

M.A.R.C.S. SPARKS

Monthly Newsletter of the Madison Area Radio Control Society
Madison, WI AMA Charter # 665

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Come Fly With Us

MARCS meetings are held on the first Thursday of every month at 7:00 P.M. in Room 201B of the Madison Labor Temple, 1602 S. Park St. in Madison. Visitors are always welcome. We think we have a great hobby and we invite you to come and see and consider joining us.

Officers:

Pres: Vince Streif, streif1@charter.net
Vice Pres: Brad Witt, 608-836-7835
Secty: Andrew Morrow, 608-798-0128
Treas: Ed McDonald, edgarnmcdonald@msn.com

Membership information:

Ed McDonald
Phone 249-0734

Flight Instruction Coordinator: Vacant

Mail address for official business, other than for publication in SPARKS:

PO Box 8864
Madison, WI 53708

MARCS Web Site: www.marcswi.org
Web Master: William Velez
william@velez.org

The MARCS web site contains links to War Birds and Electric Flyers Special Interest Group web sites

Editor: Jerry Buss
1809 Browning Rd
Madison, WI 53704

e mail: jbuss@itis.com Phone: 244-8534

Contribution of articles is encouraged. Deadline for submittal is the 20th of the month.

Minutes of MARCS General Membership Meeting, Dec. 4, 2003

By Burr Fontaine

The meeting was called to order by President Wayne Lanphear at 7:05 p.m. with 50 in attendance.

Visitors: James Cullen and Cyndee, Mike Kimmery's girl friend, are visitors tonight.

Old Business: *Scheduled Events in 2004:* The events scheduled for 2004 were reviewed briefly. The New Year's Day Fun Fly/Chili Feast, organized by Tom Lazar, is the first event of 2004 and will include Tom's chili again this year.

Dave Rush has been busy with plans for the Awards Banquet on Sunday, February 22. See the last page of the December SPARKS for details and reservation form. Nominations for awards are needed, and even if you are unable to attend the banquet, you may still make award nominations. Please include a couple of sentences in support of your nominations.

The schedule for other events later in the year was listed in the December issue of SPARKS. The Float Fly/Picnic date can't be set before January 1st of 2004.

911 Field Phone: Mike Pirkl has checked the 911 phone at the field and found the phone to be in working order. The battery was removed, charged, and tested and found to be in good condition. However, the battery-to-phone contacts were corroded and need to be upgraded. The board intends to put a solar panel on the roof to keep the battery fully charged. Thanks Mike.

Photo Directory: Vince Streif has been accumulating photos of members and has about 35 at present. When he has pictures of 50% or more of the membership we will try to include the available pictures in the annual membership directory.

New Business: *Scale Planes Needed:* Dave Rush, as part of his job as Band Director at Craig High School in Janesville, is looking for scale planes to display at the school's winter concert on December 17. He has two free tickets to the concert if you have a scale plane that can be displayed at the school the night of the concert. Contact Dave at dgrush@hotmail.com.

Tire Marks on Field: Sometime in the last 10 days someone with a 4-wheel drive vehicle tore up the field by making deep ruts and skid marks. These will have to be repaired in the spring.

Radio Interference: President Lanphear described a recent incident in which one of the board members came across an individual, who was not a MARCS member, flying a 40 inch, Corsair, electric plane from a field along side highway AB, approximately 1/2 mile east of Kettle Field. The JR transmitter had a channel 47 tag attached to it. Anytime there are two transmitters operating on the same frequency within 3 miles of each other neither pilot is flying safely, and the shorter the distance is, the greater the chance that one or both planes may suddenly lurch out of control and crash violently.

Members are urged to be on the lookout for non Kettle-based, model aircraft operating within a three mile radius of the field. President Lanphear asked that we approach such people politely and explain why it's a bad idea to fly so close to Kettle Field; bad for them as well as for MARCS. He also suggested we invite them to visit the field and to join MARCS.

Website: Our website will be down for a few hours tomorrow while we change our website to a new server with the same hosting organization. We must make a change of some kind because the present server will no longer be available from our present hosting organization. Chris Spierings indicated the change to a new server but with the same hosting organization seemed to be the most practical and economical way to go. The change will give us some nice e-mail features and more room for pictures.

Election Results: Club officers for 2004 are: President - **Vince Streif**, Vice President - **Brad Witt**, Secretary - **Andrew Morrow**, Treasurer - **Ed McDonald**.

In addition, **Bill Disch**, **Wendell Hottman**, and **Ozzie Johnson** were elected to replace the expiring board terms of **Dan Dudovick**, **Dave Jeardeau**, and **Chris Spierings**.

Many thanks to all of the persons that were nominated this year for their willingness to serve in 2004. Considering the difficulties in finding members to even agree to be nominated for the election this year the rest of us can show our appreciation for the new board 2004 by helping out when asked.

Raffle: Our thanks to Jim Biersach at Hobby Horse for the donation of the Hitec Flight Pack as a prize tonight. **Winners:** **Vince Streif** - Flight Pack; **Brad Witt** - Bristol Scout; **John MacKenzie** - Stand; **Ed McDonald** - Bottled water; **Bob Geimer** - Mountain Dew, **John Granberg** - Hat; **Jeff Alexander** - Bottled water; **Don Fadness** - Soda pop

Program: Mike Frederick, from Beaver Dam, began his enthusiastic presentation by listing the criteria for aircraft used in Slow Survival Combat:

1. Must use an unmodified stock 0.15 sized aircraft engine
2. Must use a Master Airscrew 8X3 propeller
3. Wing area must be at least 400 square inches.
4. Aircraft must weigh at least 2.5 lb..

As a result of these criteria, the planes fly approximately 50 mph, which is much slower than speeds used by planes in other combat categories. Also the 0.15-size stock engine requirement makes for an affordable engine. The aircraft tow a 30 foot streamer and are flown in five minute heats. The models are typically easy to construct and Mike brought several examples of the models with him tonight.

Show & Tell: Show & Tell pictures for tonight are temporarily not available as they will be moved to a different location. **David Lorentzen** has an interest in combat and had a Piranha combat plane with him tonight. **Gordon Gotschall** brought a Dynaflight 40 size Spitfire that was nicely finished with Seafire markings and flaperons. **Mike Kimmerly**'s latest plane is a Hanger 9, Cessna 182 Skylane, 1.50 size ARF. Mike said the kit is very well done, and he was pleased that almost all of the control surfaces have internal workings.

The Other Secretary: This is my final set of general meeting minutes as your club secretary and I want to say that it has been an enjoyable experience. During the past three years Don Weigt has been kind enough to read a rough draft of every set of minutes, correct many errors, and offer many suggestions for improvement. Thanks Don, your assistance has been very helpful and much appreciated.

The meeting adjourned at approximately 9:00 p.m.

Philosophy 101

I was sorry to have my name mentioned as one of the great authors, because they have a sad habit of dying off. Chaucer is dead, Spenser is dead, so is Milton and Shakespeare, and I'm not feeling so well myself.

Mark Twain

Tale of the Unknown President

by Vince Streif

Hi, my name is Vince Streif and I'm the 2004 MARCS president and I thought maybe you should have a little background on me so you have some idea what to expect from me.

I was born in rural, northwestern, Wisconsin on December 7, 1959 -- yes, Pearl Harbor Day. My childhood was spent in the country, dreaming of being an astronaut and watching every bit of coverage of the space program that the networks would carry.

MARCS 2004 Calendar of Events

Event	Date	Location
New Years Day Fun Fly & Chili Eatin'	January 1	Kettle Field
Awards Banquet	February 22	Coliseum Restaurant
Big Birds Fly In	June 12	Kettle Field
War Birds Over Dane	June 26	Kettle Field
Electric Fun Fly	July 24	Kettle Field
Ken Kindschi Scale Rally	August 15	Kettle Field

When I went to college, I earned a degree in physics and then went to work with computers and networks. I married just out of college and we've made our home in the Midwest ever since.

My interest in RC airplanes began a few years ago when a friend introduced me to the excitement of flying a Zagi. I love watching planes fly, but am a relatively poor pilot myself (mostly due to a lack of practice). So far, my experience is in electrics -- I find gas-powered planes to be intimidating.

I really didn't plan to be president this year; trying to fill Wayne's shoes looks like a pretty big job. However, my parents raised me to believe that one of the highest goals for a person should be to be of service to others. Wayne has given us an incredible gift of service over the last several years, and I'd like to try to match that accomplishment.

What I'd like to be remembered for at the end of my tenure as president (whenever that is) is that I helped to keep MARCS as both fun and safe. I'd like to see the club grow, and to see the participation of all members grow as well. Wouldn't it be great to have too many volunteers when something needs to be done?

Here's to a happy and prosperous 2004!

Awards Banquet

As previously advertised, the Awards Banquet if at the Coliseum Restaurant and Banquet Hall (formerly Jingles) at 232 E. Olin Ave. on Sunday, February 22. Cocktails at 5:30, dinner at 6:00 and program at 6:30. The buffet main menu features roast pork, tenderloin tips and stuffed chicken breast at \$20 per person. Please use the sign up sheet at the back of this bulletin to make reservations.

If you have one of the traveling trophies haunting your mantle like the Ancient Mariner's albatross, the January meeting is your chance to get rid of it. **Bring it to that meeting** so some other poor devil can have his name put on it for posterity and be stuck with it for a year.

And don't forget to make nominations for awards when making reservations, especially for the traveling trophies. These include the Smoking Hole, Submarine Commander, Paul Bunyan Wood Chopper and Scooter.

Even if you can't make the banquet, you can still make nominations.

January Meeting Date is Changed

Don't forget that, since New Years Day would be the normal meeting night, the January meeting will be on January 8. It will also be downstairs (I once knew the room number, but I forgot. I'm sure you will be able to find it, however).

Midnight Madness

If you intend to fly the new year in on New Year's Eve, don't forget: **No fireworks at Kettle Field.** They make a mess on the field, they are illegal and they may create panic in the dogs at Hickory Hill Kennel. Mrs. Suter has been told in the past to call the police if fireworks are shot off at the field at any time.

Election Results

Vince Streif agreed to switch his candidacy from Vice President to President and was elected. That left Brad Witt all alone as a candidate for Vice President. Andrew Morrow was elected Secretary and Ed McDonald was reelected as Treasurer.

Bill Disch, Wendell Hottman and Ozzy Johnson were elected to three year terms on the Board of Directors.

Thanks for coming forward, guys; we appreciate it. I guess it would be remiss not to also thank the guys who ran for board seats but were not elected. Please consider running again next year. That kind of participation is what makes the system work and any one of you would have been a good choice too.

An Electric Challenge

By Don Weigt

We all know that electric powered model planes are performing better and better with the improved motors and batteries that are being developed in a seemingly endless progression.

At the December meeting of the MARCS Board, it was suggested we have a fun fly next year, pitting gas and glow engined models against electrics to see if electric models really

can fly as well! There are plenty of us in MARCS who dabble in electrics or do somewhat more. The categories would need to be agreed upon. Old-timer endurance, with limited engine runs of perhaps 30 seconds was one suggested event. The hope is to keep the rules simple, about the only one being that the plane would be a true old timer free flight design. I've read of serious large electric competition models that can climb nearly out of sight in 10 seconds, so if someone wanted to spend enough greenbacks, I think electrics would be very competitive in this event.

On the other hand, the highest potential performance might not decide the winner. Given that the pilots' skills would be a factor in flying the models to the highest possible altitudes, making smooth transitions to the glides, and trimming them for best glide endurance, and then maybe finding a boomer of a thermal, the winner might not even be one of the models with the highest performance.

Other events suggested were things like most loops in a short time, most circles, most takeoffs and landings, or any better suggestions that might come along.

This sounds like it could be a lot of fun! What do you all think? Want to pick sides and try it? Winner gets bragging rights until the next contest!!

The Bent Bird

Suggestions for Winter Flying Success

By Don Weigt

So, are ya coming to the New Year's Day chili fest and fun fly at Kettle? The way things are going, it may be 45 degrees, with no snow, and things could be easy. Or, it might suddenly get a lot colder, and one storm could cover the field with 6 inches of snow.

Flying in winter is like that. It's unpredictable. You need to do what you can to improve your chances of good flights, and to be able to fly safely and successfully when it's cold.

Our first thoughts are about getting the engines started and how the radios and other equipment will work, but let's talk about the pilots first!

Back in the "old days", flying control line, you could actually feel what your plane was doing. Holding the control handle, you could tell how fast it was going, how much line tension it had, whether it was flying high or low, steady altitude or changing, even if there was an unusual amount of vibration from an unbalanced prop or something. You can't do that with an RC transmitter! Controlling our RC models depends primarily on seeing our models, and feeling the transmitter controls so we don't need to look away from the models to operate the controls.

You say that's no different than in summer? Yes and no.

How to improve or retain vision in the winter is the first topic. It's much easier to fog your glasses in the winter, and your eyes may tear enough in a cold breeze and bright light to make it hard to see clearly. You don't want to fly a high performance model you can see only as a blob or a blur.

Try to shield your eyes from the cold wind and too much light to minimize tearing. Ski goggles might be a good

idea, too. Those folks need clear vision at least as much as we do! Also, avoid blowing upward in an attempt to clear a bit of fogging on your glasses: you'll almost certainly make it far worse! If your vision gets reduced enough to be bothersome, the best thing to do is to land the plane soon, then take care the tearing or fogging.

Next, you need control and feeling in your fingers to work the sticks on your transmitter. I strongly believe you will have better feel wearing thin warm gloves than with bare hands. Sure, you have the gloves between you and the controls, reducing the feel a bit. But, you'll have warmer fingers, which won't be going numb from the cold! It works! You'll find it works fine, if you try it.

You might worry that gloves will reduce radio range. The visible transmitter antenna is only about half of the total antenna: the transmitter case, pilot, and ground are the other half!. While I'm sure there's an effect, I have found little decrease in radio range. Our modern radios have so much range, a small decrease wouldn't matter much. You weren't planning on setting a distance or altitude record this winter, were you?!

I've had good luck flying with thin lined leather gloves. Also, you want to wear warm enough clothes to keep your body functioning decently so you can concentrate on your flying, and not on shivering or worrying about how long it will be before you can go back to the shelter.

You may need to change or remove your gloves briefly to pit your planes. If you wear gloves then, you'll want them to be very thin for good feel, and inexpensive, maybe cotton, so you can wash them or throw them away if they get full of fuel. But, don't work too long with bare hands or very thin gloves, especially on very cold days: frostbite is too high a price to pay for flying!

OK, now that you are reasonably comfortable and able to function effectively, you can think about your planes.

Mechanisms take more power when cold and battery efficiencies decrease, so expect to use up the charge in your receiver packs and even your transmitter packs faster in cold weather. If you fly only half as long on a charge as in summer, you should be fine. If you want to fly longer, I hope you have a battery voltage tester and use it. Extremely cold days with deep snow cover are poor conditions for walking long distances to retrieve models, or to try to find all the debris from crashes!

Just getting engines to start can be a challenge. The electrics have a big advantage here. They always start, the cold weather may actually increase their motor efficiencies, and they may warm their batteries enough with high loads to keep them working well.

Gas powered planes start pretty well, too. Gas will evaporate and make a combustible mixture. It may be hard to flip the props fast enough to make sparks, but electronic ignitions, or battery powered units like the "Jump Starts" should solve that. A high powered electric starter will also do the job, without modifying the magneto circuits found on the lower cost engines. You may need to adjust the mixture slightly, but shouldn't need to do much. Full scale planes fly with the same mixture settings summer and winter. Mainly, they need leaning at higher altitudes, or in very hot weather.

Glow engines can be a challenge to start when the

weather is cold. First, you'll almost certainly need and want an electric starter. The motors will start best if turned over fast, which may warm them and the fuel and air charge a bit. It also will increase the pressure in the combustion chamber as the fuel and air will have less time to leak out past the piston. This makes it more likely the engine will fire with enough power to actually start. The fast cranking also makes it more likely the engine will start up running in the forward direction.

You'll also want a good starting battery, or you'll want to set your power panel for the same plug current as in summer or perhaps just a little higher.

The main reason it's hard to start glow engines in cold weather is that the alcohol in the fuel doesn't evaporate at winter temperatures: below about 20 degrees Fahrenheit! You can't burn it while it's still liquid. Cranking fast enough may vaporize enough of it to get the engine to fire, which will often warm the engine enough to help vaporize more alcohol and make it fire better. But, getting that first "pop" can be a challenge!

If you don't get the engine to fire soon when you crank it, the best thing to do is to warm it by taking into a heated shelter, or into your vehicle. It's harder to warm it in your vehicle's exhaust, which isn't that hot and is coming out into the cold winter air all around and cooling quickly. Besides, the sulfur compounds that give it that lovely smell form acids when mixed in water, which is also present in the exhaust. The last thing we need is to have our expensive engines corroded away by acid!

If it's not too cold, people have used propane torches successfully to warm engines enough to start. I advise you not to try it. You might overheat and damage your engine. Perhaps worse, you could easily set fire to your models! This probably worked OK with old control line profile planes, where most of the engines were exposed and the torch flame could be far from the model itself. Besides, when it's really cold out, the propane in the bottle may not make enough pressure for the torch to work!

I've seen low powered battery operated hair dryers advertised in car catalogs, but don't know if they'd make enough heat to warm an engine. But, they might. They were rated to make only about 1/4 the heat (300 to 400 Watts instead of 1,000 to 1,400 Watts) of our AC powered heat guns for shrinking covering. So, they probably won't let you take out wrinkles in your covering at the field, but could very likely heat glow engines enough to start.

Winter flying is possible, and reasonably practical. In years past, some MARCS members made it a point to fly every week all winter! That's dedication, or maybe insanity! But, given the warm clothing available for hunting, skiing, and snowmobiling, we can dress safely to stay outdoors for long periods in very cold weather. Our radios should work fine, and we can get any type of engine or motor to work if we handle it properly. If you want to fly in winter, prepare properly, and go for it!

But, please don't fly alone! An injury in the summer would be bad, but one in winter, where it's harder to work and where the cold is an enemy, would be more dangerous. Always have someone nearby who could help if you have an emergency. It would be prudent to have a working cell phone along, too.

Finally, be extra careful. With extra layers of clothing, you'll be bulkier and heavier than usual. You may also be wearing boots and a bit clumsier, and the ground might be slippery. So, avoid sudden moves that could cause you to lurch or lose your balance. You might fall on your model or equipment, damaging it, or more importantly, injuring yourself. As they used to say on Hill Street Blues, "Let's be careful out there!"

Happy holidays, and good flying!

The Adventures of Charley Taylor, Part 1 of 3

By Jerry Buss

Charles, "Charley," E. Taylor was born in Illinois near Springfield in 1868, shortly before his family moved to Omaha. At age 12 he dropped out of school and went to work in the bindery of the Nebraska State Journal. The tools he used here fascinated him and led him to become a mostly self taught machinist. He actually opened his own shop, but it failed due to hard financial times and the resulting lack of available work.

He met Henrietta Webbert at a young people's church club in Kearney and they were married in 1894. Henrietta and her parents were from Dayton, Ohio and were members of the United Brethren Church. Just before their marriage, Henrietta's family was visited by their good friend, Bishop Milton Wright, of Dayton. Bishop Wright suggested that the soon-to-be newly weds go back to Dayton, since despite the current depression, there seemed to be plenty of work available there. Although they didn't take his advice immediately they did move there in 1896, just after the birth of their first child. Charley got a job at Stoddard Manufacturing Company where he greatly enhanced his skills. Stoddard made engines, bicycles, and farm machinery, but apparently Charley had nothing to do with the engine department. In 1898 he left Stoddard to set up a machine shop of his own.

Two of Bishop Wright's sons, Wilbur and Orville, had a bicycle building business in Dayton and Charley had the good fortune to land an agreement with them to make parts for a new coaster brake they had just patented. No doubt his wife's family's acquaintance with the Wright family had some influence in this arrangement, but he did good work and the brothers liked him personally. Needing to keep their income flow alive while they pursued their new passion of gliding, they hired Charley in the autumn of 1901 to come to work for them in the bike shop. He sold his machine shop at a handsome profit and two weeks after he went to work for the brothers, they left for their second season at Kitty Hawk.

The wing design on their new glider was based on Lilienthal's lift tables and after it flew poorly, they concluded that these data were wrong. Actually the tables were correct, but they had failed to take into account that the tables were based on curved wings, whereas theirs were straight. In any event, they would start from scratch in developing their own data and airfoil shapes. To do that, they needed a wind tunnel and Charley was drafted into service to help make it. This was his initiation in the field of aviation.

The wind tunnel was a crude affair, but rather ingenious too. It was simply a tube made of pine lumber, about eight feet long and about three feet in diameter. Used hack saw blades were used to support the airfoils being tested and, of course, there was a fan to provide the air flow. Charley crafted airfoil configurations to the brothers' specifications and then helped in testing them. Then he helped build their glider that incorporated the wing warping feature for lateral control.

Again Wilbur and Orville took their machine to Kitty Hawk, leaving Charley in Dayton to make bicycles. When they returned, jubilant over the test results, they went to work in earnest building the machine that would become known as the Wright Flyer. Charley capped the whole process off by actually building an engine for it, as described in last month's SPARKS. The job took him two months to finish and he later said his only prior experience with a gasoline engine was an attempt to repair one in an automobile in 1901. "Never did get it to work," he said.

With the Flyer finished, the brothers again set off for Kitty Hawk, arriving in mid-November, and began the business of assembly. A propeller shaft broke and Orville was forced to journey back to Dayton. Short of car fare, he walked the last 20 miles, but Charley quickly solved the shaft problem by fabricating a new one. When he sent Orville on his way back to Kitty Hawk, he turned his attention back to building bikes to maintain the Wright boys' livelihood. While the Wright Brothers flew into history, Charley Taylor remained unknown.

On their return from Kitty Hawk the Wrights obtained permission to use a farm field just outside of Dayton, called Huffman Prairie, "as long as they didn't kill any cows," as Charley said. It now became Charley's job to maintain the field, equipment and airplane. He was, in effect, the world's first airport manager.

During this time they put Charley to work on a new, more powerful engine while the brothers began work on a new and improved air frame that would ultimately become the Model B. When they flew, they routinely crashed and Charley said that every time they went up he believed it was the last time he would see alive whichever of them was flying.

Beginning in 1905 the boys seemed to become paranoid about someone stealing their invention and kept their machine disassembled and crated for the next three years. During this time Octave Chanute urged them to continue experiments for others were catching up anyway and unless they loosened up, they would be technologically bypassed.

With Chanute's urging, the boys tried to interest the US Army in an aeroplane in 1907, albeit the paranoia was by no means exorcised yet. They were unsuccessful, probably because they wanted \$200,000 for it and refused to show or demonstrate it prior to the exchange of money. Later that year, they went to Europe to try to stir up interest among the British and French governments. Charley went along to assemble and maintain the machine, but their terms of cash in advance, sight unseen for a pig in a poke, evoked no more interest than had been the case in America. They returned home without having ever taken the plane out of its crate and other experimenters were nipping at their heels. Wilbur later said of the time prior to this that it was their plan to sell a few machines at enormous prices and then

cash the business out in a sale for a great amount of money. If so, it didn't work.

During all this time, Octave Chanute had been counseling them to relax their excessive demands and, in 1908, when the army issued a proposal for purchase of an aeroplane, they agreed to show their cards and put on a demonstration. The army proposed to pay \$25,000 for a machine that could meet the criteria the Wrights had claimed for theirs in their initial effort to sell to them. It must be capable of carrying a pilot and passenger 125 miles, remain aloft for an hour without refueling, be capable of fully controlled flight and be capable of completing a full circle to both left and right.

Charley worked full time making the engine and other metal parts for the air frame and in 1909 he accompanied Orville to Ft. Meyers, Virginia to assemble and maintain it for the demonstration. Meanwhile, Wilbur took a second machine to France where he amazed crowds of people who expected short, uncontrolled hops, but got controlled flights of seemingly endless duration over closed courses.

Back in Virginia, Orville was experiencing similar success on flights that thrilled spectators. To prepare for the passenger carrying test, Orville asked Charley to accompany him on a test flight. Charley eagerly agreed, but a young army officer approached them before the flight could occur. He was one of the people assigned to judge the worthiness of the aeroplane and so Charley became the first passenger to be bumped from a flight, to his great good fortune. Orville and the young officer crashed. Orville received a fractured femur, broken ribs and numerous cuts and bruises. The officer, Lieutenant Thomas Selfridge, received a fractured skull and that evening became the first person to die as the result of an aeroplane crash.

This effectively resulted in failure to sell the plane to the army, but the next year Orville and Charley returned to Fort Meyers with a new machine and succeeded in getting the army to accept it. Interestingly, while the army paid \$25,000 for it, Glenn Curtiss was selling his first aeroplane at about the same time for \$5,000.

At this point the Wrights went into the actual business of manufacturing airplanes for sale and they put Charley in charge of engine production. Despite his new responsibility, he continued to assist the brothers in their flights, going with Wilbur as a mechanic to the Hudson-Fulton Exposition in New York in 1910, and later to Montgomery, Alabama where Orville tried to establish a flying school. It was during this era that Charley finally got to fly. After Orville took him up he asked Charley if he had been scared. He answered, "No, Orv, if you weren't, why should I be?" Orville thought that was funny. He was always plenty scared every time he flew.

Then, in June of 1911, a new twist of fate brought Charley Taylor to the threshold of participation in another landmark aviation event when a man named Calbraith Perry Rodgers came to the Wright flying school at Huffman Prairie wanting to take lessons. (Continued next month)