Edna outside the hanger for a private discussion. Edna insisted that they proceed with the test. They did that, and she became the inspector's first woman pilot.



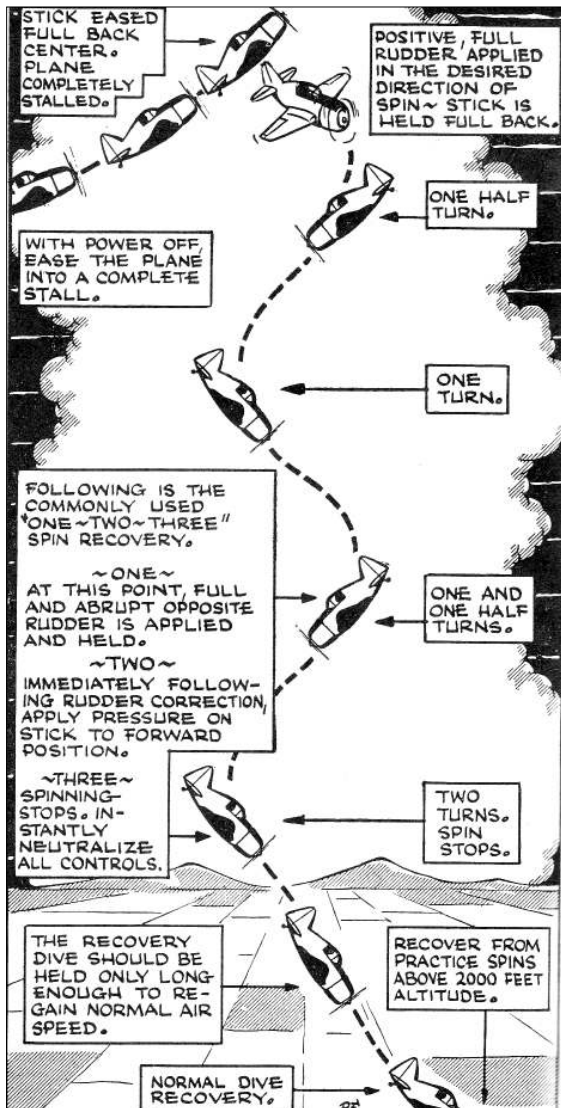
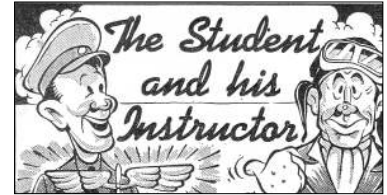
Edna Gardner Whyte, Age 85

Spins still here, (But ignored)

George Vose's comments

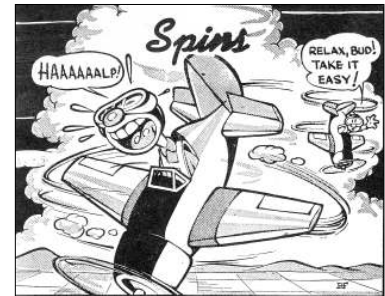
In 1943, I was a brand new twenty-one year old flight instructor, and my first flying job was with an Army Air Force indoctrination program at Westfield, Massachusetts. Thor Solberg, a noted Norwegian aviator who had moved to the U. S. shortly before the German occupation, was contracted by the U. S. Army Air Force to provide flight training for cadets receiving accelerated academic training in the nearby University of Massachusetts. The cadets received ten hours of flight instruction in Piper L-4 and Interstate L-6 aircraft prior to entering AAF Primary Flight Schools. The program's purpose was to provide basic knowledge of aircraft, aviation, and primary aircraft control.

One of my former students recently sent me a training manual, printed in 1943, entitled "Student Pilot Handbook" by Jack Hunt, The manual was used by instructors in flight training programs during WWII. I never expected to see a copy of this manual again. It is illustrated with cartoons designed to ease the rigors of 1943-44 flight training curriculums.



In the 1940s and earlier, during civilian flight training, the ability to enter and recover from spins was required before solo, and again on the flight test for all pilot certificates. In both CAA War Training Service and military training the need to wear parachutes was easily met, since "chutes" were a standard requirement for all flights.

At some time during the 1950s the spin requirement was dropped from civilian pilot certification, essentially because of demands by airplane manufacturers who viewed the requirement as a hindrance to aviation. Many post WWII students proceeded into flight training when the spin requirement was eliminated.



Many active pilots and flight instructors viewed negatively the elimination of spins from pilot certification. Perhaps their opinion was justified, but civilian flying swept upward when spins were eliminated. This editor feels that two major steps in aviation history fostered aviation into its present greatness: (1) The elimination of spins from pilot requirements, and (2) The change from tail wheel to the "tricycle" landing gear.

In a nut shell, here are Hunt's 1943 directions for spin entry and recovery: 1, "Stick full back. Plane completely stalled. 2, positive full rudder applied in desired spin direction, stick held full back".

"One turn; one and one-half turns; two turns"

"At this point, 3, full and opposite rudder is applied and held. 4, immediately following rudder correction, apply pressure on stick to forward position. Spinning stops. 5, instantly neutralize all controls. 6, recovery dive held long enough to regain normal air speed. 7, recover from practice spins above 2,000 feet altitude."

Ready to try one? First, better get some dual from a flight instructor who probably had only some demonstrations from an instructor who had only some demonstrations by a flight instructor who had only some demonstrations and so on ... and ... on

MORE ON EARLY AIRPLANE ENGINES

By John McCrory

In my series of engine articles we are at the point when the US Government failed to follow the advice of early airplane manufacturers who needed better power plants, especially with the short time before World War I was to force the issue.

The very first U.S. military aeroplane, the Wright Flyer, was equipped with an engine designed by the Wright Brothers. Although it is difficult to understand its internal workings by looking at it, the engine ran well on early available gasoline. But it produced very low power. Inline vertical engines, similar to those used in early automobiles came next, and are easier to comprehend -- almost everyone who has had an early model Ford or engine to work on will agree with this.

An admiration for radial engines has always existed. They are known as “round engines” because of the placement of cylinders in a circle in a round case, and can be recognized by their unique sounds and the spectacular antics during their start ups and warm ups. (Recently some pilots left Marfa in a Beech D-18 after a hunting trip and reproduced such a performance).

More complex designs emerged for aviation use in the early 1900s. One of the first was the three-cylinder Anzani engine that was used in Louis Bleriot's early monoplanes. The Anzani engine successfully powered his flight across the English Channel in the summer of 1909. The Anzani's initial advantage was the elimination of water cooling and water weight. Cylinder fins were designed to provide air cooling for the engine. Also, early airplanes were quite modern for the time, they actually looked like airplanes and sold well – and some are still flying.

European aviation developments moved ahead of America during these early years. In Europe, It was immediately understood that the airplane would be used for military purposes.

European manufacturers concentrated on development of the radial engine, a reciprocating type internal combustion engine designed primarily for military aircraft. The object was to produce higher power-to-weight power plants for fighter aircraft. Higher power was a continuing development and was usually obtained by adding multiple cylinders to the engines. More cylinders provided a smooth running reliable power plant without too much additional weight. This also allowed faster military flying machines that would be harder to damage in combat.

There was a second type of radial engine known as the “rotary engine”. European names associated with these are: Gnome, Le Rhone, Clerget, Siemens-Halske, and Bentley.

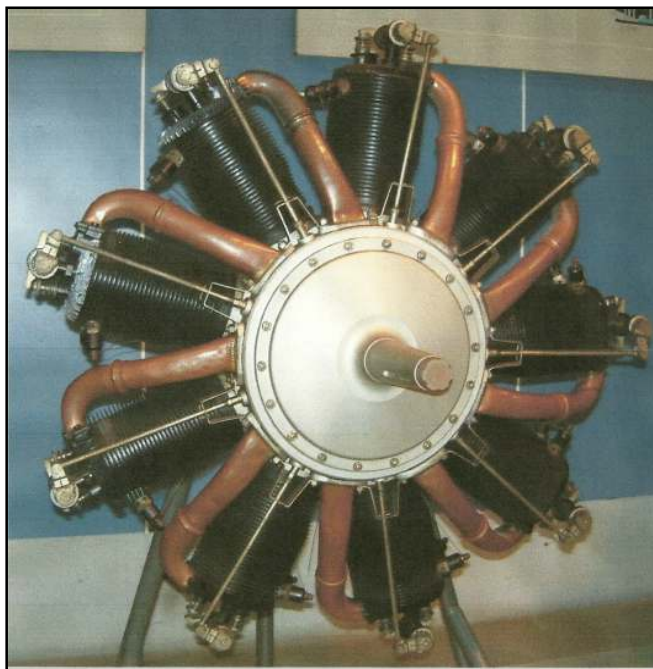
The “rotary engines” differed from the stationary radial engines which had the crankcase mounted to the firewall as they are today. All these engines looked similar from the outside, but the “rotary engines” had the propeller mounted on the front of the engine case, while the crankshaft protruded from the rear of the engine case and was attached to the airframe at the firewall. This allowed the entire round “rotary engine” to rotate with the propeller. The result was better cooling of the finned cylinders, especially when the airplane was sitting on the ground before takeoff.

The “rotary engine” was lubricated with castor oil, which is a very good lubricant and it is a vegetable product and thus nonflammable. It could also be mixed with gasoline to provide a fuel mixture that was introduced through the hollow crankshaft into the engine. If one looks at the Le Rhone engine (below), the copper pipes attached to the nine cylinders can be seen. You can think of these pipes as an intake manifold.

Where did all of the castor oil go? (Answer: Out the exhaust and all over the airplane belly). Also, this fine mist could not be kept out of the pilot’s ingestion system. The WWI rotary engine aircraft had to carry an adequate amount of castor oil, all expendable.

Engine controls were complex - and the engines often ran wide open. One method of engine control was the use of switches to cut off ignition to the spark plugs in order to slow down the engine. This switch was called the “blip switch”. Reduced power method could not be used continuously or the spark plugs would foul. So the switches were used on and off, intermittently. This produced an on-off engine sound, which was very distinctive.

“Rotary engine” production began to decline late in WWI. Their problems, described above, eventually led to more attention being given to conventional radial engines and horsepowers that reached 240 hp. In addition, the German aircraft used many powerful inline 6 cylinder engines, such as the Fokker DVII.



The Le Rhone rotary engine

The “Mystery Airplane”, Page 1



This issue’s “Mystery Airplane” is an American Eagle D-470. The model was powered by a 165 h.p. seven-cylinder Continental engine. Empty weight 1,875 lbs, gross weight 3008 lbs, Max speed 115 mph, cruise 100, landing speed 50 mph.

The D-470 was American Eagles’ first venture into the enclosed cockpit, high wing monoplane configuration. Previously, the company had manufactured successful models of the open cockpit biplane.
