

The Comets' Tale

*The Official
Newsletter of the*



September 2009

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The Comets' Tale is the official newsletter and record of the Ventura County Comets, AMA Chartered Club #173 and is published monthly at the Comets' Tale Plaza, somewhere in Ventura.

Editorial contributions are welcome.

**Next Meeting: Thursday, 17 September,
7:30 PM at the Oak View Community Cen-**



**Coming
Up!**

19 September
Big RC Swap meet at
Condors field in
Camarillo – open flying

17 & 18 October
Comets Float Fly at Lake
Casitas

**1st Sunday of Each
Month**
Open House at Santa
Paula Airport

ROOT'S RAMBLING

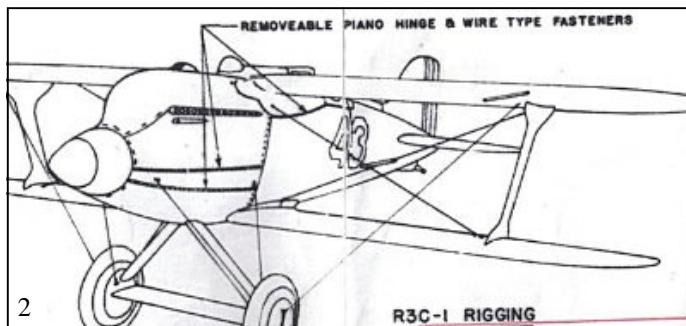
Last month I discussed the series of racers that Curtiss built during the 1920's including the 1925 Army Curtiss R3C racer which won both the prestigious Pulitzer and Schneider Cup races in 1925. I also showed a picture of my new 1/4 scale model of the 1925 Curtiss R3C-1 racer. The model has a 66 in. wing span, weighs 17 pounds, and is powered by a Saito 150 four cycle engine. Model size is shown in picture 1.

The following will describe how it was built and some of the problems I encountered along the way. I have mentioned the ongoing construction in a couple of my ramblings so some of this may be a repeat. I have flown the model and it flies great. However, I haven't managed to land without bouncing (I think wheel landings will be required). This



is due to the relatively forward location of the landing gear. In 1925 all flying was off of grass and most designs had their wheels well forward to minimize the chance of nosing over on landing.

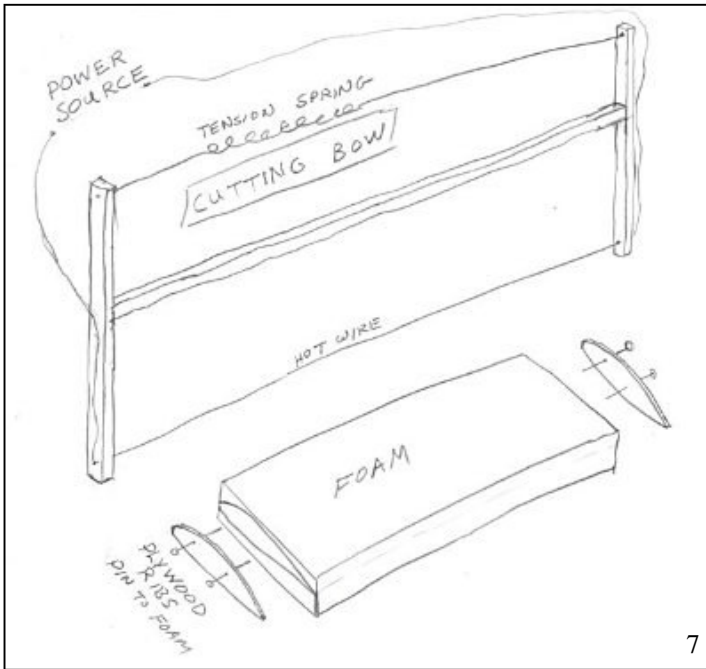
Years ago when I first became interested in this model I bought a set of Don Smith's plans and a fiberglass cowl. The plans don't have a lot of detail but they are a good starting point. I also got a package of scale drawings from the National Air Museum of the Smithsonian Institution. This is a great source for scale information on many different airplanes. The package included 3-views from two sources and sketches of many details. Figures 2 & 3 are examples of cowl and rigging details. Like many descriptions of old things the 3-views didn't agree with each other or with the pictures of the airplane in the museum. Before starting the project I had to decide which source to use. This is a bit of a problem on an airplane that probably changed day to day as it was flown. This is why many of the top scale models in competition are modeled after a particular airplane in a particular museum at a particular time.



Before starting the fuselage I redesigned the landing gear mount to meet two objectives: 1. It had to be removable so floats could be added later and 2. it had to enter the fuselage at the centerline like the original. This was completely different than the plans. I also utilized a more scale thinner airfoil. The full size fuselage, wings, and stabilizers are covered in two layers of thin plywood with no straight lines or flat areas. The model fuselage consists of bulkheads and stringers covered with 1/8 in. balsa. The left half of the fuselage was partially built over the plans and then turned over and mounted on blocks as seen in picture 4. The second (right) half could then be built on the first as shown in picture 5. The fuselage with some internal details, and ready for additional stringers and the outside sheeting, is shown in picture 6. The completed tail feathers are pinned in place for appearance.



Although the plans show built up wings I elected to build them out of foam for two reasons: 1. I had the foam, and 2. although faster I hadn't used this construction since my racing days and I wanted to see if I could still do it. I have included a sketch (7) to show how the foam is cut for a foam wing core. The wings came out at least as light if not lighter



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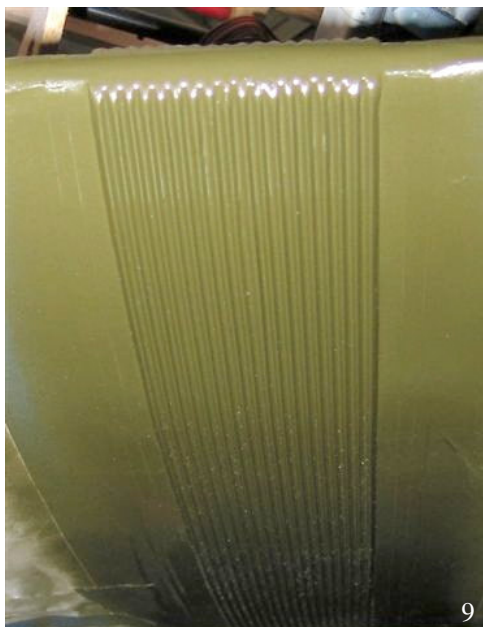


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than built up wings even after adding structure for the flying wires and struts. The short pieces of wing in picture 6 were left over from the foam wing construction. The 1/16 in. sheeting can be seen around the foam. The uncovered foam wings are shown in picture 8 on the now sheeted fuselage. My solution for creating the round wing tips is also shown. After covering

with thin balsa I realize I should have added a rib in the tip area because I had some problem with the sheeting dipping between the spars. To cover the wing many sheets of 1/16 balsa were edge glued together side by side, with Titebond glue, to create sheets big enough to cover each wing panel. No trailing edge was used. The top and bottom sheets were epoxied to the foam and meet at the trailing edge with a piece of fiberglass between them for strength. The ailerons were then cut out and the edges sheeted to cover the exposed foam and for hinge mounting.

One of the important visual features of this Curtiss racer is the wing surface radiators used to cool the liquid cooled V-12 Curtiss engine. Both wings are covered on top and bottom with these radiators from the fuselage to the ailerons and from the leading edge to the trailing edge. The original individual corrugated brass radiators were around 9 inches wide with approximately 35 triangular corrugations per section. The non-structural sections were held to the wings with aluminum strips and rivets. I ended up forming the individual sections with fiberglass and micro balloon filler in a mold. I made the mold over a plug which I formed by gluing triangle cross section lengths of plastic over Monokote on the wing stubs shown in picture 6. A picture of the finished (painted and waxed) plug used to make the mold is shown in picture 9. The wing leading edge



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10



is shown. I had to make 15 sections, four times, to cover both wings top and bottom. There is probably an easier way but I can't figure it out. The result of all this can be seen in picture 10. This view shows some of the model detail in primer before final sanding, painting, rivets, etc., but the radiators can be seen clearly.

Two other scale details which

gave me trouble were the scale exhaust and the flying wire connected to the center of the wheel. Picture 11 is a quartering front view which includes these details. Some of the full size airplane pictures show the engine exhaust as one long shroud on each side, framing zero-length ports, without even short exhaust stacks. I simulated this by feeding my model engine exhaust from the muffler into an aluminum



square tube with the appropriate holes drilled to simulate the exhaust. I made aluminum end caps, mounting brackets, and an input tube of the appropriate diameter and took all the pieces to my local welder. The exhaust (shown in picture 12) seems to work fine. The simple matching plate with holes on the other side is used for engine cooling.

For the wheels I made thin metal wheel collars with a bracket for the flying wire. Then I molded wheel hub covers over this using clay as the form. The covers are bolted to the special wheel collars. The results are

shown in picture 13. Two additional views of the final results are shown in pictures 14 and 15.

After all this effort does it fly? You bet! My calculations indicated it needed about 4 oz. of nose weight (total weight is 17 lb.). I put in 8 oz., but after two flights I think I can remove all of it. Take-off, fly-



by, approach, and landing are shown in pictures 16, 17, 18, and 19. I know this has been a long Ramble but a few of you seemed interested so this is the result.

Happy Flying.



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Bob Root



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August 2009 Minutes

Date: August 20th

Called to Order: 7:30 PM

Treasurer's Report: Approved, 89 paid members

Minutes: July minutes approved

Guest: Barbara Golding

Park Liaison: Ken Marsh - all is fine

Old Business

1. Field will be closed next week for repair and resurfacing. Will be moving equipment in Monday and work to begin Tuesday morning. Will be completed Friday morning, possibly Thursday afternoon.
2. October 17th-18th will be the float fly. More discussion next month

New Business

1. Camarillo Air Show this weekend. Present will be 2 of 4 P38's left in flying condition worldwide
2. Last weekend of this month will be the Santa Barbara float fly at Lake Cachuma

Model of the Month:

Leo Gabriels showed his T34A, Blackhorse ARF from Vietnam. Powered by a Saito .91. A very detailed model.

Meeting Adjourned: 7:56 PM

Respectfully Submitted,

Ron Golding



ON THE SAFE SIDE

101 Ways Part Deux

by Don Nix, Insider Safety Column Editor

Gee, when I agreed to write this bi-monthly column, I didn't realize some of you readers would practically write it for me. The column in the last issue, "101 Ways to Stop a Spinning Propeller," generated more e-mail than any other to date, nearly all contributing brain lapses of their own, which they gave permission to pass on to readers.

Before I do that, though, I must apologize for the way I described an incident I had witnessed nearly 20 years ago involving John Broadbeck, the "B" of K&B engines. I told of flying in the pit next to John when he reached to tune the needle from the front and ended up with a nasty gash requiring stitches.

An acquaintance of mine and a friend of John's for decades felt I might have done John a disservice by the way the example was written. Since John died some years ago and was also a friend of mine, I must assure everyone no such negative connotation was intended. My purpose was simply to point out how a momentary lapse in safe practices could reach out and grab a person who had probably been flying since he got out of diapers, but made his living in the industry as well.

My sincere apologies to any who saw my intent in a different light.

Now for a few of the incidents sent in by readers, who gave permission to use their names. Member D. Mock writes:

"Accidentally reversed the throttle servo on a 52cc Brison. Started with a heavily gloved hand. Realized the transmitter is directly below the now roaring engine. Notice the tail restraint is giving up under the intense pressure. Freak out and grab the prop with the gloved hand.

"If it weren't for the glove, I wouldn't have a hand (like my friend in a neighboring club). It shattered all my fingers. I wore a cast for five months and missed the whole season. Bummer. BTW, the hand is fine now. Thank God for great medicine."

From J. Low: "I really enjoyed your article about propeller accidents. I was safety officer for a large model club for several years. Every thing you mentioned did happen and will happen again and again.

"I'll bet you could take a safety article written many years ago and print it today and it would be just as current as it was when made up. As new people join our hobby and old ones forget what they have learned, there are the ingredients for the problems.

"Anyway, wanted to tell you I could relate to the article because been there, done that. Fly like you wish everyone else would: 'Safely.'"