



EAA CHAPTER 174

(Chartered since 1966)

FEBRUARY 2003



TALESPINNERS

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Secretary	Lee Jewell	513-471-7188

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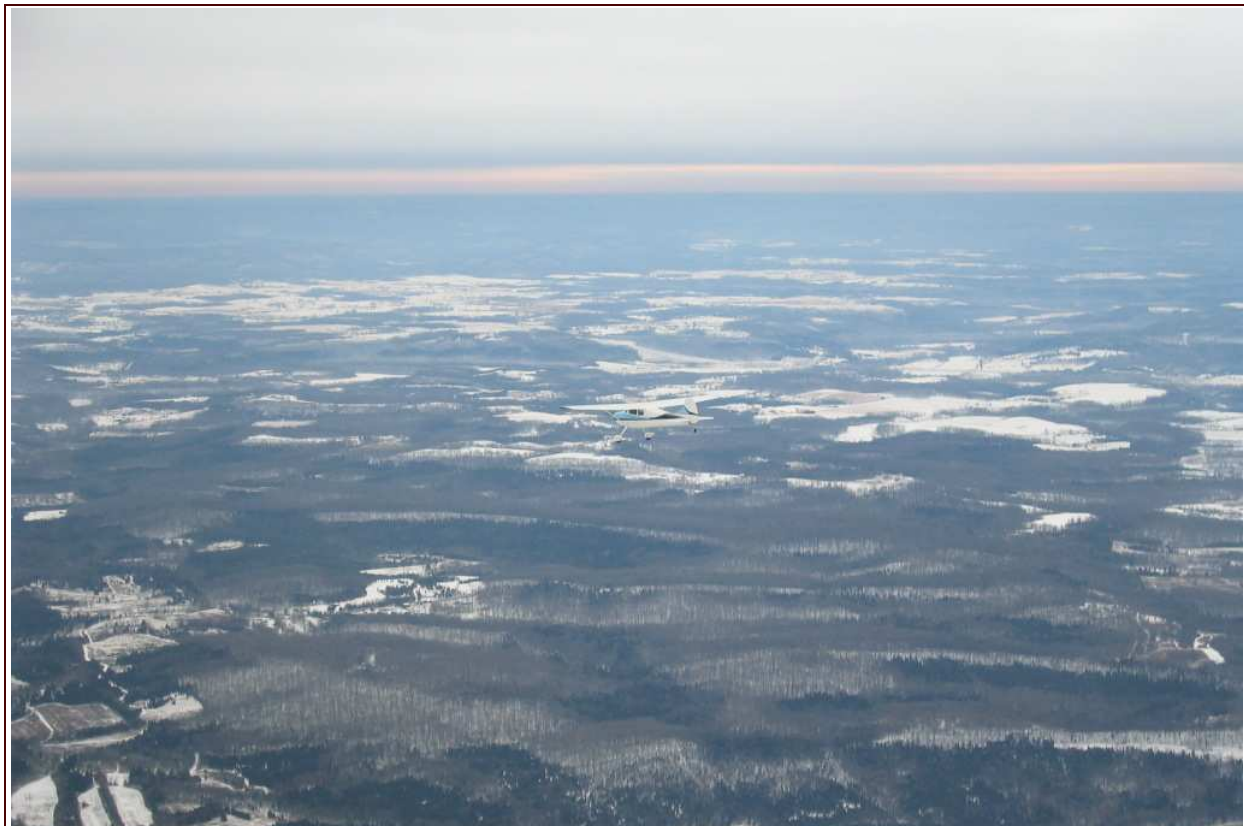
MONTHLY MEETING: 16 FEB / 2 PM

FLY-OUT LUNCH : 22 FEB / 10:30 AM

PROGRAM: MORE ON ENGINES

CLERMONT COUNTY AIRPORT (I69) : At the light 3 miles east of I-275 on St. Rte. 32, turn south St. Rte. 74 (old 74) and go about 1.2 miles. Turn right onto Armstrong Blvd and go about ½ mile until it tees into Taylor Rd. Turn left on Taylor Rd. to the Airport. The old terminal Building is the red brick building close to the road just before the runway. Rwy 4-22. Lat 39.04.42 Long 84.12.38 **Web Site www.eaa174.org**

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Gary Collins enroute to Portsmouth during Saturdays January 25th Fly-Out



FROM THE PRESIDENT

One month down, eleven more to go. Boy, there is more to this job than I figured. It gives me an appreciation for what my boss has to go through at work. There is so much more of the Chapter to see from my current vantage point. Some of it relates to airplanes, some of it doesn't. Some of it is fun, some of it isn't. I'm having a great time and I still need your help to do more. Now if I can only remember to write this column before the newsletter editor calls me to tell me I'm late again.

We had a good meeting in January and my thanks go out to Gary, Howard, and Tom for the engine overhaul program. I can just tell that Howard's "rope trick" will prove beneficial to someone, someday. We are off to a good start and I want to keep the momentum going. Tom Jenkins will no doubt have some more information on the Young Builder's program at our February meeting. I have offered to donate my Glasair III rudder kit the venture. If you or someone you know is in a position to donate a full kit please contact Tom. At the January meeting, we had three new members join the chapter. One new member, with extensive experience building high-performance composite planes, expressed interest in

mentoring the kids with composites building.

We had a nice fly-out to Portsmouth for lunch the Saturday following the regular meeting. The WX was cooperative and it was nice to see our snow-covered state from the air again. The fly-out attendees were mostly the regular crowd. We had at least one empty seat; so don't let that be an excuse for not going. When I joined the chapter a few years ago, I just sort of nudged my way into the fly-out activity by asking one of the "regulars" to please take me with him. It worked out great and now I have made some great friends. I recommend this approach to any of our new or non-flying members as a way to really get onboard with one of Chapter 174's most successful activities.

I need to hear from you about how the chapter is doing at meeting your needs and expectations. Please call me at phone number 513-793-2798 or email me at TJF@cinci.rr.com. I encourage you to tell me, or any of the committee chairmen, your comments, praise, or complaints. I would also love to hear from anyone willing to serve as the fall picnic coordinator.

Minutes From the Jan. Chapter Meeting

The January 2003 meeting of EAA Chapter 174 was called to order by President Tim Fry at 2:00, as Tim welcomed the membership to the new year and introduced the chapter's officers for 2003. The board

meeting minutes were approved as published in the January newsletter. Dave Robertson read the Treasurer's Report which showed \$362.44 in checking, \$1352.13 in savings, and \$6430.71 in the CD, a total of \$8145.28.

Committee reports:

- a. Fly-out scheduled for Jan 25, destination to be decided that morning.
- b. Mark Webb reported the hangar is available at a cost of \$80.00 per month.
- c. Tom Jenkins announced the hangar-building project is placed on hold for now while we concentrate on the Young Builders project.
- d. New members Brian Nickles, Don DeMaria, and Jeremy Hicks were introduced.
- e. Ray Kneipp Jr. reported the library boxes are available at \$.50 ea.
- f. Mike Franzago reported on the newsletter with a request for contributions.
- g. Tech Advisors Gary Collins and Howard Wells announced the day's program would demonstrate a method of freeing a stuck valve without removing the cylinder.....their famous Indian Rope Trick.
- h. Norm Beaudette discussed new items on his award-winning website.
- i. Phil Cady discussed Young Eagles with particular mention of insurance. The board will further discuss insurance and how much to carry.

President Tim laid out his objectives for this year, announcing his desire to have a "Champion" to spearhead each of the chapter activities. Vice President Tom Jenkins discussed the Young Builders project, to be sponsored jointly by Plane and Pilot Magazine and Sporty's. Tim talked of money-raising ideas to support our activities.

George Elbel spoke of the April-scheduled fabric covering seminar in Troy, co-sponsored by Chapter 174 and the Ohio Chapter of the Short-Wing Piper Club.

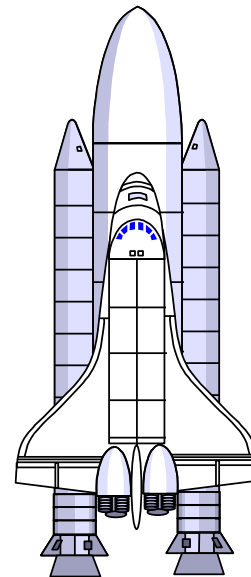
The secretary was directed to send a card to member Dave Raney, who recently underwent surgery. After a short intermission, Gary Collins and Howard Wells gave a very interesting program on the Indian Rope Trick, an emergency field repair for a stuck valve.

Respectfully submitted,

Lee Jewell, Secretary

Minutes From the Jan. Board Meeting

January's Minutes were published last month.



In memory of those who reached high for the heavens

Bugs & Ice

Bugs & Ice. Not two terms that usually go together. As a matter of fact, when you think of one, the other is probably pretty far removed from your mind. In the summer when you are cleaning bugs off the plane, the only ice is in your favorite beverage. In the colder months when ice becomes part of your weekly vocabulary, bugs are in bug heaven or their cocoons or wherever they go when they no longer commit suicide on the leading edge of your aerial chariot's wings. But recently, I came across a couple of examples where the two have a common thread, damage.

I recently completed a damage assessment on a Cessna 208B, Caravan. Let me set the scene for you. The pilot of the 208 was descending from 10,000 feet into Standiford field at Louisville, Kentucky. The contract flight, hauling cargo for UPS, had originated in South Carolina and was terminating in Louisville. Shortly after beginning the descent the pilot heard a "pop." A few minutes later he heard another "pop". The plane had a slightly different feel to it but nothing that would constitute declaring an emergency. The controls felt a little different but he couldn't physically locate any problem. Looking out the windows, everything looked normal. The landing went without incident and when the pilot exited the aircraft, he began looking around. At first, everything appeared normal. Then he climbed up on the pilot's door ledge and looked at the top of the wings. Imagine his surprise when he saw what looked like the Jolly Green Giant had stepped on the tops of the wings. The right wing was worse than the left. But the tops of both wings were sucked into the fuel nacelles. An inspection

of the under side of the wing revealed fuel leakage and some slight deformation.

I traveled to Standiford to inspect the aircraft. I have not seen anything remotely close to the type of damage I saw when I stood on the doorsill and looked down the wings. Imagine looking down the top of a wing and seeing the top skins sucked down to the bottom skin. Not a very technical way of putting it, but the visualization is there. The company who owns the aircraft sent their mechanics to help determine the cause and Cessna was also contacted. The inspection of the fuel vent system found the debris of a mud-dobbers nest in the main vent line that affects both tanks. Keep in mind; the caps on these tanks are non-venting. Now the interesting point is that this flight was conducted long after mud-dobbers season. The plane is normally based at McCollum field in Kennesaw, Georgia (my old stomping grounds). This plane is a workhorse and flies on a regular basis. So what happened and why on this flight and not other flights? A check of the aircraft flight logs revealed that this plane normally flies very short and low altitude flights of less than an hour. On the flight in question, the plane had been full of fuel, on a long flight at an altitude of 10,000 feet. As the descent was started into Louisville, the tanks were now low on fuel, the plane was descending from thin air to thick air and the engine fuel pump was working like a machine possessed to keep kerosene going to the burner. The result, the tanks and fuel structure could not withstand the negative pressure and the wings collapsed. Aircraft Structures, in Edna, Oklahoma, did the repairs. The wings suffered extensive spar, rib and skin damage. The header tank at the pump was also sucked in. Cost to repair, \$123,101.48. The Cessna technical

representative told me that this is the second example of such damage. The system is designed with a small secondary opening deep in the vent line plumbing in case such blockage occurred near the wing opening. But in this case, the little buggers climbed past the secondary opening to make the nest. The owner inspected his fleet and found three more planes with vent blockage.

Don Reasoner keeps very simple plugs in his tank vents while the RV-6 is parked. They have red flags on them to make sure they are pulled during the preflight. This is a very good practice to follow any time of the year. The next time you are on a flight line, notice how many pitot covers you see. Now think about how many fuel vent line covers you see. I can keep a plane in the air without the pitot system. Without fuel, the glide path is predetermined in the POH.

My next example is a little (a lot) less dramatic but frustrating all the same. It was the day after Thanksgiving and I had a flight scheduled in the company C-182. The plane is housed at Lebanon-Warren County in a very nice enclosed T-hanger. As you may recall, it was very cold that day and on the previous Thanksgiving night. This particular plane has five quick drains in each wing. The drains are the flush type. I took samples from four of the drains on the left wing with no problem. As I took a sample from the fifth drain on the trailing edge near the fuselage, I felt a slight crunch when I pushed the sampler into the drain. After I removed the sampler, the fuel just kept on coming in a steady drip. Nothing I did would make it stop. I tried pushing up and down with the sample to see if I could get the drain to reset. Fuel just kept dripping. I shook the wing. I pulled the fuel cap off. Fuel just kept coming. I tried the sampler

again. More fuel. Since it was the day after Thanksgiving and before 8:00 AM, no one was around the airport. By now the puddle was getting pretty big on the hanger floor and I had 45 more gallons to go.

I pulled the plane out of the hanger and started the engine. My thought was that maybe the vibration of the plane would help reset the drain. I was convinced it had dirt wedge in the seat and was stuck. I needed to go over to Highland County and I was hoping that mechanic would be in. As I landed at HOC and taxied up to the hanger, I noticed the drain was still dripping. Damn, more fuel. The mechanic was in and he took a quick look and said he had another drain. Another gentleman in the office overheard my conversation. He heard me say that I felt a crunch when I pushed the sampler in the drain. He asked the mechanic to get his air hose out with the blow nozzle attached. He came out to the plane and told me to take the cap off. He put the blow nozzle to the drain and gave it two or three quick burst. The fuel stopped immediately. The problem. Evidently there was a little slug of ice in the fuel that had formed around this drain since it is the lowest in the wing. When I pushed the sampler in moving the seat up, the ice moved in under the seat causing the crunch I felt. Interestingly enough, I have never seen even a hint of water in any of the samples I have taken from either wing. Whether it was just coincidence that this particular load of fuel had some water I don't know. I have not seen any water since. Bugs and ice. Both can be a nuisance. Either one can cause a lot of damage given the right circumstance.

By Bob Porter

HANGER FLYING

With Stu Faber

EAA 174 02-03

ROTARIES AGAIN. As a "gear head" aka "engine nut" I am fascinated by all kind of engines. The Wankel rotary being light and simple has always seem to have merit as an engine for light planes. I once owned a Mazda RX-3 with a Wankel. It ran well but used more gas than other small cars. Mazda has continued to produce the RX-7 as a hot rod turbo charged sports car. *Popular Science*, 02/03 has an article on a redesigned Wankel for their new RX-8. The exhaust and intake ports have been moved from the side of the block to the end plates and increased the power and efficiency of the engine. Port overlap in the earlier model wasted fuel. The RX-7 engines were reasonably priced. The RX-8 engine delivers 247 HP at 8500 RPM. A number of experiments in aircraft conversions of RX-7s have been tried but it has not taken hold. Perhaps the new engine will do it. See Feb 2002, yes 2002, *Sport Aviation* for an article on Wankels.

HOMEBUILDER'S DREAM. Also in *Popular Science* A short article on a man-carrying rubber band powered plane. It claims it will fly a mile at 100 ft. AGL with two people. The very small picture looks like a long pipe with a cross tail, huge prop, and a tall landing gear with a person seated on the axle. No wing was visible.

MONSTER FLYING SOMETHING. According to the February issue of *Popular Science Magazine* Boeing is looking at plans for a huge machine called a WIG, for wing-in-ground effect, about 4 times as big as a C-5A. This one is named Pelican. Some time ago I mentioned in this space that spy photos had spotted a similar Russian craft on the Caspian Sea in the 1960s. No airfield could handle it so it was a flying boat. However wave pounding during landing and takeoff requires a heavy hull making for problems. The Soviets built several, called ekranoplans, which required 7 to 10 jet engines including two at the front pointed down at an angle to get them off the water. The Boeing plan is for an unpressureized land plane flying in ground effect if possible, or up as high as 20,000 ft. It will have a 500 ft wing with drooping outer panels which will raise to promote handling at airports. There will be two decks and some cargo space in the wing roots. Empty weight 3.2 million pounds plus 2.8 million of cargo. 4 pairs of 80,000 HP turbine engines turning 4 pairs of 50 ft diameter counter rotating props provide power. The landing gear has 78 wheels. It may have civilian uses too as does Russia's super size transport now. I don't believe the Spruce Goose ever got out of ground effect.

DON'T MISS THIS ! eBay has been offering an ideal aviator's home. How about a 727 mounted on a pylon so it can pivot with the wind ? The interior to be reworked into complete living quarters with the wings converted to decks. Attachments will be added to eliminate the wing lift. Est. value \$300,000. *Gen. Aviation News*, 1/11/03. **OR** for winter reading, Amazon.com is offering *Jane's All the Worlds Airplanes for 2002-2003* for just \$595. The chief customers for this are the military and intelligence departments of most nations. Saves a lot on spys. They are great for History buffs as they have been published for about 90 years. I have a reprint of the 1919 edition. They also publish on ships, armament, etc. Has anybody looked up Iraq ?

HISTORY. A recent TV program discussed the role of the CAP in a phase of WW II. I don't remember the details but it covered the use of CAP pilots in their own planes to patrol the waters off the east coast of the U.S. to spot German submarines. As we entered the war Germany was determined to keep American supplies from the British and sent subs to sink any shipping that could be found. Not just enroute to Europe. As memory serves some 150 Cap planes spent many many hours patrolling over water in small private planes. More than 40 were lost. But they were quite effective for about a year and a half until the military could take over. In summer 1942 I met several recent trainees who would say nothing about their training except they had been in Florida. Later, one who had been at a secret radar school at Boca Raton near Miami, mentioned seeing as many as 4 American freighters burning off the coast in one night. I believe we lost over 400 ships in a few months but the puddle jumpers saved many more. One pilot would dive at a periscope causing the sub to submerge.



Definitely looks like winter in Ohio!



Canadian Trainer?



The Lunch crowd was small this month.