

# HANGAR ECHOES

EXPERIMENTAL AIRCRAFT ASSOCIATION  
CHAPTER 168 DALLAS TEXAS

**The March Chapter meeting has a date change! Wednesday, March 5th, at the same location!**

On January 9, 1997, Susan and Jeff Hanson broke open a bottle of champagne to celebrate the first flight of their RV-4. As announced in last month's Hangar Echoes, the very first flight was only about eight minutes because of a plugged fuel injector. Once that little item was fixed, Jeff has put 10 hours on the plane in the last four weeks with absolutely no problems.

You probably remember, this RV-4 is one of a pair built over a five and one half year period by Jeff Hansen and Chuck Wilson. Chuck's first flight was last April and was covered in the June Hangar Echoes. The article outlined their nine years in the Air Force flying F-15s, a tour with the Red Flag program flying aggressors, and now American Airlines pilots. All of us at Aero Country have had the opportunity to watch their building process and I must say that it has been a study in perseverance. Perseverance is what builds airplanes when you need to round up 2000 hours plus and overcome all of the setbacks. For example, Jeff was putting the final touches to his canopy one day when it accidentally fell open breaking the hinge resulting in

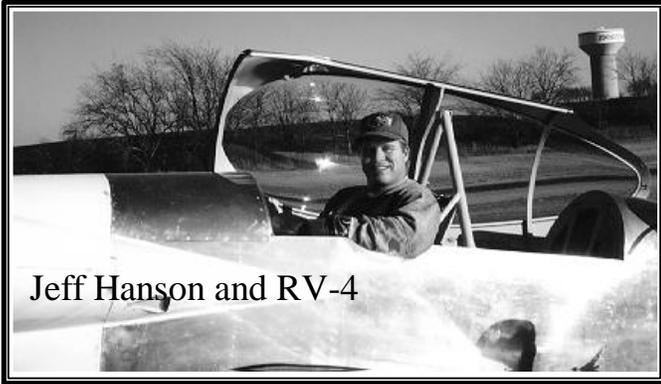


**Susan and Jeff Hanson**

a lot of rework. It's also been a study in seeing what kind of quality in workmanship can be obtained when you don't get in a big hurry. As one who has seen many RVs over the past 15 years, their RV-4s are right at the top of the pyramid

Jeff selected an interesting N number for his RV-4, November 107 SH which recognizes his entire family. His daughter and son born in October and July, and of course his wife's name is Susan. N107SH has a fuel injected O-320 Lycoming with an electronic ignition. The propeller is a high aspect ratio Warnke exactly like what Don Christiansen is running on his RV-4. It's really too early to determine how fast Jeff's four is since all of the fairings have not been completed. This brings me to another point. Chuck

and Jeff now realize they are only 90% done with 90% to go. Over the next several months, fairings, radios and final exterior paint will need to be completed. At this point in time, N107SH weight is 920 pounds which is really light even without paint and radios.



Both of these RV 4s are good examples of systems engineering above and beyond the basic kit received from Vans. They put in foot wells for the back set passengers. They used the wasted space between the floor and the bottom of the fuselage up front near your legs for small lockers. From buttons on the stick, Jeff is able to start his engine, turn on and off the fuel boost pump, and adjust his electric elevator trim. Jeff was not happy with the throttle quadrants he could buy off the shelf because of size and shape, so he developed and built his own. Jeff, you need to go into business selling these throttles as after market items. Congratulations Jeff  
*By Marvin Brott*

**Dick Johnson  
 Remembered**

Dick Johnson, a long time chapter member, made his last flight into the arms of his Lord on January 25th. He discovered airplanes at 8 years of age in Kansas City and aviation became a hobby and a profession with both man-carrying and model aircraft. Dick served his country as a radar operator aboard the battleship U.S.S. Maryland and participated in the Okinawa Invasion. He worked at Chance Vought Aircraft (LTV), serving as a designer of flight control systems. He loved coaching children on building and flying model airplanes, accumulated a vast library on experimental aircraft, and knew about everyone in his era of aviation. He is now very busy at "altitude"  
*By Ernie Ludwick*

**Chapter 168 News**  
*By Marvin Brott*

- Many of you remember John Wester who was a long time member of our chapter. Diane Wester has asked me to help her in selling the many items of aircraft material and tools John accumulated over many years. I have inventoried the material and all of it is in new condition.

The plans and material are complete to build a Cygnet and Windwagon/Hummelbird. That includes a very complete VW engine and the parts for the VW on the Windwagon. All the tools are available for metal working (Rivet gun, Cleco's, etc.). Since the Cygnet is tube, wood, and rag, the tools are also available to accomplish this job (torch, C-clamps, etc.). We need to help Diane and those in need of these plans, material, and tools have the opportunity for a great purchase. Please call me for the inventory list. Marvin Brott 972-235-5552

- Dick VanGrunsven, better known as Van, was in town several weeks ago for the soaring convention in Arlington. Van has always been a big sail plane enthusiast. On Saturday, Darrel Watson had lunch with him at the convention. On Sunday morning a number of the flying RV people met Van at Hicks Field where we toured George and Becki Orndorff's mini-factory. George and Van showed use the RV-8 wing construction. Very impressive. After looking over the Orndorff's place and looking around Bob and Judy Avery's shop, we went over to Eagle Mountain lake for lunch.
- Tom Moore has his Q-200 ready for first flight. We will follow up on Tom's first flight with a story in the newsletter.
- Bo Bauereis indicated that his Glasair III flew for the first time at Mesa, Arizona with the test pilot. Everything went very well with some changes with the propeller. Bo will go out to Mesa for a complete check out and bring it home sometime in March. We will get the complete story on this very fast plane for our newsletter.
- For those of you who missed the January newsletter meeting, Jerry Mrazek and friend gave us a super excellent blue-grass concert after showing off the construction of the RANs. Thanks Nelda and Jerry for a good time.
- As you may have heard, Cecil Mcree had some chrome cylinder problems with very poor plating. He was going through oil faster than he wanted so he started checking the filters and found considerable metal. After a complete tear down, overhaul and lots of money, his RV-6 is back in the air with about five hours on this engine. Seems like a number of us have had problems with initial engine problems. Chuck Wilson with his RV-4 had a cracked cylinder that was giving him trouble with oil consumption for a while.

*If you some Chapter 168 news, please call 972-235-5552 and leave a message.*



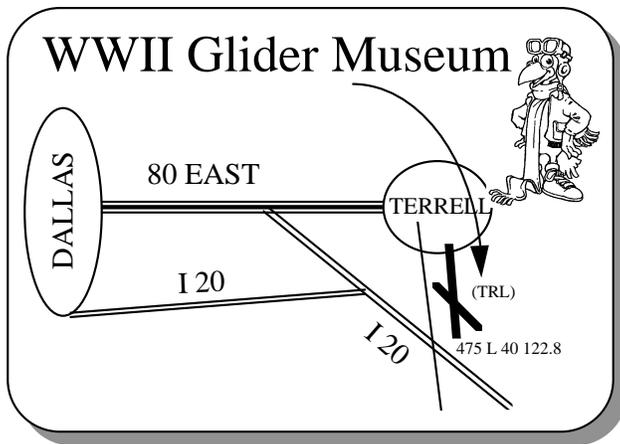
## March 5th Meeting (Wednesday)

Our March 5th (note: this meeting is on first Wednesday) Meeting will be held at the Farmers Branch Library, located on the Northwest corner of Webb Chapel and Golfing Green Drive. The meeting will be held in the auditorium and will begin at 6:30 p.m. and finish at 8:45 p.m. Please plan now to attend!

Our March 5th meeting will feature Bela Ambrus, one of our advertisers. Bela will have a presentation on engines and will answer all of our questions.

## March 8th Fly-In Drive-In

On March 8th (Saturday following the chapter meeting), Chapter 168 fly-in/drive-in will be at Terrell Airport.



## Internet Addresses

<http://vline.net/eaal168>  
<http://www.eaa.org>  
<http://www.faa.gov>  
<http://ceps.nasm.edu>

Chap 168  
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## Calendar of Events

- April 6-12 Lakeland, FL 23rd Annual Sun N Fun EAA Fly-In at Linder Regional Airport 941-644-2431
- May 2nd Galveston, Lone Star Flight Museum
- June 6th Bartsville Biplane Expo 97
- July 30 - Aug. 5 Oshkosh, WI 45th Annual EAA Fly-In and Convention at Wittman Regional Airport

## March 13th Director's Meeting

The March Director's Meeting will be from 7:00 - 8:45 PM at the Farmers Branch Library on the 13th. The following is a report by Gerry Mizelle from the February meeting.

- Carter Craft reported to the board the updated information about chapter hats. He discussed the less expensive, foam screened front with mesh back versus a better quality full cotton cap with an embroidered front for a few dollars

more. The board examined the samples which were available and following a lengthy discussion, decided to order the full cotton caps embroidered with our 168 Chapter Shield. The board ordered the caps in three colors, red, white and blue. Assuming the initial proof is satisfactory, they should be available at our March meeting for eight dollars each.

- Monroe discussed the Kerrville status. He will be attending the next planning meeting in Georgetown on the 22nd and will update us all at the chapter meeting.
- Discussion about the upcoming flying season and the need to prepare our trailer for our events. Tom Moe volunteered to register the trailer and assess its current status. We will continue with the 1996 scheduling for transportation of the trailer to our fly-ins with Gary Hansen's coordination of those volunteers.
- There was a brief discussion about a request to place our newsletter on the Internet. At this time the board felt it is not practical because of the additional work required and the potential expense for scanning and disk storage.
- At our March meeting we will be accepting nominations for the 1997 Board of Directors. At this time we have received the following nominations for the eight to ten positions: Dave Davidson, Ralph Haroldson, Tom Moe, Jerry Mrazek and Bill Wisley. The nominations will be completed at the March meeting and vote will take place at the April meeting.

## New Members joining during January:

- Rod Johannsen Mooney and Piper Super Cruiser restoration (20%),
- David Landrum RV-6 interest
- Robert Navar Cessna 170B (1953)

## March 25th Newsletter Assembly

The March issue of Hangar Echoes will be assembled at Linda and Don Christiansen's home on March 25th starting at 7:00 PM. The address is 515 Softwood Circle, Duncanville TX, phone 972 298-6531 This will give us an opportunity to look over Don's RV-8 wings. Don't miss this newsletter assembly.



## **A Message From the President Monroe McDonald**

### **February Activities**

The regular and airport meetings this month were both about the extensive propeller maintenance facility that Karl Byam owns and operates at Meacham Field. I thought I knew quite a bit about propellers, but I learned a lot. I hope you enjoyed it too.

### **Southwest Regional Fly-in aka. "Kerrville"**

As I explained last month, I am on the committee to investigate alternative locations for the fly-in. We are having the first committee meeting on Saturday the 22nd. I expect to come back from this with a list of the criteria for a location and a comparative analysis of Kerrville so we will know what we are looking for. There is no point in moving unless we are making an improvement.

When we have this criteria, we will invite anybody who has a favorite place to submit it in this format. If it has advantages, it will be considered.

### **Hot dogs etc.**

It is again the time to start our serious fly-in schedule, beginning with our March outing at Terrell Airport, meaning we would like to be able to prepare lunch outdoors. Otherwise we are limited to airports that have restaurants, and that eliminates a lot of nice airports. We have had poor success at getting people to help with this chore; we will discuss ways to make this more attractive, please bring your suggestions.

### **Changed Meeting Dates!!**

In the months of March and April our meeting room at the Farmers Branch library is not available on our usual 1st Tuesday, and will be held the next night, on Wednesday. Repeat, the March meeting will be Wed Mar 5, and the next on Wed APR 2. Don't be early! In May we will go back to our regular time.



## The Good Merlin Doctor

by Michael Johannsen

If you're like me, and I would assume most other aviation enthusiasts, you know that there is just no sound like the sound of a P-51. As most of you are aware, that sound comes from the Mustang's Rolls Royce Merlin V-12.

However, some of you might not know that our own Aero Country airport is host to one of only a handful of Merlin shops in the nation. Rick Shanholtzer, owner of Frontier Aviation, has been rebuilding the Rolls Royce engines at Aero Country for about four years. He was previously in Sylmar California working for Zeuschel Racing Engines, building Merlins for Reno racers. When the owner of Zeuschel was killed in a plane crash, Rick bought the company and moved to Texas.

What is involved in overhauling a Merlin? About 10,000 parts (including hardware) and about 1,000 man-hours, depending on the extent of the overhaul and what the engine's application will be. A stock Merlin takes roughly three months to overhaul, while a racing engine could take considerably longer depending on the extent of the modifications.

The first step after receiving the engine into the shop (usually by truck, sorry!) is to tear it down. Wes Hill, Rick's faithful assistant, is in charge of tearing the engine down, cleaning the parts that will be reused, and painting the massive case, heads, supercharger housing, etc. to the owner's liking. (This usually means a very expensive Imron job.) Meanwhile, Rick is inspecting numerous moving parts of the engine for wear. He will

either finely machine the part to make it serviceable, or replace it with a new or used one. Although many of the parts that could be needed are difficult to find, Rick has a very extensive cache of parts that he brought with him from Zeuschel. Parts that he doesn't have he can usually get from a Rolls Royce surplus shop in England.

Then the case is put on a huge engine stand, beginning the long task of reassembly.

One area that requires particular attention is the cam/valve assembly.

Every piece must be honed to perfection and set up precisely so the Merlin will have that super-smooth purr. Another area requiring a tremendous amount of precision is the two-stage supercharger.

These turbines spin at up to

26,000 RPM and have the capability to generate 150 inches of manifold pressure! Obviously, everything must be to very close tolerance and well balanced spinning at those speeds. After the extensive assembly, the engine begins to take shape. All of the accessories are added, as well as the fuel, cooling and ignition system. Somewhat surprising is the spark plug used on a stock Merlin. It is a wire-filament plug manufactured by an English company called Lodge. It is much smaller than the plug found on most of your Lycomings and Continentals. Rick says that these plugs will easily last three to four runs to TBO, however they will cost you about a hundred dollars per plug. On the other hand, Rick says that a plug that works almost as well is a Bosch plug found at the auto-parts store. It could certainly save a guy a wad of cash!



Rick inspecting a cylinder/cam assembly before mating it with the case



After the engine is all put together and everything double-checked, it is time to hoist it on to his test stand, a 1964 International truck, complete with two fuel cells, oil tanks, and a booth with all of the applicable gauges

and controls, including a throttle quadrant out of a P-51. The engine is fitted with a test-club; a cut down S-2 Tracker prop with lots of pitch. When it is time to run the engine, Rick activates the pre-oiler. This gets oil pressure in the engine, especially up to the cam/valve-train which is at the highest point. After a visual verification that oil has made it to the cams, the valve covers are secured. Rick turns the engine over for eight blades, (two revolutions of the engine) and then throws the mag-switch

to "both". The engine roars instantly to life, with none of the smoke and thunder or rough running that you would expect from a first run. Almost makes you wonder what sort of witchcraft he's is up-to when you're not looking!

Rick will go through a series of run-in procedures lasting six hours, gradually working up to two hours of

full-power operation by about hour four. Folks, that's two hours of 3000 RPM and 61 inches of manifold pressure! During these runs, Wes is in charge of taking down readings from the engine gauges (almost minute

by minute at first) and recording them in the test-log, as well as inspecting the engine for leaks between runs. Rick says that he rarely encounters any bad behavior from an engine and usually no more tweaking is required than the correction of a minor oil leak here or there.



A Merlin almost ready to run, mounted on the 1964 International test stand

Apparently, Rick and Wes's good work pays off. Last year, an engine they overhauled powered the Mustang that

won the Bronze race at Reno (*Miss America*), and in previous years, Frontier Aviation engines powered Gold and Silver race finishers, such as Mickey Rupp's *Samurai*. If you get a chance, you should really go see Rick and his shop. It is on North American drive at Aero Country. Seeing what goes in to building these magnificent engines is something that you won't soon forget. Hearing them after they're done is even better!



## HANGER FLYING TALES

By Tandy Allen

All of the pilots that I know like a good flying story. In fact, some of them have been known to embroider the truth a bit to impress fellow aviators. Over the years, I have searched book stores for good stories and have been thrown out of Borders for making myself too comfortable while reading through their stock of flying books. Finally, however, I parted with \$4 for a copy of "MEN IN THE AIR" which was almost hidden in the bargain book pile.

Great find! If you like a good flying tale or two you need to add this one to your shelf of aviation books. Actually, there are a great many more flying stories than one or two, 60 by my count. All of the really readable aviation writers are represented - Richard Bach, Antoine de Saint-Exupery, Len Deighton, Stephen Coats, Earnest Gann and many more. True stories, fiction and history are allotted their place in this book.

Almost every category of flight is covered. There are sections on mythological flights (remember Icarus); Imaginative interplanetary flights with a good one from Isaac Asimov; histories of human powered flights; balloons; dirigibles; early manned flights (Wilbur and Orville's account); other pioneer flight (Lindbergh); barnstorming and airshows with a particularly good one about a wing walker by Guy Gilpatric; air wars - WW1, WW2 and Vietnam.; stormy encounters such as the account of an English glider pilot who soared to over 25,000 feet (yes he passed out from anoxia); parachuting (from 40,000 feet); the jet age with an account of Yeager breaking the sound barrier by Tom Wolfe; and the space age. The book concludes with a special section on women in aviation. All of your favorites are here and some you didn't know existed.

Although winter should be about over, this is a good book to curl up with on a winter's night. The stories are mostly short but the book runs to 550 pages. One can pick and chose the stories that interest you and come back to the ones you skipped later.

The book is "Men in the Air" edited by Brandt Aymar and published by Wings Books - \$3.98 plus tax at Borders Books.

### Selected News Items

Brownie Seals

#### McKinney Municipal (TKI)

PILOT-CONTROLLED LIGHTING (PCL): The after-hours PCL for runway edge lights is no longer on frequency 123.0 -- it's now on 118.825, the tower frequency. (VASI and approach lights are in work). Note that 123.0 is also not the CTAF anymore,- it's just the Unicom. CTAF is also 118.825. CONTROL TOWER GOES FEDERAL: McKinney Tower will be a Level I Tower starting sometime in March, as it's going to start receiving FAA funding. We shouldn't notice  
*March 1997*

much of a change from the previous private contractor status. (From the *Newsletter of the Texins Flying Club*) →

#### "Pitts" Built Swifts ?

Aviat (Pitts) Aircraft owner Stewart Horn has completed negotiations with the Swift type club which will let him produce the Swift airplane. The license is based on the type certificate as at the last production by Temco. Horn advises that he may do some mods - like the stick controls, bubble canopy, larger engines and others but basically the plane will be a Swift. Horn later continued the negotiations with LoPesti/Piper and has now acquired the production rights from them that will allow production of the souped-up version of the Swift. No announcement of intentions has been made, but considering the number of orders that LoPesti had for the plane it is very likely that there will be some announcement soon.

#### 99's Put Compass Rose at Mesquite and Gainsville

A compass rose is an important and useful addition to any airport. The 99's continue to provide these valuable additions to airports all across the country.

They have recently completed a new compass rose at the Mesquite Metro Airport. The 99's provide compass roses as a service to their fellow pilots and the aviation community in general. In July they placed one at the Grayson County Airport. Those of us who live and fly at Dallas Air Park still gratefully remember the 99's putting the runway identification numbers on our runway a few years back. Melody Dougherty, president of the Dallas Chapter and her fellow 99's, are well known for involvement in aviation education and charitable activities. For information about a chapter in your area, call 1-800-68-PILOT.

#### McCauley Propellor AD

Reviewing the AD summary, I find one that might be of interest to the Fun Flyer crowd. AD 95-21-01 relates to McCauley propellers installed on Cessna 152, 152A, Reims F152, FA152 and perhaps others with similar configuration. For propellers with 3000 hours or more time in service (and any with unknown time), inspect the hub for cracks, with a 10 power magnifying device. There after inspect at 50 hour intervals. As PIC you are responsible for compliance with AD's. So check your own plane and any that you rent or borrow. (*Karl Byam mentioned this at the last chapter meeting*)

#### Duane Cole Honored



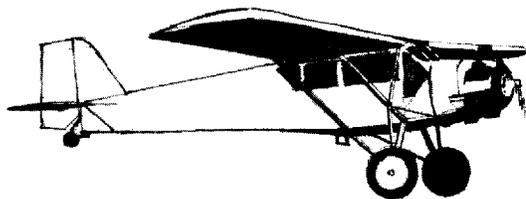
Duane Cole has received more honors. Cole was awarded the "Sword of Excellence" by the International Council of Air Shows (ICAS) at their December Banquet in Las Vegas. In addition to that prestigious award the ICAS also inducted Cole into the Air Show Hall of Fame. Duane Started flying Air Shows in the early 1940's and continued performing until a couple of years ago when the FAA would no longer issue him a medical certificate. He now lives in Burseson, Texas and continues to participate in Air Show activity by announcing at the shows, lecturing, writing and promoting his aviation books.

**SPEEDVISION NETWORK TV** Beginning in March, the Speedvision network will be airing 'Sport Flying' which will be a series of twenty different 1/2 hour programs produced by the EAA. The schedule has not been published at this time. So if you have access to this station and also have a VCR, please contact me. I am willing to supply the tapes if anyone would be willing to record them so we may show them at our meetings and include them in our library. I spoke with Dick Nocenti, EAA, who informed me that we may record it for personal use and they may be shown, as long as it is not in a commercial environment. I believe that you need a satellite system to receive it in our area. The schedule will be posted in Sport Aviation and I will be glad to pull the schedule off the Internet, along with the other aviation programs for the volunteer. Thanks in advance. Gerry Mizelle

**ONE-WAY CORRIGAN**  
By Robert McG. Thomas Jr.

*Editor's note: I picked this article up from the TI Texins Flying Club Newsletter (thanks Ash Collins). Douglas Corrigan died in December, 1995 (about a year ago). Enjoy the inspiration with respect to bureaucratic authority.*

NEW YORK (New York Times Service). Douglas Corrigan Was a brash, errant aviator who captured the Imagination of a Depression-weary public in 1938 when he took off from Brooklyn on what he was said was to be a nonstop solo flight to Los Angeles and then landed his improbable airplane in Dublin a day later. He died Saturday at a hospital in Orange, California. He was 88 and had been lionized for more than a half century as Wrong Way Corrigan. The few people who were at Floyd Bennett Field when Mr. Corrigan took off at 5:15 A.M on July 17, 1938, were baffled when the 31-year-old aviator turned into a cloud bank and disappeared to the east.



According to his flight plan he should have been heading west.

As they and the world learned when his jerrybuilt, overloaded, secondhand airplane touched down at Dublin's Baldonnell Airport 28 hours and 13 minutes later, Mr. Corrigan had not only known what he was doing, he had also flown straight into the hearts of the American people. "I'm Douglas Corrigan," he told a group of startled airport workers when he landed. "Just got in from New York. Where am I? I intended to fly to California." Although he continued to claim with a more or less straight face that he had simply been led astray by a faulty compass, the story was far from convincing, especially to the American aviation authorities who had rejected his repeated requests to make just such a flight because his modified 1929 Curtiss-Robin monoplane was judged unworthy of more than an experimental aircraft certification.

Unmoved by evidence that he had not checked weather reports for the North Atlantic before his flight and had carried charts showing only his supposedly planned route to California, authorities deemed his plane so unsafe and his flight so illegal that it took a 600-word official telegram to detail all the regulations he had violated. But if Mr. Corrigan had such a twinkle in his eye when he told his story that he appeared to be trying to suppress a wink, the authorities had trouble stifling a wink of their own. Although his pilot's license was instantly suspended, Mr. Corrigan, who returned to the United States by ship, did not miss a minute of flying time. He served the entire suspension at sea. The license was reinstated as soon as he and his crated-up plane sailed into New York harbor aboard the liner Manhattan on Aug. 4, and received a tumultuous greeting.

There was an even larger welcome the next day when an estimated one million New Yorkers lined lower Broadway for a ticker-tape parade that eclipsed the one given for Charles Lindbergh after his solo flight to Paris in 1927. Mr. Corrigan's 3,150-mile flight was a sensation, pushing depressing economic news and grim international reports aside on the front pages of US newspapers. Although a half dozen well-known pilots, among them Amelia Earhart and Wylie Post, had made solo flights across the Atlantic since Lindbergh had blazed the trail in the Spirit of St. Louis in 1927, none struck such a chord with the American people as Mr. Corrigan did. That was partly because he was seen as an engaging and impish young pilot who had thumbed his nose at authorities, then baldly denied it, and partly because he had made the flight not in a state of the art aircraft with cutting edge instruments, but in a rickety plane so precariously patched together that it was dubbed an airborne crate and a flying jalopy.



Mr. Corrigan, who was born in Galveston, Texas, and grew up in Los Angeles, had been dreaming of a flight across the Atlantic for a long time. Enchanted with aviation at an early age, he had become a barnstorming pilot, flying instructor and an aviation mechanic who helped build Lindbergh's Spirit of St. Louis in San Diego. It was Mr. Corrigan, in fact, who pulled the

chocks away from the wheels when Lindbergh took off from San Diego on his flight to New York in 1927.

During World War II, Mr. Corrigan was a test pilot and later operated an air freight service. →