

KANSAS WING **OX5 NEWS**

Harold Walter President 2019
 Dale Krebs 1st VP 2021
 Joe Latas 2nd VP 2022
 Jay McLeod Secretary 2021
 JoAnn Bailey Treasurer 2022



Harry Clements Membership 2021
 Bobbie Walter Governor 2021
 Doug Moler Program Chair 2022
 John Winter Governor 2022

JUNE 2019 – VOL 2 HAROLD AND BOBBIE WALTER PLUS JOE LATAS, EDITORS

OX5 AVIATION PIONEERS KANSAS WING

2:00 PM ~ PROGRAM

LARKSFIELD PLACE

SATURDAY, JUNE 15, 2019

LARKSFIELD PLACE
7373 EAST 29TH St North
Wichita, KS 67226

Meeting/Program: The meeting will be held at Larksfeld Place located at 7373 East 29th Street North. It is between Rock Road and Woodlawn, and on the south side of 29th. Park in the lot west of the main entry. Meet in the auditorium. Enter the west welcome entrance. The auditorium is located just inside and to the left of the west welcome door. The program is open to OX5 members, guests and also for those who are interested.



Program: Harry Clements will make a presentation entitled, "A Detour Happened on the Way to Mars!" He provides us with the following information:

The launch of U.S. manned missions to Mars began in the 1960's - before we even went to the Moon - with the development and testing of the solid propellant rocket motors for the launch itself. Mr. Clements was General Manager of the Division that produced the nozzles for several motors in the developing series - including the final one, which was the largest rocket motor ever built and tested in the world: handling nearly six million pounds of thrust. That's enough to lift 1200 loaded cars. The ultimate customer was NASA, who after that successful static test decided having men go to Mars was no longer an immediate objective of the administration and cancelled the launch motor project. This presentation will cover the fascinating story of the huge facility required, the technical problems overcome, and getting that nozzle from California to Florida for firing.



President's Message: We have progressed in aerospace from the propulsion of balloons, the airplane, and rocket powered vehicles to outer space. I know that we all will be interested in hearing Harry Clements at our next OX-5 program, presenting us with a part of his history that includes a special nozzle that was designed, built and tested. It could have been applied to a space vehicle. Your President has a special interest related to helping on a project for the Apollo 11 moon landing.

Ron Blum gave an excellent presentation titled: *Attention to De-tail - Mooney Aircraft in Wichita.* I think that we all know that "attention to the tail" is a readily identifiable characteristic of the Mooney, with its forward vertical tail sweep.

(hopefully all of you), the Mooney M-1 was also designed for the OX-5 engine.

Mooney Aircraft Company officially started in 1929 with the M-5, and the last Wichita Mooney was the M-20.

A Mooney M-18 is on display at the Kansas Aviation Museum. Mooney Aircraft Company wasn't in Wichita for more than a few years.

Thanks to 1st Vice President, Dale Krebbs, the display for the Kansas Aviation Museum of the Curtiss OX-5 engine is progressing quite well. It will include photos of Kansas Wing recipients of the Hall of Fame awards. The display is to be with our OX-5 engine that is on display at the

museum. The engine has been overhauled and is rotated monthly by Jay McLeod.

We are pleased by the response to our request for donations needed for constructing the display. The display will enhance the presentation of our OX-5 engine, and will tell how important the engine was in the early days plus its use for those years. Please contribute a bit by sending a check to JoAnn Bailey.



MOONEY IN WICHITA / RON BLUM

Ron Blum collage – photos by Dale Krebbs

This enlightening presentation was a general review all the Mooney aircraft designs and highlight those designed and/or built in Wichita, Kansas. Mooney aircraft originally competed with Wichita aircraft, in particular the Laird "Swallow". For those that are OX5 enthusiasts

I hope to see you at our June meeting, again at Larksfeld Place (2:00 PM).

Harold Walter, President KS Wing OX5 Aviation Pioneers

Treasurer: Please mail or see JoAnn Bailey to pay OX5 Kansas Wing annual dues of \$10. Please note that the fiscal year begins on January 1.

JoAnn Bailey
1736 S. Emporia
Wichita, KS 67211

JoAnn Bailey, 316-258-4956

OX5 National dues are \$30. Make check payable to *OX5 Aviation Pioneers*, and mail to:

OX5 Aviation Pioneers
PO Box 769
Troy, Ohio 45373

Secretary's Report: Those present: Harold Walter, Bobbie Walter, Joe Latas, JoAnn Bailey, Doug Moler, Dale Krebs, Jay McLeod

Harold Walter opened the meeting handing out an agenda and other material related to the OX5 display project we are working to finalize. After a few introduction items, the meeting was turned over to Dale Krebs.

Dale distributed a detailed break-down of bids he had received for costs of construction of mounting panels, text printing and special lettering. After reviewing this material, Dale asked for final input from those present. There were a few questions and remarks but generally there seemed to be agreement that what was presented was approved. Doug Moler presented special pictures of OX5 powered commercial aircraft to be included on the display. Dale demonstrated the method of attachment of the Wing newsletter and the aircraft picture in special frames to the display that will allow for up-dating the content.

Dale proposed using 1 inch Gator Board to fabricate the large mounting panels due to their large size (8 ft tall x 4 ft wide). He requested approval of the Board since the cost of the heavier material is \$160 more than the ½ inch material. All present approved this change.

There were some minor changes in text to clarify the status of the Laird Swallow aircraft as the first production model commercial aircraft in the US manufactured for resale (43 models were built beginning in 1920). A great effort was shown in minimizing the costs without compromising the display quality, and even enhancing it.

It is considered that this meeting should be the final review meeting for funding and content before proceeding with construction of the display. JoAnn reported that donation returns for the display were coming along quite well. Dale has made a special effort to minimize cost and maximize the quality of the display.

Jay McLeod, Secretary KS Wing OX5 Aviation Pioneers

Nose Wheel Aircraft: An aircraft with nose wheel landing gear has not always been as popular as it is today. In the past landing gear terminology was conventional for the tail-wheel type, and tri-cycle for the nose-wheel type. Today, the nose-wheel type is known as conventional, and the tail-wheel type is often called simply tail-wheel and tail-dragger.

There are several reasons that the nose wheel has become popular. Structural materials and design efficiencies have improved, allowing the extra gear weight.

Retractable landing gear reduces the nose wheel drag. Cross-wind landings are much more predictable when flying with the nose-wheel configuration.

Adverse wind effects upon the aircraft, when parked, are considerably reduced due to the lesser angle of attack relative to the ground.

One disadvantage of the nose-wheel type is that landings must be made by contacting the ground with main landing gear at or before the nose wheel contacts the runway. Touching nose wheel first can result in an airplane porpoising effect that can become divergent.

An advantage of the tail-wheel aircraft is that the main gear can contact the runway at any speed, allowing braking to begin at a higher speed. This is good when operating on short fields.

In the early days of aviation, nose wheel airplanes were often referred to as airport airplanes. The inference was that the nose wheel might collapse on very rough ground.

There are more variations than those mentioned here for the two configurations. The topic can be a good subject for hangar flying discussions.

Harold Walter notes that aircraft handling qualities characteristics are very important for the pilot's opinion of the airplane, the ease and preciseness that the pilot is able to control the airplane. Also control harmony is important. For example, I have flown an airplane that had very light pilot rudder pedal forces and heavy aileron forces. It was very difficult to fly the airplane with precision, especially with other undesirable characteristics, such as a lot of adverse yaw.

An airplane may meet the FAA requirements, but that is not a guarantee that the handling characteristics will be pleasant. It does mean that the aircraft probably is safe. The regulations have an added comment that even though the aircraft may meet the detailed factors, the resulting combination should not result in an "unsatisfactory" airplane.

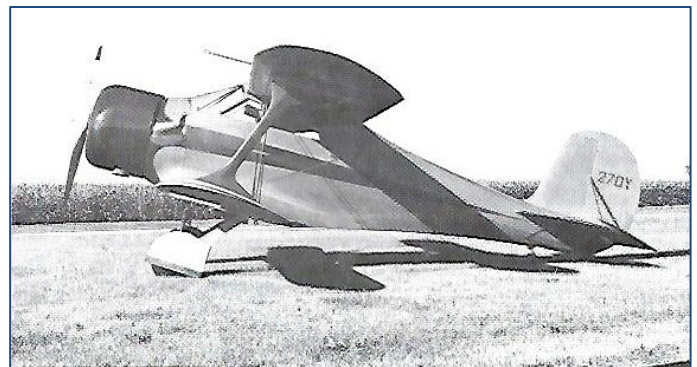
Stagger Wing: The question has come up several times. What is a Stagger Wing? What does the term mean? Perhaps it is time for an explanation.

When the term "stagger" is applied to bi-planes, it can be explained as follows: Assume a side view of the airplane with the fuselage level horizontally. When the lower wing is directly below the upper wing it is said to have zero stagger. If the lower wing is aft of a perpendicular line from the upper wing, it has positive stagger. If the lower wing is ahead of

the perpendicular line, the airplane is said to have negative stagger.



Travel Model 3000 with Wright-Hispano engine
Beech Photo probably by Frank Madson



Beech Model 17 Stagger-Wing
Photo probably by Frank Madson

Most bi-planes have zero or positive stagger. The Beechcraft Model 17 has negative stagger. This fact has been mentioned enough times that the airplane has become known as a Beech Stagger Wing.

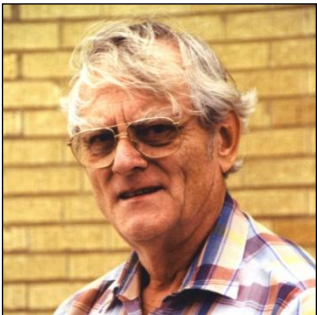
The reason for having positive stagger is that for open cockpit airplanes, it is easier to get into and out of the airplane. Otherwise, the wing interferes with entering and departing the front seat. Also, the upper wing trailing edge is often cut-out just above the front cockpit in order to make it easier to board. In addition, with the pilot in the rear seat, visibility is better to view for traffic, etc. to the right and left, especially when banking to turn.

The negative stagger allows the pilot to see in front of the leading edge of the upper wing, again when banking to turn.



Beechcraft Model 17 Stagger-Wing
Kansas Aviation Museum
Photo by Harold Walter

Sam Snyder: Sam's wife, Kay, reports that Sam Snyder flew west May 16. He had been a member of our OX5 KS Wing Board of Governors. Sam had been 1st Vice Pres, and also President. Sam was the recipient of an



OX5 Award. He was a regular at both Board and General meetings, as well as many other aviation functions. He was a member of aviation organizations. He volunteered at the Kansas Aviation

Museum, helping to restore a 1927 Swallow. Sam was an engineer, pilot and aircraft mechanic. He was a valuable asset to OX-5, specific aviation progress, and aviation success in general.



Richard E. Kirkland: Richard Kirkland flew west March 21, 2019. He is survived by his wife, Darlene, and four daughters. Richard was a graduate of Kansas State, then

moved to Wichita to be in the Missile Division of Beech Aircraft. He received his pilot's license in the Beech Flying Club. He was a member of EAA and was very active in starting EAA's Young Eagles Program. He gave children rides in his Cessna 150 and his Clipped Wing Cubby. Richard was a member of KS OX5 KS Wing and had been a member of the KS Wing Board of Governors. Richard was acquainted with Francis "Gary" Powers, U-2 pilot who was captured by the Russians.



Photo: Rainbow, Caleb Whitehead,
Engineering Manager, Doncastor Center UK,
Textron Aviation

July 20, 2019 is the 50th anniversary of landing on the Moon in 1969. Neil Armstrong and Edwin "Buzz" Aldrin were the NASA US Astronauts.

OX-5 KS WING DISPLAY PANEL

The display panel shown below was constructed and put on display at the Kansas Aviation Museum June 4, 2019. It is behind the Curtiss OX5 engine that is on loan from the Kansas Wing. The display enhances the museum's presentation of the engine as well as adding museum decor. It contributes interest in the engine as well as aircraft on display at the museum which have OX-5 engines. It will be a positive benefit for the museum as well as the KS Wing.

The Curtiss JN-4 Jenny, a WWI training aircraft was powered by the OX5 engine. The Jenny trained many pilots, stimulating the beginning of aviation in the United States.

The photo panels include the engine plus Kansas Wing OX-5 Hall of Fame persons. The pictures of airplanes are Curtiss OX-5 engine powered.

Many thanks go to Dale Krebbs for the design and development of the display. Also many thanks for the OX5 Kansas Wing Board and other members who contributed to the display becoming reality.

The completed product is shown below, behind the Curtiss OX-5 engine, located at the Kansas Aviation Museum.



Photo by Dale Krebbs

Harold Walter – OX5 Kansas Wing President
Teresa Day – Kansas Aviation Museum Director