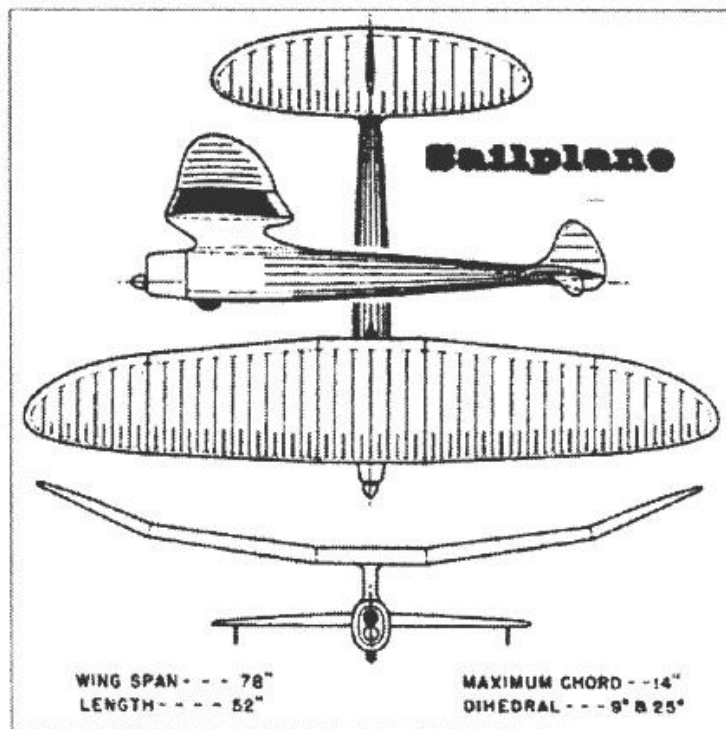


From: "Tandy C. Walker" <tandyw@flash.net>  
 To: "Walker, Tandy C." <tandyw@flash.net>  
 Date: 10/31/2008 4:04:39 PM  
 Subject: 1 The Start of a new Construction Report Series

Carl Goldberg's 1940 Comet Sailplane



### HISTORY

*(The events leading up to the selection)*

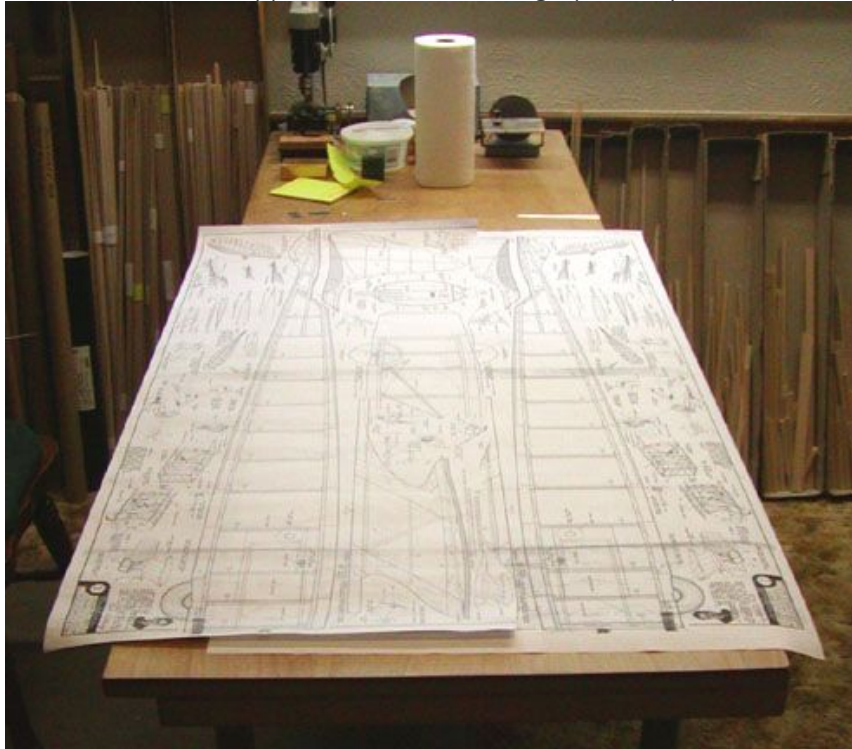
I have wanted to build the Comet Sailplane ever since I saw it the first time when I was a boy. This event is recorded in the book I wrote about Ray Matthews' life and his free flight designs. The excerpt from page 4 of my book records where I first saw the Comet Sailplane:

*"In the spring of 1947, when I was twelve years old, I first met Eugene (Gene) Bonenberger in Oklahoma City. He and some of his friends were teaching me to fly U-Control in McKinley Park near where we lived on 10<sup>th</sup> Street. We rode our bikes to the Schmidt Model Shop next to the Villa Theater out on 23<sup>rd</sup> Street. I became good friends with the owner, Vivian Schmidt, and her husband Ralph. She nurtured and encouraged me to become a model builder. Through her I met Ray Matthews and his wife, Frances. Ray had a beautiful white silked Goldberg Comet Sailplane with a green Orwick engine hanging from the ceiling in her shop and I used to stand and admire it for hours."*

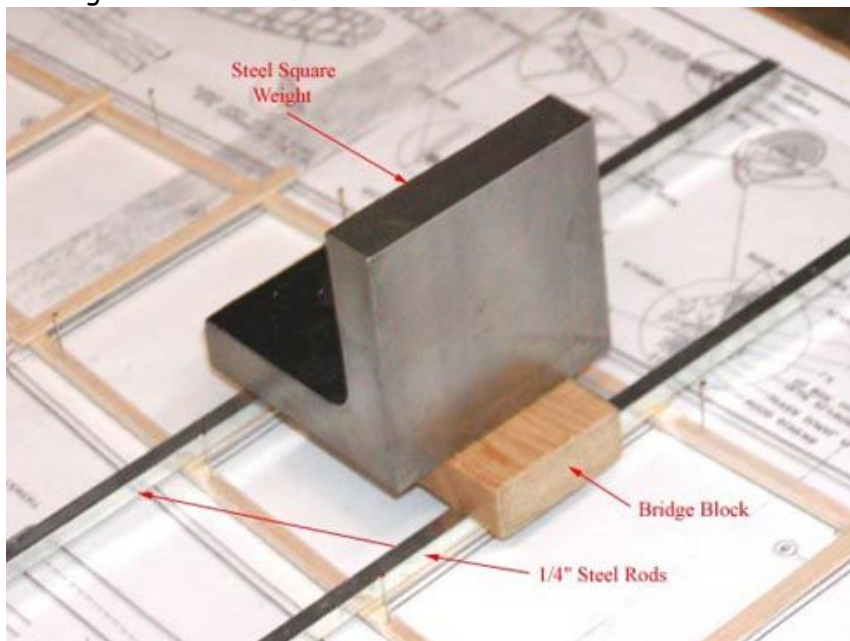
The Sailplane has remained somewhere in back of mind most of my modeling life. I purchased a copy of the original Comet plans for the Sailplane in the late 1990's just to have them to look at. Then sometime in the early 2000's Bob Holman laser cut the parts for the Comet Sailplane plans and I bought the parts, again just to have them. Building this model would require a long term commitment of time and focus. And then there is the single wheel retractable landing gear, which has always been a stumbling block for me.

### TRIAL CONSTRUCTION

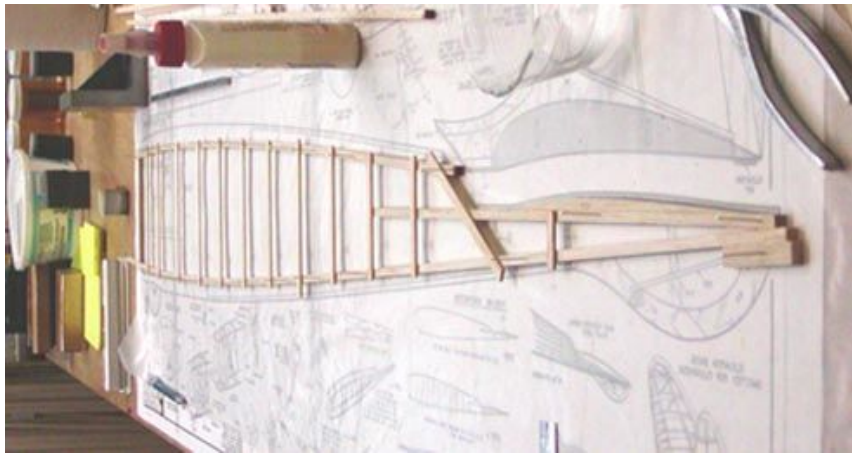
In November of 2004, I decided that I would build the fuselage sides of the Sailplane just to see how Goldberg's "ladder" construction on the fuselage side frames would work out. In order to build both sides, the first thing I did was to have a reverse copy made of the fuselage profile plan as shown below.



I had to devise a technique for holding the 1/16" X 1/4" cross members in place while the glue dried. The set up is shown below. I bought some 1/4" square steel rods 12" long at the hardware store and laid them on top of two of the fuselage cross pieces. I laid a short length of 3/4" x 2" pine bridge block across the two rods and placed my 3" steel square cube on the block for weight. I let the Titebond dry about 5 minutes, which was enough to hold the cross members in place. Then I went to the next cross member and did the same thing all over again until I was finished.



The resulting side lay up is shown below.



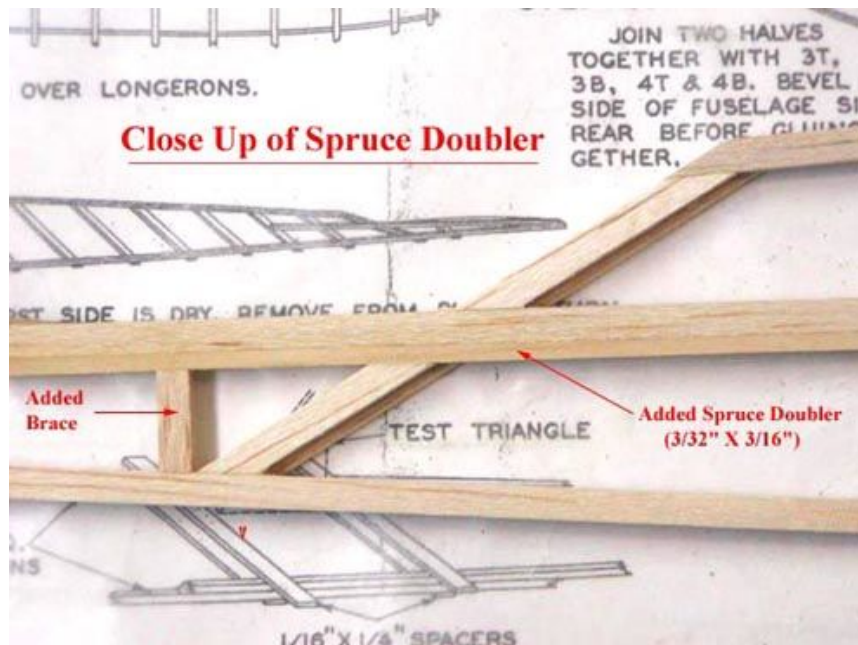
Then using the reverse copy of the fuselage profile plan the other side was laid up as shown below.



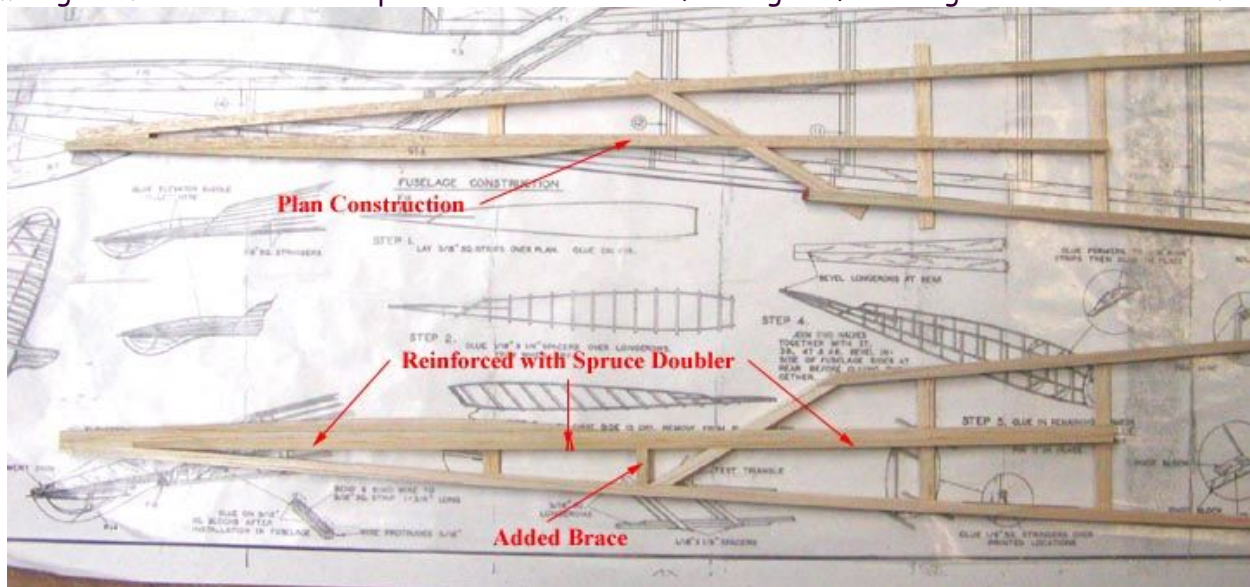
The aft end of the structure appeared to be weak so I decided to reinforce the longeron under the stab with a 3/32" X 3/16" spruce doubler. This shows the spruce doubler on the top longeron under the stab clamped in place while the glue dries.



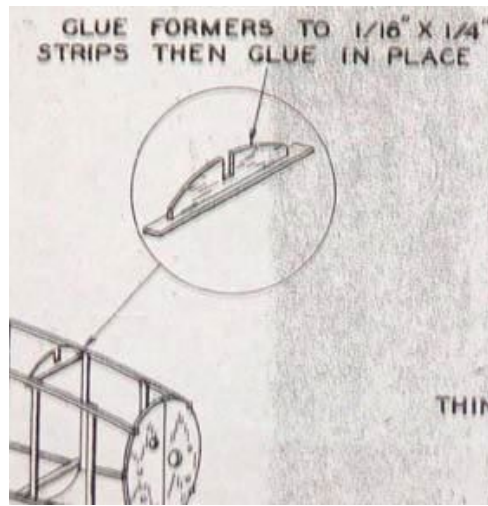
This shows a close up of the spruce doubler glued in place. Notice that a portion of the diagonal truss member had to be removed to allow the spruce doubler to fit down into place. I also added the short 3/16" square brace between the spruce doubler and the bottom longeron.



This compares the untrimmed left fuselage side on top with plan construction to the trimmed right fuselage side on the bottom with the added spruce doubler and short brace between the spruce doubler and the bottom longeron. Notice that the spruce doubler runs the full length of the longeron under the stab.



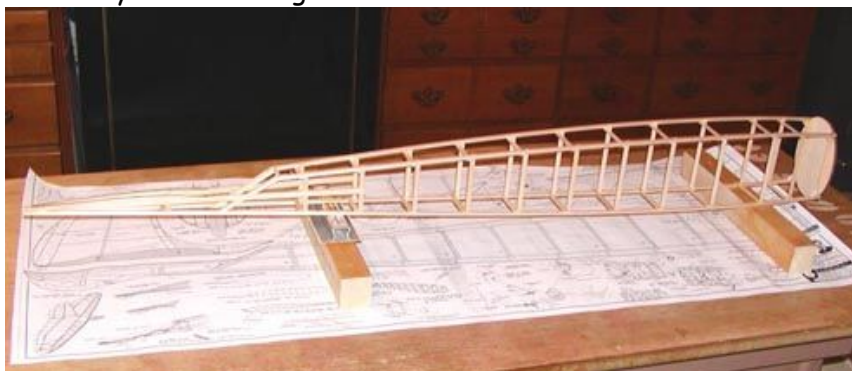
The Comet Sailplane plan does not show a top view of the fuselage. :O< Instead, the top and bottom former pieces are first glued to cross strips and then glued in place, which sets the width of the fuselage sides as shown in this picture taken from the plan. Since it was my intent to build the fuselage's primary frame and then stop the project, I did not want to put on the former pieces with no stringers because they would be subject to getting knocked off while in storage. So I joined the sides by using the former pieces as spacers to position the width of the sides and then gluing in the cross strips, which turns out to be a bit of a trick if you think about what it takes to do this.



This right front quarter picture of the fuselage's primary shows the two fuselage sides joined together with the front balsa bulkhead glued in place. The structure turned out very straight and very square. It is extremely light due to the thin 1/16" X 1/4" balsa strips used for both the vertical and horizontal truss members. The frame appears short and fat due to picture angle. Notice the former cross pieces in the foreground that I used to set the frame width.



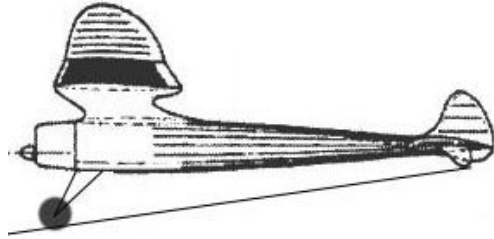
This picture is a better perspective of the fuselage frame and shows it to be long and slender like a thoroughbred. You can see that for its size, it is extremely light weight! At this point, I discontinued the Sailplane project, which was my intent to begin with.



### SAILPLANE PROJECT SELECTION

Recently, when Mike Myers announced in SAM Speaks that he would be serving as the Contest Manager for the 2009 SAM Champs, which he was going to call the Comet Model Champs, my interest in the Sailplane was again aroused because "the model of the year" can be any SAM legal Comet model.

Concerned over the complexity and functionality of the retractable landing gear of the Sailplane, I seriously considered selecting a scaled up version of the Class B Comet interceptor for my Comet model because the retractable landing gear on the Sailplane was simply in the "Too Hard Pile"! Then with some encouragement from Gene Wallock and Sergio Montes, I started thinking about a more conventional two-wheel fixed landing gear configuration for the Comet Sailplane and made the sketch below of a possible two-wire strut landing gear, which surprisingly does not detract too much from the Sailplane's beautiful lines.



At least for this afternoon, I have decided to commit to an R/C Assist version of the Comet Sailplane for my winter's building project. However, it is imperative that I locate another Series 20 McCoy 60 ignition engine for this project. Does anyone know one that might be available for purchase.

I will be posting reports on the continued construction as I go along. If you do not wish to be on distribution, please let me know I will remove you from my list.....Tandy