THE FLY BABY BULLETIN

Issue No. 1 July, 1967

When PETE BOWERS designed FLY BABY, proved it a safe, stable airplane, and made the plans available at a reasonable price, he brought flying within reach of a lot of people who otherwise would never have flown or owned an airplane. We have a lot to thank him for. Consequently, any publication, however modest, dealing with Fly Baby, should begin with an introduction by Pete.

A MESSAGE TO ALL FLY BABY BUILDERS AND PILOTS
from PETER M. BOWERS, FLY BABY designer.

This is the first issue of THE FLY BABY BULLETIN. HAYDEN FERGUSON is to be commended for his initiative and industry in offering to compile, edit, and publish such a document on a monthly basis.

It is his hope and mine that the BULLETIN will, with the help of the builders and flyers, become a valuable publication and a worth-while and interesting source of information about FLY BABY builders, their problems, and their accomplishments. While some information can be provided by the designer, most of it will have to come from YOU, the reader. Don't feel that you have to be a "Pro" writer in order to have something published. You're among friends and the BULLETIN will be as informal as a bull session out in the shop. If you are having problems in finding materials, or have stumbled onto a good source, send in the word. If you had construction problems and licked them on your own, others will be grateful for the information. If you just want to sound off on the joys of flying your own FLY BABY, here's your soapbox!

One personal benefit that I expect to derive from the existence of the BULLETIN is a great reduction in the personal "Problem" and "Where" mail that has to be answered. Now that Hayden has all of the file cards that I compiled with each plan sale, he will have the job of answereing all the letters that ask "Who is building a FLY BABY near my town?". This chore might not leave him with enough time to get out a monthly magazine and build his airplane too. He may have to cut back to a bi-monthly publication! In any case, the transfer should enable me to get out in the shop again and finish those biplane wings that I started a couple of years ago!

In the statistics department, there are at least 32 FLY BABIES that have been completed. I have definite knowledge of 24 in the form of photos and reports from the builders and indirect knowledge of eight more that I have heard about second-hand. At this writing, I have personally flown 10 and made the first test flights in five. The most I have know of in one place at one time was at the EAA Chapter 105 Fly-in at Portland, Oregon on July 14/15, 1967, where five were on hand. As a project for an early issue of the BULLETIN, I would like to compile a list of the completed and flown projects. If yours has been completed, please send the information, including registration and serial numbers and FIRST FLIGHT DATE, to Hayden. If you know of others, send that word along, too. The builder might not have heard about the BULLETIN. Additional information, such as powerplant, color scheme, modifications, etc. wil be welcome but is not as essential as name and location of the builder and the first flight date. Good pictures, suitable for our photo page, are welcome.

As you who read EAA's magazine SPORT AVIATION know, I have put up a trophy over the last three years for the best FLY BABY appearing at the annual EAA Fly-in at Rockford. My ambition is to be there for the Fly-in that sees more FLY BABIES on hand than any other single homebuilt design. When that day comes, I promise you, there will be a special FLY BABY award for every pilot who has a FLY BABY there! Here are past attendance-toppers, just to give you an idea of the numbers I am talking about:

1960 - 15 Corben Baby Ace	1963 - 21 Corben Baby Ace
1961 - 12 Wittman Tailwind	1964 - 27 Wittman Tailwind
1962 - 17 Wittman Tailwind	1965 - 23 Smith Miniplane
	1966 - 21 Smith Miniplane

I can only make it to Rockford with my own ship every other year (even numbers), so I won't be there in 1967 but will look forward to meeting many of you in 1968. If the desired FLY BABY numerical superiority shows up in an odd-numbered year, I'll hop an airliner and get back there for a day or so if someone will send me the word that the FLY BABIES have topped the list.

Ed. Note: If taking some of the correspondence load off Pete will speed up the development of the biplane wing, then we will have made a lot of friends. Some fellows plan to build the biplane from the start and many others have incorporated the fittings for later addition of the top wing. As soon as Pete gives us the word, you will know. - - Hayden.

BIRTH OF THE "BULLETIN"

As we outlined in the original letter about the Bulletin, the idea was born several months ago. It was not until March, this year that we really got serious and contacted Pete with the idea. He bought the whole idea immediately and things got underway. Pete sent us his card file and the work began in earnest. Our shop looked like a fresh snowfall for weeks with paper, cards and envelopes covering every available space. Finally, the last envelope was dropped in the mail chute. The weeks of typing, folding, stuffing, stamping and mailing were over. Now all we could do was wait. And then the waiting was over. Day by day the replies came in, slowly but surely. Slowly to be sure, with rarely more than 2 or 3 in one day. However, as we read and re-read the replies, a definite pattern emerged. We were among our own kind. These people loved airplanes and FLY BABY in particular. This we more or less expected, but more important, these were people who liked to talk about their airplane and were anxious to help others and in turn asked for help. To sum it up, they not only love airplanes, but they like other <u>people</u> who love airplanes. Needless to say, this is exactly the type individual we wanted to reach. Without them, the Bulletin would be a miserable failure. So, let us say a heartfelt "THANKS" to each and every one of you for your wonderful reception of the Bulletin.

This first issue of the Bulletin is going to be somewhat lighter than we had planned, for several reasons. We want to keep it light so it can go first class mail to escape the rail strike embargo on third class and also to get it into your hands before the Rockford Fly-in. Also we don't yet have a lot of information in from the builders to include in this issue.

We ask everyone who has something to contribute to please get it in to us as soon as convenient. As Pete said, you don't have to be a "Pro" at this. It is obvious that we are not experienced, so dont shy away from sending us material. We are all in the same boat, and if the literary and grammar critics are so moved, they can have a field day grading our "papers".

ONE FATAL ACCIDENT

On September 6, 1965, a Canadian builder of FLY BABY was killed in a takeoff accident. Because of the unfortunate way this accident was handled in an American magazine, the FLY BABY plans business was just about wiped out for a couple of months. Both aspects of the story should be explained.

The magazine ran a two-part article on accidents involving amateur-built airplanes as a safety feature. As a lead shot for the series, it ran a photo of this particular crash. It was not identified as a FLY BABY, but it didn't have to be - that trademark tail was identification enough. The harm to the program resulted from the fact that no information concerning this crash appeared in the same issue. It was mentioned, with insufficient supporting information, in the following issue, which was a month AFTER the unexplained (and spectacular) crash picture had scared some actual FLY BABY builders to the point where they telephoned the author of the article to ask if FLY BABIES were unsafe. Some went so far as to ask if they should scrap their nearly-completed ships.

Thanks to friends in Canada who obtained copies of the official Department of Transport (DOT) accident report, we have the facts. These show very definitely that the airplane can't be blamed for this one.

The pilot, a typical family man, had last flown in February, 1960, and had accumulated a total of 33 hours to that time. His flying then stopped for over five years, during the last few of which he built his FLY BABY.

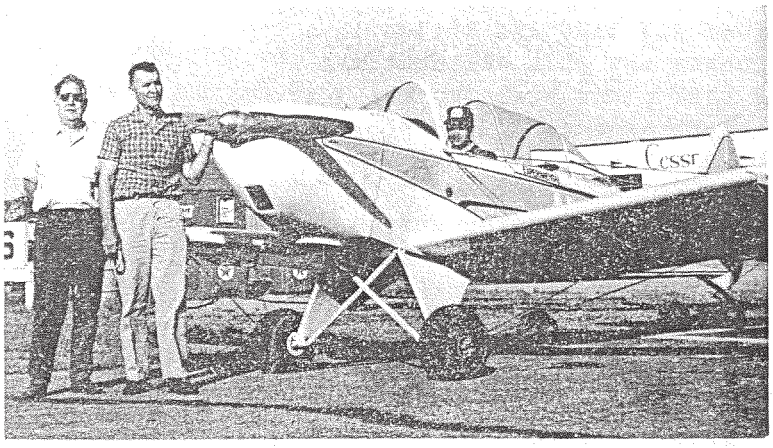
The Canadian regulations are like those in the U.S. in regard to test flights - a current and suitably rated pilot has to make the first flight in a new homebuilt. This was done, and the first flight was for 15 minutes on a windy day with crosswind gusts to 20 mph. The test pilot reported everything OK except that the ailerons seemed a bit stiff. The report says that they were loosened a bit, but didn't say how. This was probably done by loosening the micarta blocks that hold the torque tube between Stations 3 and 4. No other adjustments were considered necessary for further flying. The airplane desigh itself had been modified only to the extent of adding a rather large elevator trim tab.

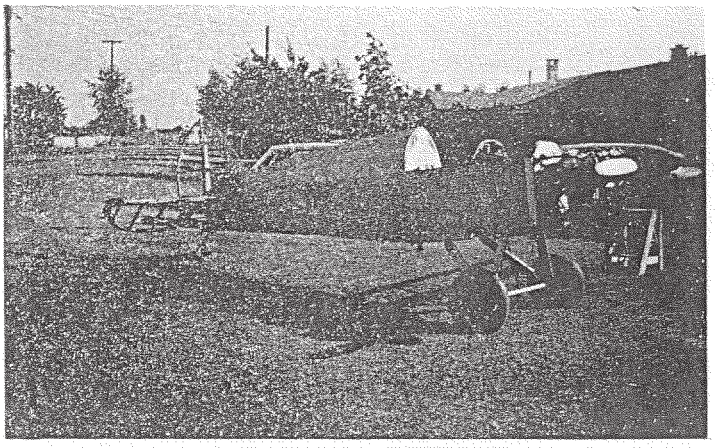
With the remark that "I hope it flies as well for me as it did for you" the builder/owner climbed into the ship to make his own first flight. He still had only 33 hours, all of it five years in the past. His friends and the DOT officials all had urged him to take some refresher flights in a two-seater first, but he ignored the advice and stepped into a felatively lively single-seater when all of his experiencé had been in docile two-seat trainers.

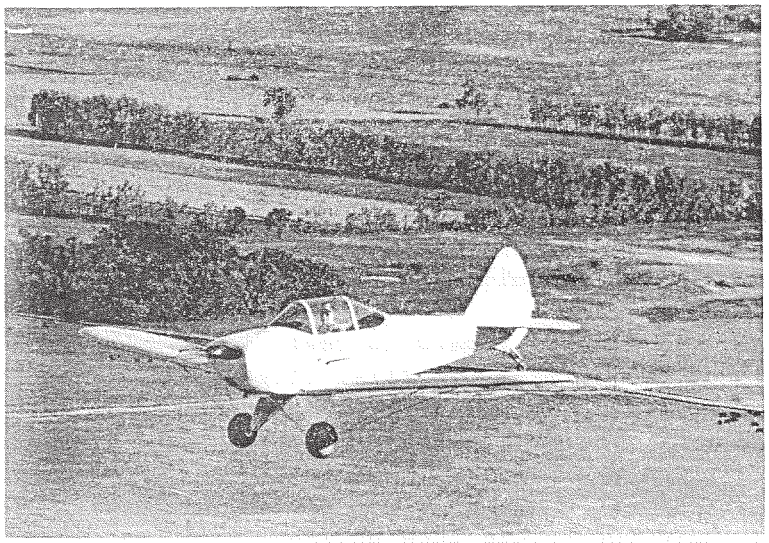
According to eyewitnesses and an amateur movie of the event, he never caught up with the airplane. It got into the air quickly, thrashed around for about 20 seconda, and went in nearly vertical.

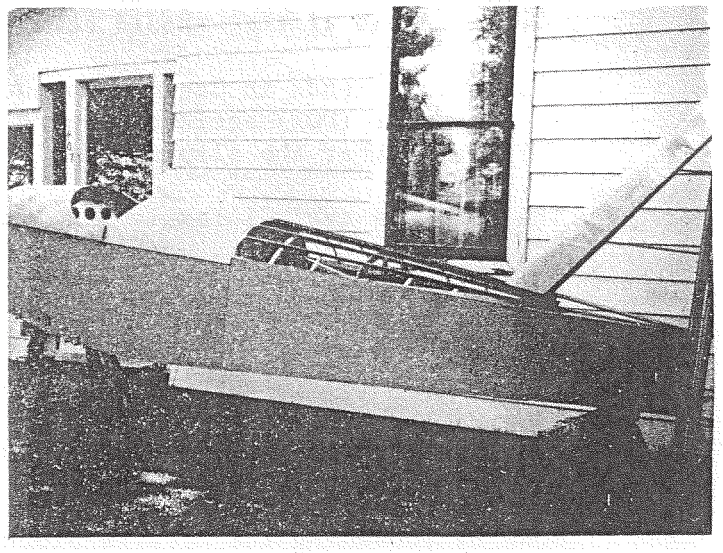
The DOT contacted Bowers for his opinion as to whether the elevator tab could have introduced a control problem. Pete bolted a big fixed tab to one elevator of his own ship and found that while it stiffened up the stick forces when filly deflected, it was easy to over-ride. The official conclusion of the DOT investigation was that the pilot "Exceeded his ability and experience".

Several pilots with only 35 hours' total flight time have flown the original FLY BABY (158 different pilots have flown it through July 16, 1967), many of them straight out of Piper J-3 "Cubs". The essential difference in these cases is that the flight time was recent and the pilots were "Current".









Top Left and Lower Left. - This beauty belons to Clarence Brueggeman of Norfolk, Nebraska. Clarence finished his project in the fall of 1965' and from the photos and articles appearing various magazines, he has been flying it ever since. Powerplant is a 65 Continental and is finished in gold and white with blue trim. We are planning an article on his canopy as soon as we can get him out of the cockpit long enough to tell us about it.

Top Right. - Our apology to Mr. George Noble of Richmond, British Columbia, Canada. Our reproduction of a photo of a truly fine fuselage leaves a lot to be desired. Take our word, the workmanship is beautiful in the original snapshot. We will improve with time and experience. This ship is 70% complete and the spinner is going to give it a rather sleek appearance.

Lower Right. - Again we have a nearly complete fuselage belonging to Lowell D. Morrow of Yorktown, Indiana. This job has already passed two FAA inspections with flying colors. Note the sharp clean line of the scarf joint on the fuselage side. Again our apology for a poor reproduction of a good print. Maybe by the time this ship is complete, we will be able to do it justice with better quality pictures of the first flight.

If you have photos you would like to see in print, send them in. We will do our best. We would like to keep the photos in our files for future reference but will return them if you insist.

See you next month - - - - - -

THE FLY BABY BULLETIN

Issue No. 2 August, 1967

If the mail received in response to the first issue of the Bulletin is any indication of the future, then it is a bright one indeed. Our sincere thanks to all those who took time to write us. The well wishes and congratulations are appreciated.

We have not as yet received any postive replies from the suppliers who have been contacted. Maybe before we wrap up this issue we may have something definite. We did get to talk to a couple of the exhibitors at Rockford, but with the rush and confusion of the Fly-In in full swing, we couldn't corner them long enough to talk about any Fly Baby specials. The stock answer was, "write me a letter about it", and this is what we are doing.

AL JOHNSON, out in Wenatchee, Wash. sent us a sketch for wing tip modification which he claims simplifies tip construction considerably. It shortens the wing span slightly, but Al and the local EAA Designee, BILL DUNCAN do not expect any appreciable change in performance. So far we haven't heard from PETE BOWERS on this, (maybe because we haven't asked him), but Al says Pete has agreed to fly the prototype "Cry Baby". Since our drawing ability is even worse than our composition, we won't try to reproduce Al's drawing but will be glad to mail photo-copies to anyone who wants them. Thanks a lot Al for the kind words and if you come across another pair of those "free for nothing" Scott brake cylinders, keep us in mind. The only stray pair we have been able to dig up are so old and corroded that they are without doubt the first pair Scott ever produced.

ROGER DUPERRON of Santee, Calif. is working on a two seater and has promised to keep us posted as he progresses. Cockpit will be 3 ft. wide. More on this as we hear from Roger. Considerable interest has been shown in the two seat version, even though Pete has not given too much encouragement up to this point.

JOE POPE, Lynchburg, Va. has drafting equipment and has offered to draw sketches of any modifications you might have. If so, send them to us and we will forward them and make copies available to everyone. Since reproducing all sketches in the Bulletin would take a lot of space, we will in most instances, describe the modification and make the sketch copies available on a request basis. It would be appreciated if you could send along a stamped envelope when requesting copies and also specify which sketch you want. While on this subject, we would like to add that the offer of help from Joe Pope is typical of the attitude of most of the builders. Everyone wants to help and needless to say, we need and appreciate it.

DAVID STODDARD, a "Fly Baby" builder has written us advising that he has a limited supply of small hardware such as washers, nuts, nut plates, clevis pins, etc., which he will sell for half or les of retail price. Dave says to send him a list of the small parts you need and if he has them, will quote you a price. Please handle these inquiries direct with him. The address is 268 Colorado Ave. S. Torrington, Conn. 06790.

THE BULLETIN'S "FIRST LADY":

As most of you know, we have among us only one lady builder at the present, and it appears that any group of a half dozen or more waste no time in naming a "princess", "queen", "first lady" or some such. Why should we buck the trend. Permit us to introduce MRS. HAROLD ROUTLEDGE, of Almonte, Alberta, Canada, the Bulletin's "First Lady". Mrs. Routledge is a housewife and works on her project "mostly on the kitchen table". She chose "Fly Baby" because it "looks like an airplane". Don't smile at that. This was a common answer on most of the replies. Sometimes it was worded different, but the meaning was the same. At the moment, Mrs. Routledge is the only lady among us, but once the word gets around, we expect more to step out of the shadows. A lot of plan sets have been sold to ladies and they were not all gifts to husbands and boyfriends.

Mrs. Routledge in her letter of "acceptance" passed on what we consider some valuable information. It seems she lives near an area of boatbuilding activity where marine plywood is used. She says that what the builders consider scrap is often large enough to be used on her project. Those thick pieces of plywood come high, so you fellows who live near a boatbuilding area take note and let us know what you come up with. Thank you Mrs. Routledge and we will be looking forward to hearing from you as your airplane progresses.

JIM COX, down in Houston, Texas has what is probably the sweetest set-up a homebuilder could ask for. Jim is a commercial photographer, licensed aircraft mechanic, commercial pilot, and owns a FAA Certified Repair Shop. At the present he is with the Houston Post as a news photographer, and uses his shop to work on his own airplanes. Probably the only FAA certified hobby shop in existence. Once he starts a project, he really moves as evidenced by a photo sent of the major part of the fuselage built in eight days, including layout. At the moment however the "Fly Baby" project is shelved in favor of some antique restoration and the neccesary evil of making a living. The photo of the "eight day fuselage" will be included as soon as we get it out of hock with the platemaker for printing.

PETE BOWERS test hopped another completed "Baby" the last week of July. This one, with longer wings, 30 gallons of gas, and a 125 hp. powerplant weighed in at 1240 pounds. Pete says this combination makes a two seater look practical and will look into it further. He also promised some photos as soon as available and we will pass them on as soon as we get them. Take heart two-seat enthusiasts.

PAUL BOKROS of Carlisle, Mass. sends along a tip that you might want to use and save a little time. On page 1-11, Fig. 1-6, detail "B" & "D" show a cross member as two separate pieces. Paul says make it a single piece of wood. Also detail "A" of Fig. 1-10 shows an insert in the bow. Paul made a solid bow instead. The extra weight he says is negligible.

At this point we want to give a proud salute to GEORGE R. GARRETY, formerly of Springfield, Ohio and presently serving in Vietnam, flying helicopters. George bought a set of plans in June, 1965, but this other little chore came up and took priority. His mother was kind enough to return the questionnaire, advising the military status of her son. We are sending her a copy of this issue and asking that she forward it to George. From what we have heard about chopper pilots in Vietnam, the "Fly Baby" should prove rather tame to George. If he should so decide, we will welcome him aboard on his return. In the meantime we wish him the best of everything and we are proud to have one of "our kind" doing his fair share for all of us.

ROBERT CLOW, Inglewood, Calif. says that he had a fellow builder pass along a set of drawings for building a substitute for a 1/8" NICOPRESS. These things go for $35.00 per, so here is a chance to save a few bucks. Bob says the drawings are now in the NEW E.A.A. publication, "Tips", which is available from headquarters for $2.00. We don't have a copy as yet but will bet even money that it is a good investment and will have a lot of handy hints and kinks. Thanks for the tip, Bob.

PAUL COMEAU, of Leominster, Mass. suggests we initiate a "Buy, Swap, & Sell" section. We are all for it. All we need is ammunition. If you have an item that fits the description, send it in. This section however is not open to commercial type advertising, even though the person might be a "Fly Baby" builder. It is intended to serve the people who might wind up with surplus parts, wrong type parts, or looking for a hard to find item.

LONDO'S "FLY BABY" ADVENTURES

The Sunday Supplement of the SEATTLE TIMES for April 9, 1967, had a color cover and a four-page inside spread featuring FRANCIS LONDO and his beautiful white-and-yellow "Fly Baby" which first flew in February, 1967. You need a gimmick to get a homebuilt written up in the papers these days, and Francis had a good one - he had built an airplane but he didn't know how to fly!

Because of this, designer PETE BOWERS made the test flight, which was covered by the paper. Another pilot flew the original "Fly Baby" as a chase plane and Francis went up as a passenger in a "Cub" and took closeup pictures of his bird on its first flight when Pete moved in for some close formation flying. No adjustments were necessary after the test hop and a relay of other pilots started putting time on the new ship, which ended its first day with nearly four hours flying time in the logbook.

Francis, meanwhile, went in search of flying lessons. After an unhappy experience with one of the local pilot factories, he and a friend bought a Luscombe 8A and he took his lessons in it. He soloed it on June 17, 1967, and on the weekend of June 24/25 took it 300 miles to a Fly-in in southern Oregon. He felt that he was ready to solo his "Fly Baby" at the time, but his instructor wasn't available to sign him off for it, so he had to use the Luscombe.

(Con't next page)

In discussing the problem with Pete, who had his own FLY BABY at the Fly-in, Pete offered the use of his ship for some tail high fast taxy runs down the runway for familiarization. As a further check on Francis' flying ability, Pete flew formation with him all the way back to Seattle. It was still early in the evening when they got back, so Pete offered to ride around the pattern a few times with Francis in the Luscombe to see how he handled it on the landings.

The first landing was completely routine, so Pete told Francis to do it again, this time from the right seat. This was quite a change for Francis, who had been doing only left-seat flying, which meant that he used his left hand on the stick and his right on the throttle. This change gave him some readjustment problems and he decided that maybe he wasn't quite ready for FLY BABY after all. A couple of hours' right-seat solo time, however and he was ready. With his regular instructor still not available for a sign-off, Francis drove 30 miles to Pete's place to get his student permit signed off for FLY BABY (Pete has been an instructor since 1949) and then drove 30 miles back to his own airport to solo his FLY BABY.

From there it was strictly "Cloud 9" - no problems at all. Nothing to do after a few trips around the pattern but drive all the way back to Pete's to tell him about it.

FOR SALE

GLEN C. PALMATARY, writes as follows; With much regret I am forced to sell my project because of financial reasons. Therefore, I am asking you to notify other builders through the Bulletin, that it is for sale. I have the fuselage about 2/3 to 3/4 completed. Everything from the cockpit rearward is completed except rudder and elevators. The aft turtledeck and stringers are on and ready to cover. The firewall is complete with asbestos and galvanized covering. I do not have it on gear, nor do I have any controls or instruments. I have the tailwheel and fittings ready to install. I have the upper wing landing wire supports and aluminum blocks ready to install.

I also have 1 full sheet of 1/8 plywood, 2/3 sheet of 1/4 inch marine plywood, 1 sheet of .065 sheet 4130, all the capstrip stock for wing ribs, enough spruce to finish the ship except the wing spars, and misc. bolts, nuts, washers, glue, nails, C-clamps, etc. All is aircraft grade material with receipts and the ship has been inspected and the log signed by the FAA.

I would like to recover my cost which is about $200.00..
Sincerely, Glenn C. Palmatary. (end of letter)

We regret also that Glenn will not be able to complete his project. Maybe at some future date, he will again be in a position to build. For those who wish to contact Glenn, his address is 1409 Marylee Drive, Columbia, Missouri. 65201. Please handle all correspondence direct with him.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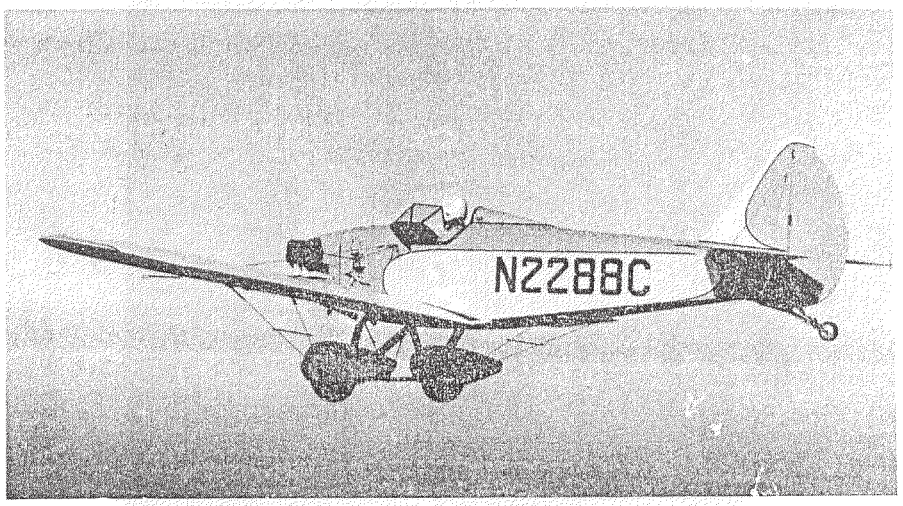
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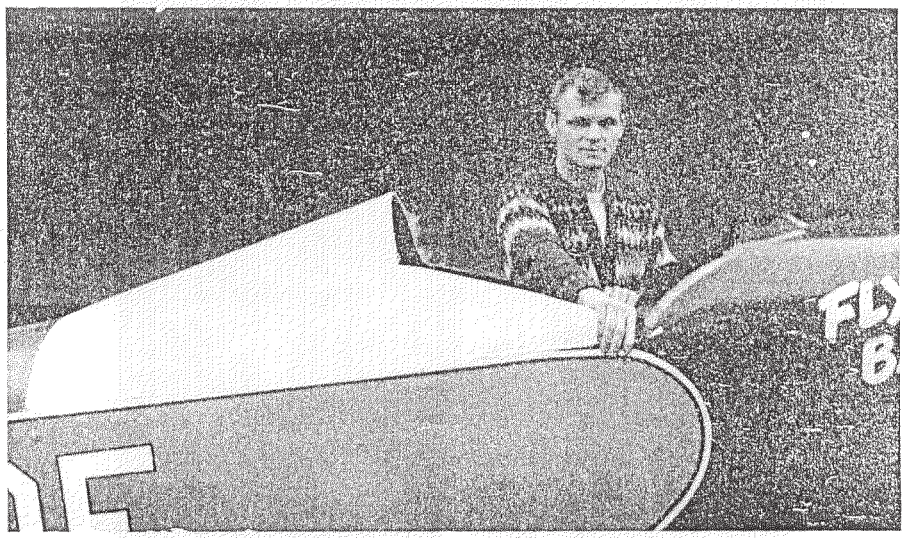


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ABBOTSFORD AIR SERVICES
FLY BABY
CF-SWA

Photo Page Captions.

Front Side:

Upper Left; This is a slightly modified FLY BABY by Wes May of Portland, Oregon. Steel tube divided axle, landing gear and wheel pants, plus one-piece windshield. Photo by Peter M. Bowers

Upper Right; Francis Londo of Seattle built his FLY BABY before he learned to fly. Now he's making up for lost time on a X-C from Seattle to Portland for a fly-in. Photo by Peter M. Bowers

Lower Left; The original FLY BABY with it's original fuselage and short registration number taken in 1960. Photo by Peter M. Bowers.

Lower Right; Dave Smith of Seattle is building a FLY BABY and will use a fiberglass turtledeck. Here he tries it out on the original. Photo by Peter M. Bowers

Back Side:

Top; Although five FLY BABIES have been in one place together, three are the most Pete has been able to get together for a photo. Left to right, Wes May's, Pete's, and Bert Copp's. Photo by Peter M. Bowers.

Bottom; Another "gathering of eagles", this time at an Abbotsford, B.C. fly-in. Shown are Pet's ship and Bernie Bricklebank's, CF-SNA. The other ship could not be identified as the registration markings were hidden. It definitely is Canadian however from what is visible. The photo came from Bernie, who got it from Pete, and we assume it is handiwork.

FLY BABIES AT ROCKFORD

We don't as yet have any photos of the Fly Babies at Rockford, but all told, there were eight present at the 1967 event. Although all 8 were on the field at one time, we were not able to get them together for a family portrait. We did get individual shots of each, but the finished prints have not been returned from the processor. If the photos are worthy, they will be in an upcoming issue. The Fly Babies that made it to Rockford are listed below, with registration number and builder.

CF-RXL	George Welsh	N-4742	Jim Quick
CF-SUT	Norman Kelly	N-59365	Johnson-Porter
CF-EWC	Ed Cook	N-4629T	Ed Sampson
N-6542D	John Villenueva	N-86681	Hal Gier

Thats it for this month, and since it is so late getting out, we plan to get started right away on the new issue. See you in about four weeks.

THE FLY BABY BULLETIN

Issue No. 3 September, 1967

Last month we set a precedent by getting the Bulletin out late and at this point it appears that we will do the same again this month. Most magazines and periodicals stay at least one month ahead and a lot already have the December issue on the newsstands. You must admit we are different. Pete Bowers said that we were biting off quite a chunk when we first broached this idea and did he ever know what he was talking about. Sure cuts into our building time. No. complaints however, since we enjoy every minute of it. (well, almost.)

Those who are members of EAA be on the lookout this month or next for an article in Sport Aviation about "Fly Baby, Five Years Later", or something to that effect, by PETE BOWERS. The article may not make it due to the Rockford coverage, but should show up soon. In the same issue we hope to see a notice about the Bulletin, and maybe it will reach some of the fellows who didn't get the initial letter. About a third of our letters were returned, undelivered and a lot of guys never got the word.

There have been several responses to our offer of copies of prints sent in by AL JOHNSON. At the moment we are experimenting with a photocopy machine to make a printing master direct from the prints you fellows send in. If this works out, we will be able to print exactly what is mailed in and nothing will be lost in the translation. Will know for sure next time.

As you may have guessed, the Bulletin is made up a little at a time as mail comes in and time becomes available. If it sometimes seems a little dis-jointed, this is the reason. While on the subject of mail, it has been a little light lately and we would like to hear from some of you guys that have been holding back until you see how this thing is going to work out. We really need you fellows and your ideas and thoughts. We heard several ideas at Rockford that were going to be mailed in, but haven't heard from you yet. While at it, we might mention that all contributions don't have to be brainstorms and new innovations. Constructive criticism is certainly welcome and if you have something to say, lets hear it. That is what we are here for.

Here are just a few items that we have had requests for help and questions about. If you can help on any of them, let us know.

A simple radio installation.
Glue types and working characteristics of various glues.
Modifications using salvaged light plane gear.
Experiences in making or using wheel pants.
Sliding removable canopy plans.
Modifications for wearing a parachute. (seat and back pack.)
How to get the wife interested in "Fly Baby".

These are just a few. More next month.

Last month as you will recall, we introduced our "First Lady", Mrs. MAUREEN ROUTLEDGE, and we thought we did a pretty fair job of it. Well, is our face red. In one fell swoop, we moved her all the way across Canada. Her location was given as Almonte, Alberta. This is wrong dear friends. Almonte is in ONTARIO, which is only about 2000 miles to the East. Our apologies, Maureen. While on the subject, our only lady member is considering using streamlined brace wires such as used on floats, tail surfaces, etc., instead of control cable for her wing braces. She is asking for advice on this if anyone can help. Specifically she needs to know the exact distance between attach points for each brace. This same idea was brought up at Rockford and if anyone has done any work along this line, let us hear from you.

ED JORDAN, Aurora, Ill. was kind enough to let us borrow his 1945 issue of Model Airplane News, which contained the plans for the original "Fly Baby", a model airplane built by a Lieutenant Peter M. Bowers. The article also carried a photo of Lt. Bowers which evoked a smile. 22 years and he still hasn't got over airplanes.

REV. G.W. SHEERES, our only minister, sent in the following concerning the rudder of our Baby. Since there are several "onlys" and "firsts" among us, why not here and now appoint Rev. Sheeres our unofficial, official Chaplain. Now that we have that bit of democratic proceeding out of the way, we can get down to the serious part of his letter which follows.

Rudderpost Talk

Well, another FLY BABY Monday has come and gone (Monday is my day off), and we're just a wee bit closer to the big day when Fly Baby will take to the air, that is, if you take the l o n g - - - perspective, for it will probably be at least two more years or so before all the spruce and the plywood and the fittings and the bolts which make up Fly Baby will hopefully defy gravity. Yet every nail driven thry the plywood and every batch of Aerolite glue mixed brings the ideal a little bit closer.

Having finished the fin recently I'd like to bring a small item to your attention which may be of benefit to those who still have to build their rudderpost. According to Mr. Bowers plans, (cf. page 1-15, Fig. 1-10) the rudderpost is to be built with the following filler blocks.

7" 17" 27" 47"

It might be well to consider adding ONE MORE fillerblock to the rudderpost to act as a back-up for the wire support. You'll have to figure out for yourself where your wire support fitting will be located. If the figures on page 3-3 of the drawings are accurate it should be approx. 11-1/2 inches from the top; the measurements of my rudderpost are slightly different here. The point is: add a fillerblock as a back-up for your wire support.

(continued)

Rudderpost Talk: (cont.)

A second item pertaining to the rudderpost is this -- you may want to consider adding steel tube bushings thru the rudderpost where the bolts of the tailwheel-spring-fitting go thru the rudderpost (cf. page 2-12, Fig. 2-6). A friend of mine who has a sharp eye for possible weak spots in plane construction, and who is a regular lecturer on this very topic at our monthly EAA meetings, suggested that some play might develop without bushings there. He made this suggestion some months prior to the '67 Rockford Fly-In. Lo and behold, when I looked over one of the many Fly Babies on the Rockford field, and questioned the owner on the tailspring etc., he told me that some play had developed where the tailspring fitting was attached to the post. He suggested that bushings might prevent this. So I am merely passing on what I have been advised to do and what I have consequently done myself, i.e. add steel tube bushings thru the rudderpost where the bolts of the tailspring fitting go thru the filler block of the rudderpost. (end)

The above item requires no further comment, but we would like to add that we had the pleasure of meeting Rev. Sheeres at Rockford and it would be difficult to find a more personable likeable fellow. We had always figured it would be rather difficult to be a minister and a "nice guy" at the same time. There is a combination and this man has found it. You had better know your airplane pretty well if you plan to argue the fine points with him.

ED SAMPSON Of Belview, Minn. had 2 flying airplanes at Rockford. In addition to his completed Fly Baby, he had his Headwind, which he built himself, and a friend flew in. Now, Ed is working on a 2 hole Fly Baby and says he has the plans all drawn up... Completed so far are the stabilizers and rudder. Wing ribs are next. Wing area will be 136 sq. ft. and the fuselage will be 21 inches longer and 4 inches wider. Seating will be tandem. Wings will be strut braced from a cabane mounted at the present location of the landing wire fitting. Tail surfaces will be increased in size and squared off. Landing gear will be of the J-3 type using 700 x 6 tires. Wings will use routed ribs and one inch thich spars. A J-3 torque tube will be used if it can be adapted.

Ed also added that the advent of cold weather will "ground" his "Headwind", and anyway it should have been called the "All Wind". Those familiar with the plane can see why.

WOODROW THOMPSON, Eureka Calif., sent us a snapshot of the Trinity Alps taken on a cross-country while working for his ticket. The mountains make our foothills here look like sand dunes. Thos of us living in flat and semi-flat areas should pause and count our blessings.. Woodrow is a Music Instructor and uses his 3 months off in the summer to good advantage in working on his ship and building hours toward his private ticket. Oh! for the life of a teacher.

"Something On Steel"

Mr. C.E. MULTOG, McMinnville, Tenn. sent us the following item which should prove of value to those who have yet to face the making of fittings. The article is reproduced as sent in by Mr. Multog, who we met at an Alabama Fly-In a couple of years ago.

"When I undertook this Fly Baby project, I thought I'd soon burn out and with this in mind I bought a whole sheet of 4130 plate.090 thick, 18" x 72". I had the notion that by the time I chopped up this piece of steel and made a few fittings, I'd come to my senses and quit before I got in too deep. I am no youngster and it has been many years since I did any flying.

Pete's material list isn't much help, so how many pieces or square inches of steel do you need? I have all my fittings made lacking just a couple items that are of different stock or best made later "to fit". Of the .090 sheet I have one foot left and from an 18" x 36" (1/2 sheet) of .063 steel there is about eight inches remaining. There are a few scraps, but not much. Pete calls for .090 and also .093 in some places. I couldn't find .093 and did obtain an O.K. from Pete to use of .090 throughout.

I had the steel sheared at a local plant and unless you have access to shears, it would be best to buy your steel in strips. It's a long saw by hand and you will do plenty of that anyway. Following is the way I had my steel cut up.- - - -

Pcs. (Out of .090 - 4130 steel plate)

1 - 4-1/2" x 18",	cut 4- 4-1/4" pcs.
1 - 2" x 18",	cut 2 - 3-1/4"& 2 - 4-3/8"
1 - 2-5/8" x 18",	1 - 12"
1 - 5-3/16" x 18",	4 - 3-3/8"
2 - 3-1/8" x 18" ,	2 - 7-1/8", 2 - 4-3/4"
1 - 1" x 18"	(an extra one needed - maybe)
1 - 2-1/4" x 18"	

(Out of .063 - 4130 steel plate

2 - 3-3/4" x 18",	cut 8 - 3-3/8"
1 - 3" x 18"	cut 4 - 3-7/8"
1 - 2-7/8" x 18"	cut 4 - 3-7/8"
1 - 2" x 18"	cut 2 - 5", balance 2-1/4"
2 - 1-1/2" x 18"	
3 - 1" x 18"	
5 - 3/4" x 18"	

A few remarks on working steel that come under the classification of "Same Old Stuff", may be of some help if you are not an "expert" or it has been awhile since you tried your hand.

C.E. Multog (cont.)
It is not too difficult to turn out say one elevator hinge that looks pretty good, but make eight more just like it. If you are going to duplicate parts, some kind of a template is needed as it is most difficult to make bends to a mark or line.

When you layout the first piece from which you will drill the others, don't use the full size drill. Drill pilot holes with a small drill, say 3/32". With a small drill, you can set it into a center punch hole more accurately. If your are drilling thin stock like .063, even .090, and try to use it as a template with say a 1/4" drill, even though the pieces are clamped together the hole will tend to wander. With the small pilot hole, the larger drill will follow it and all the pieces will come out with the holes in the desired place.

Setthe drill very lightly in the punch mark and don't hold the steel. Let the drill center itself, then hold the piece and lubricate after taking a light cut. I like to start the drill-press after I have set the drill in the punch mark.

Even on steel, a scribe mark at a bending place will tend to cause a break. If you have to scribe, bend to the mark inside. On aluminum, scribe marks are prohibited and I don't like them even on 4130.

In making the Fly Baby Rudder-elevator hinges, after the hinge pieces are shaped and drill to size, make two simple templates of say 1/8" flat stock. Round the bend edges with a nice easy radius and match drill the two little templates with a hinge piece , so the template can be bolted to the hinge piece to be bent. The templates are to be a little wider than the hinge and of course to the length between the bends. I used a drill shank thru one hole and tightened a bolt in the other. Then remove the drill and set the part in the vise down almost to the bend line as the light steel template will not take the bending unless supported by the vise jaws. You can bend the end over with the hammer; put the bolt in the other hole, holding the two pieces in the corner of the vise so the template does not shift while changing the holding bolt from one hole to another. My templates for the hinges were 2 - 5/32" for the outside hinge and 2- 1/32" for the inside hinge part. You mayhave to adjust the template length a bit with a file after bending a pair.

The plans do not show what these hinges turn on and nothing in the hardware list is indicated. I bought a deal for what was supposed to be all the hardware requirements for Fly Baby and while the items furnished conformed to the list, I find many items short, wrong size, too long, too short or just not there. So don't go by your plan "Bill of Materials" too much. In my notion, had various sheets shown the needed hardware items, one could have run out their own list. Bolts were used in the Fly Baby I have seen. I think the hinges could stand a little more pin area and the hinges should be bushed.

C.E. Multog (cont.)

Speaking of hinges, the plans call for AN 257-2-300 aileron hinges. That is what I got in this stuff I bought and it is so stamped right on the hinges. But, if you will look at plan Fig. 4-23 which scales 1/2" - 1", you will see that the hinges shown are 1" each half or 2" flat out. The AN 257-2-300 hinges I have are just 1-1/16" flat open or 5/8" to the side. This puts the bolt holes right close to the edge and while there is enough wood at the hinges in the wing spar, the wood in the sloped top of the aileron spar is pretty marginal, which I didn't wake up to until after I had already fitted up the wing with the doublers, nut plates, etc. I believe the AN 257 hinge is obsolete anyway.

Back to the template or jig deal; a rectangular piece of steel (1/8" to 3/16" thick) was used to bend up the eight landing gear inner support fittings, Figure 2-2. As these are left and right hand fittings, all four sides of the template were used the difference being in location of the holes by which the part was bolted to the template for bending. The area of the part which is later trimmed and rounded off was drilled for the holding bolt and the template drilled to match. These fittings are drilled in place on the fuselage, or at least marked at the time of assembly.

I also made up a jig for welding the end fitting on the tubes for the compression ribs. It isn't easy to weld .035 tube to .090 or thicker plate and I couldn't find anybody here who could do it. The welding instructor at the trade school suggested Welco 17-FC high strength alloy and that is what was used. This alloy has a tensile of 100,000 P.S.I., hardness of 200 B. and bonds at 1550° F. I don't know if it's legal, but it is a very strong weld and I couldn't twist a sample weld loose. All I did was wind up the tube.

I was very careful in making up the components for the compression ribs; that is, that the tube ends were square and of exact length, that the end fittings were all drilled alike and the fittings square, also. I center drilled the end fittings 3/16" - used a washer in each end of the tibe to center a 3/16" rod, threaded at both ends which held the fitting to the tube. These washers were some I had and a bit oversize so that I had to put a few on a bolt in the drill press and take a light cut with a file; very little for a snug end fit in the tube ends. The washers may be an Auto-Lite generator part. I couldn't find any more of them around here. If you had a taper reamer, a light cut would let the washer in enough. The tube with ends held by the rod were lined up in a simple jig made of a couple 4" hardware-store steel angles and a piece of 3/4" angle iron I got off an old bed frame. The steel angles were bolted to the base angle iron, squared and lined up and drilled at the top to take two 3/16" bolts spaced exactly as the end fitting is drilled. These bolts projected 1/8" so that by springing the angle a bit, the tube and end fittings could be slipped in between the two ends of the jig. The base of my jig is 26-3/4" long and there has to be two positions for the angle at one end as the compression ribs are of two - actually three lengths. (cont. next page)

C.E. Multog (Cont.)

C-4 rib was not put in the jig, but held with the rod and squared or lined up by putting on a flat plate. The washers of course stay in after the weld. The rod is removed and I put "Texaco" Rust Proof Compound inside and sealed the end holes with a piece of tape.

I think I am running out of "herbs", but there has been a couple articles about adhesives - glue if you prefer; in Sport Aviation and every time you read something of this nature, you wonder who is right. I made archery bows some years ago and have had a little experience with this stuff. I'll go along with the W.S. Evans tests and experience as opposed to the "Dont Believe All You Read" in the April issue. See Evans comments under letters Page 3, July issue. I have made a number of "break tests", mostly like Mr. Evans suggests, trya few tests of your own. Resorcinol is waterproof all right, but it won't stack up for me with plastic resin glues and I have know this for a long time; - my experience. I don't go along with some of the things that have been written about wood, Somebody will have to prove to me that aircraft woods get special treatment at the mills. This is lumber country around here, not fir or spruce, but I know something about how mills operate. I'd like to see how I get .70 to .90 per foot certified aircraft grade spruce, fir or anything else delivered here. It's your move. C.E. Multog. (end)

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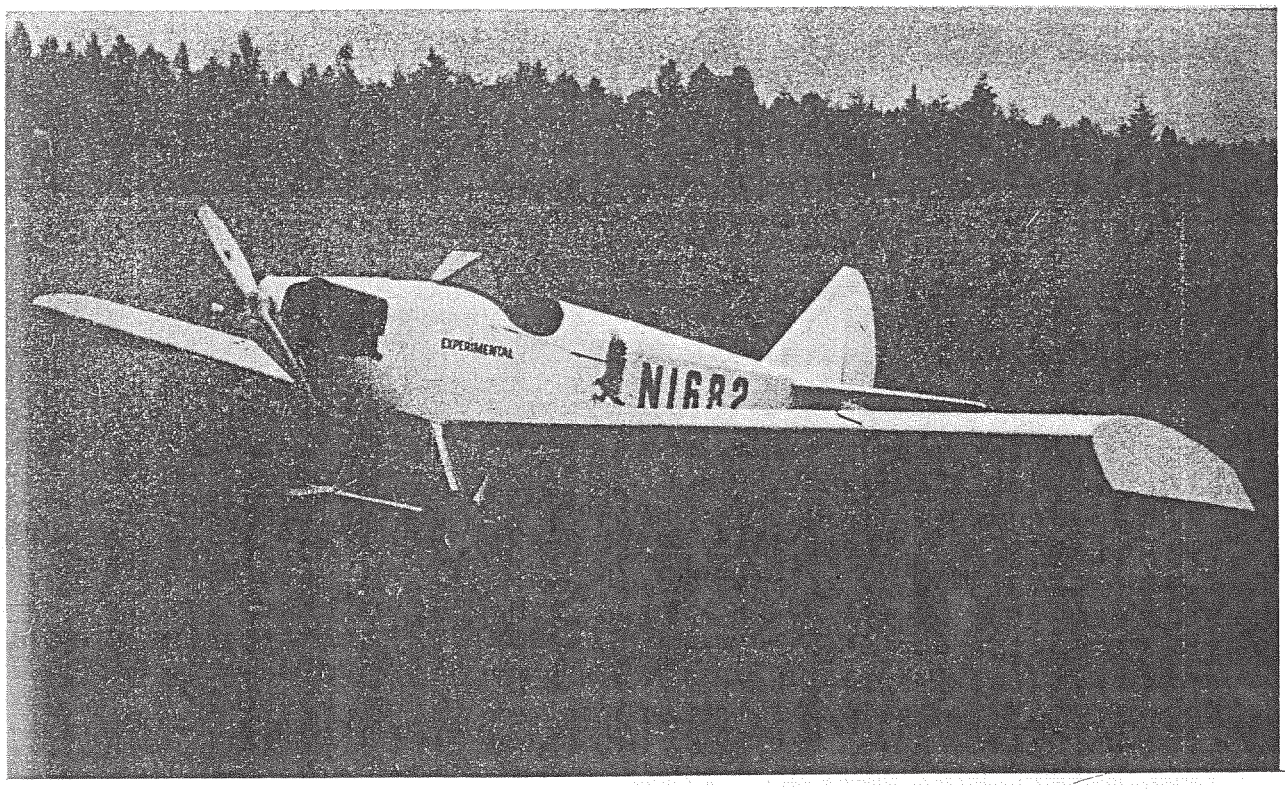
Notes on Modifications: (From Pete Bowers)

One of the most extreme modifications under way is by Eugene Wise, of Saugus, Calif. He's converting FLY BABY to a shoulder wing, something like the old Buhl Pup or the Church, with the wing attached to the upper longerons. He realizes what this does to the pilot's downward visibility, so he's putting windows in the wing roots. My major concern is the extremely shallow angles of his wing brace wires - the flying wires attach to the bottom longerons and the landing wires to the top of the turtledeck ahead of the pilot. While this worked fine on the Buhl Pup, that design had an extremely deep belly to give good flying wire angles and had a pylon above the fuselage to give a good angle to the landing wires.

Quotation from a letter received 19 July, ordering a set of Fly Baby plans: " I am ordering a set because I can no longer put up with the way George Welsh (CF-RXL) has been living it up since he completed his FLY BABY"....That from Garth Elliot, Meadowvale, Ontario, Canada. - - - - - Ed. Note: George Welsh won the "Best Fly Baby" award at Rockford this year as reported in the August issue.

JOHN J. HOFFMANN, of Waco, Texas sends in a report that the Sherwin-Williams Company has a Polyurethane varnish that he believes is far superior to the traditional spar varnish. He mentions a friend who started a Pietenpol and had to leave it uncovered and out in the weather for a year. No visible ill effects on the wooden frame.

Tips like these are just what we need for the Bulletin. Keep 'em coming. (All above from Pete.)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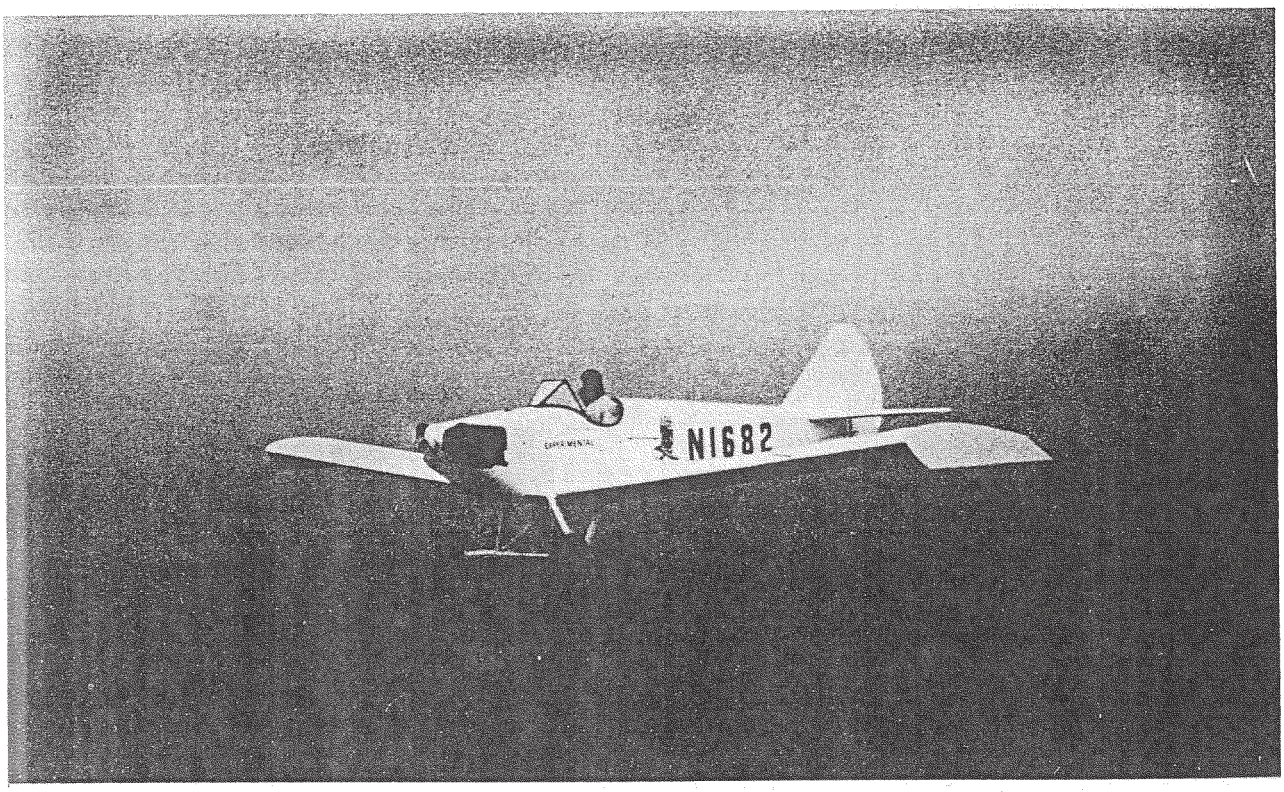
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Open Next Section FBB section two

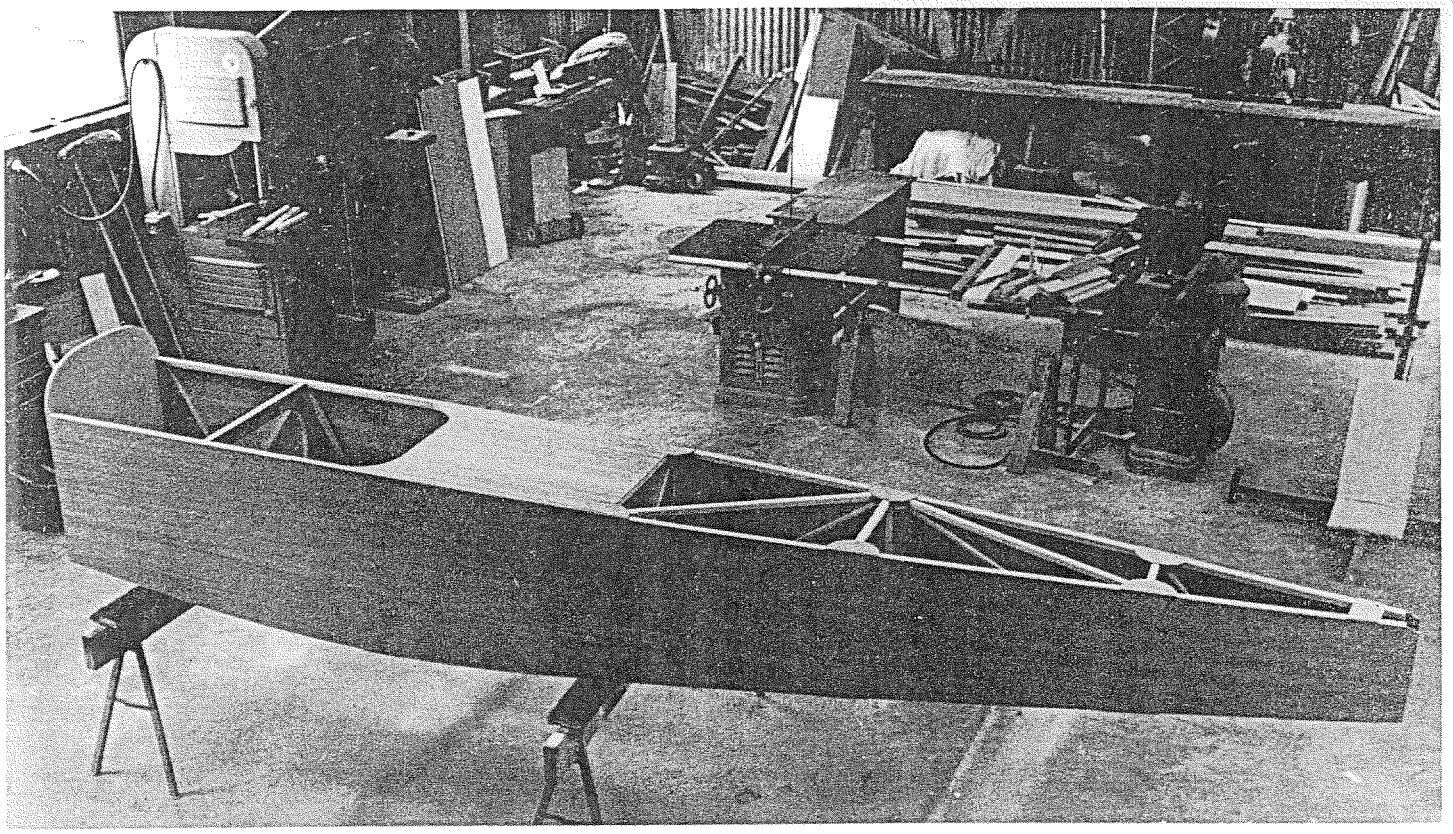
Above: This is the "eight day" fuselage we mentioned last month, built in that length of time by JIM COX, Houston, Texas.

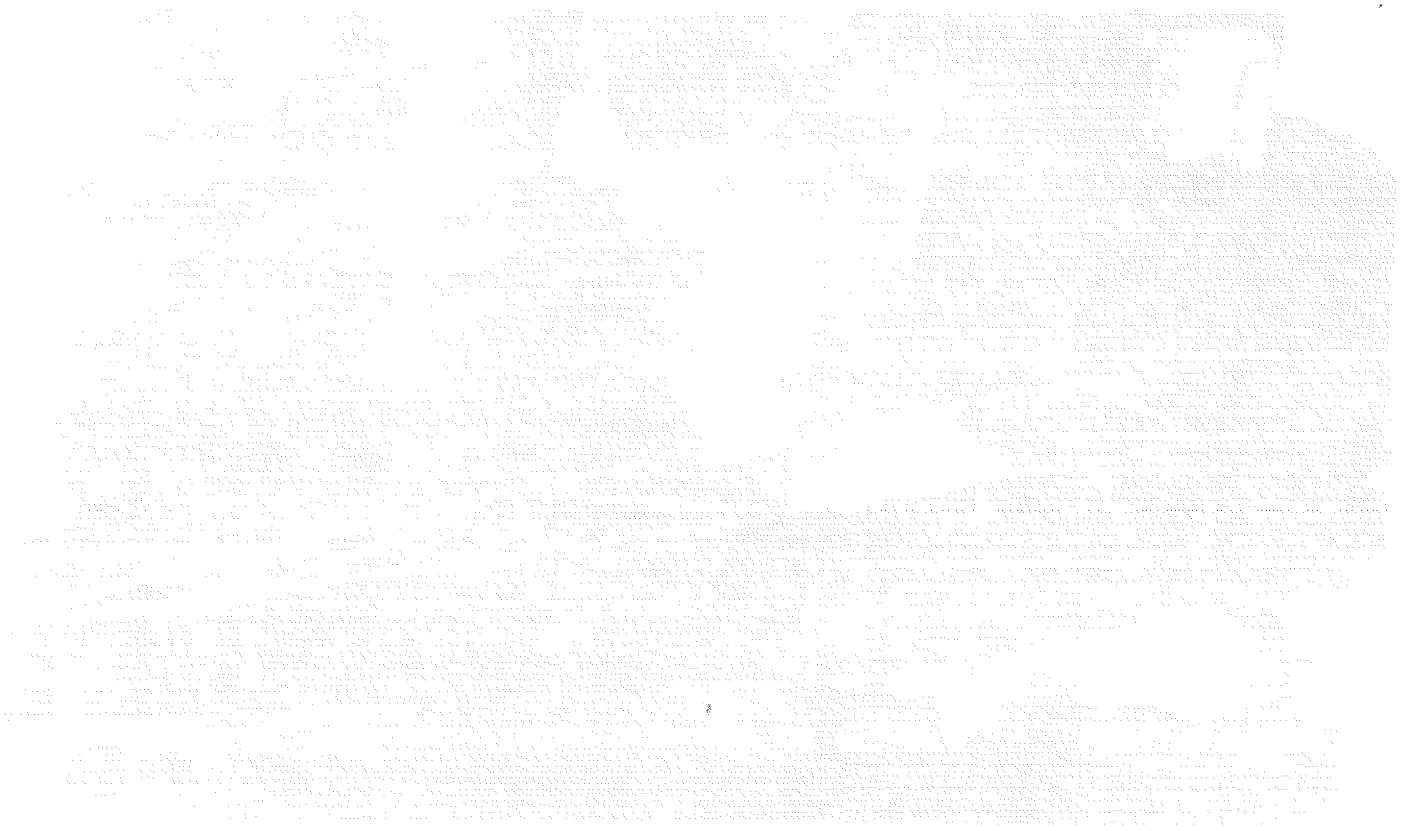
Opposite: A rather extreme modification by DAN DUNNING, of Federal Way, Washington. He put in a 125 HP Lycoming O-290G engine, increased the wing span two and one-half feet, added tip plates UNDER the wingtips only and put on a modified Whittaker type tandem landing gear. Spar size was increased to one inch and the wire attach points were moved outward five inches to reduce the overhang ratio. Thirty gallons of fuel are carried, 19 gallons in a tank in the regular location and in a tank behind the seat. Gross weight for the test flight was 1245 pounds. Since Dan had only a student permit at the time, Pete Bowers made the test flight. (bottom photo)

The tandem gear didn't work out very well, and has since been replaced by a standard unit that saved 30 pounds in the process. Both the original and the replacement gear used steel tube struts instead of wood. The tandem gear seems to have died out anyhow. Pilots who used to use them for flying into rough area in things like Super Cubs have abandoned them in favor of plain oversize tires on standard gear. Main drawback of the tandem gear is manevribility on the ground.

Main problems on Dunning's ship, in addition to the ground handling, was the lack of shock absorbers. With his combination of an overweight ship and going into rough mountain clearings, he really needs shock absorbing characteristics, and the oversize tire route is the only way to go. Actually, Dan's original intention in using the longer wings and more power was to give the ship good high takeoff capability on floats.

Well, that's it for this month fellows, (and Maureen), and sorry we are so late, but will try to catch up next couple issues. See you next month.





THE FLY BABY BULLETIN

Issue No. 4 October, 1967

Some fine morning you may wake up and find that the Bulletin has arrived in the same month that it is dated. Don't bet on it however, since that day may be a long time coming. Anyway, we had rather stay a month behind than to skip a month.

EAA & SPORT AVIATION

In case you EAA members missed it, the October issue of Sport Aviation carried an announcement of the Bulletin on page 20. We had hoped to see in the same issue PETE BOWERS article on "Fly Baby, Five Years Later", but it didn't make it yet.

While on the subject of EAA, we want to pass on the information on how to get in touch with this organization for the benefit of our readers who are not members. To those who are members, it may seem incredible that anyone building or contemplating a homebuilt is not aware of this outfit. However, there are several of our group who are not members. Whether this is by choice or not, we don't know, but we do want to be certain that everyone who reads the Bulletin is aware of EAA and the benefits that are to be gained by membership. EAA by the way is short for "Experimental Aircraft Association". We could devote pages to this subject, but the best thing to do is let those interested contact EAA Headquarters and get the info first hand. The address is, Experimental Aircraft Assn., P.O Box 229, Hales Corners, Wisconsin 53130. About all we can say in summary is that if you really love airplanes, and homebuilts in particular, the $10.00 annual membership fee is the best investment you can make in pursuit of your dream. Didn't mean to sound so dramatic, but thats about the size of it. You may not always agree with the policies of EAA, but is is the best thing we have going for us, so if you don't belong, give it serious consideration.

SURPLUS PARTS CATALOG SOURCE

We have the address of a parts house that we are told carries several items of hardware that can be used on "Fly Baby". This info was sent to us by BILL STURGEON, of Victoria, B.C., Canada. Bill, who is just one of several Canadian builders sent us a clipping showing such things as aircraft cable, choke assemblies, rod end bearing and so on. If you want a copy, write to,

PRINCESS AUTO AND MACHINERY LTD.
P. O. Box 1005,
Winnipeg 1, Manitoba, Canada.

We have written for a copy but haven't got it yet. We also asked if there were any problems getting orders shipped into the U.S. such as customs, duties, etc. Will let you know if there are any procedures to follow.

HELP NEEDED ON "HOW TO VARNISH"

Simple as it may sound, the proper method of varnishing in building our airplane is very important. The question has been posed several times and we don't feel qualified to answer. We need a comprehensive report from someone who can speak from experience to put in the Bulletin. Remember, you don't have to be an expert at writing to get it printed in the Bulletin.
(Cont. next page)

Varnish (Cont.)

We need information such as, type, brand names, proper temperature for application, what brush to use, how many coats, when and when not to varnish and many other details. When preparing copy for use in the Bulletin, it is nice to have it typed and double spaced, but this is definitely not a requirement. Write it on the back of an envelope if you have to but get it to us.

FIREWALL (STA. 1) CONSTRUCTION TIP

We had another letter from PAUL BOKROS of Carlisle Mass. with a note that might save a little frustration. Paul says that in Fig. 1-14, the Sta. 1 dimension of 12" to center line could be changed to 12-1/8". This will ensure that the edge of the firewall is flush with the sides of the fuselage. The depth of the two notches on the side of the station will also have to be changed from 3/4" to 7/8" to compensate. Thats all from Paul. (just couldn't help that last bit.)

PROJECT GIVEN UP

It may never happen again, but for at least once we would like to applaud someone for giving up building "Fly Baby". JOE CLARKE of San Jose, Calif. was building his ship along with a partner who was helping. During the building, they discovered that his partner was epileptic and would never be able to fly single seat aircraft. This resulted in the plans and fuselage being donated to the local EAA Chapter 204 as a Junior Project. Joe plans now to build a 2 seat "Woody Pusher" and if a 2 seat version of "Fly Baby" is worked out, he wants to know about it.

To our way of thinking, this is an excellent example of why a lot of people call homebuilders a "different breed of cat". To Joe we want to extend our sincere best wishes on his new project.

A BINDER FOR THE BULLETIN

Several readers have suggested that a convenient way to keep the original plan file and the Bulletin in good shape is to buy a 2" or 3" three-ring vinyl binder. These are usually found in office supply or dime stores for a 1.50 to 2.00. We say a vinyl because our first purchase of a cardboard-backed version for 80¢ lasted about three months and had to be replaced. Since the same idea was suggested by several people, we can't give any one individual credit, but the first person to write was GLEN HODGES of Granbury Texas. In line with this you might want to pick up a few clear plastic sheet protectors at the same time. These holders make ideal display sheets for photos and since they usually have a black filler sheet in them, you can use both front and back. We have found that they keep your photos and important documents from getting dog-eared and finger-printed.

The Bulletin has been and will continue to be 3-hole punched so you can use the same binder for it and the plan set.

REPORT FROM ROCKFORD

We mentioned in an earlier issue the number and names of the "Fly Babies" in attendance at Rockford, but that was about all. Here is the rest of the story.

This was our first year at Rockford and we spent eight great days there. A tent was home and "foot-long" hot dogs were survival fare. It was well worth it though and we wouldn't have traded places with anyone, anywhere else. Most of the week was spent crawling under, over and around the eight ships there, talking to their pilots, and making a general nuisance of ourselves.

Since most of you will be reading the details of the Fly-In in Sport Aviation, we will leave that to the pros' reports. We did, however, have some "Fly Baby" activity that won't be reported in S A. On Tuesday and Thursday nights, there were informal meeting of "Fly Baby" builders that were more bull sessions than anything else. These meetings were held in the "back yard" of ERNIE HARBINS camper in the tent area. Ernie as you may recall is the builder who had his ship test flown at the Fly-In last year by none other than PETE BOWERS himself. This event was given full coverage in Sport Aviation at the time. Not until you realize how many obstacles and difficulties that had to be conquered, do you realize what a great accomplishment it was.

In addition to the general discussions at the meetings, we had films of the "first-flight" last year and also some of the early flights of the original "Fly-Baby". These included the "dunking" of the mother hen when Pete first put floats on her. The film which was flown in by ED SAMPSON in his own Fly Baby, had some great footage made by Pete with a remote camera mounted on the vertical stab and shooting forward over his head. Some of the shots taken with this rig included a chase sequence of Pete hot on the tail of what appeared to be a "Liberty Sport". Only once did the Sport manage to get out of his "sights", and then for only a few seconds. Another striking sequence was of Pete coming in on final to a very narrow grass strip with tall trees almost brushing both wingtips. There was an almost audible sigh of relief as each tree was cleared without touching. Another discovery was made while watching this shot. Pete Bowers has been recorded as having bounced on a landing! The effect was rather strange though, because with the fixed camera, the airplane seemed to remain steady while the ground bounced up and down a couple of times.

If you want to shoot some exciting film with your bird, try the remote fin mount. We will ask Pete to give us the details of how it is done and pass it on for those who want to try it.

Quite a bit of excitement was stirred up among the "Fly Baby" crowd, as well as everyone else for that matter, when JOHN VILLENEUVE, of Gilbertsville, Ky. arrived in his "Baby". John followed the plans as faithful as anyone could. Right down to the paint job. Except for a slight difference in the shade of red, (so we are told), his ship is a ringer for the original 500F. When it hove into view over the horizon, everyone was sure Pete Bowers had arrived and not until John climbed out of the cockpit did they know different. In fact many who did not see the ship close up were sure Pete was on hand and we were asked several times where to locate him.

REPORT (Cont.)

Just about everything at Rockford was great, but the greatest kick of all was meeting other Fly Baby builders. We met a lot of them and there was not a single "sour apple" in the bunch. We have said it several times before, but it bears repeating; Fly Baby builders are the greatest group of guys in the world. (and lady)

All in all, it was a wonderful week and we plan to try to make it again next year but will have to wait and see. The family gave up their vacation this year so "Dad" could go, but they may not be so willing next year.

BEST "FLY BABY" AT ROCKFORD

The "Best Fly Baby" award for this year was given to GEORGE WELSH, of Etobicoke, Ontario. George was awarded the trophy at a presentation ceremony in the Forum Tent.

George has a beautiful sliding canopy which he says is a neccesity for the winter flying in Canada. Being from the "deep south" we wouldn't know about such things. Last winter we had two inches of snow and they closed the schools and declared an emergency. Just kidding, but it seldom gets below 15 degrees here and then we don't fly.

George had one of the three Canadian "babies" at Rockford and they all three came from the same area. We just had a letter from him a few days ago and they expect to have two more ready to go in the spring! How about that, a whole squadron of the "bloody" things as these Canadians say. The whole group is made up of ex-servicemen. There are two RAF, two RCAF, and one Navy. All are about the same age. They all work at totally different things, but have one thing in common. That is a mutual admiration for the airplane and Pete Bowers.

While at Rockford, we spent a few minutes in the cockpit of George's ship and happened to notice that the "stick" was a rather odd looking piece of hardware. We meant to ask George about it, but with all the hubub and talking, we never got around to it. As if he read our mind, George told us about the stick in his most recent letter. Here is the story as George tells it.

"It is the stick out of a Messerschmitt 109G. It was back on New Years' Day, 1945, on an airfield in Belgium and we were just recovering from a big party the night before. Around about 9 a.m. two squadrons of 109' and FW-190's hit us with everything they had. They shot up our field from every direction and we lost fifty two aircraft on the ground including some of your B-17 bombers which had landed there as they couldn't make it back to their bases in England. One ME-109 pranged right beside our billet and a few days later I cut off the joystick as a souvenir, never thinking that one day I would be using it to control my own aircraft."

This little narrative makes us wonder how many other ships are flying around with pieces of equipment in them that have an interesting background. Take ED SAMPSON for instance. We noticed what appeared to be a World War I tachometer or possibly a clock in his panel. What is it Ed? How about an article on it. If anyone else has something of this nature, we would like to hear about it and are sure the others would also.

AILERON FLUTTER

"Fly Baby", because of sound basic design has never had problems with aileron flutter as some homebuilt designs have. We do have however one reported instance which we want to pass along to remind everyone that it is possible. BOB MITCHELL of Santa Barbara, Calif. says that flutter has occured twice on his ship. The first time was when entering a loop at 110 mph. and the second was when a friend was in a tight spiral. Bob has since balanced the ailerons, but we haven't heard yet if this corrected the problem.

Aileron flutter is an entirely foreign subject to us and all we have heard is "old wives tales" about it. The original "Fly Baby" has been flying over 5 years now and as far as we know, has never shown any tendancy to have flutter.

It would be quite helpful if some of our more experienced pilots would write us some technique type material of what to do when flutter occurs. Also how to recognize it, how to correct it, and most important, how to build in prevention during construction.

Don't get us wrong about this. We are not trying to generate a major problem from a minor incident. It is just that we have not had much material to date on actually flying our bird. Many of our builders, like ourselves for instance, are not "old pro" pilots and an article like this would be helpful and interesting. Any takers?

BUY, SWAP & SELL

Remember the "for sale" we ran on a fuselage in the second issue? A letter just arrived from LOUIS BALOS, Niles Mich. telling us that he had contacted GLEN PALMATARY and bought the fuselage. Louis says that he is very well pleased with it and this gives him a good start on his project.

This also gets our "Buy Swap & Sell" column off to a good start, but this month we don't have any offers.

If anyone has an item that fits this category and is not of a commercial nature, let us know and we will be glad to run it for you.

EXTERIOR GRADE PLYWOOD

On page 9-2 of the plan set, Pete Bowers says that it has been found that exterior grade 1/8" mahogany door plywood is excellent for use in "Fly Baby". To back this up, we have a letter from GEORGE GOODIER III, of Sedalia, Mo. who says the door paneling will stand the water-proof test for days with no ill effects. An added attraction is the appearance of the wood. Since it is made for exposed doors, it usually has a beautiful finish. George says that it is available at most first rate cabinet shops and if they don't have it, they can order it easily.

This letter as well as conversations with several builders who have used the door plywood, makes us feel much better about our decision to do likewise. If any other builders have used this wood, we would like to know about it and how well it worked out for you. Use of this wood can save several dollars as you well know from the prices of aircraft ply. George also sent us some addresses to contact for prices of other items which we are checking out and will report later.

PHOTO PAGE DETAILS

Top Left: Fuselage of Lowell D. Morrow, Yorktown, Indiana taken in June, 1967. He calls it "Splinters" and will carry registration of N-30060. Photo by builder.

Center Left: Inside view of "Splinters". Note the contour seat and map case. Will try to get more info on the seat from Lowell.

Lower Left: This is Gifford Gillingham tooling along over what we suppose is his hometown of Buffalo Grove Ill. Shots like these make our mouth water in anticipation. Makes you want to get out in the shop and get busy.

Upper Right: This neat "office" belongs to Clarence Bruggeman of Norfolk Nebr., This bird has been flying about two years now. As you may remember we ran a shot of the completed airplane in a previous issue.

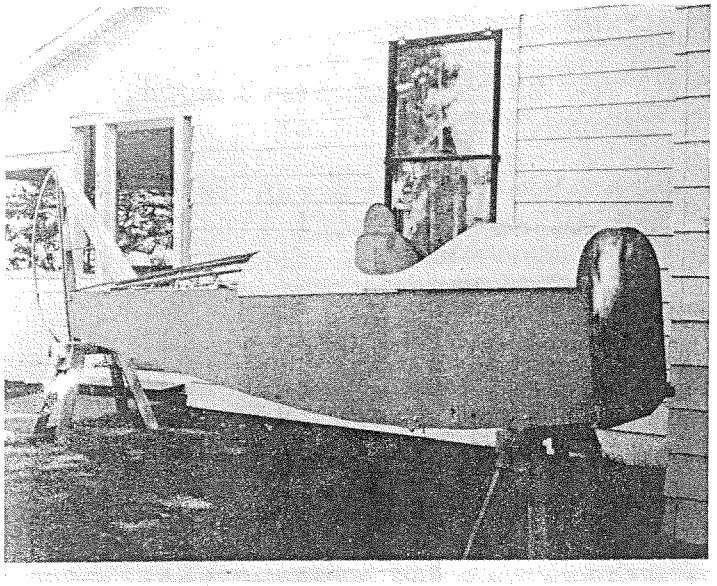
Center Right: This is the "Baby" that caused so much commotion when it landed at Rockford this year. The proud owner is John Villeneuve who was our neighbor in the tent area that week in August. When John came in, everyone thought it was Pete Bowers in 500F, since the reproduction is faithful down to the last detail. The excellent photo is thru the courtesey of Joe Pope who is one of our most valued readers. Joe is the fellow who is preparing drawings of other guys sketches for the Bulletin. He is also in his spare time working on a type approved small transceiver. More on that in this issue.

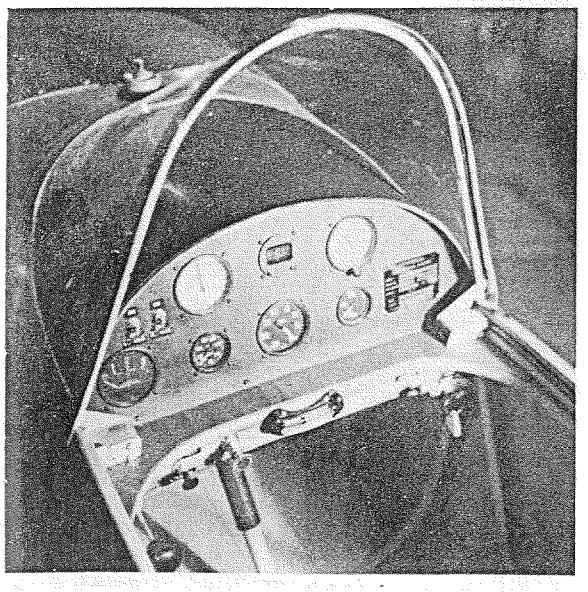
Lower Right: This is another construction photo of Clarence Bruggemans's ship. Note the beautiful cowl job, and sliding canopy. The canopy we hope to get plans on before long and publish them.

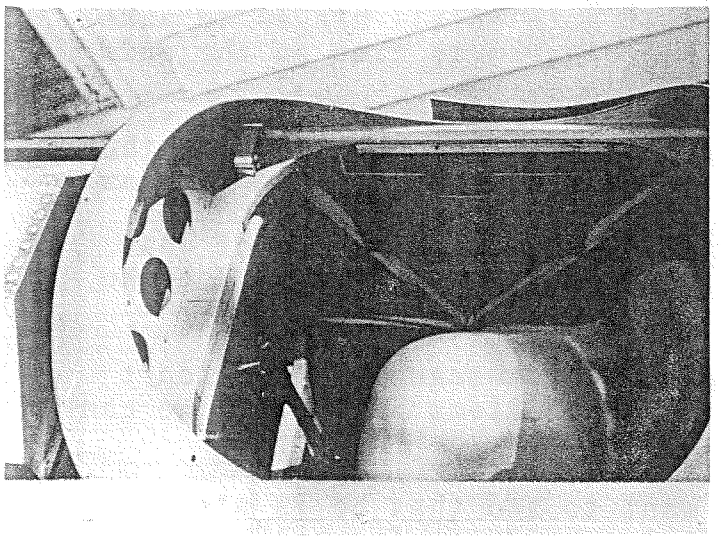
MORE PHOTOS NEEDED FOR OUR PHOTO PAGE

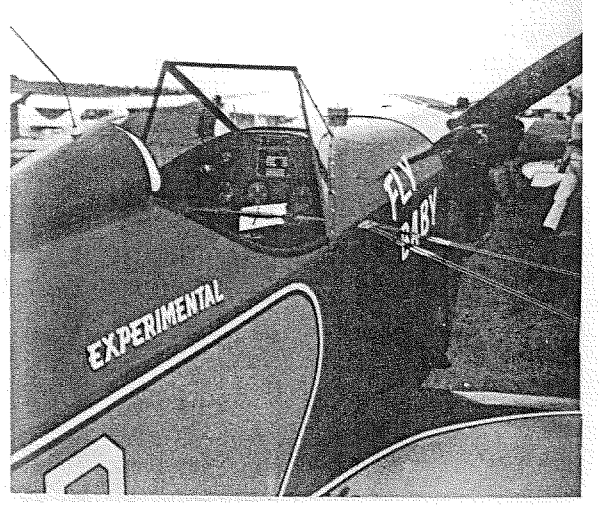
Not a single one of the above snapshots was made by a professional. The point we are making is that any one of you can take a snapshot type camera and get reasonably good results. If we are going to continue running our photo page, we need pictures to print. Dig thru your old snapshots and see if you don't have some that would interest others. We can't be sure of printing all of them since some contrast is required for halftone printing, but not many are too hazy for reproduction. If your photo is a "one and only", tell us and we will return it after printing. Several fellows we know are keeping a running record of their ship by photographing it during all phases of construction. A couple have said that it made their FAA inspections easier.

Modification photos are especially interesting since they can show what the finished job looks like. As someone once said, "one picture is worth a 1000 words. How about it?

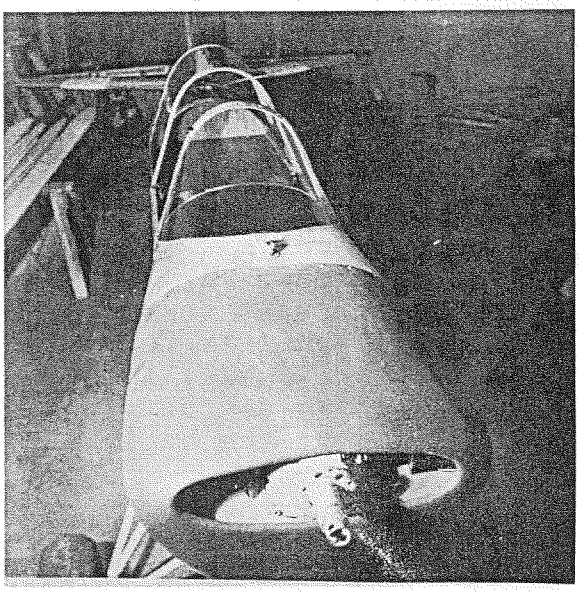







EXPERIMENTAL


N2408



OUTBOARD RUDDER & ELEVATOR HINGE MODIFICATION

Here is a hinge modification submitted by JOE BYRNES, of Streamwood, Ill. and illustrated by JOE POPE, of Lynchburg, Va.

Joe Byrnes, who is a police Lieutenant with the CMSTP&PRR ran into a problem with locating the hinge for the top of the vertical fin. Here it is in his own words.

"The hinge for the top of the vertical fin is in the wrong place. Maybe I should say it is in the right place, but the diagonal spar for the fin joins the rudder post just where the hinge is supposed to go. The top bolt will have to go thru the point where the post and diagonal spar join.

I wrote to Pete Bowers regarding this and he stated to move the hinge down past the point they join. By doing this the bolt holes will not go thru any of the rudder post filler and any great tightning of the bolts will result in crushing the spar or post. I think I have a solution to this problem. First of all, the top of the rudder post will have to be filled more than 8" from the top. Then make a hinge as shown in the diagram, (see next page), and attach it as shown. I plan on using anchors instead of regular nuts on all hinges to make repair easier. The same, as shown on the diagram is true on the ends of the horizontal stabilizers also."

The drawing as mentioned above is courtesey Joe Pope who is doing them in his spare time, along with about 5 other projects. If you have an article or modification that requires a drawing or sketch which you would otherwise send in, go ahead and give us a rough sketch of what you want in the way of a drawing. We will in turn send it to Joe who will prepare it for the Bulletin.

Now, some of you guys who have been holding out because you couldn't draw, have no excuse. How about getting those items in to us. We can certainly use them.

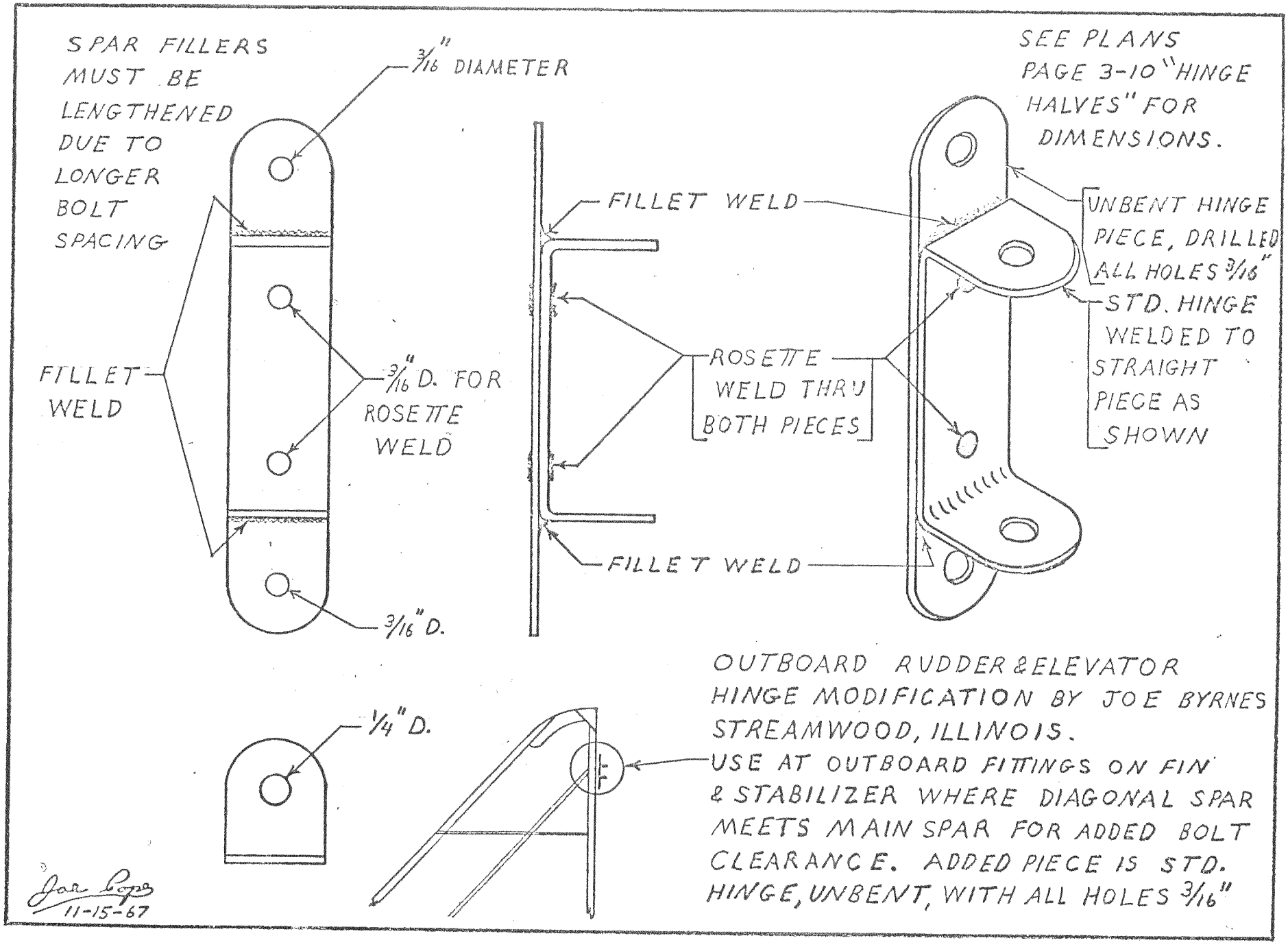
Before we close out on Joe Byrnes, we want to add that he is also among the group who is building a fibreglas headrest for his ship. This approach seems to be getting more popular all along. (For those who are curious about the string of initials, CMSTP&PRR, as we were, they stand for Chicago, Milwaukee, St. Paul and Pacific Railroad. O.K.?

BULLETIN LARGER THIS MONTH

As you may have noticed, we have a few more pages than usual this month. We may regret it when we start digging for items for the next issue, but we have faith.

We depend almost entirely on incoming mail to put this thing together. However, the past few weeks have been rather light. Maybe it is the holiday season that is almost upon us. At any rate, our reserve of items for the Bulletin is dwindling fast and help is needed. If you have something to contribute, now is the time to get it in. As Pete Bowers said at the beginning, this is your "soapbox", so lets use it.

(Note. The back-side of the drawing on the opposite page is blank in case you want to place it in your plan set.)


SPAR FILLERS MUST BE LENGTHENED DUE TO LONGER BOLT SPACING
3/16" DIAMETER
FILLET WELD
3/16" D. FOR ROSETTE WELD
3/16" D.
FILLET WELD
ROSETTE WELD THRU BOTH PIECES
FILLET WELD
SEE PLANS PAGE 3-10 "HINGE HALVES" FOR DIMENSIONS.
UNBENT HINGE PIECE, DRILLED ALL HOLES 3/16"
STD. HINGE WELDED TO STRAIGHT PIECE AS SHOWN
1/4" D.
OUTBOARD RUDDER & ELEVATOR HINGE MODIFICATION BY JOE BYRNES STREAMWOOD, ILLINOIS.
USE AT OUTBOARD FITTINGS ON FIN & STABILIZER WHERE DIAGONAL SPAR MEETS MAIN SPAR FOR ADDED BOLT CLEARANCE. ADDED PIECE IS STD. HINGE, UNBENT, WITH ALL HOLES 3/16"
Joe Byrnes
11-15-67

"FLY BABY" FITTINGS PRICE LIST

1.	ELEVATOR AND RUDDER HINGES WITH RUDDER HORN	-$12.50 SET OF 9 PR. OR $1.50 PER PAIR
2.	WING LANDING WIRE SUPPORTS	-$5.75 WITH SPACERS
3.	ELEVATOR CONTROL CABLE HORN AND TORQUE TUBE	-$1.50
4.	STABILIZER ATTACHMENTS	-$3.75 SET OF 4 2 FRONT, 2 REAR
5.	AILERON BELLCRANK	-$5.00 SET OF 4
6.	WIRE SUPPORT	-$1.75 EACH
7.	WIRE SUPPORTS	-$3.30 SET OF 6
8.	INNER ELEVATOR CONTROL HORN	-$3.15 SET OF 2
9.	OUTER ELEVATOR CONTROL HORN	-$3.65 SET OF 2
10.	COMPRESSION RIB SET WITH TUBING	-$20.28 PER SET
12.	LANDING GEAR OUTER SUPPORT FITTING	-$6.96 SET
13.	LANDING GEAR INNER SUPPORT FITTINGS	-$8.80 SET
14.	TAILWHEEL STEERING HORN	-$1.65
15.	SWING LINK SUPPORT	-$1.88 SET OF 2
16.	BELL CRANK SUPPORT	-$3.00 SET OF 4
17.	SWING LINK WITH TUBING	-$2.00 SET OF 4
18.	AILERON HORN	-$3.40 SET OF 4
19.	WALKING BEAM SUPPORT	-$1.25 SET OF 2
20.	WALKING BEAM	-$1.00 UNIT
21.	FIN SPAR ANCHOR	-$1.60 EACH
22.	SHOULDER HARNESS ANCHOR	-$1.50 SET OF 2
23.	REAR L. GEAR FITTINGS	-$3.65 PAIR
24.	FWD L. GEAR FITTINGS	-$3.60 PAIR
25.	SPAR FITTINGS	-$4.96 SET OF 8
26.	HINGE SUPPORT WITH GUSSET	-$1.70 PAIR

(CONTINUED ON REVERSE SIDE)

27. WING HINGE	-$2.00 SET OF 4
28. WING WIRE ANCHOR LEFT FRONT BOTTOM	-$1.60 SET OF 2
29. WING WIRE ANCHOR LEFT REAR BOTTOM	-$1.60 SET OF 2
30. WING WIRE ANCHOR LEFT FRONT TOP	-$1.75 SET OF 2
31. WING WIRE ANCHOR LEFT REAR TOP	-$1.75 SET OF 2
32. CONTROL STICK AND ATTACHMENTS	-$12.50 SET READY TO WELD
33. TAILWHEEL SPRING AND BRACKET ON SPECIAL ORDER ONLY. SEND DIMENSIONED SKETCH FOR YOUR TAILWHEEL	
34. L.G. WIRE SUPPORT	-$.75
35. AXLE SUPPORT PLATES	-$5.00 SET OF 4
36. RUDDER PEDAL ADJUSTMENT LINK	-$1.00 SET OF 2

COMPLETE SET TOTALS $133.63

THESE FITTINGS ARE ACCURATELY LAID OUT, DRILLED, EDGE FINISHED AND DIE FORMED WHERE NECCESSARY TO EXACT BOWERS SPECIFICATIONS OF 4130-N STEEL. THEY ARE THEN SAND BLASTED OR BUFFED, AND ZINC-CHROMATED ONE COAT. AT THIS TIME I CANNOT SUPPLY WELDED FITTINGS, HOWEVER, ALL PARTS FOR THE WELDMENT ARE FURNISHED. THIS SET INCLUDES ONLY THOSE FITTINGS LISTED AND DOES NOT INCLUDE THE FOLLOWING:

RUDDER PEDALS AND PEDAL MOUNTS	P-6-3	FIG. 6-2
ELEVATOR CONTROL PUSH ROD	P-6-9	FIG. 6-3
AILERON CONTROL PUSH RODS AND AILERON LINK	P-6-8	FIG. 6-4
SEAPLANE REAR FLOAT STRUT FITTING	P-2-13	FIG. 2-7
FLYING WIRES, AND BOLTS AND HARDWARE		

ALL FORMED PARTS ARE FORMED ACCORDING TO MINIMUM BEND RADIUS OF STOCK THICKNESS TIMES 2 TO THE INSIDE RADIUS. ALL BENDS VISUALLY CHECKED UNDER 10 POWER GLASS FOR CRACKS. YOUR SATISFACTION IS GUARANTEED AND YOU ARE URGED TO RETURN ANY DEFECTIVE PART FOR ANY REASON FOR REPLACEMENT OR REFUND. WHEN ORDERING GIVE FITTING NAME, PAGE NUMBER AND NUMBER OF THE FITTINGS AS IT IS LISTED IN THIS LIST - FOR EXAMPLE:

"OUTER ELEVATOR CONTROL HORN PAGE 3-4 NO. 9"

TERMS

ON ORDERS LESS THAN $10.00 - CASH WITH ORDER. OVER $10.00, 30% WITH ORDER, BALANCE C.O.D. ON FULL SET, ORDERS, PLEASE ALLOW 30 TO 45 DAYS FOR MANUFACTURE AND DELIVERY. ALL OTHER ORDERS 15 DAYS. PRICES SUBJECT TO CHANGE WITHOUT NOTICE REMEMBER, THESE FITTINGS ARE GUARANTEED UNCONDITIONALLY AND IF THERE IS SOMETHING ABOUT THEM THAT YOU FEEL ISN'T SATISFACTORY, I WANT TO KNOW ABOUT IT.

DICK WEEDEN EAA 30164
1430 GARFIELD
BELOIT, WISCONSIN 53511

HOW THE BULLETIN IS "BUILT"

Since we are brand new at this editing and composing routine, we have been trying several different ways of working up the material for use in the Bulletin.

At first we tried putting the major items in groups that had some relationship, but found this to be quite burdensome. Also we find that most letters from our readers contain more than one subject and we have to split the letter into two or more parts, which isn't always easy since some have reference to a previous paragraph or idea.

The approach we are taking now is is to take each letter as it comes in and sit down and type the information under a heading that gives a general idea of what is covered. This method results in a stack of isolated items that can then be put into whatever order best fits the make-up ofthe Bulletin. So far this is working out reasonably well, but still gives a sort of hap-hazard grouping of material.

The purpose in going into this explanation is to tell you how we do it and ask for suggestions as to how it might be done better. Write us and let us know what you like and don't like about the way we are doing it. Also, we are sure there are some of our readers who have had experience along these lines and can offer suggestions. As we have said all along, we don't mind criticism, and we appreciate all the help we can get.

FLY BABY FITTINGS

You will find a listing of ready-made fittings listed in the Bulletin this month. Mr. DICK WEEDIN, of Beloit, Wisc. makes up sets of fittings for "Fly Baby" and they are quite reasonably priced. Several of the builders that we met at Rockford this year have used Dick's fittings, and we heard nothing but praise for them. Everyone we talked to was much impressed by the quality and workmanship and not a single person thought the price was too high.

Dick is sending us some of the fittings in exchange for putting his list in the Bulletin. When we get them, we plan to have them inspected by the local fixed base operator who has a licensed FAA repair station. This is NOT because we doubt the quality, but so we can give you the opinion of a professional, since we don't consider ourselves qualified to do so.

We do feel however, that a builder is probably better off using fittings fabricated by someone who is well qualified, and experienced in metal working, unless they happen to be experienced themselves. Most of the people we have contacted in this regard have no experience whatever with working steel, and everything they do will have to be from scratch. These are the ones who will benefit from Dick's offer.

At the moment, as you will note on the fittings list, Dick does not offer welded parts. We hope however that he will be able to at a later date. The parts supplied are ready to weld, but not welded. He is at the present attending A & E School in addition to holding down a regular job, and although he hasn't committed himself to it, we look forward to his being able to offer the welded parts as well, once he is out of school.

THE FLY BABY BULLETIN

Issue No. 5 November, 1967

With the stamp-licking taste still with us from the last issue, we are getting hot on this one in an attempt to get it to you during the holiday season when many will try to cram in a few extra hours on what has been termed "our own private brand of insanity". Call it what you wish, but for many of us, our project represents that thin invisible line that separates us from those who resign themselves to the "rut" and let it go at that. Few, if any, who are building "Fly Baby" can deny being individualists. Why else would they declare themselves self-made "nuts" by building an airplane in their bedroom or garage. Maybe we are generalizing a little too much, but that is the reaction we get from the "unenlightened" when the subject arises. When it happens, we try to pass it off as the most normal thing in the world, knowing full well that they don't accept what we are saying, but not wanting to hurt our feelings, they agree. It is we really who should feel the pity as they walk away shaking their head and clucking, because they will probably never know what it's like taking that detour out of the rut.

We all know that lots of different people have all sorts of things going for them, but you must admit, the aircraft homebuilder, and especially those building "Fly Baby" are without doubt the king of the mountain.

So much for this month's Walter Mitty column. If some of the more eloquent among us would like to expound further on the above, we would like to hear about it. Our own streak of romanticism is just broad anough to bridge the gap and thats all.

UNCONFIRMED RUMOR

Heard a rumor today, probably unfounded, that Santa Claus sled is a homebuilt, and that he and this other cat named Rudolph, (no last name) are EAA members in good standing. Of course we don't believe it, but just in case, if anyone gets a good look at this craft in the near future, see if you can find any evidence of the word "EXPERIMENTAL" stenciled on the side.

While in the holiday spirit, we will use this space to wish everyone and their's a very happy holiday season. Also it it much quicker and easier than sending Christmas cards.

THE POETS CORNER

Before we get on to the serious business of building an airplane, here is a bit of poetry from our "first lady", Maureen Routledge, Almonte, Ontario, Canada which is still in the eastern section of Canada. The next time you hear someone remark that the design of "Fly Baby" was a step backward for sport aviation, you might remember these few lines.

The Triumph of "Fly Baby"

There once was a wee airplane
That brought back the past again.
People sighed and descried,
But never could hide
The charm of this wee airplane.

Maureen Routledge

AN ANSWER TO THE VARNISH QUESTION

Last month we asked for help on varnishing for several members who needed tips on the subject. Here it is in the form of a letter from Dr. LLOYD ROBERTS, of Cooperstown, N.Y.

How to Varnish.
1. Types of Varnish: Natural varnishes (other than plastic base varieties) come in two basic flavors; indoor varnish - often advertised for use on floors or furniture, and spar varnish; Spar varnish is for boat spars and is more flexible and never really dries hard. Therefore it is no good for floors and furniture. It should be the best of the natural varnishes for the airplane weather protection. However if you are building an airplane you might as well go first class and use something better.

2. Polyurethane Base Varnish; This is better (and somewhat more expensive). These are made by the major paint manufacturers under various names. The one I have used is "Polyvar" made in San Antonio. This smells like varnish, looks like varnish, goes on like varnish, but it sticks better at least to finger nails where it remains as a source of entertainment for days and days. (It has been used by the manufacturer to line his swimming pool.) It is quite a strong film, flexible and when it dries it seems to impart considerable extra strength to the porous door panel mahogany. This door panel stuff will soak up 3 to 4 coats before it looks varnished, 2 are sufficient for water-proofing. The best way to test water-proofness is to varnish small pieces with various numbers of coats, weigh them, soak them in water for a few days and weigh again. If there has been negligible weight gain, its water-proof. Use one extra coat for good measure to cover any "holidays".

The best feature of the Polyvar is that it is not affected by dope either, Nitrate or Butyrate. Furthermore the dope adheres very well to the varnished surface. This simplifies things no end although for major attach points of the fabric bare wood or doped wood is probably better. Polyvar does not require exotic solvents, just mineral spirits. It dries fast, expecially the first coat, often less than 1 hour.

3. Varnish Application: Any brush will do. A light sanding of the corners of the diagonals etc. will help prevent any varnish from cracking with age along the sharp corner. A light sanding before the final coat should be applied with the grain. Cross grain application of early coats will fill the grain faster.

I will second the motion on door paneling, as long as it is used in a place where thinner aircraft grade would be O.K. (as in "Fly Baby" per Pete Bowers). That fancy grain means some loss of strength. Some sheets will be found to have unequal thickness of the plys, one side thicker than the other. Some of the hardwood varieties have a very thin core so that they are very strong in one direction but not in the other. These make good spars I guess. Some of this stuff is so cheap its unbelievable, 50 cents per 2 x 7 foot slightly damaged sheet in one place. (all gone now). There is a marine grade mahogany plywood imported from Holland which is harder (and heavier) than the door panel but still less than 10 dollars per 4 x 8 sheet. I got this in 4 mm. thickness (5/32 and probably 3 mm. is available. Write to Bob Craddock, Smoot Lumber Co. 1201 Royal St., Alexandria, Va. They get from some supplier in Baltimore. This is excellent wood with no voids. (spaces in center ply often found in door panels.)

VARNISH CONT.

That completes Doc Roberts comments on varnish but we do a couple of other items from him which will appear in this issue. (we hope)

QUESTION ON WING DRAWINGS

We have a question from Rev. G.W. SHEERES, Detroit, Mich, that maybe someone that was at Rockford this year can answer. It seems that during one of the "sessions" at ERNIE HARBINS camper, there was some discussion of an error in the drawing in fig. 4-28 on page 4-26. The discussion could have been concering the dimension change from 1-1/2 inches to 1 inch of the location of the push rod hole from the top of the spar, or the re-positioning of the link support from the top of the pushrod to bottom. Both of these items are covered in the correction sheet 9-1. Probably it was something else that someone changed or found to be in error. If anyone remembers the discussion of anything other than the above, please let us know.

FURTHER COMMENT ON WIRES

Pete reports that his original calculations on the FLY BABY wing loads for 5-g airplane showed that 3/32 inch 1 x 19 stainless wire would do the job, particularly when doubled. He picked 1/8 inch, however, not for the fudge factor of extra strength but because wire stretches, and 1/8 stretches less than 3/32. For those considering the use of swaged end fittings for turnbuckles, 5/32 for the flying wires should cut down even more on the stretch. This size isn't practical for the Nicopress attachment because the radius and associated thimbles would have to be too large.

As for the stretch, that's something you're going to have to get used to. Even rugged hard-wire braced ships like Ryan PT-22's stretch the flying wires a bit in flight, with consequent slacking off of the landing wires. Pete has flown several other FLY BABIES with wires even looser than his and no ill effects. Realize that this slacking off on one side is from stretch on the opposite side, and not from slop in a rigid system with the wing banging back and forth between two restraints and getting jerked to a halt with each reversal of loading like an undersize bolt in an oversize hole in a strut fitting.

BUY SWAP & SELL

Only have one item at the moment and if more turn up later, we will add them someplace else.

BILL LEISGANG, Route 2, Box 264, Onalaska, Wisc. 54650 has a fresh-majored Continental A-65 for $365.00 F.O.B. cash or will trade for aircraft or parts.

Bill also adds that he has found a man who has 3 (three!) barns full of aircraft parts new and used. He lives about 60 miles from Bill. If FLY BABY builders will write their needs, he will try to find parts for them at cost from this man. He specifies that all requests must have the plane serial number assigned by Pete Bowers or won't answer the letter. He is not interested in making the trip for anyone other than FLY BABY builders. Direct all correspondence on this to Bill.

(This is just another bit of evidence of the spirit that sets this bunch apart.)

ODDS & ENDS

Remember that fascinating tale of how GEORGE WELSH obtained his control stick and the remark about the odd instrument in ED SAMPSONS ship? Well Ed answered the call and here it is.

"About that clock; A former resident of my home town who still has relatives here was home visiting his brother. This fellow is an antique car collector and he came over to see me about my 1924 Ford truck. The truck has been put aside in favor of the FLY BABY project. He said he had a clock that he had picked up from a crashed Allied plane in France in 1918. He said that the plane had been shot down near where he was located and didn't know if it was French, British or American. He offered the clock to me and I jumped at the chance.

As you know FLY BABY N4629T has streamlined tubing for landing gear legs. The legs are Curtiss Robin wing struts and American Eagle interplane struts.

The headrest is American Eagle and all the turnbuckles used in the control system and wing drag wires are from the first and only side-by-side Ford V-8 Pietenpol ever built. It was pictured in Sport Aviation about a year and a half ago. The airspeed is from the original Lasley Sport which became the Franklin Sport Biplane. The Lasley was a homebilt 2 hole biplane powered by a DH Gipsy motor. A friend of mine owned it and flew it till the hail came, about 1939,and then sold the engine etc. The solid flying wire inserts plug that I have in my axles came from a 1929 Ford Model A truck drive shaft.

Here is the clincher that Pete will enjoy. The metal for the removable turtle deck is from the aluminum outside shell of a Siedelhuber water heater made in Seattle circa 1948-49. Being in the plumbing business, I have an eye on a couple of those old heaters. Waiting for them to spring a leak any day!

CAUTION ON LOWER FRONT FLYING WIRE FITTING & STAB LOWER WIRES

In addition to the above, Ed passed on some "hard information" that may help some builders.

"A word of caution on the lower front flying wire fitting. To make it as the plan show will result in a concentric load being put on the fitting and bolts. I changed mine during the first 10 hours of flight. There is either too much angle in the dog-leg or too little. I can't remember which. But I made a paper pattern lining up the wires with the attach bolts. I noticed this condition on some of the ships at Rockford this year. Also another item noted was the pick up point of the lower stabilizer wires. Some of the fellows had them attached to the tailspring assembly. I wanted to do this also but an A&E friend of mine pointed out that the tailspring bracket is subject to damage on rough ground and if it failed so does the stabilizer brace wires. The proper place is as the plans show. A hole drilled thru the fin post between the 2 tailspring bracket bolts. Also use a hardwood filler on the fin post. This will help the tailspring from working loose."

Ed also promised us a photo of his winter canopy which we haven't had a chance to see yet. (these poor north-land pilots)

Open Previous Section FBB section one

Open Next Section FBB section three

MOTOR MOUNT ERROR

Have a letter here from LOWELL MORROW of Yorktown, Ind. indicating that he has discovered an error in the motor mount, fig. 5-2, page 5-3. The 11-13/16" dimension between top and bottom motor pads should be 11-9/16". He checked the service manual, and also the motor. Lowell had his jig all made up but had not cut any tubing when he found this. He has since finished welding up his mount.

Lowell goes on to add that he made his own 13 gal. gas tank using 24 ga. galvanized sheet, pop-rivets and solder. Says it can be made with just a bending brake and no fancy seams. He promised to draw it up for us next month.

Included in the letter was a tail spring bracket - stab brace wire anchor, modification that we will save till next month.

Remember the molded seat shown in last months issue. Well, here is the story in Lowell's own text. " You mentioned my moulded seat in the last issue. I am working on that deal now. If it works out, I might be able to get them for almost nothing. They are fibre glass, (not plastic) made for patio furniture. My former flight instructor, PAUL BROWN of Marion, Ind. is in contact with the plant that makes them. He was there one day when they had some set out as rejects. Maybe a run, or too much fiber showing. When he learned I was building, he brought one down to me and it is perfect. Has four bolts moulded in for mounting. The top just comes up to the shoulder harness slot. Had to re-design the seat supports. If they are available I will work up the drawings for the installation. I am not sure how it will work with a seat chute, but think a back-pack will be O.K. Mr.Brown is now trying to find out if any of them will be available. If so, will let you know as soon as possible."

"As you can see from my picture, (see Issue #4), I used 1/8" ply in front of the cockpit area. This was for two reasons. It will stiffen the aluminum in that area that will take quite a beating-cockpit edges wind-shield, etc. Also I plan to put a finger slot in the forward edge behind the windshield to make it easier to get in and out."

"Also had a brainstorm about master brake cylinders. I haven't been able to locate any Scott's at a reasonable price, and I think I can work up something else. More on that when I can check everything out."

(Note:)
This letter from Lowell was exactly the type reaction we had hoped for when we asked for material last month. However the results were not as plentiful as we needed. Only two or three responses as a direct result of our plea for help. Lowell started his letter saying that he woke up with a guilty conscience because he had several ideas that he could have sent in and was more or less waiting on everyone else. Our sincere thanks to him for feeling that way and we wish we knew how to motivate others in a similar fashion.

Some of you who we havent heard from since you subscribed to this lash-up, drop us a line and let us know how your project is shaping up or any questions you may have. We love to get mail, no matter what you say. Give it some thought.

WING TIP MODIFICATION

A few issues back we described a wing-tip modification by AL JOHNSON of Wenatchee, Wash. and offered drawings to anyone who sent us a note. At that time we were still searching for a method of getting the drawings into the bulletin at a reasonable cost and without having a lot of expensive artwork and drawing done. We found the solution to our problem in the person of JOE POPE of Lynchburg Va. You have seen Joe's name mentioned several times in the Bulletin as being involved in several projects. Still he has given generously of his time in preparing drawings for the Bulletin as well as doing some testing on which the results will appear as soon as they are complete.

Back to the subject at hand, you will find Al Johnson's wing tip drawing in this month's issue. Since the drawing is complete and Al did a good job of describing the change on the sketch he sent us, there is no need of an article to go along with the drawing. However if anyone does have a question or is not clear, drop us a note and we will put you in touch with Al.

ANOTHER CATALOG SOURCE

One request we get more than any other is for names and addresses of aircraft parts and components suppliers. In line with this, we are continually on the look-out for just such information. The following outfit offers a monthly catalog called the "ACI Flyer", which has several items that can be used on "Fly Baby". To get on their mailing list, just send them your name and request it.

Aircraft Components Inc.
Benton Harbor, Mich. 49022

In addition to the components for the airplane, they carry a complete line of aircraft tools and special equipment, that will make your mouth water. Most of the tools are rather expensive for a one airplane factory such as ours but there are some that the average builder can use.

REASON FOR FRACTIONAL PARTS LIST

Since C.E. MULTOG grumbled a bit in Issue No. 3 of the BULLETIN, about the FLY BABY parts list being arranged by chapters in the plans document, instead of expressed in total material quantities, PETE BOWERS has come up with an explanation of how the situation came about.

A complete set of plans in the present form did not exist at the time Fly Baby won the EAA design contest in 1962. Pete had one sample chapter worked up to submit with the contest entry to show the judges what the working plans would be like. Turning out the plans was actually much more of a job than building the airplane, and there certainly wasn't any point (and no time) in expending hundreds of hours on fine finished plans of a ship that might not be a winner and end up with no market for the plans.

Well, Fly Baby did win, and there was an immediate demand for plans. The only thing Pete could do was put them out in installments since the customers didn't want to wait for the year that it would take to turn out all the drawings and writeups. For this reason, each major section of the plane was written up as a separate project, with its own parts list. Pete admits that he didn't even think of the over-all procurement problem when the job was finished and the obvious advantages of consolidating the several parts list. (Con't)

FRACTION PARTS LIST (Con't.)

Speaking of the drawings, one reason why some of the full-size fittings, which can be traced right off the drawings and don't need dimensions, are so fully dimensioned is that the plans were published in EAA's magazine SPORT AVIATION (as required by the contest) and the drawings that are full size in the FLY BABY document ran four to a page in the magazine. The dimensions were necessary for the people building from the magazine plans to scale the parts up to full size.

MORE FROM MULTOG

Since we mentioned C.E. MULTOG in the above item, we want to pass along a few items he mailed in recently. His contribution follows.

"When spreading glue in the cap strip slots and other places too, a squeeze bottle beats a brush. I have used a "white glue" plastic bottle, but there are others. With a little practice you can run a "bead" of glue about as you want it - and fast. Also the glue holds up well in the bottle. I use plastic resin glue "Wilhold" by name. It's good.

The enemy of good glued joints is grease - out of the air. Any wood, especially plywood that stands around for awhile gets "stuff" on it. I go over all joints just before glue application with acetone on a towel type rag. It will take off pencil marks, sawdust or sanding dust as well as the "gook" which seems to come from the air. I don't depend on nails for "pressure" if there is any way I can put the clamps to it and if not clamps, rubber strips cut from tubes are wrapped on. On the wing tips, I used the rubber for laminating; it's work, but the job looks good.

If you do not have a "Skil" perma-grit tungsten-carbide file No. 18730 you are "out of tools". It is the best wood rasp and finishing tool I have had in my hands.

"Questions"

The item in a recent issue with respect to rudderposts was very good. I knew this tail-wheel, spring fitting got sloppy and have put a hard maple block in mine. What size bolts do you bush for? My drawing doesn't show bolt size, but they appear to be ¼". (fig. 2-6).

Where do you get the 1 x 19, 1/8" stranded cable? I haven't found it in Knoxville, Chattanooga or Nashville. What does it sell for?

A 1600 - 2100 lb. turnbuckle (both have the same dimensions) is .156 between the clevis end. The landing wire terminal, fig. 8-1 A calls for 3/16" stock which is .187 thick. A 3400 pound turnbuckle will take it, but mine are 1600 or 2100, I don't know which; so they won't go on that 3/16" fitting.????? Oh! Mr. Bowers, what do I do now? If 32 other guys figured it out, maybe I can too."

(Note:) We're sure Clarence will figure out a way to solve his problem, but in the meantime if you want to get in touch, he can be reached at Route 6, McMinnville, Tenn. 37110.

Mr. Multog also says that he thinks the vertical fin should be offset a bit and has asked a friend for advice on it. The "friend" turns out to be Johnny Dorr, from Merigold, Miss. who is a professional old-time aerobatic pilot who runs a agricultural-aerobatic flying school.

THE AILERON FLUTTER PROBLEM

Since the question of "FLY BABY" aileron flutter has come up in the Bulletin, PETE BOWERS has hastened to send in his information on the subject to date.

The condition had first been reported to him by JIM SLAUSON, who does quite a bit of flying in 500F (his engine is in it and he treats it like his own airplane.) The remarks weren't in the nature of a complaint, so Pete didn't worry about it. He figured that it was a good jolt from turbulence,as Jim was mostly flying through the mountains. Pete first encountered it himself during a race at a Fly-in in Oregon in 1965, and that was the only time. The next mention came from BOB WHITTIER, well-known aviation writer and authority on antiques and homebuilts, who got to fly 500F at Rockford in '66.

Since it was bumpy that day, Pete again put this down to gust loads or turbulence, but thought he had better do a little checking, because it was a long flight through rough air back to Seattle. Flutter had never been a problem before, and hadn't even showed up in deliberate flutter tests during 150 mph dives when Fly Baby was so new that it was 13P. The plain hinge arrangement of Fly Baby and a lot of other ships is the most susceptible to flutter, but should be no problem at our operating speeds.

So up he went for a test, with a borrowed parachute just in case. He found that he could get flutter in rough air at speeds well above normal cruising. This was partly due to accumulated slack and slop in the aileron control system, but the main cause was something else. 500F's old wires, which have been in use since 1960 are pretty well stretched, much more than they should be on "Standard" Fly Babies because half of them are flexible control cable instead of the prescribed 1 x 19 stranded stainless steel wire. The reason for this is that Pete ran out of the 1 x 19 at 3:00 O'Clock in the morning of the day the ship was to make its first flight and so finished the job with control cable. He hasn't bothered to replace this original stuff since, even though some of it has stretched to more than the ability of the turnbuckles to keep it tight.

Well, in flight at cruising speed and above, the stretch in the flying wires lets the landing wires above the wing slack off, especially the left rear ones on 500F because they aren't very tight to begin with. At a certain speed, the flapping of the two left landing wires sets up a rhythm that feeds into the rear spar and starts the left aileron fluttering. A slight reduction in speed or a brief nosing-down to put tension on the landing wires stops it. A preventive measure would be to get the slop out of the aileron control system and to tighten up the wires (for 500F this means new ones). The Fly Baby owners who have reported flutter should make a careful check to try and determine the source. Pete believes that the PRIMARY cause is loose rear landing wires and SECONDARY cause is slop in the aileron system. The report of flutter encountered while starting a loop reinforces this opinion. Because of the original 150 mph dive test, it should not be cecessary to add static balances to the ailerons.

FLYING WIRE STRAND BREAKAGE

A related problem to the aileron flutter is the report of two instances of wire strands separating and the wing spar attachments, reported directly to Pete by DAVID PAULE who also reported on the similar situation encountered by EMMOR PORTER. FAA got wind of this and also advised Pete of it. This was complete news to him, as his ship had more hours than anybody, (ove 800 hours) and not a sign of the problem. It has a few broken strands on one landing wire, but this is the result of the wing falling off the trailer on the way to Rockford in 1962 and being dragged along the ground until the car stopped. (con't.)

FLYING WIRE STRAND BREAKAGE (con't.)

The situation came to light when Emmor inspected his ship very carefully after it had quite a bit of time on it and some 4-G aerobatics. When he found some broken strands at the flying wire turnbuckles, he checked farther and found more. He reported it to FAA as required when encountering malfunctions and defects in amateur-built airplanes, and they asked for the wires from the opposite side. They too found separations. So Emmor ordered new stainless 1 x 19 wire and is grounded until he gets it installed.

He had telephoned MacWhyte, and their engineers told him that 1 x 19 stainless wire should not be bent as sharp as is required to around a Nicopress sleeve and thimble, and that the breakage is definitely coming from stress on this sharp bend. So, Pete checked his ship and could find no signs of similar breakage, even on the landing wire fittings at the wing spars, where the bend is extra acute because his fittings do not have the rounded end modification described in the second paragraph of page 8-4 of the plans and illustrated in Figure 8-3. With a concentrated load at one point on the thimble instead of a distrubuted load, the thimble tends to fold at the point of contact.

His landing wires have taken an extra beating over the last couple of years because of a real sharp aerobatic pilot, DEAN ENGLEHART, has been aerobatting the heck out of it and spending a lot of time on his back trying to set up a good inverted flight picture for a lockal photographer. On one flight he was upside down so much that he dumped two quarts of oil out of the engine! Man, was the ship a mess!

As for the bend being too tight for the wire size, Pete bought his wire from MacWhyte and they also sold him the thimbles he used. There should be no problem of this kind at the shackle on the end of the axle, as there is a good radius there. We will look forward to any further reports of this condition.

One nice way out, but which will cost a little extra money, is to use swaged cable ends at the turnbuckles and the landing wire fittings. In addition to the cost of the fittings, these cost about a dollar a squeeze at the FAA approved cable shops that are set up to do the work. Pete is thinking of trying them when he replaces his wires.

HOW MANY SHIPS FLYING?

We have established a running record of the number of Fly Babies already in the air, and need help to get the list up to date.

We have, of course, a record of the ships reported direct to us, shown in magazines and seen at Rockford. However, there are several ships flying around the country that have not been reported. This isn't illegal, but we are so proud of the ship, that every time one takes to the air, it is a cause for celebration.

Many of these guys are "loners", don't get the Bulletin, may not belong to EAA, and may just plain don't give a hoot whether anyone knows it or not.

If you know of a completed ship flying or ready to fly, send in the word. You may not know full details, but let us have what you know and we will follow up.

As soon as we get all the info in, a list of planes and locations will be run in the Bulletin.


N93003

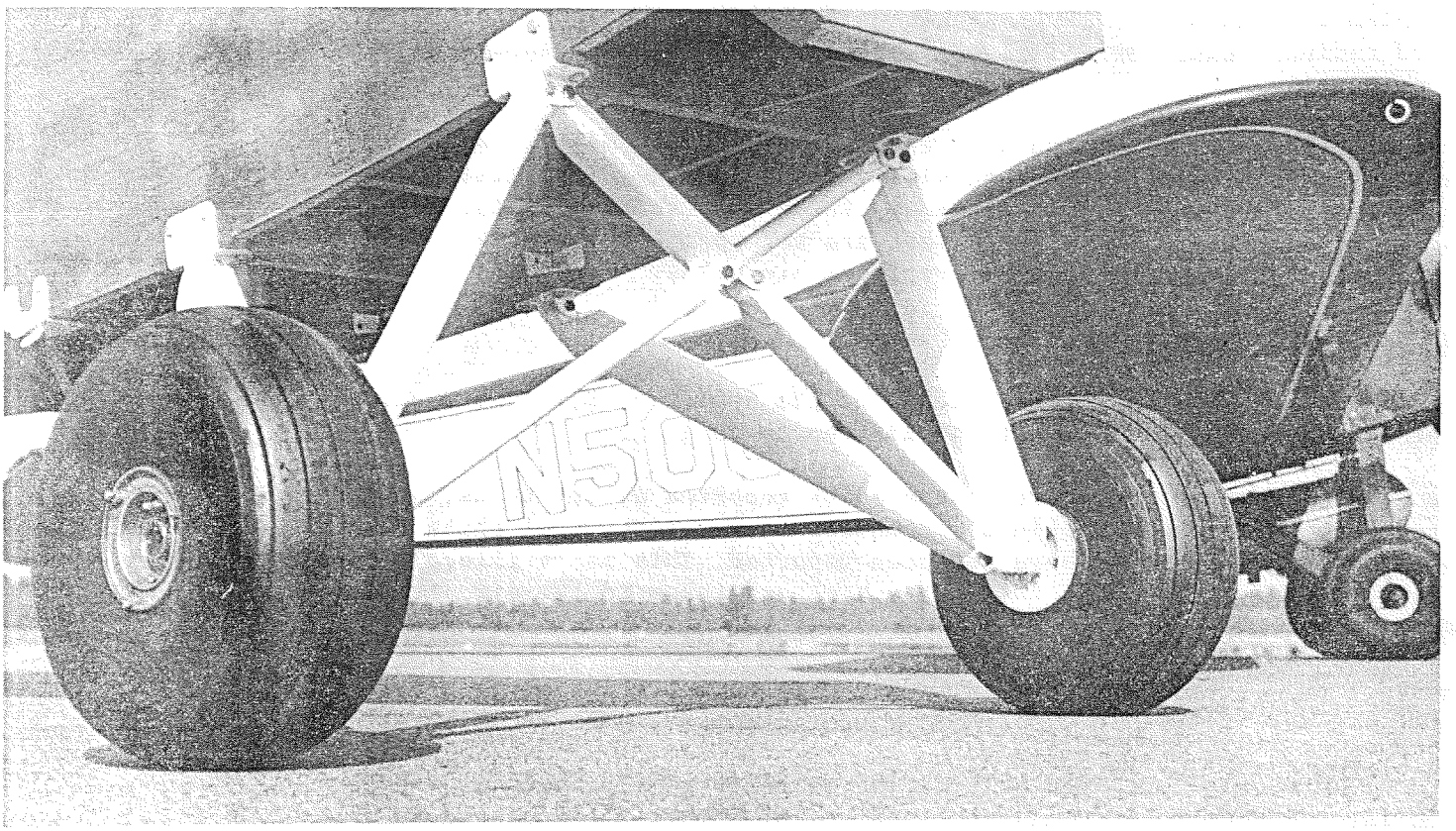


PHOTO CAPTIONS

Left: Pix of divided steel tube landing gear. Closeup is the Bricklebank ship before completion with 500F in the background. Real husky, that!

The more distant shot is Wes May's, with tie-wires across for insurance. Beautiful job of wheel-pants making. Note also the one-piece unframed windshield. Colors yellow and white.

Photos by Pete Bowers

Reverse Side:

The first photo of three FLY BABIES together - Minneapolis, August 1966. N4629T belongs to Ed Sampson, who had taken the FLY BABY trophy at Rockford in 1965 but didn't have his ship there in 1966. N7525U is LIN HOLMES and wasn't able to leave Minneapolis for the Fly-in because of not enough time on it.

The picture was taken when Pete stopped off there on his way home. Ed had brought his ship in from his home 150 miles farther west just for this occasion.

It provided Pete with one of the biggest thrills connected withe the FLY BABY program when he arrived over a general aviation airport and could look down and recognize two of HIS ships on the line - a pair of FLY BABIES. The next year he was able to fly to an Oregon fly-in in formation with two other FLY BABIES and find two others already there. However, this gathering of five didn't have the effect of that first sight of the two eastern ships on the ground from the cockpit of old 500F.

Bowers photo

Interesting photo of HAL GUIER's green and white strut-braced FLY BABY taken at Rockford in 1966 when Hal taxied up to let Pete fly it. Originally, the wings of this ship had been rigged standard.

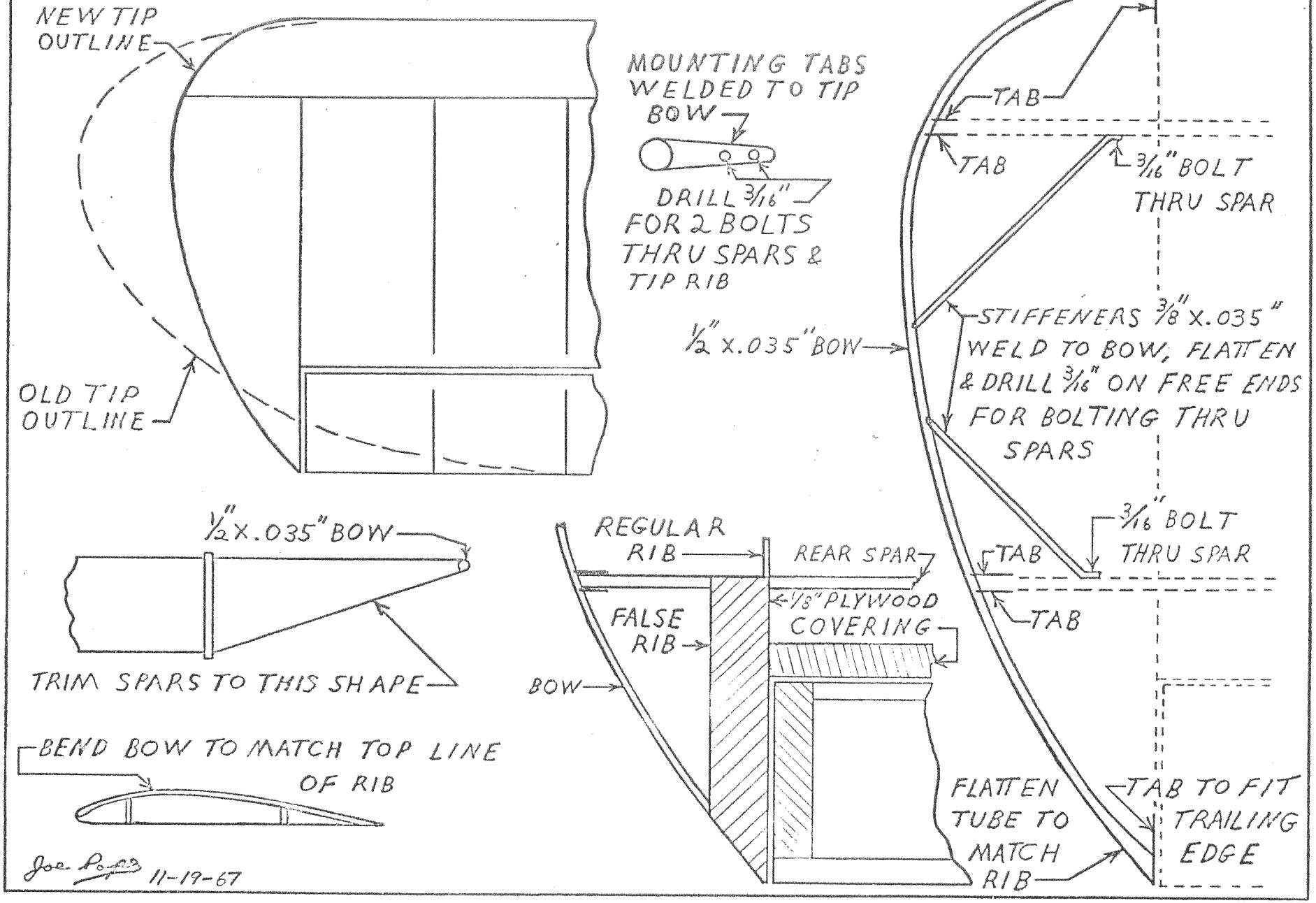
Hal feels that eliminating the wires and the attach fittings on top of the wings gives him a little extra speed. However, in eliminating the upper wires he has also eliminated the closed-loop of the bracing system. Since the struts are attached to the landing gear, the only things taking the roll loads are the stabilizing wires from the lowere longerons to the middle of the axle.

Hal had mentioned that he was going to replace these with struts.

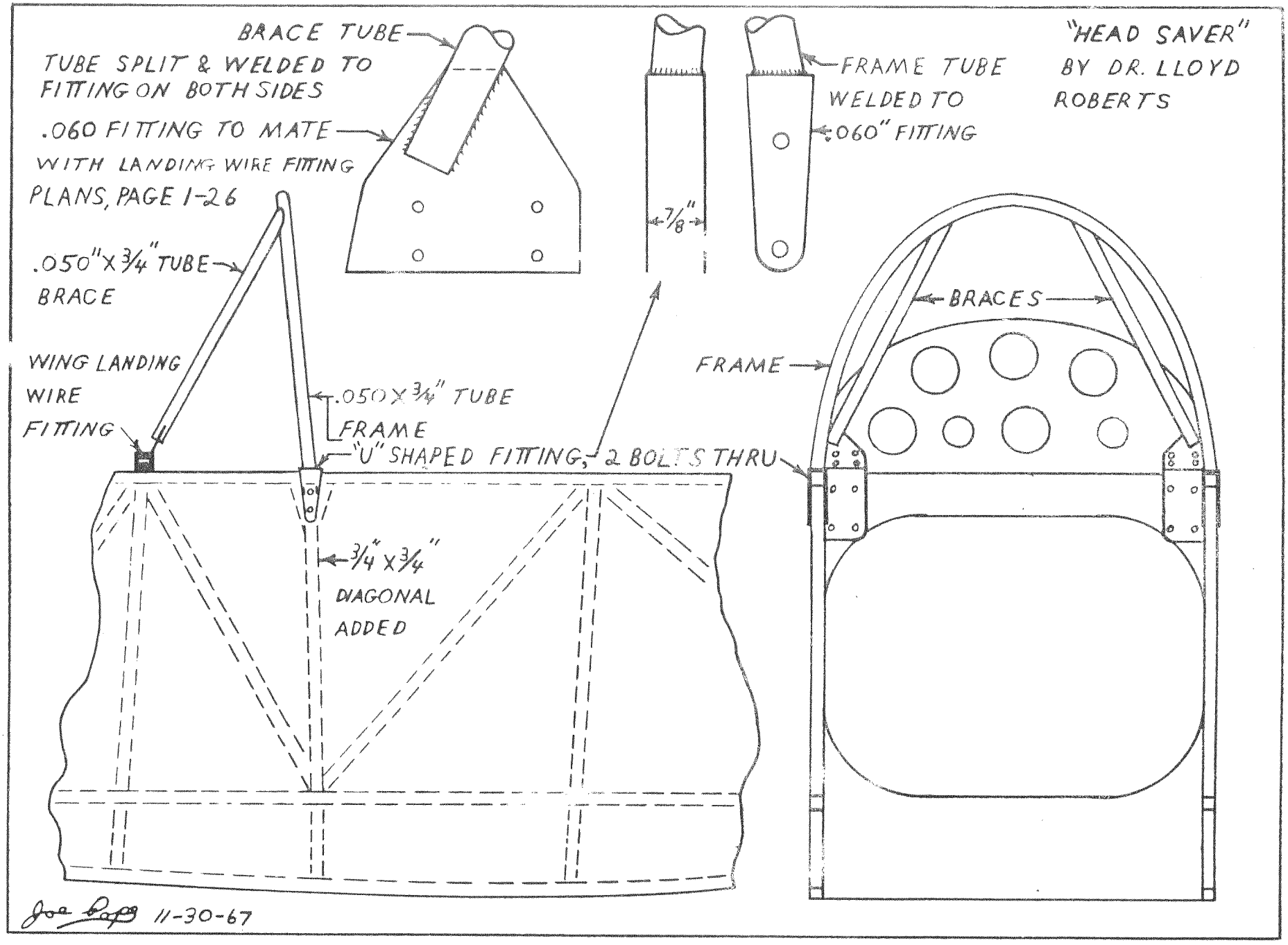
Bowers photo


N7525U
N4629T
FLY BABY

AL JOHNSONS MODIFIED WING TIP



Joe Popp 11-19-67

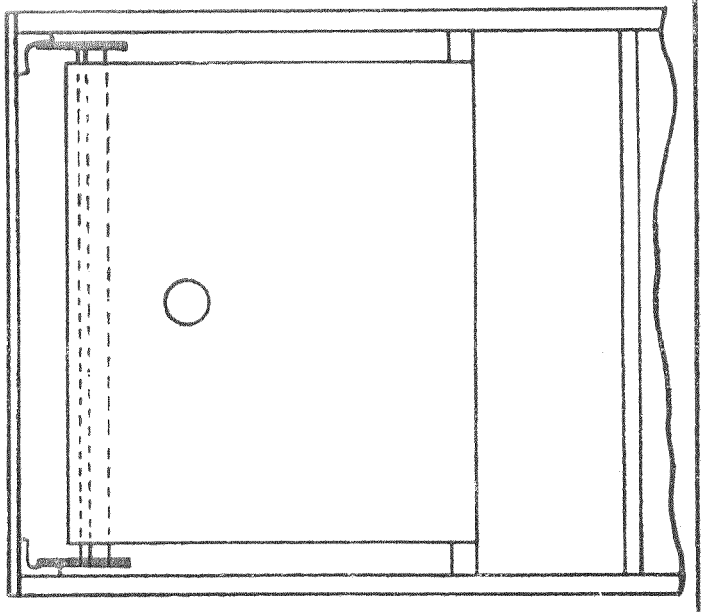

"HEAD SAVER"
BY DR. LLOYD ROBERTS
BRACE TUBE
TUBE SPLIT & WELDED TO FITTING ON BOTH SIDES
.060 FITTING TO MATE WITH LANDING WIRE FITTING PLANS, PAGE 1-26
.050" X 3/4" TUBE BRACE
WING LANDING WIRE FITTING
.050 X 3/4" TUBE FRAME
"U" SHAPED FITTING, 2 BOLTS THRU
3/4" X 3/4" DIAGONAL ADDED
7/8"
FRAME TUBE WELDED TO .060" FITTING
BRACES
FRAME
Joe Bapp 11-30-67

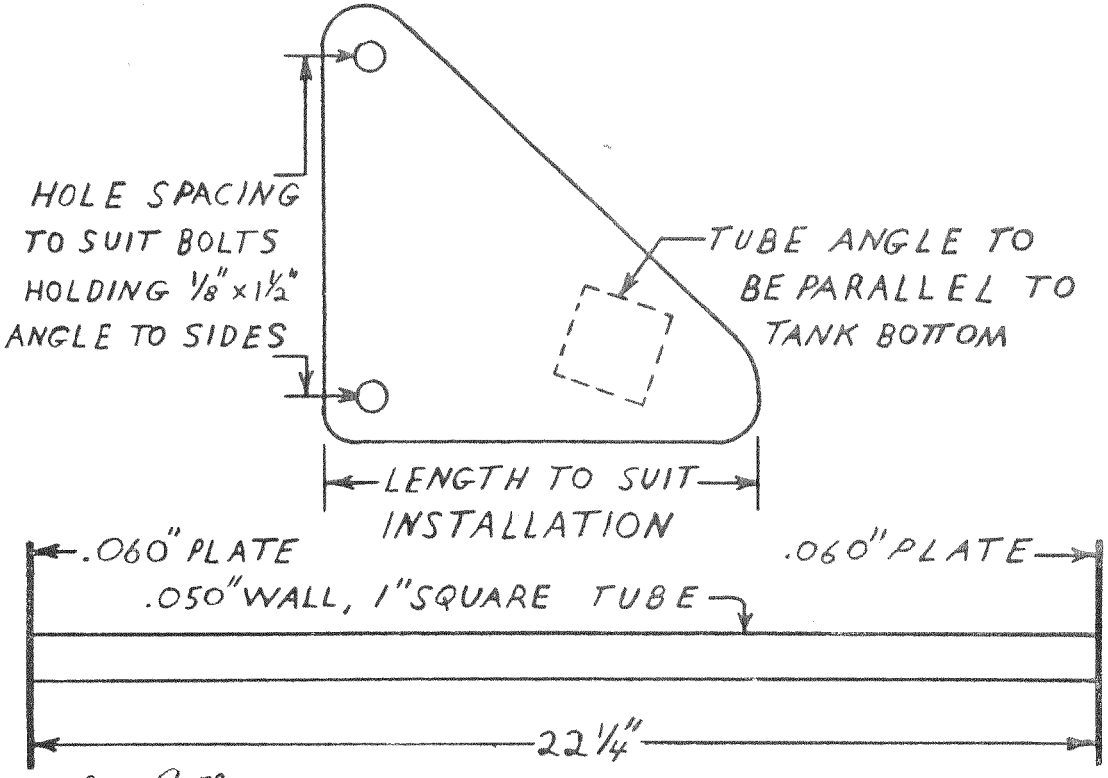
15

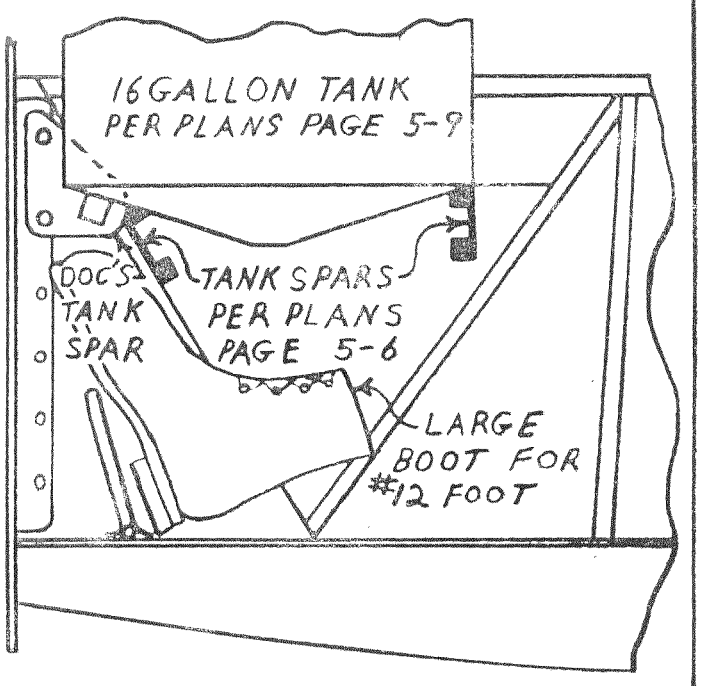
FRONT FUEL TANK SUPPORT FOR 16 GALLON TANK BY DOCTOR LLOYD ROBERTS.

PREVENTS LOSS OF RUDDER CONTROL DUE TO TOES BECOMING JAMMED BETWEEN REARWARD MOVING PEDAL AND LOW FRONT TANK SUPPORT

LOOK MAW, NO GROUND LOOPS!







Joe Bates 11-28-67

HEAD SAVER (See drawing also)

Back a couple of months ago, LLOYD ROBERTS, M.D. of Cooperstown, N.Y. sent us a couple of sketches he has come up with as well as the descriptive article to go along with the drawing. We finally got off our duff and sent them over to Joe Pope who promptly drew them up in a printable fashion and sent them right back. Since Doc did an excellent job of writing, we won't spoil it, and here it is in his own words.

"If you draw a straight line from the top of the fire wall to the top of the rudder post you will find that there isn't much room for your head if the ship should capsize, a not unheard of event in emergency landings and brake malfunctions. The answer is some sort of roll bar.

The combined windshield frame - roll bar illustrated here was added as an afterthought when fuselage construction, panel, and forward and rear turtle decks had been built. The frame could just as well be angular per plans. The curved tubing was simply heated in increments and bent around a piece of plywood cut to a pleasing curve. This operation is a bit smoky. The welding of the frame to the fuselage side fittings requires a jig made up to fuselage dimensions from scrap.

The brace tubing was welded to the landing wire extension fitting, the fitting installed, and then the braces welded to the windshield frame after it had been installed and the side fitting drilled and bolted. There is sufficient flexibility so that the shrinkage changes during welding are not a problem.

A false windshield bent up out of cardboard is taped to the frame and the plexiglass bent over it. A flare can be bent out onto the turtle deck at the same time and the plexiglass simply bolted to the turtle deck and windshield frame.

The resulting rugged frame also serves very nicely as a much needed handhold for extracting one's posterior from the depths of Fly Baby's capacious cockpit.

ALTERNATE FRONT TANK SUPPORT: (See drawing also)

This item is another afterthought. My gas tank was made to dimensions suggested in the plans. I found that my size 12 feet, especially when dressed for possible winter flying, got hung up in front of the front tank support spar reducing rudder movement to practically nothing. My only landings so far have been confined to my basement with a maximum 3 feet roll-out under complete control even with the cross-winds from the garage door, however the embarrassment that would result from loss of rudder travel out in the big cruel world is obvious.

The answer here was to make the front tank support out of square tubing hung by plates of appropriate dimension from the bolts already placed in the aluminum angle corner post. This raises the support well above the toe line.

Watch the welding distortion on this one. Weld forehand around one of the ends and backhand around the other or they will rotate so far you wouldn't believe it. I didn't. The weld can be sawn through, moved and whole mess done again. The resulting slight shortening is taken up by the flexing of the plates between the cross bar and the bolting point.

You may have short feet, but the fellow who tests - borrows your ship may have been born with snow shoes.

THE FLY BABY BULLETIN

THE "FLY BABY" BULLETIN
c/o HAYDEN FERGUSON
114 WHITE DRIVE
NEW ALBANY, MISS. 38652

Issue No. 6 December, 1967

"Happiness is eating chopped liver on crackers and reading the Bulletin." That is how a recent letter began and we sort of got a kick out of it and thought we would pass it along. Anyone else have any "happiness is" favorites that you might want to share. If so send them along. (Fly Baby types of course, or related subjects.)

We have had a lot of praise on the last couple of issues and not only does this make us feel great, but also fires us up to try to do even better on each issue. None of it is possible though without a steady flow of mail from you characters, with the bits of news, new ideas, gripes, compliments, hangar flying and so on. We have noticed a general "loosening up" of our readers in the past few weeks, and we are beginning to hear from some of the group that have not written before. Those of you who haven't written, take heed and let us hear from you. To repeat our same old song, "we love to get mail", may get old, but so do the days when the mail carrier breezes merrily by with a big wave, and an even bigger smile.

One of the items that has drawn a great deal of favorable comment is the addition of clear concise drawings of modifications. These would not be possible without the help of JOE POPE of Lynchburg, Va. You have seen his name before in the Bulletin, but we have never given him the recognition he has earned. The drawings are sent to us "gratis" by Joe in a finished state ready for printing. They take a great deal of time and effort and there is no charge for them. This is fortunate, since we could never afford to buy the type work that Joe give us. In addition, he finds time to write material for us and build his own airplane, which is more than we are doing. Progress on our own ship is extremely slow, mainly because of the Bulletin and a few other distractions, like making a living. At any rate, we did want to take a few lines here to "publicly" say an earnest, sincere thanks to Joe for a great job. He probably won't like us doing this, since he is not a glory hound type, but the situation calls for some form of recognition and this is the best we could do.

"YOU DON'T HAVE TO BE CRAZY, BUT IT HELPS"

Don't remember where we first saw that line, but it comes to mind often when discussing our project with Joe Blow down the street. Last month we rambled a little on the subject and asked for comments and here is what we think is a good one. This from GEORGE WELSH, of Etobicoke, (Totonto) Canada. George as you will recall, is the guy with the ME-109 control stick. Here is his experience.

" I had just started framing up the fuselage and my basement workshop was littered with pieces of Sitka spruce cut up to the various sizes required for "Fly Baby". My next-door neighbor, an ardent fishing and hunting man, came in to see me. He looked at the little bits and pieces and then said in a startled voice, "My God! ", you are not going to fly in that thing." I assured him that I was, whereby he looked at me in disbelief, mixed with pity, and then remarked that he would give up dringking ??? if that bundle of sticks ever left the ground. A year and a half later the Baby flew hands off much to his surprise."

"The sequel to the story came about a year later when he asked me what my next project would be. I, with a deadpan face, replied that I was contemplating a 2-man submarine. He didn't raise an eyebrow. Believed every word.

(con't.)

"Crazy" con't.

Needless to say, I have no intention of building a submarine, but it just goes to show how the average man views our homebuilding in the beginning and how disbelief turns to amazement and then finally to respect.

FOR THOSE WITH "SECOND THOUGHTS" ON WOOD LANDING GEAR.

There have been many discussions during the past five years regarding the pros & cons of the wood gear on "Fly Baby". There have been convincing arguments on both sides and there remains a segment who will never have full confidence in the wood gear. Most builders however are going with the wood version and the following is especially for them. (Yours truly included.) This incident is also from George Welsh. George,as you probably recall was awarded the "Best Fly Baby" trophy at Rockford, in '67.

" Many people have been doubtful about the wood landing gear on the "Baby". They need have no fear of it as I have found out the hard way what punishment it can take.

I was recently flying along in our cold northern weather, when the engine quit. (Why is another story.) I was only up to 800 ft. above a large quarry which was no place to put down. The only other field was to one side of it but this one happened to be plowed and frozen to boot. However, I was committed to that field regardless and I made my approach, keeping the airspeed up. Well, I touched down on this plowed and frozen field to experience the roughest ride in my whole career. I thought that the gear would be sure to be wiped off, but no, it stood up to that terrific beating and finally we came to a halt. The silence was profound! So, don't let anyone tell you that the wood gear on the "Baby" won't stand up. It does and I have proven it. Incidentally, I used white ash for the gear instead of spruce or fir. It has paid off."

That incident should give the "pro-wood" crowd some ammunition.

George added a P.S. to his letter on aileron flutter to the effect that he has flown 250 hours without any sign of flutter.

"CRAMPED QUARTERS" ADVICE NEEDED

We have some builders, among who, space is very limited. One of these fellows is JAMES MANOLIS of Los Angeles. Jim, like many others, doesn't have a large enough area to do the wings and fuselage but until he gets room, wants to work on the parts that he can. What we need are suggestions of what small components can be built in a bedroom, on a card table, kitchen table, on the sidewalk, on the wall, in the attice and a few dozen other places we have heard about that you wouldn't believe. Like fuselage sides being laid up on a flat wall? How about some comments along these lines.

TIP TANKS ANYONE?

Jim Manolis has also kicked around the idea of using tip-tanks on a fixed wing version. He would like to know if anyone else has given it any thought. We also had a question on the advisability of a belly tank with a wobble pump. Any thoughts on this? It would appear that the "Baby" is being considered for longer and longer, X-country flights. Some of these fly-ins do get pretty far away, but half the fun of getting there is stopping at the little 'grass root" strips along the way.

BENDING ALUMINUM FOR LEADING EDGES:

Dr. LLOYD ROBERTS is one of our most valued readers in that he has all sorts of hints and kinks he sends along that he has discovered during building. Like for instance the tank support and "head saver" items last month.

Well here is another that should prove very valuable since we have heard a lot of discussion of what is the best way to form the leading edge metal. Here is Doc's method.

If the aluminum used for the leading edges is applied without pre-shaping, it has a tendancy to dent easily and stay dented. Most of the aluminum available is .012 instead of the .016 specified and there is a big difference. Use the .016 variety.

Cut the appropriate length from the roll, kill it's rolling tendency by drawing it gently several times over the corner of the work bench. Split it in half lengthwise (for tail surfaces). Plane off the front edge of your bench to about a ½" radius. Use your hands and the edge of the bench as a bending brake to shape the sharp bend where the metal is nailed to the leading edge. Then with gentle pressure gradually bend in the curve of the leading edge by pulling the metal down over the edge of the bench toward you, sliding it crosswise (spanwise) as you press. This can be done more easily if the metal is held down somewhat on the trailing edge with a board and appropriate weights.

With no practice at all the leading edges can be preshaped to almost a perfect fit to the nose ribs and there will be no struggle while nailing them on. When the metal has been prestressed to the curve it resists the tendency to dent and springs back out again if it is dented.

NEW STYLE TAIL SPRING BRACKET

LOWELL MORROW, of Yorktown, Ind. didn't like the bolt holding the brace wire fittings going through the fin spar, nor all that stuff holding the tail wheel spring. He solved the situation by making a fitting to do the job, and sent us a copy. We sent it to Joe Pope and the results can be found in this issue in the form of a detailed, dimensioned drawing.

We have heard a lot of comment on the tail wheel assembly, and this fitting will probably turn up on several airplanes in the future. From what we can see, it can also be adapted to completed ships if this particular area is giving you problems.

NEW EAA CHAPTER BEING FORMED

GEORGE DORMAN out in Ventura, Calif. writes that a new E A A chapter is being put together in Santa Paula, Calif., and the first meeting is scheduled for January 21st. Some of you "wood butchers" out in that area might want to check this out and see if you turn up more "Fly Baby" builders. They show up in some odd places. E A A Chapters even. Georges' address is 1710 Callens Road, if you want to get in touch.

We will be looking forward to hearing from George as to how the first meeting goes.

ANYONE MISSING BACK ISSUES ?

When we first started putting out the Bulletin, Pete Bowers suggested we run several extra copies when we printed it. We took his advice and glad we did.

Our original plans were to add new names to our mailing list once each quarter, but this turned out to be too optomistic. Instead, when a new man wants the Bulletin, his five bucks gets him all back issues from the beginning and his subscription runs through June, '68. This will make all subscriptions run out at the same time. This way, when and if the Bulletin is ever discontinued, we won't have a lot of "hangover subscriptions" uncompleted. While on this subject, we want to say that we definitely plan to continue with the Bulletin for another year after this June if enough want to do so. This way it will be on a year to year basis and you will make the decision of whether or not to continue. We will get into this in more detail when we get closer to the end of the current subscription year. After all, this is just the half-way point and a little early to be talking about another year.

If anyone has not received all back issues or has missed an issue for some reason, write us and they will be sent. Also if you have lost a copy or it has been destroyed, let us know and we will send another. We want everyone to have a complete file. Also be sure we get your new address if you move. We have had a couple of instances where the mail was not forwarded, even though we send it out first class mail. We tried 3rd class on one issue and as some may recall, it took 3 or 4 weeks for some to be delivered. From now on we will stick with first class even though it costs a little more.

DRILL TO FIT THE FITTINGS.

Its' easier to drill the holes to match the fittings, than it is to make the fittings match the hole. So says FRANK NISHINA of Los Angeles. Here is an excerpt from a recent letter from Frank on that subject.

"While constructing my "Fly Baby", the part that gave me the most trouble was the matched fitting with the bolt holes already drilled out on both parts. You can imagine what an alignment problem this was after going through one to six inches of wood. As expected, I had to remake most of the fittings. Some times I was lucky and hit it right on the money. The best way I found to accomplish this job was to drill out all the hole on one fitting and only one hole on the other fitting. Next take your fitting and clamp it on your spar or whatever it happens to be. Drill out one hole and now take the other fitting and bolt the two fittings on each side of spar etc. Now take a drill guide, (a must for meticulous builders) and clamp it over the hole to be drilled. After drilling out the needed amount of hole - presto - perfect fit. This goes for the landing gear fitting also. Drill one side only and back drill after fitting op your strut and saving a lot of grief later. "

HOW TO GET THE WIFE INTERESTED

This also from Frank Nishina, who seems to have found the answer, at least for him. Per Frank, just don't over do it. Take your wife out as often as you can and give her the same attention and loving care as "Fly Baby" and you won't have any problem. Deep inside they are proud of your accomplishment. I know my lovely wife is proud of my accomplishment even if I do get sawdust all over the new family car and everything. She is at my command whenever I need slave labor to help move my wings, etc. (After she reads this Frank, you should really have it made.) (see Franks ship on the photo page this issue.)

Open Previous Section FBB section two

Open Next Section FBB section four

MORE RIBS, BUT LESS WEIGHT

Here is a modification in the wing that some might find worth thinking about. CLARENCE MULTOG, McMinnville, Tenn. sent us this a couple of months ago and we just got around to including it. Here is how he built his wing.

" I have two extra ribs in my wing and spaced 12 inches. The nose end of the ribs are 1/8" ply, not 1/4" as Pete's design. The cap strips come almost to the end and the ribs were put together in a jig; no nails. Even with the extra ribs I think I am lighter than Pete's design as there are also no intermediate 1/4" nose ribs. Figure to cover the leading edge with plywood rather than aluminum. There can't be much structural integrity in a nailed on aluminum edge, whereas the plywood glued on makes a "D" spar that must add a lot to the wing strength.

Clarence also added that he thought that the vertical fin should be offset a bit and has a friend who is an old pro in the flying game who is going to try to provide some adjustment. He promised us more on that later.

SWAP, SELL OR TRADE

Not too many military men are building "Fly Baby" for several reasons,such as space, moving around a lot and military pay scales. A few however have overcome these obstacles and one of them is SSgt JIMMIE L. STURGILL who is currently at Clinton Sherman AFB in Okla.

Jim has some Grade "A" cotton, enough to cover "Fly Baby", that he is willing to swap for about anything or sell outright. He can be reached at 400 Choctaw Road, Clinton Sherman AFB, Okla. 73632.

Jimmie is also among the group interested in a two place version since he has a Lycoming 125 GPU still in the crate. He also picked up at a bargain an old Cessna "Bamboo Bomber" from which he is salvaging a lot of hardware.

SKYWAY RADIO

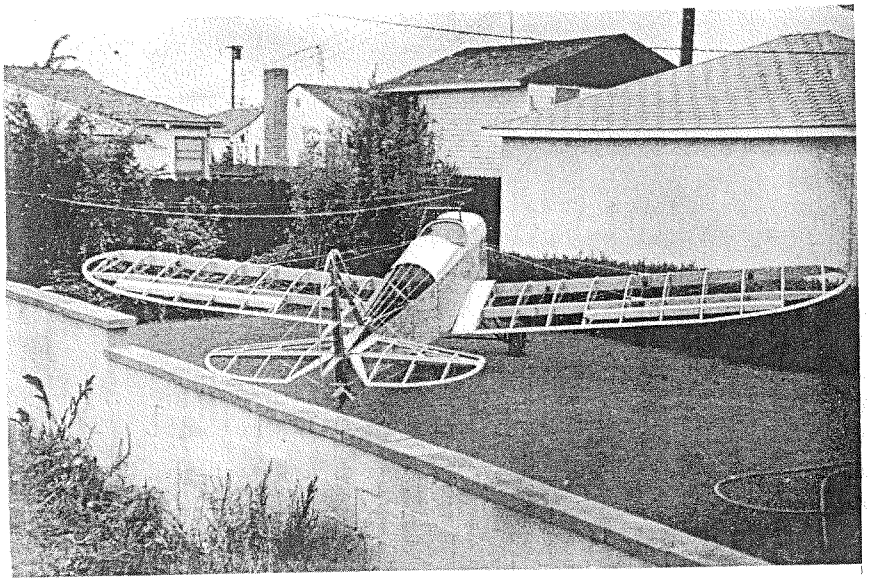
Several people have asked us about the small version of the Skyway radio which seems about the right size for our ship. If anyone has any experience with this radio, we would appreciate hearing from you. We saw a couple in "Fly Babies" at Rockford but didn't get much information on them. One was mounted in the floor between the rudder pedals and another in the headrest.

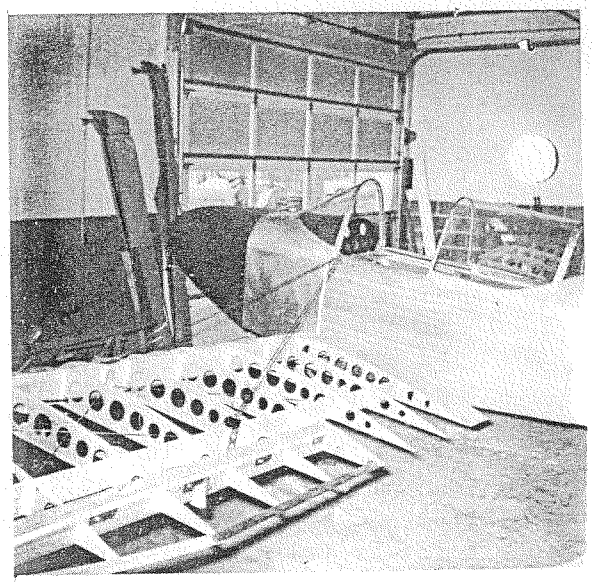
Since radio is being required at more and more airports all the time, it would behoove us to try to gather as much information as possible on radios suitable for "Fly Baby". How about some help?

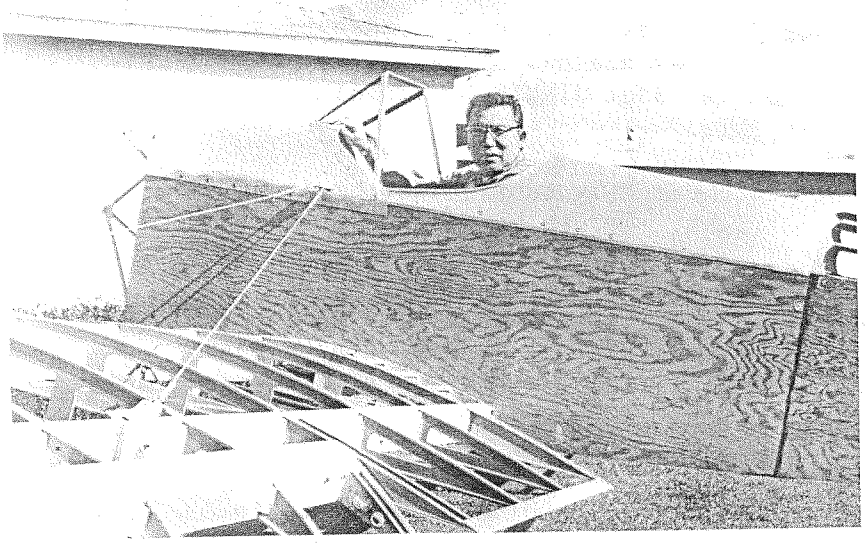
Along these same lines, we have had a couple of questions on an electrical system for our ship. As far as we know, there aren't any ships flying with electrical systems. We may be wrong, and if so would like to hear from you.

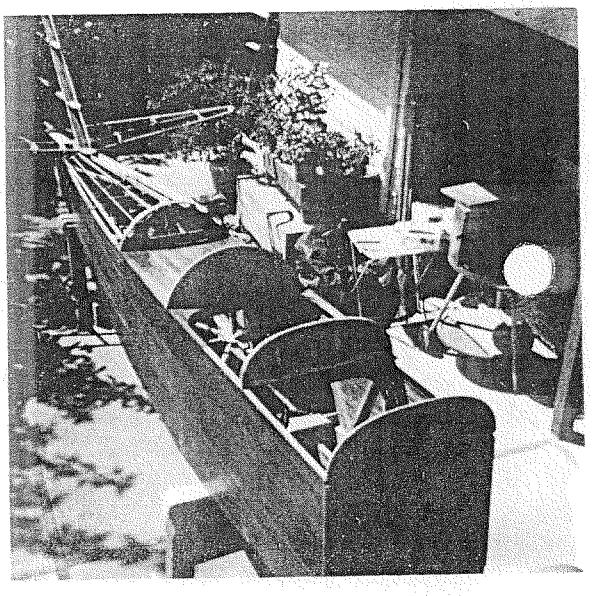
ERROR CORRECTION

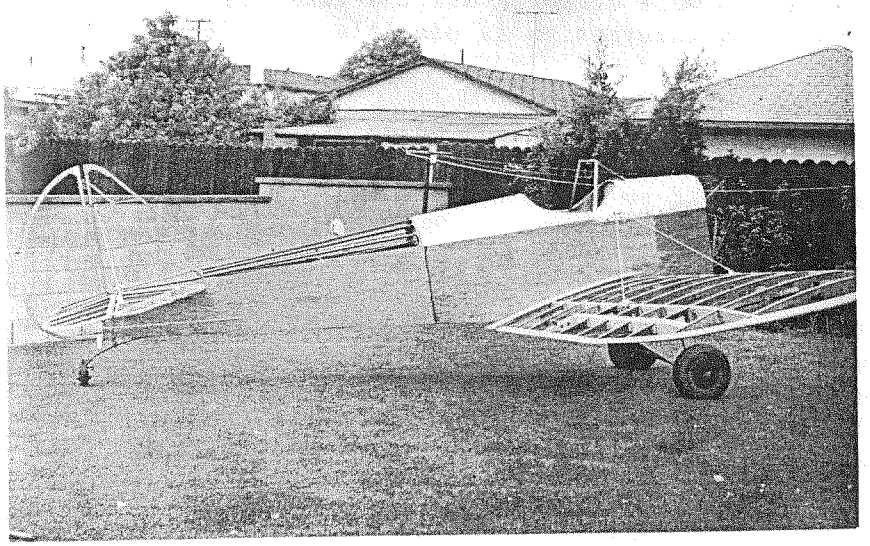
Remember the item we ran about Pete Bowers rigging up a remote camera on the fin and shooting in-flight footage. Well we said it was a "Liberty Sport" that he was after in the chase sequence, but were wrong. The ship was the "Hawk Pshaw", which is a Myers "Little Toot" built by ARLOSCHROEDER of Newton, Kansas. For the movie set-up, it was flown by JOHN BERWICK of Wichita Kansas.











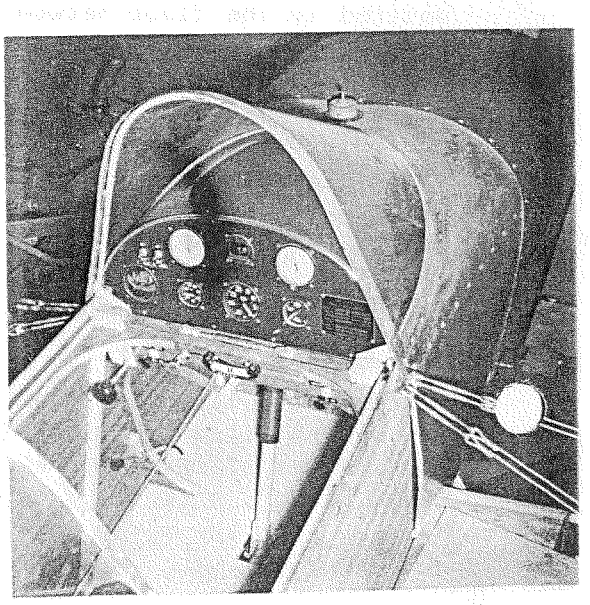


PHOTO PAGE CAPTIONS

ALL LEFT SIDE

Beats there a homebuilders heart that isn't stirred by the sight of a wood wing aircraft just before covering? There is something about the fragile-looking open woodwork with the uniform rows of ribs and the delicate tracery of the brace wires that once again causes you to marvel at the miracle of aerodynamic lift. (There we go again, lapsing into that romantic, nostalgic mood, but there are times that you can't prevent it.)

The top and bottom photos on the left side will give you an idea of what we are getting at, and in the center is FRANK NISHINA, of Los Angeles, the proud owner of the ready-to-cover job. Frank appears to have just returned from one of those "flights of fancy" that Pete warns us about in the plans. (Surely Pete can allow us one little flight after all that work.)

We have done the best we could on these open framework photos, but a halftone print just can't capture the fine minute detail that shows up in a glossy print Frank sent us. Only wish we had enough to go around, as it is truly beautiful.

RIGHT SIDE

Here again, by popular demand as they say are more photos of CLARENCE RRUGGEMAN'S ship showing the canopy. This particular canopy has done more to generate interest in a covered cockpit than any other and we have been asked several times to run more detail so that others may copy. In the meantime, as we mentionned earlier, we are working on getting prints drawn up that will help in building this canopy. This however may take some time. Clarence has supplied us with quite a bit of detail and we are working on it. Both the top and bottom photo are of the same ship.

The center photo is the nearly-complete fuselage of WOODY THOMPSON of Eureka, Calif. This shot was obviously taken in the summer as evidenced by the patio scene and Woody should by now be well along on his wings. (Assuming of course that they have winter in California.)

Want to see your bird in the Bulletin? All it takes is mailing us a snapshot and a little info on what you have done. It is even better when the builder is in the photo. Not that we are running a beauty contest, but it adds interest.

Unlike the slick paper commercial magazines, we don't have any "closing dates" or deadlines and that sort of thing, so send them in any old time and watch the Bulletin. Sooner or later it will show up.

(Watch next issue's photo page, as we have a "shocker" all lined up.)

MORE COMMENTS FROM "DOC" ROBERTS (Complete with drawing)

The "Doc" isn't a monicker, for Lloyd Roberts is a for-real M.D., but more important to us, he is one of our best contributors of ideas. Another example follows. A drawing by Joe Pope illustrating his idea appears on another page of this issue.

"About this fancy hinge for the top of the fin." You will encounter the same aggravation on the stabilizers. The alternate solution which I have used kills two birds. The joint between the tail post and the diagonal spar doesn't have much strength because it is essentially an end to side arrangement. The addition of two filler blocks as illustrated, with bolts of sufficient length will not only allow you to put your hinge on where you want it, it will also effectively stick the tail post and spar together, something which is needed anyway.

If you have left out a mounting pad or two in these little hollow spars, don't burn the whole project in despair. Simply open up the spar by cutting through the plywood with a sharp knife or chisel, fill in the aching void with a block 1/8" deeper than the spruce member so that the block is flush with the outer surface, and cover the whole mess with a good deal longer piece of 1/8. You may then have to put 1/8 pads under the rest of the hinges on the same side to keep them in line, but this gives you something to plane off here and there to get the alignment right. Actually as the climate changes (I moved my project from Texas to Virginia to N.Y.) the length of the diagonal spars changes slightly so that the hinges get themselves out of line any way, but this adds no noticeable friction to rudder travel. In fact, these hinges are quite flexible and can stand a good deal of misalignment laterally and be bent back again. (a good reason for NOT making them of .090.)

Doc Roberts as well as several others has requested that we ask for comments from our clan on rib stitching versus the glue-to-the-rib method Pete says is fine. One inspector who is generally sympathetic towards homebuilts didn't think it was such a good idea. We have heard it cussed and discussed but no real logic or thought out answers.

It would be be very much appreciated if some of our more experienced builders would elaborate on the fabric attachment idea as well as some of the other hints and kinks that go with covering a fabric type ship. Some of us novices might wind up crunching our structures if it isn't done right, so we are told. Don't know exactly what they meant by "crunching", but have some idea that it is similar to what happened once to a balsa model that had the silk put on too tight and collapsed when it started shrinking and drying.

A DO-IT-YOURSELF STRESS ANALYSIS

Next issue we have a stress analysis write-up by DAVID PAULE of Santa Monica, Calif. Would have tried to get it in this time but still trying to decipher it. Not that Dave didn't do a good job of writing it, we just haven't quite "understood all we know" about it and since there are several algebraic equations in it we want to be darn sure we get it down on paper right.

In the meantime, grease up your slide rule, brush up on your high school algebra, and gather up the weight and dimension data on your ship. You will need it.

Dave Paule, by the way is using Sears & Roebuck type brakes as featured recently in Sport Aviation. This cost is around $20.00. Would like a little more detail on that Dave if you please. Like where and what to order.

64

CUSTOM WOODCRAFT
P. O. Box 42
10484 Platt Rd. So.
Milan, Mich. 48160
Phone 313-432-1621

WOODEN AIRCRAFT PARTS, KITS, SUPPLIES & SERVICES

We have been appointed a dealer for "FPL-16A". (Hughes Chemical # 3684 Wood Epoxy Glue.) This represents the adhesive mentioned in Mr. Michael Myal's article, "The Ultimate Glue", in the October issue of "Sport Aviation", page 15.

This glue is especially prepared for all types of wood glueing in aircraft, boats, etc. It is completely waterproof when cured, and very high strength, up to 5000 lbs, plus on shear test. Possesses gap filling properties, the glue line can vary from one to eleven mils without any appreciable loss in strength, so pressure clamping is not required.

This glue has a long shelf life, does not age once the can is opened. Open assembly time is up to 1½ hrs. at room temperatures, and there is no unpleasant odor. At room temperature this glue will produce a joint overnight that has sufficient strength for handling. A full strength cure depends on time and room temperatures, but 48 hours is usually sufficient. Lower glueing temperatures can be tolerated, but again the time required to attain strong joints will be extended considerably. We do not recommend using below 50 degrees.

(MIXING INSTRUCTIONS)

Stir resin thoroughly. Measure out 10 parts resin; Measure out 1 part hardner. BE SURE TO MEASURE OUT COMPONENTS CAREFULLY - PARTICULARLY FOR SMALL BATCHES. MIX GLUE THOROUGHLY.

Apply with dime store brushes or acid brushes for small areas. Cleanup may be done with lacquer thinner. This glue covers much more area than other glues, so start with small batches till you get used to using it.
(Note)
This glue is not F.A.A. certified but is excepted in Amateur Built Aircraft.

(Prices and Shipping Information) Please read carefully.

Price is $6.50 per quart, $16.50 per gallon, shipped United Parcel Service, prepaid in the following states. Alabama, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Michigan, Minnesota, Missouri, North Carolina, South Carolina, Ohio, Tennessee, and Wisconsin. Partial state coverage to Kansas, Nebraska, North Dakota, Pennsylvania, Virginia and West Virginia. (Check your area for further information.)

Outside the above areas, prices are $7.00 per quart and $17.50 per gallon, Parcel Post paid to all states.

PLEASE USE ORDER FORM ENCLOSED. Money order or check with all orders.

SORRY, NO C.O.D.'s

(note: In this particular ad, the order form mentioned above is not enclosed.)

65

DATA ON FPL-16 A GLUE

As soon as we learned from JOE POPE that he had ordered some of the new FPL-16 A epoxy glue, we asked him to let us know how it checked out and if possible write us an article on it. Joe, as usual came through like a trooper. The article follows:

In the October 67 issue of "Sport Aviation" was an article entitled "The Ultimate Glue". Naturally I read it, with great interest and a little doubt. It sounded too good to be true. It required no glue pressure, wasn't temperature sensitive, and was stronger than resorcinal as well as completely waterproof & inert.

Developed by Forest Products Laboratories as FPL-16 and slightly modified by the author of the article, Mr. Michael Myal, EAA 7978, it is known as FPL-16 A. Manufactured by Hughes Chemical as their Formula 3684, it is distributed by Custom Woodcraft, P.O. Box 42, 10484 Platt Road South, Milan, Mich. 48160 at $6.50 per quart, and $16.50 per gallon prepaid.

I had to try some so I sent in my order the same evening I read the article. I had the glue, consisting of a quart of Resin and a plastic "squeeze" bottle of hardener within 2 weeks.

Being in the process of moving at the time, the project was shelved for several weeks. When I finally was able to get started I mixed up a batch, and it was awfully thin. The blocks soaked up the glue like a sponge. After re-reading the article, I stirred the resin real good, as the filler had settled to the bottom. The next batch looked better and didn't soak in quite as much. The blocks were set one atop the other and left overnight. Next morning, after an 11 hour cure at an average temperature of 66 degrees F. they were put under shear load in a vise and they all pulled wood.

A total of 20 blocks were made up and pulled in shear to failure on a recording weld tester. All pulled wood and the average shear load at failure was 3,843 PSI.

I believe the glue is capable of much more than this but I can't prove it, as the tester used won't accept a larger piece of wood. The only way to get more shear load on the glue line is with a larger piece of wood so it won't pull in two as fast and a 5/8" x 2" cross section is as much as the machine will take. This is sufficient however to prove that the glue is stronger and more efficient than Resorcinal, Plastic Resin, or any of the other accepted aircraft glues.

Peeling tests of lapped joints also pull wood every time. Even butt joints will pull wood if you put one coat of glue on the end grain, let it soak in for 10 or 15 minutes, then recoat it, coat the mating piece and put them together to cure.

Temperature has little or no effect on FPL-16 A. Five blocks were cured outside for 12 hours one night when the temperature got down to 19 degrees. They pulled wood and failed at the same load as the others after an additional cure of 4 hours at 72 degrees.

Glueing pressures varied from contact to 20 psi for different sets of blocks.

(Con't)

FPL-16 A, Data Con't.

No difference was noted in load and all pulled wood at failure. Two pairs of blocks cured with 150 psi of pressure however pulled a little lower than the rest and there was partial glue line failure on one.

This stuff is really great. It works best with little or no pressure over contact and it doesn't need a bunch of "C" clamps to get a fine exceptionally strong joint.

It is quite easy to use. Being thin like paint, it is very easy to apply. Just paint it on both mating surfaces. Mate the pieces with a sliding motion so you don't trap any air bubbles and use a couple of nails or staples to hold it in position and leave it alone for 10 or 12 hours and you've got a fine joint.

Pot life of small batches, about a cupfull, is approximately an hour at 72 degrees. Working time, open or closed is about 1½ hours at the same temperature. This is much longer than Resorcinal or Plastic Resin so you won't have to rush to get things together.

It is mixed 10 parts of Resin to 1 part of hardener. I have never had any trouble mixing it. Baby bottles make good measures for large batches and I use syringes of plastic such as diabetics use or veterinary types available in drug stores for small batches. The syringes are calibrated in cubic centimeters.

Just be sure to stir the resin very well, especially the first batch, as the filler will be mostly on the bottom when you get it and after several days of storage too. I turn the can over every day and this helps. Stir the hardener in well too and you won't have any trouble at all.

I think this is the best thing that ever became available to us "wood butchers", it really qualifies as the "ultimate glue". Try some, I think you will agree. I have made up almost 100 joints with spruce, hemlock, oak and mahogany plywood. All were most satisfactory and I am going to use FPL-16 A from now on. (end)

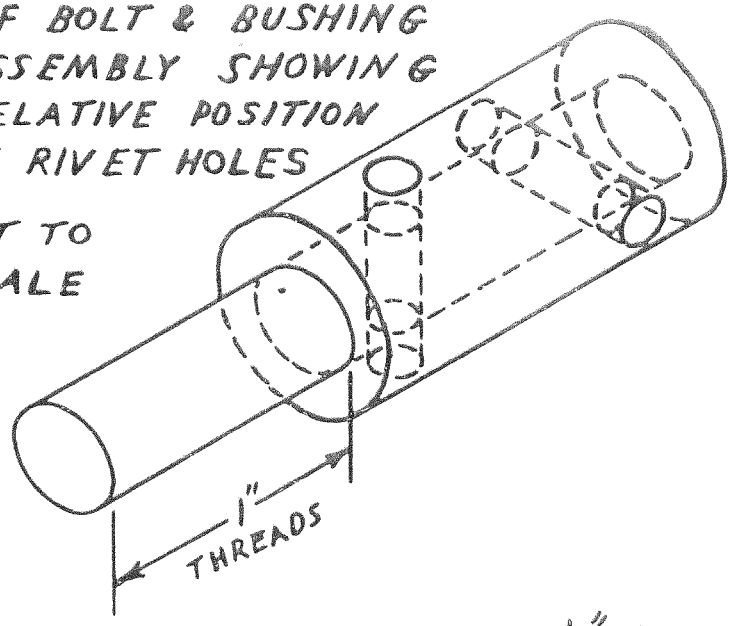
There you have it. One of our own builders who we happen to know is quite meticulous in everything he does is well pleased with it.

Right now, as far as we know, the only place you can get this glue is from Custom Woodcraft in Milan Mich. In this same issue you will a re-print of the brochure and instruction sheet that is sent out with each order of the glue. Should you have any comment or question regarding the glue, please contact Custom Woodcraft. After you have used it we would like to have your comments on the results.

One added little wrinkle that Joe didn't mention, that he practices is the filling of nail holes from the inside out with this new glue. He does it with the syringe he reffered to by filling it with mixed glue, inserting it in the nail hole and filling the hole from the bottom up. This leaves no room for moisture, stray fungi, or any other contaminants. Also if you will note on some old wood aircraft where nail holes were plugged at the top, the "plug" has popped out eventually and left the old hole exposed.

PERSPECTIVE VIEW OF BOLT & BUSHING ASSEMBLY SHOWING RELATIVE POSITION OF RIVET HOLES

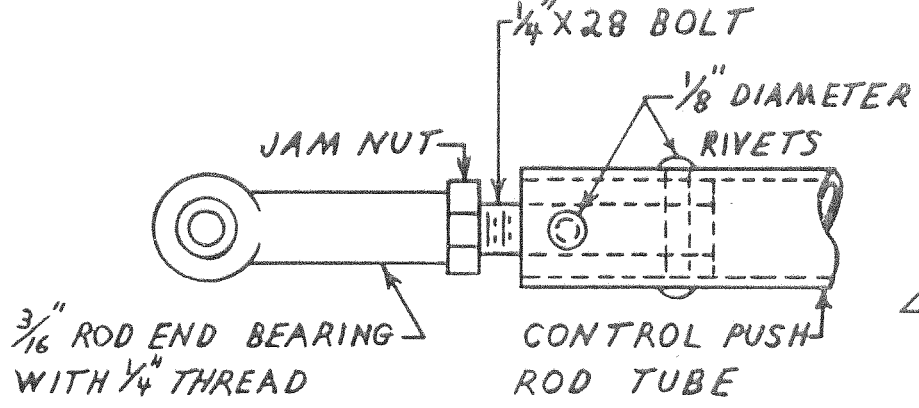
NOT TO SCALE

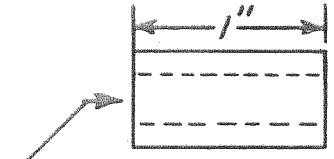


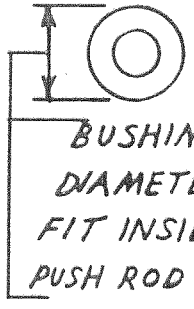
PUSH ROD END FITTINGS

BY ERNIE HARBIN
FLINT, MICHIGAN

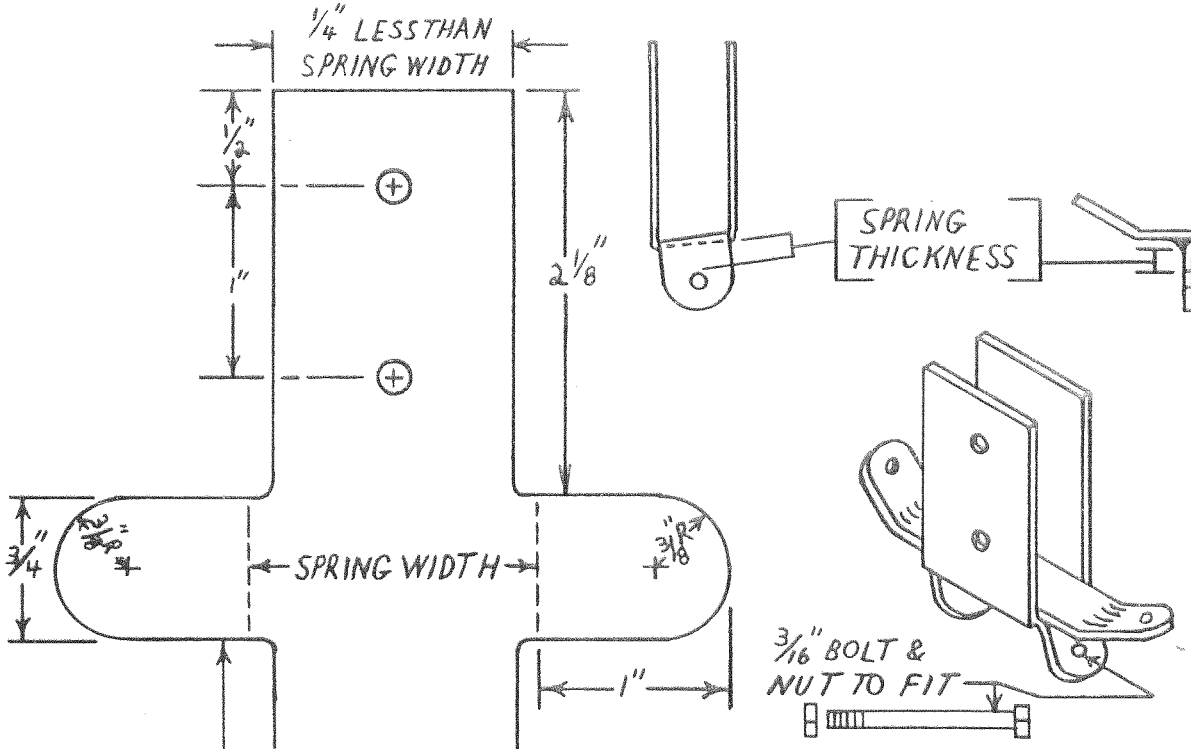
TURN STEEL BUSHING STOCK TO SNUG FIT IN TUBE, DRILL & TAP 1/4" X 28. EXTEND THREADS ON 1/4 X 28 BOLT TO 2" MIN. INSTALL BOLT IN BUSHING WITH 1" OF THREAD PROTRUDING, CUT OFF BOLT HEAD & INSTALL ASSEMBLY IN TUBE END. DRILL TWO 1/8" HOLES WITH AXES 90° APART, ONE NEAR EACH END OF BUSHING & INSTALL 1/8" RIVETS.



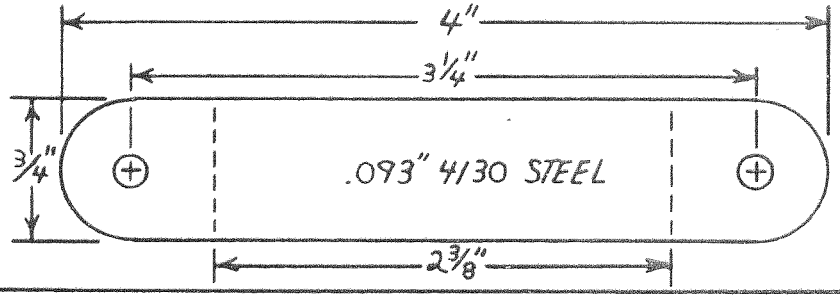




Joe Popp 1-2-68



TAIL SPRING BRACKET, STAB.
BRACE WIRE ANCHOR MODIFICATION
BY
LOWELL MORROW
YORKTOWN, INDIANA



MAKE MOUNTING TAB NARROWER THAN SPRING SO FITTING WONT TEAR AT CORNERS. ADD 1/8" PLYWOOD SPACER TO FRONTSIDE OF RUDDER POST TO COMPENSATE FOR ADDED WIDTH OF FITTING. BEND ONE LOWER TAB THEN DRILL, BEND OTHER TAB & BACK DRILL. NOTE: DRILL HOLE SO 3/16" BOLT WILL HOLD TAIL SPRING SNUG AGAINST TOP OF BRACKET. ALL HOLES ARE 3/16".
REFERENCE PLANS PAGE 2-12 FIG. 2-6
& PAGE 3-10 FIG. 3-5

Joe Pope 1-28-68

"TO TELL THE TRUTH"

One of the most straight-forward replies we had to our original questionnaire came from DON HOOVER, of Hunlock Creek, Pa. Dond has finished his ship, and in June, '67 had logged 35 hours. His airplane, by the way was one of the 5 shown on page 20 of October '67 "Sport Aviation". Don's remarks, we believe merit thoughtful reading.

"As my own "Fly Baby" is finished, I am interested in hearing from other builders that have flown their own completed projects - would like to know how their ship handles. How much testing they have done, such as a good calibrated airspeed, spin and stall characteristics, flutter, etc.

What really counts on this deal is that when giving the information on "Fly Baby" in this respect, is that the actual results are given and not something that might be mexed with a little wishful thinking. Also when info is given on airspeeds, stalling, cruising, approach speed, landing speed, etc., it should always be given along with the information that would include any modifications in the airplane, gross weight, engine-propellor combinations, weather conditions, etc. In short, if we are going to swap information, lets do it so we can get something out of it.

Just because my own "Fly Baby" is finished, doesn't mean I am no longer interested in all the other phases of this project. (the bulletin). I have learned a few things and if I can help someone out by something I have learned, well i'm ready to try and I am interested in this Bulletin business because I have not learned everything and this looks like a good chance to learn a lot more. Well you asked for it and there it is." (end)

Well, ask for it we did and get it we did, and appreciate it, we do. This is the spirit of cooperation and willingness we have been looking for and for the most part, have found.

You can't imagine how much it means to us to have someone like Don take this attitude. It is not however exceptional, since most of our readers do feel this way, but we just don't hear from them as much as we should. We did specifically ask Don for this and he responded. So some of you others, take a few minutes out from building time and write us a few lines. It doesn't have to be an epistle, but just bring us up to date on what you are doing.

In line with the above article, we would like to have some operating figures from ships already in the air. If we can get them, we will start a regular feature giving the vital statistics of different planes each month and maybe it will grow as more projects take to the air.

Well, thats it for this time, "wood butchers", now all we have to do is get the service man in and get our machine running so we can print this mess. Everything is ready except the press. Soon as it is fixed, we will " go to press" as they say in the slick paper world. See you next month.

THE FLY BABY BULLETIN

Issue No. 7 January, 1968

A GUEST EDITORIAL

For some time now, we have had a letter kicking around on our desk that we wanted to include in the Bulletin, but for various and sundry reasons, it never made it. Some times it was lack of time and again we would run out of space. At any rate, one way to be sure to get it in is start with it.

Maybe the title line of "Guest Editorial" is a little misleading, since the author is not a "guest". Neither is it an editorial. The article is actually in the form of a letter from a builder to the Bulletin. However the letter is so well written and thought out that we cannot under any circumstance, improve it with our "amateur" editing.

The author is ELWOOD M. BOND of Montvale, New Jersey. "Woody", as he prefers it, is an Eastern Airlines captain and flew his Fly Baby in November, 1965. The facts that he is an aviation professional and has over two years in his own ship should be kept in mind while reading this. We feel that these facts give him a little more license than usual to "speak his piece". We think you will agree after reading it. Here it is exactly as we received it.

"Dear Hayden, I really have not forgotten about you people down there. It seems that working for a living is interfering with my hobbies. I wasn't able to make Rockford this year (1967) although I had really planned on going.

I appreciate what you are going through in setting up a paper such as the Bulletin, for we (Chapt. 73) went through a similar experience in setting up a newsletter. It is a tough and time consuming job, made so to a great degree by the difficulty in in prodding the membership into doing any work, especially into writing any articles. You may find that a large percentage of individuals, in paying a token assesment to cover expenditures, feel that they have done their part and it is now up to you to carry the whole thing alone and keep them entertained. Please dont think I am cynical, I am 101% pro EAA and "Bulletin", the above is simply a fact of life that is perpetrated on public ventures.

Perhaps from our old bruises, you can derive something, therefore allow me a few personal observations. : Stand up on your two feet and shoot straight, avoid a "mutual admiration society" type attitude. A lot of people are hurt (physically) through ignorance. It is far better to hurt their feelings and let them realize the truth, than to stand by and let them really get hurt. If some nut incorporates modifications that are unsound, and you know it ..... dont tell him its "interesting", tell him its "lousy" and tell him why. Then if he isn't man enough to learn and admit to mistakes, then at least you have done your part.

We all need more education in Aerodynamics, much more education. This is especially painfull to Twister and Miniplane builders, and it will elicit long wails of pain from said quarters. Few will admit to the "man-hole-cover" flight characteristics even after they scare themselves witless, however you will notice that numerous of these aircraft are for sale, again and again.
(con't next page)

EDITORIAL (con't)

Our purpose is not to deride current designs per se, only to educate in good design, and LEARN through past experience; then, if the shoe fits: wear it. We are fortunate in that the "FLY BABY" is a good design, a little heavier than need be, but based on sound judgement and excellent working knowledge. If we can manage to "understand" this aircraft, study the thought behind every truss and fitting....abd why it is thus, then.... as a child learns to appreciate good music by listening to good music, we will have made a good start in light plane design. There is quite a gap between assembling a Heath-Kit and designing that same radio.

I suppose I should get off this soap-box and answer your questions. Fittings: These are accurate with the exception of the lower front flying wire fittings. These fittings are oriented to point directly to the axle shackle. Any variation in angle of incidence will influence the direction of cable pull on these fitting, so to preclude the possibility of an eccentric load, you may be better off rigging the wings on the fuselage before final shaping of the fitting. I have noticed that among our homebuilders around here, there is a tendency to trace fitting patterns right off the plans. On Bowers plans this is feasible to some degree, but it is not good practice. Plans and especially blueprints are subject to distortion due to the techniques of their reproduction. This is not true of all, nevertheless it is not considered good practice to trace from the plans. Use the measurments given, and draw your own pattern.

The forward stabilizer "C" brackets could go to .090 to provide more stiffness. The strength is ample with .065, but the rearward pull from bracewires, people, etc. tend to "sweep back" the horizontal stabilizers such as to pull away from the fuselage about 3/32" or so at the forward attach fitting. I would strongly favor a one-piece stabilizer in every respect.

The forward floor boards (under rudder pedals) are higher than need be. I find that the level of my heels is too close to that of my seat, and on long cross-countries, my heels go to sleep. There is quite a bit of room between floor-boards and the bottom of the airframe, so I believe one could drop the rudder pedals down a couple of inches and be much more comfortable. I am going to drop my forward floor this winter and will let you know how it turns out.

I found it necessary to install a small rudder trim tab to compensate for prop-wash, torque, etc. Otherwise a varying degree of right rudder is required. If the vertical fin would be offset a fraction of an inch to the left during construction, this might be remedied. I cannot give you any measurements on this as the question comprises: engine, propeller, and speed considerations and would be quite empirical. I would estimate about 3/4" left, but you had better check with Pete Bowers on that. (Ed. note: See article and "fix" on this subject, (offset) elsewhere in this issue.)

Hayden, I believe you can do a great service to the EAA with your Bulletin. I say this because the "Fly Baby" it's self can just about stand up on it's own two feet, but the general EAA members light plane criterion is rather cripple. Now I'm not being acid again, really, but look at these fly-ins and see what I mean. In fact look at the trophy business.....there are awards for "best finish", "paint schemes" etc. etc. for gorgeous chariots with overstuffed furniture, rugs, chromed struts! They are lovely to look at, but gentlemen, they can't fly! The fool things are so heavy it takes 125 hp. to get them in the air, and they fly (?) like a bomb. (Con't.)

76

EDITORIAL (Con't.)

So, we are staging a beauty contest! Not a word is said about performance, such as: best climb, shortest landing, best ratio of top speed to stall, and so forth. The question is: What are we rewarding in EAA, design and performance of aircraft, where an aircraft is considered a flying-machine or a gravity-stricken bunch of prima donnas? Beauty and performance are very desirable, but Beauty and the hell with performance is terrible. We profess to foster Education, ... education in what? Cosmetics? Now I believe there is room for everyone in EAA regardless of their personal taste, but when our EAA starts rewarding Beauty for it's own sake, to the detriment of aerodynamic efficiency.....then something in our basic philosophy is amiss. The buying of performance (?) with overgrown engines in inefficient airframes follows the same vein. Admittedly it is easier to substitute H.P. for brains.

The EAA needs the "Fly Baby" philosophy, it's ingenuity, it's insight. If we are to develop a better aircraft, we're going to use our heads, and for lightplane criterion, the "Fly Baby" and some of the French designs are as good a start as I can think of!

So now that I have placed the whole responsibility for this shooting-match on your shoulders, I'll quit. If you have any specific Fly Baby questions in mind, I'll be glad to answer them if I'm able. Best of luck to you.
/S/ Woody Bond. (end of letter.)

There you have it! The Bulletin has never had a "statement of policy" as such, and probably never will, but if we are ever asked for one, the above letter is a pretty good answer. What is your opinion? This letter should elicit comments from our readers. We would like to hear them. Do you agree or disagree. Let's hear from some of you have not written before. "Equal time" is guaranteed to anyone who wants it, Pro or Con.

ANOTHER LADY BUILDER

This month we welcome to our ranks another lady builder. That makes two, gentlemen. They're gaining on us. This lady, MRS. LULA W. RODGERS, of Reseda, Calif. is not entirely new to the game, as she has been helping her husband on rebuilding a "Cougar". If this keeps up, we may have to start a "ladies only" column. Glad to have her aboard.

MECHANICAL BRAKES

HARRY KOECKE, Prairie Du Chien, Wisc. has some info for economical brakes for the bird. Harry says there are several sports car master cylinders that will do the job and a Ford Fairlane will be O.K. However, hydraulic brakes are not mandatory and he is using motor scooter brakes. Here is his parts list.

Source: Sear Roebuck & Co.
Allstate (Vespa) Motor Scooter
Model # 78894494

Parts List:

4 ea.	# 81229	Sec. A	Jaw, rear brake, with lining.
4 ea.	# 7886	Sec. A	Pad
2 ea.	# 25990	Sec. A	Spring, Return of brake lining.
2 ea.	# 2140	Sec. C	Lever, front brake.
(and if you want to put a drum on another wheel)			
2 ea.	# 23831	Sec. A	Drum, rear brake.

There are other scooter brakes that will do just as well, so says Harry. If you are interested, his address is, 409 Brisbois St., Box 203.

FLY-IN REPORTS WANTED

The beginning of the Fly-In Season is just around the corner and a lot of us will be spending good building time at them looking at other ships and maybe an occasional Fly Baby. So that the time spent away from the bench won't be a total loss, here is a way you can justify it. There is always a chance you will see a Fly Baby and then you are duty-bound to tell the "Bulletin" about it. What we are getting at seriously, is to try to find out how many ships are flying around the country of which we have no record. We are sure there are some from rumors and heresay, but nothing definite. By next month we are trying to get up a list of known flying aircraft, and then when you spot one that isn't on the list, fire it in to us. When possible, get all the info you can. If nothing else, get the registration "N" number and we will look it up in the FAA book of numbers. Keep a sharp eye out. Here?

ANOTHER VOTE FOR EXTERIOR GRADE PLY

RILEY BUMGARDNER, Ft. Smith Ark., is employed by a furniture manufacuring company and discovered they use exterior grade ply for drawer bottoms. He gave it the "soak test" and it came out O.K. and he is using it. He paid a nickle a sq. ft. for it but didn't mention if this was the going rate or just a "special" for him. At any rate, if you live near a "case goods" furniture plant, it might be worth checking out. Riley went on to say that he is using "C" grade Douglas Fir for longerons, etc., and found some suitable white spruce at the lumber yard for the tail section. Strictly aircraft grade spruce for wing spars though, which are next on his production schedule.

SELECT FIR FOR SPARS ?

While on the subject of wood, we have a question asking for opinions of others. BILL LEISGANG of Onalaska, Wisc. is considering the use of select fir for wing spars. It seems the local A & P, in business since the OX-5, says that he never replaced a light plane spar with anything but fir which he selected locally. Bill checked all the local yards and they all have fir, select grade and costs a fraction of aircraft grade. He asked that we toss it out for discussion and opinions.

Our own ship is being built on "beer money" and beer isn't even legal where we live. Consequently we also would be tempted by all that select fir. However, we plan to spend several hundred hours and maybe several thousand supported by those spars, and when we divide the cost of aircraft spruce spars by those hours, the cost per hour of the extra peace of mind gets down pretty reasonable. Granted that there is still room for human error even on aircraft grade, but that inspector is supposedly an expert and his judgement is the best I can get. Certainly, there are lots of homebuilts flying around with "lumber yard spars", and <u>probably,</u> and thats the rub, they will never fail. Still, we will have to cast our vote with the "certified" group. Any opinions from the "field"?

LONDO GOES ELECTRIC

Remember Londo's Adventures back a few issues ago. He's had another which you will read about later this issue. However, we wanted to mention here that he has the first Fly Baby with an electrical system as far as we know. His engine has starter and generator already, so all he had to do was put it to work. If we already had it on our engine, we might be tempted to use it, but otherwise we will probably stay with propping the mill. That's part of the appeal of Fly Baby.

FLY BABY UPSIDE DOWN

FLY BABIES have been getting upside down quite a bit lately as the pilots warm up to their aerobatic capabilities. Upside down on the ground, however, is quite a different matter. Some builders and would-be builders have expressed concern over the absence of a recognizeable turnover structure to keep the ship off the pilot's neck if he does flip it over on the ground. Don"t jump to conclusions about FLY BABY having built-in noseover tendencies because of the accompanying photos. There is a story behind each and they are presented to prove that a roll-over bar or similar structure near the cockpit is not necessary.

The shots of 500F are the result of a runaway. Normal starting procedure for starting without help was to tie the tail to a ground tiedown through the glider towhook on the tail wheel casting. The pilot could prop the ship alone, climb into the cockpit for a warmup, then pull the release and taxy away. Well, just prior to the time the pictures were taken, Fly Baby was moved to another hangar, and the new one didn't have tiedowns in front of it. A helpful friend said he'd drive a stake into the ground so the old technique could be continued.

Pete went out to fly one day, pulled 500F out of the hangar, and slipped the tiedown rope into the towhook. He propped the engine with the throttle part-way open, trusting that the tiedown stake was as secure as it looked. The thing must have merely been slipped down a gopher hole, because as soon as the engine caught the stake came out of the ground like it had never been there. Pete made a dive for the left wingtip and caught it. This made him the pivot point, and Fly Baby went 'round and 'round, the throttle vibrating farther and farther open until it was practically wide open.

People began to gather, trying to figure out how to get inside the circle to get to the cockpit and cut the switches. The speed of the turning complicated this, as did a wooden stake on the end of three feet of rope swinging straight out from the tail. Well, to make a long story short, no one got inside the circle, and the wing pulled out of Pete's hands. Away the ship went, parallel to a line of tied-down airplanes and between them and the row of T-hangars, headed straight for the big maintenance hangar. Pete was already figuring the cost of repairing a rammed Bonanza or replacing a hangar door without even considering the costs to Fly Baby, when Nature, in the form of an extra-big gopher hole, came to the rescue. The wheels dropped into the hole and the ship flipped onto it's back before it had travelled a hundred feet.

Damage? Just about nil. The prop was bent, of course, the windshield was mashed flat and the balsa wood block that forms the top of the vertical fin (instead of the bandsawed plywood of the plans) was split. What if a pilot had been in it? No sweat, if he ducked his head. Those concerned about the results of noseovers will be glad to hear that THE HEADREST NEVER TOUCHED THE GROUND. The points of contact were the top front end of the engine, the windshield, and the tip of the fin.

The photos show how cleanly Fly Baby went over. When it came to rest, neither wingtip was touching the ground. Plenty of manpower was available to set Fly Baby upright again and if one didn't mind flying without a windshield, a replacement prop was all that was necessary to fly. As it was, the ship was taken home to Pete's shop for a careful going over.
(Con't. next page)

The other FLY BABY nose-over episode involved FRANCIS LONDO'S beautiful bird (be sure to see this one at Rockford in '68) that another pilot was flying for the first time. He had just landed on turf when another plane taxied across in front of him, and he hit the brakes. He was used to much softer brakes, and Francis' were set up to be real touchy (even Pete had commented on them when flying the ship himself). Well, this Fly Baby went over onto it's back too, except that only the fabric seal at the top of the fin was ruffled.

The difference here was that a pilot was in the ship. He ducked and was unharmed. However, an interesting problem showed up. Francis' ship had been fitted with a military-type shoulder harness with loops on the bottom through which the safety belt passes. The pilot reported that because of his weight pulling these loops tight against the belt, he had difficulty in releasing the belt to get out of the upside-down cockpit. Bystanders helped him out. It is recommended that Fly Baby builders use the types of belt-harness combination in which everything fastens at the middle with one latch.

An interesting sidelight on this episode - Pete was down the field a way when it happened, photographing an airplane. Someone else took off for the scene of the accident on a motorcycle, and Pete hopped on the back fender, holding his camera case and winding film at the same time. He jumped off the cycle at the scene and immediately climbed to the top of a nearby truck and started snapping pictures. Some friends joked afterward that he seemed more concerned about getting pictures than finding out how the pilot was. His reply to that was that he could tell that the pilot was O.K. by the way he was jumping up and down and cussing, and that he had to get the pictures fast if he was to get them at all because a crowd was coming and soon had the plane practically buried in spectators.

500F seems to hold the record at the moment for inadvertent inversions - once on the ground and twice in the water. Let's leave it that way.

Speaking of inverted, we had a shot of FLY BABY inverted in the air, but unfortunately it wouldn't print. We are trying at the moment to "borrow" a shot of 500F inverted in flight, and will print it if we do. Meantime, take a look at page 14 of the Spring-Summer Edition of Air Progress' "Homebuilt Aircraft". The photo illustrates an article by Pete on aerobatics and if you have any thoughts of even mildly putting your ship through it's paces, this will make interesting reading. Pete points out that you don't have to have a raging cyclone of an engine up front to perform "everyday" aerobatics. If you don't have a copy, Air Progress will probably be able to supply you, for a price of course.

The photos this issue don't require a caption page as usual. The above tells all about it.

Now that the "ice is broken" on reporting handling mishaps, we would like to hear about some of the scrapes you others have been into. Certainly not to criticize, but so that the others of us may profit from your experience. After all, thats what this thing is all about, to help each other through experience. If you have scraped a wingtip, bent a strut or axle, blown out a tire, or in some other manner, learned something the hard way, let us know. There are a couple of instances we know of, but don't know the details, that we would like to know more about. How about it?

50

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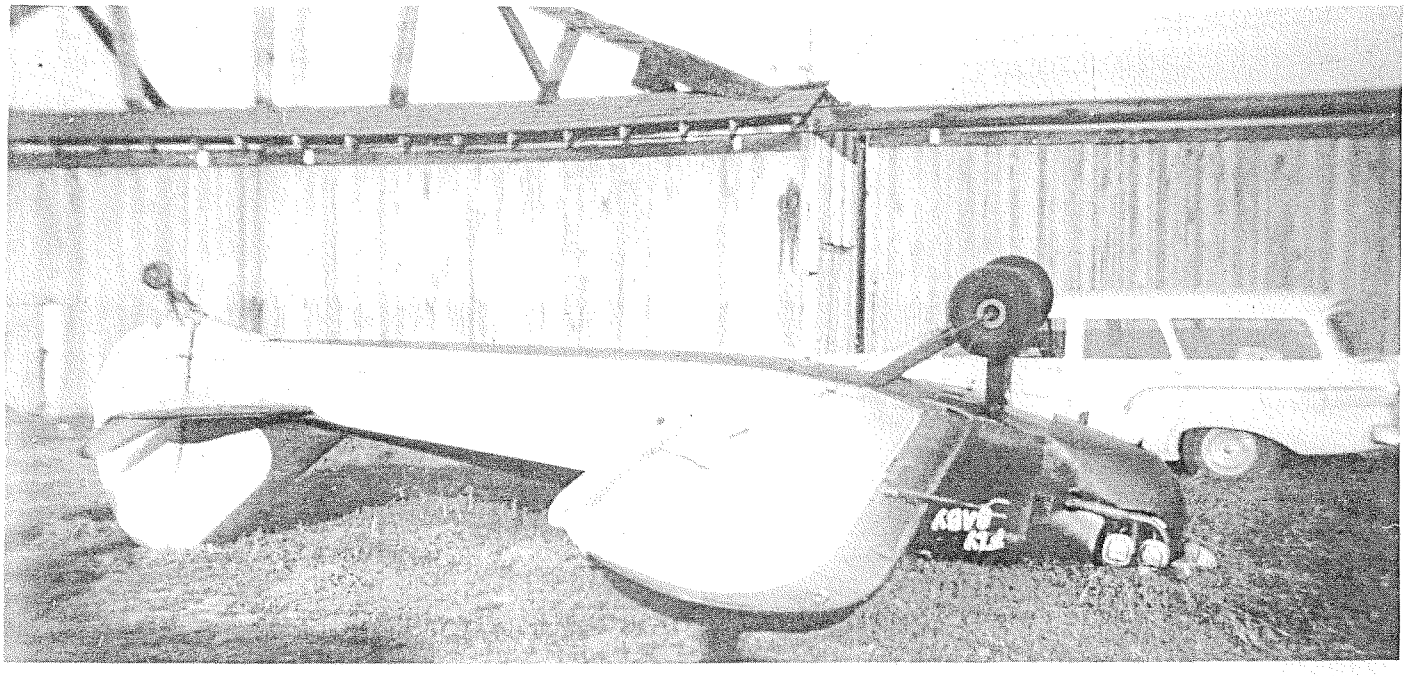

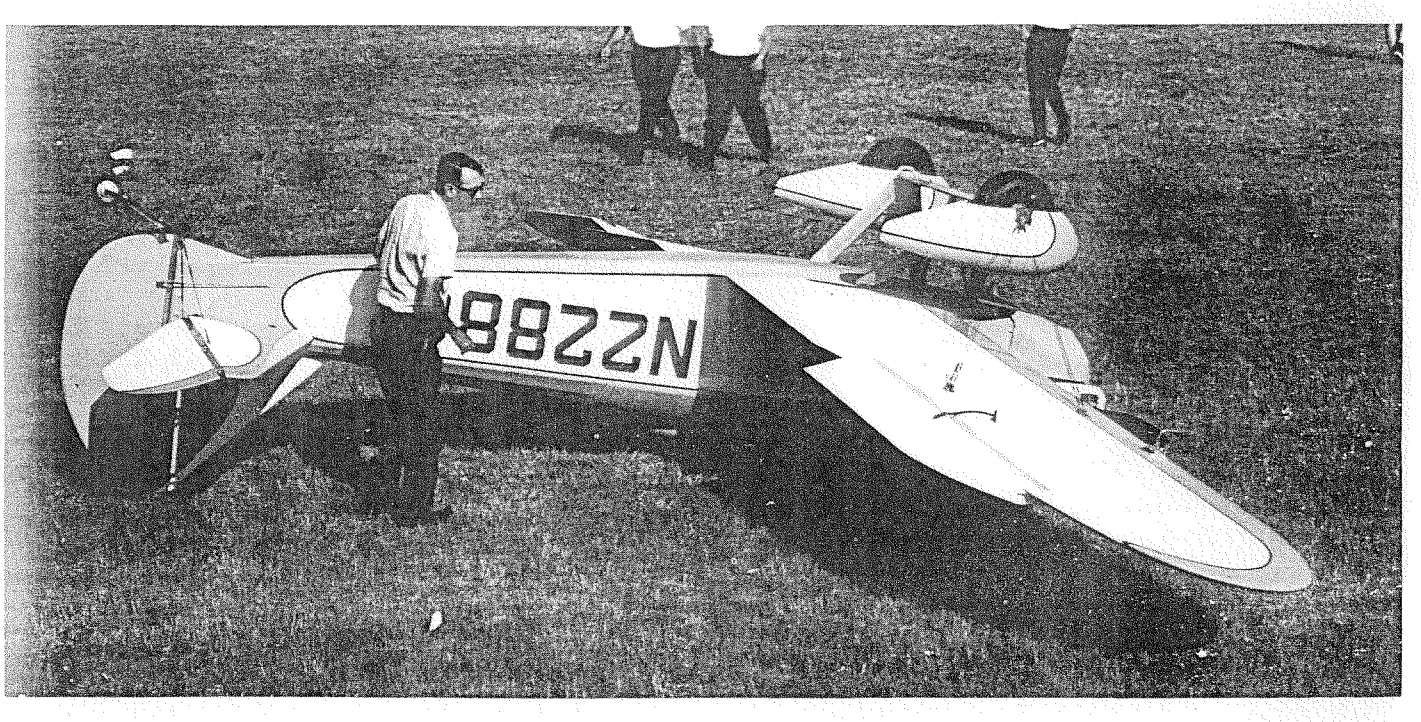
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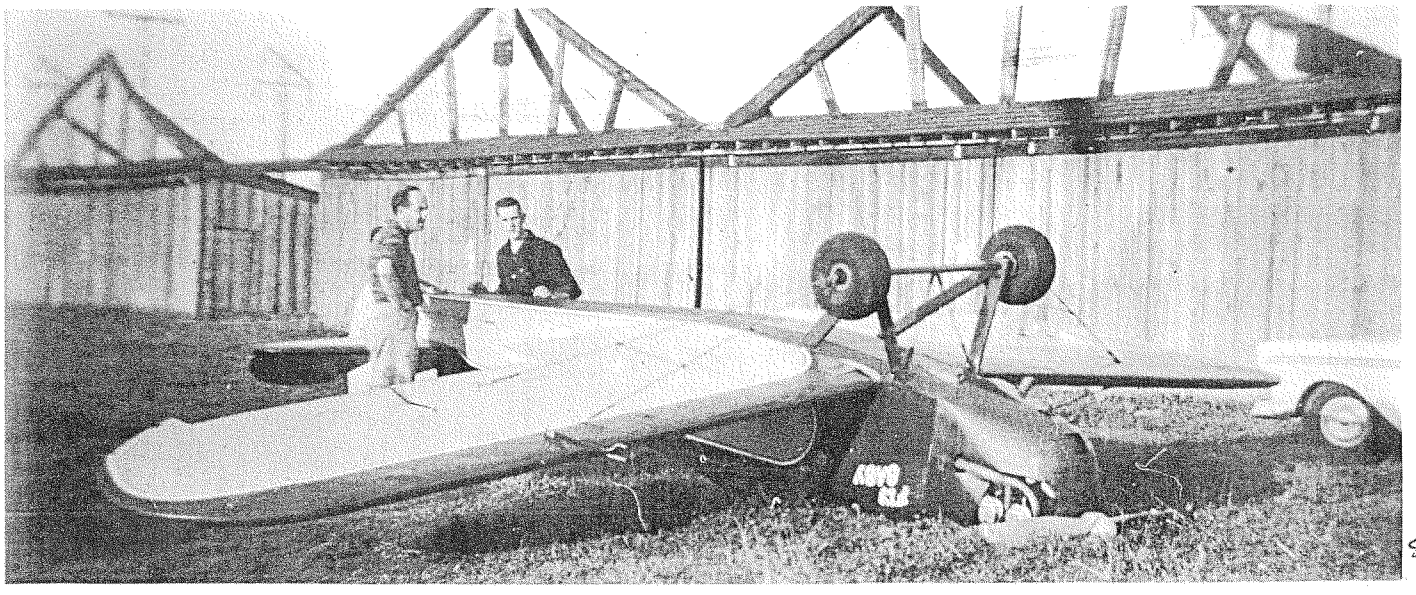


FLY BABY RUDDER TRIM

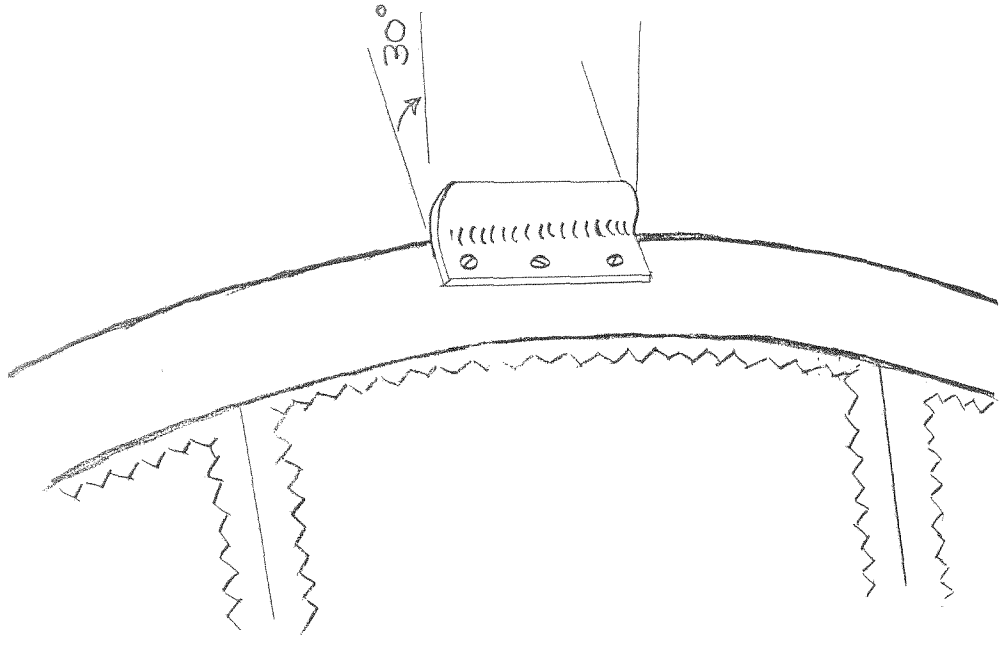
CLARENCE MULTOG'S letter in the December Bulletin indicates that some people are going to take action on the suggestion of offsetting the vertical fin to counteract the tendency of the plane (any plane with a right-hand turning engine) to turn left in flight.

After Pete saw this item, he wrote in to say that there are much easier ways of solving the problem than building in a major fixed component with deliberate misalignment. Besides, what do you do if you find you have put in too much offset or not enough?

The answer is a simple fixed tab on the trailing edge of the rudder. Take a piece of .020 to .032 sheet aluminum about 2 by 4 inches. Drill three 1/8" holes along one edge as shown, and use wood screws to fasten this tab to the LEFT SIDE of the rudder bow at the farthest-aft point on the bow. This should be midway between the second and third ribs. Have at least 3/4" of the metal against the bow.

With your fingers, bend the projecting portion of the tab to the left about 30 degrees and make a test flight. This much offset should be about right for cruising flight. You can't get a fixed tab like this (or an offset fin either) to trim your ship for all flight conditions, so cruising is the most desirable. Tabs of the same size can also be used on one elevator to make minor adjustments to overall trim that aren't worth the trouble of resetting the horizontal stabilizer.

Many pilots like to trim out to zero stick (or rudder) forces for every flight condition. Pete doesn't, which is why he hasn't bothered with trim on his own ship. The corrective forces are not big enough to bother and he likes to have the "feel" of the ship. After seeing the item in the december Bulletin, he made and tested a tab and sent in the accompanying drawing with word that this is the easy "fix" for those who feel that they have a problem.



A FEW MORE WORDS ON "FLUTTER"

Our good friend JOE POPE over in Lynchburg, Va., had an experience with flutter and did a little boning up on it, and passed along a "nutshell" description of what it's all about and what to do when it occurs.

"Flutter is a mechanical resonance which occurs at a certain velocity determined by the weight and area of the hinged surface and the amount of play in the controlling linkage."

The best way to keep from having it in a proven design like Fly Baby is to stick as close as possible to the plans for the control surfaces to insure that they are no HEAVIER than the originals. Also, be very careful in building the hinges and control surfaces so that there is no play in the system. For instance, if one aileron is clamped in position, it should be impossible to move the other aileron, or get any lateral movement of the stick. Anything more than a tiny bit of movement of the control surface or stick under such conditions should not be tolerated.

If flutter should occur in flight, reduce power immediately and "back out" of the flutter range, like right now! Also keep a firm grip on the stick, as this will not only help damp out the flutter, but keep the stick from beating you black & blue before you can slow down out of flutter range. The principal thing to remember though is to SLOW DOWN. That is the only way to stop it.

I have only encountered flutter in flight once and that was in a J-3 Cub as I was recovering from a spin. I got flutter in the elevator and it scared me pretty good! I had to hang on to the stick pretty tight and continued to pull up as fast as I dared and was well down in the seat. The only way I could wash off the extra speed was to get the nose up, and the flutter dissapeared as the speed dropped. This occurred at about 85 mph. I had done about six turns of spin and hadn't been hurrying the recovery as I had plenty of air under me.

It seems that the bolt holes in the elevators where they join were elongated and the cables had stretched too so that there was a good 1/2 to 3/4 of an inch play in the elevators at the trailing edge with the stick held firm. The hinge pins were a little worn too. You can bet that I check for play in the controls every preflight now.

NEWS FROM "DOWN UNDER"

The Ultra Light Aircraft Association of Australia is trying to get Fly Baby approved for home-building by our Australian counterparts. We can help them. That is, those who have built and flown their ships can help them. Within the next few days we will be mailing some forms to those we know have their ships finished and flying. You are requested to fill out the form and get it back to Pete as soon as possible. The form amounts to a brief resume' of your experience with the ship and the operating statistics of same. If you should get a form from both Pete and Hayden, just disregard one of them. We are trying to cover all bases and may duplicate some pilots. At any rate, the form should be sent to Pete direct so that he can in turn get them back to the proper people as soon as possible. Those fellows are as anxious to get started as we all were at one time. They are not as fortunate as we on regulations, and their designs have to pass full C.A.R. 23 ratings or show evidence of a sufficient number of the design operating safely for a good period of time in the country of origin.

MORE ON FLY BABY LANDING CAPABILITIES

GEORGE WELSH has pretty well settled the doubts that anyone may have had concerning the durability of the wooden landing gear on FLY BABY. Actually, it's more the thought of wood in this age of "iron birds" than any serious study of the problem that bothers the doubters. Check the cross-section of that gear, and you'll find that FLY BABY has MORE than such famous old timers as the Curtiss "Jenny", and it sure took a beating! Fly Babys gear design, particularly the cross lamination feature, was directly inspired by the famous French SPAD fighter of WW-I. Pete got a good chance to study one in his shop, having borrowed a non-flyable one from a friend and brought it into his shop to paint it up for a museum display.

A few other would-be builders have written in to ask if the narrowness of the gear wouldn't be expected to complicate the ground-handling problems and lead to ground-loops, etc. Far from it! Wide gears can be more trouble on the ground than narrow ones if a wheel is a little out of line or if a brake is dragging. The farther out the wheel is from the centerline, the greater the multiplication of any such problem. Look at gliders - they have the best ground handling characteristics of all, and they roll on ONE wheel! Fly Babys gear is relatively narrow, but Pete will stick by his statement that it has the most docile ground-handling characteristics of any homebuilt. Some examples:

A lightplane pilot flying the original Fly Baby for the first time set it down on a paved runway and immediately noticed a tendency to turn left that kept increasing. Turned out the tire was flat. All it took to keep it rolling straight was some right rudder. Try that with one of the hot jobs!

FRANCIS LONDO had a similar experience with his ship, and he wasn't nearly as experienced a pilot. In fact, he was flying on a student permit. He didn't have just a flat, it turned out - he had a broken wheel. Again the tendency to turn could be corrected with rudder.

Now, before anyone tries to blame that one on the no-shocks landing gear, it should be pointed out that Francis' wheels came from an airplane that had been crashed, and that old cracks were found in the wheel after his accident.

Pete also has movies of a 50-hour pilot, who had never flown anything livlier than a J-3 Cub, making his first landing in the original Fly Baby. You have to see that bounce to believe it. Something over 800 hours on Pete's ship now, still with the original axles, and they aren't bent enough to be worth the effort of straightening.

MORE PRAISE FOR WEEDENS' FITTINGS

There must be a lot of builders around that don't relish the idea of the long hard hours spent over the fittings with hacksaw and file. This observation is based on the unusually large number of letters praising Dick Weedens' fittings. We have several of Dick's fittings ourself and without lapsing into a lot of lavish "hollywood" type adjectives, the only way we can describe them is "Perfect". There is not the slightest flaw anywhere and the workmanship is the best we have seen. Dick obviously takes a great deal of pride in his work and it has resulted in a large number of satisfied customers. The fittings are already chromated and shipped well packed, individually wrapped in newspaper in a sturdy carton. If you have the slightest doubt about whether to make your own, we strongly suggest you check Dick's prices. You will find them quite reasonable for the quality of work.

ADDITIONAL COCKPIT ROOM

Although FLY BABY has about the roomiest cockpit of any single-seat homebuilt going, there are still a few guys in the six-foot-plus category that have their problems in it. Pete made sure that he could be comfortable, and he's 6'-1½" and weighs 200.

The tallest person to fly Pete's ship was 6'-6". This was at Rockford, and with the lineup of guys waiting to fly, Pete didn't want to take time to reset the rudder pedals from the middle position. The giant, Pete Peterson, merely took off his gunboat-size shoes and away he went with no problems.

The problem with other tall guys isn't so much their actual height, it's where they are jointed. Some have shorter trunks and longer legs, which puts their knees up into the instruments when they are seated in Fly Baby. BERT COPP solved the problem neatly on his - he lowered the forward floor boards a couple of inches. It's fairly easy to lower the bottom of the seat itself, too. It can actually go below the level of Stations 5 and 6. The occasional short pilot flying the giant's ship can be raised with cushions.

Woody Bond plans to lower his floor and will give us some tips on how its done later on. Shouldn't be too much of a problem.

STATUS OF FLY BABY PLANS

As of February 20, 1968, 327 serial numbers have been issued to Fly Baby builders who wrote in to Pete Bowers requesting them. The reason that Pete asked the builders to get their serials from him was twofold; to serve as a rough guide to the number of ships under construction and to avoid a duplication of serials that would complicate FAA's bookkeeping. Imagine if five builders named Smith all applied for registrations of Smith-Bowers Fly Baby Model 1A's, all with the Serial Number 1 !

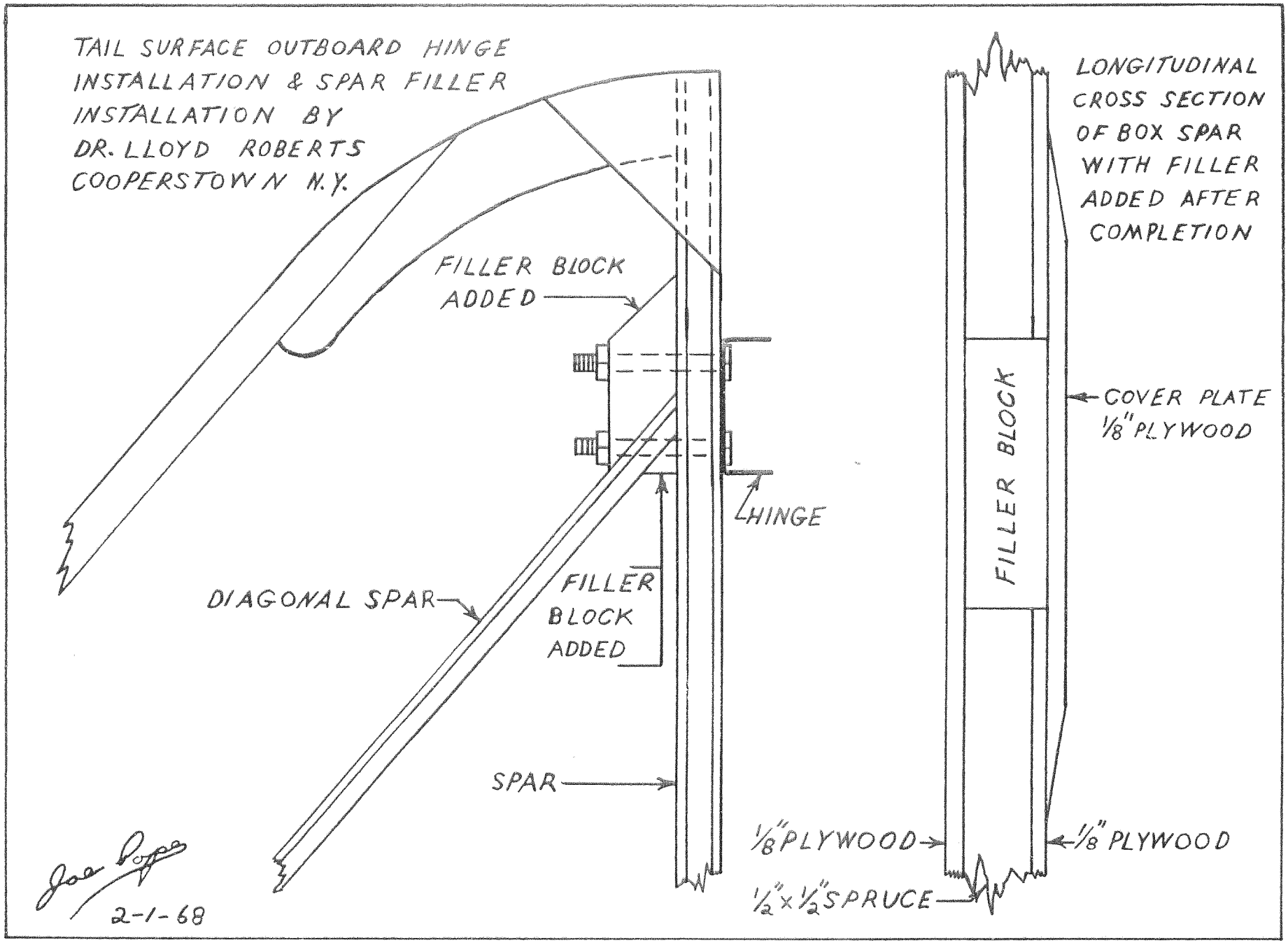
The way Pete handled the problem was to go at it in the Air Force manner and assign the numbers sequentially within a calendar year (Air Force uses a fiscal year, July 1 thru June 30). Serial 66-1 is the first one issued in 1966 and so on. These break down by yearly totals as follows:

1962 - 1
1963 - 79
1964 - 50
1965 - 56
1966 - 75
1967 - 55 (less one)
1968 - 12

Serial 67-1 was reserved for a Northwestern builder who never picked it up, so that one is blank on the books. It's open to the first person who gets through to Pete and asks for it, preferably someone who started a Fly Baby in 1967 but who hasn't picked up a serial for it.

NEW EAA CHAPTER BEING ORGANIZED

Anyone in the Lynchburg, Va. area who is interested in an EAA Chapter, can contact Joe Pope for details. The first organizational meeting is set for March 13. It was planned for the 20th but the FAA representative couldn't make it and the date was moved up. You can contact Joe at 109 Briarcliff Circle in Lynchburg, zip 24502. We don't have the phone number handy, but sure you could reach him through "information". They have several people already involved but can use all the help they can get. We want to wish them the best of luck in this undertaking. Just wish we had a chapter around here.


TAIL SURFACE OUTBOARD HINGE INSTALLATION & SPAR FILLER INSTALLATION BY DR. LLOYD ROBERTS COOPERSTOWN N.Y.
FILLER BLOCK ADDED
HINGE
DIAGONAL SPAR
FILLER BLOCK ADDED
SPAR
Joe Poppe
2-1-68
LONGITUDINAL CROSS SECTION OF BOX SPAR WITH FILLER ADDED AFTER COMPLETION
FILLER BLOCK
COVER PLATE 1/8" PLYWOOD
1/8" PLYWOOD
1/8" PLYWOOD
1/2" x 1/2" SPRUCE

ATTENTION ALL PILOTS - ATTENTION ALL PILOTS - NOW HEAR THIS - NOW HEAR THIS

Sounds like "Victory at Sea" on the late-late show, but read on anyway.

Here is a sporting proposition from Pete Bowers to all pilots who are already flying their ship or expect to be by Rockford time.

We will call it "THE FLY BABY ROCKFORD POOL". Anyone who brings his ship to Rockford in 1968 is eligible. Here's the deal - - - - Send in to Hayden your guess of how many Fly Babies will be there. To the one who guesses closest, Pete Bowers will pay out that many CASH DOLLARS. In case of a tie, split the prize, or if too many ties work out something else.

You don't have to stay the full week to be eligible, but your ship must be registered, so we get an accurate count. If you have to leave, and win the prize, it will be sent.

Pete's ship can be counted in the total, but don't cout it as 1½ if he shows up with the biplane wings by then.

There were eight last year and we hope to see more this year. Start laying your plans now to reserve Fly-In Week for the big show. Wouldn't it be a blast if Fly Babies outnumbered any other homebuilt there. It is a distinct possibility, but it will take just about every Fly Baby in the air to pull it off.

HAPPINESS IS

Lets wrap it up this time with a "happiness is" that is more of a rambling on of thoughts than anything else.

"Happiness is", getting away from the office the moment the clock permits, skipping supper, and driving out to the strip instead. Roll out a venerable old J-3 and climb leisurely to three thousand and "park" there to watch the sun go down over the Blue Ridge Mountains. You linger a few minutes, then slip quietly in over the underbrush and plant her firmly on the numbers. You are just a wee bit illegal, as the old "J" was never blessed with an electrical system, but no one is around except the FBO, and anyhow you can still see pretty good. After securing the old girl for the night, you start home, and as you pass the rows of houses in your suburb, you see the pale white glow of the TV sets through the windows. It isn't difficult to imagine the den scene in these houses, nor is it difficult to guess the opinion of the occupants. "Anyone that would miss the first hour of the "early movie" to go flying around just before dark in an old fashioned airplane must be some kind of a nut". If they knew you were on your way home to work on a "homemade" airplane, they would really flip. Especially if they knew you were living for the day you could watch the sunset from your "homemade" airplane. There is a tinge of guilt to your feeling of smug satisfaction as you turn into your drive. Some guys have it, some don't. You're lucky, you have. You feel good.

Thats it for this month gang. See you next time. If you like what you read, let us know. If you don't, still let us know. The mailbox has been looking like Carlsbad Cavern lately, so drop us a line. O.K.?

THE FLY BABY BULLETIN

Issue No. 8 February, 1968

PETE BOWERS UP FOR AWARD

What better way to start this issue than to share with you the news that EAA President, PAUL POBERZNY is going to recommend PETE BOWERS for the DR. AUGUST RASPET Award.

This welcome new came to us in the form of a letter from Paul, dated March 26th, a copy of which you will find in this issue. As you will note, he also had some kind words for the Bulletin, by which we were flattered, coming as they do from the "Big Chief" himself.

We are of course in complete agreement with Paul's recommendation of Pete for the award and plan to give him all the support possible. In the letter, Paul has asked for and needs all the support he can get. Right now we don't know exactly how to go about it, but you can bet that by next issue we will have the information and pass it along.

We are all grateful to Pete for giving us a common bond in "Fly Baby", and this is our chance to help him get some of the recognition that he has, so many times over, earned. So, as soon as we find out how, let's all get behind Paul and see what can be done.

WOODY BOND SCORES WITH "GUEST EDITORIAL"

The response to Wood's letter in last month's issue was, to say the least, gratifying. We heard from everyone from Paul Poberzny, EAA President, to some that we hadn't heard from since last June when they "joined up". Better than 95% of the replies were enthusiastic endorsements of Woody's opinions. Only a couple dissented and they were not really dissenters. They just said let everyone choose his own level of proficiency, and build to suit his own desires.

To Woody, on behalf of those who took time to write, our sincere thanks for a fine contribution. Maybe this will inspire others to "speak their piece." We hope so, and invite them to do so. As we said before, we offer equal space to anyone and everyone who wants to disagree or elaborate on the same theme.

ANOTHER FIRST FLIGHT REPORT

Just learned of another Fly Baby that has been flying almost a year, but is news to us. This one belongs to ANGELO SILVAGGIO of Ashtabula, Ohio and his first flight was on May 30, 1967. The owner had logged over 130 hours in it, on a student ticket, last we heard.

This report came to us from JOHN MILLER of Geneva, Ohio, who has flown the ship and loves it. His first flight in the Fly Baby was also his first open cockpit ride and although he isn't himself building at the moment, it shouldn't take much to get him started. From his description of the flight, he has what it takes to become a "Fly Baby Type".

MARINE PLYWOOD SOURCE

In addition to the first flight report, John Miller also sent us the name of a supplier where you can get marine grade plywood at a reasonable price. The name and address of the outfit is:

Harbor Sales Co.
1401 Russell St.
Baltimore, Md. 21230

JOE POPE, who is a familiar name on the pages of the Bulletin, also bought some plywood from Harbor Sales and is well pleased with the quality. One thing though, you might have to go through a local dealer to get the wood. Some of these places are wholesale only and won't sell to an individual. Joe purchased his thru a local dealer, but he wasn't aware of the supplier at the time. It just so happened that the dealer bought from Harbor Sales and that is how Joe found out about them. We will write and find out if they will sell direct and let you know. In the meantime, if you're in a hurry, write them and find out. Any reports on your dealings will be appreciated.

ANOTHER WOOD WORKING TOOL

While on the subject of wood, Joe Pope also sent us the name of a new tool he is using that works real well on plywood. It is a Stanley brand tool, and they call it "Surform". It can be found in most quality hardware stores and the name Stanley indicates that it is a pretty good brand. Joe says that once you get the hang of using it, the results are better than the old standard block plane that most of us use. Plan to get one for our own shop and try it.

SAFETY FEATURE ON THE FORWARD TURTLEDECK

BOB CLOW, of Inglewood Calif., who a while back gave us a tip on a Nicopress tool, also sent us an idea for the cockpit area. Bob wanted a continuous curve on the forward turtledeck edge that is exposed in the cockpit. This however, leaves a sharp edge exposed unless you cover it in some manner. His solution was a piece of soft aluminum tubing about 40" long, split down one side and slipped over the edge. The ends are crimped to hold it on and he used APOXY, a brand of epoxy to secure it. Bob says to work it on slowly to get a good clean curve and it will result in a neat job. It might also prevent a neat clean slice in your skull in the event of a sudden, unexpected stop. (This is not in lieu of a shoulder harness which everyone should have and use.)

"DO IT YOURSELF" STRESS ANALYSIS DELAYED

A couple months back we promised a "do it yourself" stress analysis, but since have had someucorrections from DAVID PAULE, the author and before we run it, we want to be sure what is correcting what. As we said before, our Algebra is rather stale and it would be easy to goof up the whole bit. Soon as we have time to sit down and do a little meditating, will let you know. If it gets too deep, we may have to go back to Dave for clarification.

The item hasn't been given much priority since it isn't essential if you follow Petes plans when building, but it is interesting to know how it's done.

BUY SWAP & SELL

Grade "A" Cotton: SSgt. JIM STURGILL, 400 Choctaw Rd., Clinton Sherman AFB, Okla. 73632 says that he has some grade A available that he will swap for almost anything that will go on Fly Baby, he will sell it outright. Jim also picked up the remains of an old "Bamboo Bomber" from which he is salvaging some material. If you are familiar with this old crate and can use some of it, you might be able to talk Jim out of part of his loot.

Wheels & Parts: TOM WILEY, 10 Main St., Hagaman, N.Y. 12086 has a few items to pass along. He writes; "To give you a few items for the Bulletin; 1 pair of Schinn wheels with 3 bearings, backing plates and shoes, no tire or lining on these wheels, "T-Craft". Will trade for a good pair of 800 x 4 Cub tires or sell out-right. Also have Cub backing plates with bladders and some blocks, make an offer. (Tom also sent along a couple of tips we will use elsewhere.)

Propellor Blade Needed: TOM ABLE, Stanfield Oregon, (Route 1, zip 97875), is looking for a blade for a ground-adjustable Hartzell, Model HA-12UO-2. This is the prop for a 65 hp. Continental and if anyone can put his hands on one, Tom would sure appreciate it.

Compression Strut Jig: Tom Able also says he has a jig made up that is just perfect for the compression struts and will be glad to loan it out for the cost of the postage. (how's that for the Fly Baby "help & be helped" spirit.) Sure hope someone can help Tom come up with that Hartzell blade.

Thats all the items for this section to date, but if any more come in before mailing time, will add them onto the tail-end of the issue.

SOURCE OF CABLES, FITTINGS, ETC.

Credit for this one goes to both LLOYD ROBERTS, Cooperstown, N.Y. and also C.E. MULTOG, McMinnville, Tenn.

Both these builders sent us the following address which should be able to supply the stainless wing wires, turnbuckles, thimbles, shackles, etc.

Hoboken Bolt & Screw Co.
Aircraft Division
Willow Ave. at 17th St.
Hoboken, New Jersey. 07030

Clarence Multog went on to add that the minimum order to escape a service charge is $10.00, but most orders will probably go over that anyway. When you order something from a place that has been mentioned in the Bulletin, be sure to give it a plug, and it might be that we can get them to go along on some "specials" for us if they realize it means more business for them.

Speaking of "specials", we haven't been too successful in persuading any suppliers to go along with "Fly Baby Specials" as we had hoped. Possibly however, after the Bulletin has been around a few more months, they will realize that it isn't a temporary "brainstorm" of some idiot homebuilder and will give our requests more consideration. One thing for sure, we will keep trying.

CANADIAN REQUIREMENTS

ROY ORVIS, Dryden Ontario, was kind enough to send us a set of the DOT, (Department of Transport), requirements for Canadian homebuilts. Our first thought was to copy them in the Bulletin, but there are several pages and your best bet is to send for a set. Write the DOT at 601, General Post Office Bldg., Winnipeg 1, Manitoba. That way you will have an official set yourself and at the same time establish contact with the Canadian "powers that be".

Since we have several Canadian readers who have joined the "movement" as newcomers, this maybe will be of some help and our thanks to Roy for securing a set for the Bulletin files. Also hope that Roy has recovered completely from a torn cartilege in his knee that developed complications. (not done in an aircraft accident.)

ANOTHER CATALOG FOR HOMEBUILDERS

Here is another source for a catalog of various and miscellaneous parts, many of which can be incorporated into Fly Baby. They carry both new and used parts and equipment and the prices seem to be about equal to and in some instances less than other supply houses. Name and address is:

WAG-AERO
Box 181,
Lyons, Wisc. 53148

We purchased a parachute from this outfit sometime back and their service was prompt and courteous. The chute was exactly as advertised and had a fresh pack certificate by a licensed rigger. If nothing else, the 32 page catalog makes a good reference for cross checking prices.

ADJUSTABLE TRIM TAB

GEORGE NOBLE, who usually hails from Richmond, B.C. Canada, sent us a neat idea for an adjustble trim tab hook-up. We say "usually", because at the time of writing he was up near Hyder Alaska on a job, bemoaning the lost building time on his ship. Because he is going with the 125 hp. model, he has had to increase the tail surface and also wanted the adjustable tab. The idea for it came from his Maranda AMFS-14, which uses the same basic setup. The use of the Bowden cable, as shown in a Joe Pope drawing elsewhere in the issue, permits departure from the straight line linkage usually associated with adjustable tabs and permits the cockpit control to be put almost anywhere you wish.

PLYWOOD LEADING EDGE GAINING FAVOR

In the letter from George concerning the tab, he mentioned that he is using 1.5 m.m. birch plywood on the leading edges of stab and wing. He is one of many going this route, and while it seems to take a little more time and effort, the ply should resist nicks, bruises and dents better than aluminum. This however remains to be seen, since we don't know of one flying with it. If we're wrong on that score, correct us someone and let us know how it is working out.

BULLETIN REACHES TWO-THIRDS MARK

With this issue, we complete two-thirds of our first year. Back at the beginning, there were many who were doubtful that we would survive the first six months, much less a year. Well, survive we did, and now we are proud to say that some of those same people are our staunchest supporters. Don't think however, that we are going to sit back with a smug, self-satisfied look on our face just because we have made it this far. Far from it, as we have just begun to learn some of the basics of presenting what you want and in a manner that can be understood. So, don't class us with the 100 hour pilot who knows all there is to know, but with the solo club, since we are still flexing our wings and anticipating the future.

ANYONE FOR ANOTHER YEAR?

Even though we are only two-thirds of the way home, several guys have been inquiring when to send in their new subscriptions so as not to miss an issue. A few have taken the bull by the horns and sent it in. Wish we had their confidence in us! No kidding, that makes us feel like a million bucks, to know that what we are doing is that much appreciated.

The main reason we got off on this theme to begin with was to let everyone know that we had received quite a bit of encouragement to continue, and had decided to do so. We have less than 90 days to catch up to our mailing schedule and there is an outside chance we will make it.

One of the principal reasons for the erratic issue dates of the Bulletin has been the neccessity of relying on being able to borrow the correct kind of typewriter on which to type the masters for the Bulletin. That coupled with our heat-pain-laziness threshold has resulted in schedules not unlike those of the early air-mail pilots.

To cure the first of the problems, (there is no cure for the second) we went in search of a typewriter to call our own that would do the job and do it well. We found such a machine and after testing it thoroughly, struck a deal for it. Only one hitch, the man wanted cash on the barrelhead. Since it was a "now or never" proposition, we grabbed the "D" ring and jumped. As a result, we are the proud new owners of a slightly used IBM standard office model electric typewriter, complete with carbon tape ribbon for master typing.

Needless to say, the tab of $300.00 put quite a crimp in the budget and our "beer money" Fly Baby fund suffered considerably also.

We had planned to make this move when the new subscriptions were due, but had we waited, the "deal" we made would have been gone, so we went ahead anyway. Our reason for going into all the detail is to ask anyone that can spare the coins to send in their subscriptions a couple months early. This is not a request for extra funds but just some interim financing till the time rolls around. The rate will be $5.00, the same as it was this first year.

Before you grab your checkbook however, read a little further on a couple of minor changes we are planning.

"NEXT YEAR" Con't.

Several people, including Pete Bowers, have suggested that we reduce the number of copies per year to 10 instead of 12 to give us a little more time between issues and give us a chance for more quality in lieu of the present quantity. That may have been a camoflaged slam at our quality, but we don't think so. Not in Pete's case anyway, because when he says something, it is straight-forward and usually blunt and to the point.

We are going to try the 10 issue schedule and see if it helps, but at the same time try to add something that we have been asked for several times.

This year we are going to attempt to get out a special Rockford issue, either as a separate issue or as part of a regular one. It will be a pictorial mostly of Fly Babies at Rockford with any interesting side-lights that develop. This is not a firm promise, since it will require the help of some of our readers who are adept with a camera. We will, of course, do our own share of shutter-snapping, but will need help. Last year was a fiasco as far as our own camera work went. We shot seven rolls of 36 exposure film and didn't get the first photo. Camera shutter was stuck in the "open" position all week long. If we can get enough help with the camera work though, we will put out a pictorial.

Now, if you are still interested in going for another year and can help by subscribing a little early, we'll appreciate it. (If something should torpedo our plans for another year within the next couple of months, any new subscriptions would be returned.)

WOODY GETS HIS TICKET

A note just in from WOODY THOMPSON, Eureka Calif., tells us that he has his private ticket now. Maybe that doesn't mean much to the old timers with a pocket full of ratings, but to those of us who have been flying on a student ticket for longer than we can remember, it means a lot.

Woody also "rushed right out" and bought a set of Deck Weedens fittings after reading about them in the Bulletin. Like the others, he is very much impressed with them. We also got a couple shots of his ship in color but unfortunately, we can't reproduce them.

ANOTHER PLUG FOR HOBOKEN BOLT & SCREW

We mentioned on page 3 that this outfit could supply the 1 x 19 1/8" stainless cable for the wing wires. Just turned up another note from CHARLES HONER, of Newton Square, Penna. telling us that he got his wire from them also and added that they give discounts on quantity orders.

This raises the possibility of several guys going in together to buy at one time and getting a good price. We for one would be interested. If you are, drop us a line and if we can get several lined up, we will write these people and see what can be done. They will probably drop-ship each individual order and still allow the discount. Most of these suppliers will. Since this cable is relatively difficult to locate, give this idea some serious thought.

We had the pleasure of meeting Charlie at Rockford last year and look forward to seeing him again in July.

AILERON SWING LINK "FIX"
AILERON STOPS AT THE "START"
AXLE BEEFED UP
ALUMINUM AND A COLD GARAGE

The multiple heading is to cover several subjects in one letter that we don't want to break up. This letter from DON HOOVER of Hunlock Creek, Penna. is entertaining reading as well as giving some valuable information and building tips. Read it and you will see what we mean.

"Dear Hayden, I hope someplace in this letter one might find a word or two that could help them along on the road to completion of a Fly Baby, but then again one might find some words that would cause them complete failure and grief. I don't know anything about building airplanes, (I'm amazed that I made it through Fly Baby as well as I did,) so I hope nobody takes as gospel any ideas they might get from this, (should you print it in the Bulletin). If you do, then you are at the bottom of the barrel. (Ed. note: We should get to the bottom more often.)

The ones that have completed a Fly Baby will say that this is old stuff and that to them of course is true, but for the ones that are just getting started, some of the simple little problems are very big, very real and sometimes very exasperating and it is only AFTER they are solved that you can honestly say, "Why man, that was simple, nothing to it". I found that as you go along building a Fly Baby you are continually licking small problems and it gets to be part of the whole project. And because we have in mind that this is very likely a one-time deal, we tend to dismiss the problems and the way they were solved and start getting ready for the next one. Well, here are just a few that I came up against mostly because of being a little broad between the ears.

The best way to get this one across is to ask you to turn to page 6-2 of the plans and take a look at station #3 with it's micarta bearing block in place and the little diagram of the front spar with the swing link in place which is next to it. Now you can see how a few knotty little problems become simple if you picture the spar in line with station #3 (like it will be) and picture the swing link on the back side of it's support instead of between the support and the spar. For me this answered the following questions.

1. Where do I make the hole in the fuselage for the aileron control rod?
2. Where do I make the holes in the wing ribs for the aileron control rod?
3. How in the heck will the aileron control rod line up with the aileron link?
4. Won't the aileron control rod rub on the spar fittings or the bolts that hold them or the spar pins?

I had the swing link support already made when I got to this so fixed it by using a bolt long enough to go through the spar and far enough out the back of the support to hang the swing link in a cantilever fashion. This is working O.K. but maybe a different support would be better. Was wondering how some of the other fellows (and ladies) dealt with this.

DID YOU KNOW!

That my wife got real miserable just because I forgot to wash out her little old cake decorator after using it to put glue in the slots of the cap strips?
(Con't. next page)

DON HOOVER (Con't.)

I like this one because I think I found a way to save some wear and tear on the aileron control system. I think Pete says in the plans that aileron stops are not necessary because the aileron itself makes contact with the aileron mounting spar for its full length and makes for a very good stop of it's own. Good! and I agree, but I have looked at a couple of Fly Baby planes besides my own and found that although the ailerons are tight against the aileron mounting spar, the control stick can continue to move past the position where the ailerons are no longer traveling. This means at least on my own Fly Baby, that there is a lot of flexing of the aileron control rod especially in the area of the swing link and the junction of the control rod and the aileron link from the yoke on the torque tube assemble. (whew!) A-n-y-w-a-y, I made a right angle bracket from a piece of .065 4130 and bolted it to the rear of station #3 below the bearing block so that it would contact the aileron yoke on the torque tube at the same the ailerons reached their normal stops. Maybe this doesn't sound like it is worth bothering with, but at least I don't hold my breath anymore when someone climbs into the seat and starts banging the stick from one side of the cockpit to the other.

DID YOU KNOW!

That the only mail I get that comes already opened and read is the FLY BABY BULLETIN? The wife always beats me to the mail box.

Here is something to consider, (builders suit yourself). If the landing gear axle is made from tubing with a wall thickness of .125 instead of .093 then a 1" wide strip of 4130 would just fit inside of the axle for the flying wire anchors. This would save the job of cutting a special size to fit the inside of the .093 tubing. Also while adjusting up the stabilizing wires to the center of the axle by turning the turnbuckles with my fingers, I was wondering why in the heck the wires were not getting tight when my buddy walked in and said, "take a look at the axle STUPID, you're pulling it up in the middle." He was right you know, the darn thing was bowed like WOW! Of course, the flying wires were not attached to the end of the axles to help keep the axle from bowing up the way it did but it got me to thinking just how flexible the axle was. I am <u>not</u> saying that .093 is not strong enough, because I have made some landings that would have made a Dodo bird hold it's head high with pride. Never-the-less, if I was doing this job over again, it would be with .125 wall thickness. Like I said, suit yourself.

DID YOU KNOW!

That spilling nitrate dope on a kitchen tile floor can get you in a peck of trouble? So can a reddish-brown spot on a green living-room rug when it looks just like resorcinal glue!

I'm not alone on this one because I know another Fly Baby builder that solved this little deal the same as I did. It seems somehow or somewhere along the way, I became brain-washed to the idea that nicopress sleeves and thimbles went hand-in-hand. It goes something like this --- Run the wire through the eyes, thimbles and nicopress sleeves etc.--- Well, came the day I tried getting four of those wires, thimbles and nicopress sleeves on the clevis shackle that fits on the anchor at the end of the axle --- Ha! --- I ended up like the other builder and made a shackle of my own big enough to hold 4 wires, 4 sleeves, and 4 of those #@&*%$# thimbles. It came out O.K. and my airplane has not fallen out of the sky but it kinda got under my skin because I couldn't figure out how Pete done it. Well one day I found myself staring at old 500F and I took a peek to see how Pete got four of everything on that shackle. Do you know what?--- That doggone Pete didn't use any thimbles! (Con't.)

DON HOOVER (Con't.)

So, he got 4 wires on that shackle --- no trouble. Later on I pitched him a curve on this deal and he belted it right back to me by asking if I found anyplace in the plans where it said to use thimbles at this location? Well I gave him my best sheepish grin and walked off muttering something about taking another look at 500F. Boy! did I feel stupid.

DID YOU KNOW!
That if I had all the money I lost from taking days off from work to build a Fly Baby, I could have bought a good used Boeing 707?

While on the subject of being stupid maybe some of the other builders of Fly Baby might give a little thought to the temperature of their workshop when they put the aluminum leading edge on the wings. I put mine on out in the garage when the temperature was down near freezing. Now I'm not saying this was the reason but when my Fly Baby sits out in the hot sun, the leading edge gets full of humps and bumps. I thought that maybe the cold temperature had the aluminum in a contracted state and now when the hot sun hits it and it tries to expand, it can't move because it is nailed down so it does, the only thing left --- it bulges up and down between the nose ribs. Yes ????????? .

DID YOU KNOW!
That the roof on our house leaks, the house needs painting, the drive-way is all washed out, the car is worn out, and I got holes in my shoes, but, I've got a brand new Fly Baby?

I didn't think too much of the idea of using wood blocks for the bearings for the torque tube assembly on stations 3 & 4 until someone said, "What do you think the bearings are made out of for that old wringer washing machine over there in the corner."(the wringer bearings). Well I made mine from Oak and it works!

Look for N608X at Rockford in '68 and if I ever build another home-made airplane, it will be a FLY BABY again. " Sincerely, Don Hoover. (end)

On the next two sheets you will find "Pope-made" drawings of Don's aileron-stop fitting and the aileron linkage.

Many thanks to Don for taking the time to pass on some of his experiences. This is a case of where a builder has finished and is flying his ship, and could take the attitude, "every man for himself" and let it go at that. Like most "Fly Baby Types" though, he isn't that type individual and is just one more example of the comradeship that exists among us.

(The next two pages of Don's drawings constitute pages Eleven thru Fourteen.)

On the back of this sheet you will find some so-called, "trivia" or "filler" as some magazines and papers call it. We however find it to be delightful reading and hope the author will favor us with more. It was signed "A Believer" and we will honor the "signature" by not publishing the name. Our original thought was to ration it out over a period of several issues, but we will "shoot the works" and hope for more. Please!

HAPPINESS IS:

The lead-in runs something like this..... "In this day of fast living, obscene literature, and risque behavior, I feel I should check all reading material coming into this house! I did check --- The Fly Baby Bulletin, and find there are different degrees of Happiness. Happiness in our house, (what's left of it) shapes up something like this:

HAPPINESS IS

Happiness is a bundle of sticks
Grooved and lovingly stacked,
And grotesque shapes of metal
Hammered and laboriously "hacked".

Happiness is:
A copious covey of cupcake tins
Alined in fingertip array ----
Strange things fill their cavities now,
(They were mine just yesterday!)

Happiness is:
A multitude mass of S.A. monthlies,
A "glue caked" tongue depressor
Adorning that "thing" in the corner
That once was called a dresser!

Happiness is:
A pail of peat and potting soil
to bed down the Heliotrope
Lies hopelessly now in a hideous heap --
And the pail? It's full of dope!

Happiness is:
The topmost shelf of the closet
(My Chapeau from Paris, France)
Has lost it's long priority
To a pair of lacquered wheel pants!

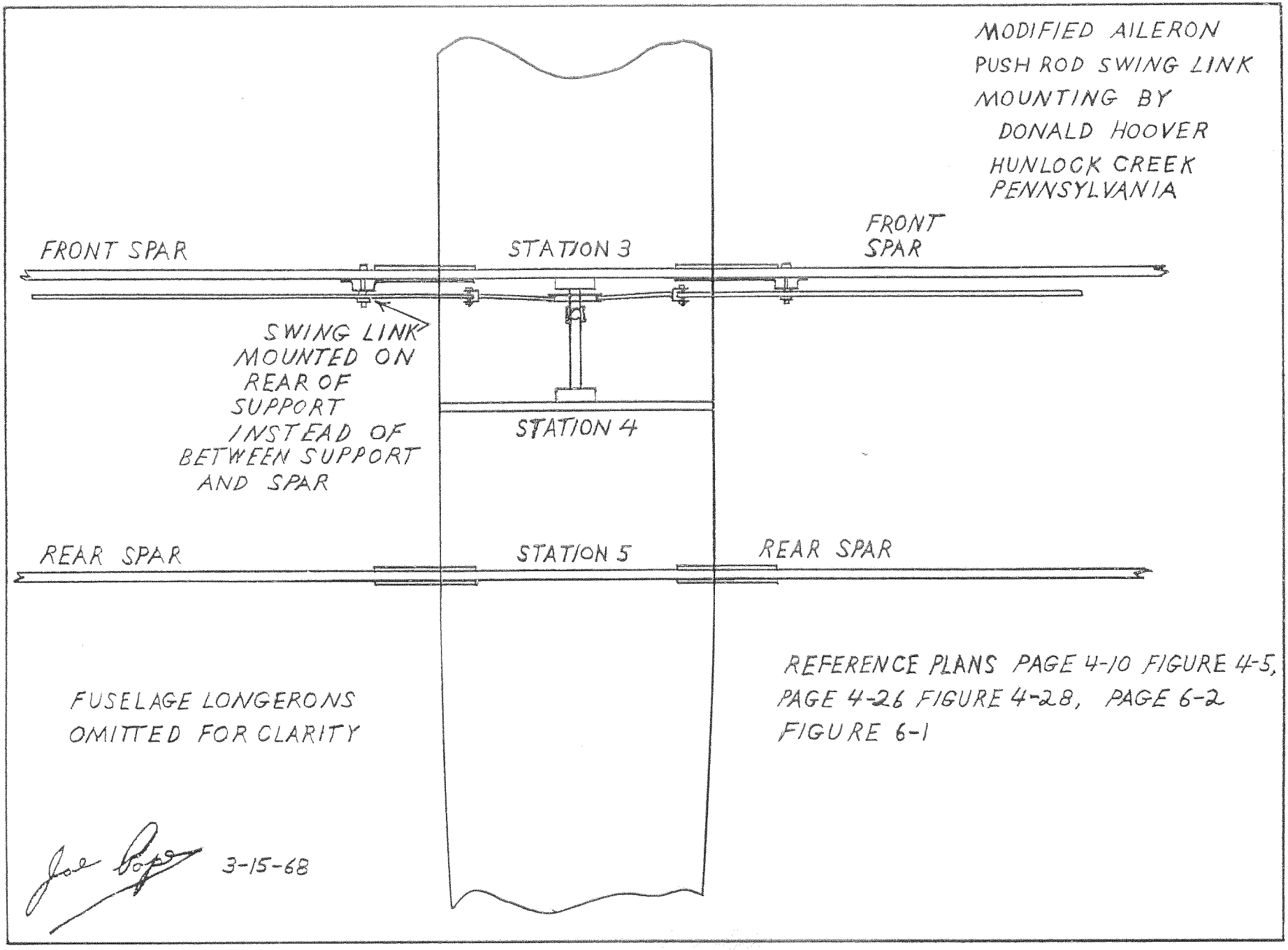
Happiness is:
Lots of love and understanding
No matter what that entails,
Though a blissful kiss becomes a hiss
From a mouthful of cemented nails.

A Believer

Welcome Believer! You're among friends. The ability to turn a neat phrase to express ourself is not among our limited literary attributes. You're needed here to pinch hit, so consider this your invitation to do just that. O.K.? Thanks.

Open Previous Section FBB section four

Open Next Section FBB section six


MODIFIED AILERON
PUSH ROD SWING LINK
MOUNTING BY
DONALD HOOVER
HUNLOCK CREEK
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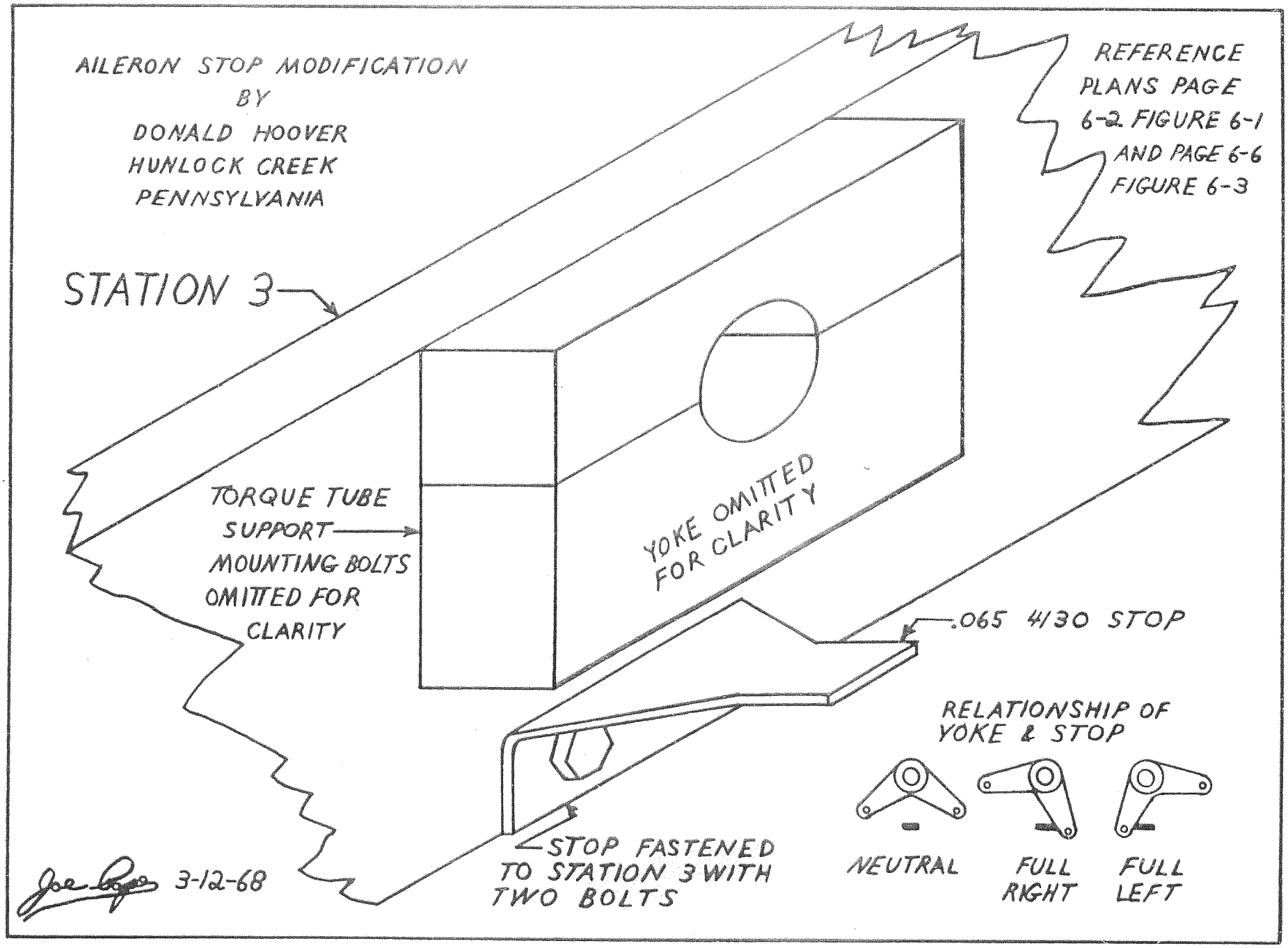
FRONT SPAR
STATION 3
FRONT SPAR
SWING LINK MOUNTED ON REAR OF SUPPORT INSTEAD OF BETWEEN SUPPORT AND SPAR
STATION 4
REAR SPAR
STATION 5
REAR SPAR
FUSELAGE LONGERONS OMITTED FOR CLARITY
REFERENCE PLANS PAGE 4-10 FIGURE 4-5, PAGE 4-26 FIGURE 4-28, PAGE 6-2 FIGURE 6-1
Joe Pope 3-15-68


AILERON STOP MODIFICATION
BY
DONALD HOOVER
HUNLOCK CREEK
PENNSYLVANIA
REFERENCE
PLANS PAGE
6-2 FIGURE 6-1
AND PAGE 6-6
FIGURE 6-3
STATION 3
TORQUE TUBE
SUPPORT
MOUNTING BOLTS
OMITTED FOR
CLARITY
YOKE OMITTED
FOR CLARITY
.065 4130 STOP
RELATIONSHIP OF
YOKE & STOP
NEUTRAL
FULL
RIGHT
FULL
LEFT
STOP FASTENED
TO STATION 3 WITH
TWO BOLTS
3-12-68

EXPERIMENTAL AIRCRAFT ASSOCIATION

An International Non-Profit Organization Dedicated to the Advancement of Aviation Education, Homebuilt Aircraft and Private Aviation

OFFICES & AIR MUSEUM: 11311 W. FOREST HOME AVE., FRANKLIN, WISCONSIN

Paul Poberezny, President Ray Scholler, Vice-President S. H. Schmid, Secretary Arthur Kilps, Treasurer Audrey Poberezny, General Manage

PHONE 425-4860 AREA CODE 414

POST OFFICE BOX 229, HALES CORNERS, WISCONSIN 53130

26 March 1968

Hayden Ferguson
114 White Drive
New Albany, Miss. 38652

Dear Hayden:

Received my copy of the January issue of the Fly Baby Bulletin and would like to take this opportunity to congratulate you and all those who contribute to the bulletin as it is serving a most educational purpose and is mose helpful to all building the Fly Baby, or any other wood aircraft for that matter.

I read with interest the fine letter of Elwood M. Bond and certainly agree with many of his comments. I recall the great criticism I received as President of EAA when the Fly-Baby was selected winner of the Design Contest we held some years ago. It wasn't slick enough to suit many, however the judges evaluated it for what it is and for the purpose it was to serve and I am glad they did. I cannot offer enough praise for Pete Bowers who is a wonderful guy and who had the vision to put together a 'little guy' airplane and especially so for all the sincere interest that he continually puts into the airplane and all the people who need help in building airplanes. I for one am going to recommend him for the coveted Dr. August Raspet award and I would like any support you fellows can give me.

Keep up the good work and foster our basic ideas. It's not what the finish looks like but what the airplane can really do - simplicity, good performance with reasonable power. We need more fellows like Pete Bowers.

Sincerely,

Paul

PAUL H. POBEREZNY
President

PP/a

105

PHOTO CAPTIONS.

Since the printed matter on the back of photos in previous issues has, in some instances shown through and detracted from the picture, we are in the future, leaving the backs of the sheets blank. We are also tinkering with an idea to put the captions under the photos in future issues. (the photo sheets are run from metal masters, while the captions are typed on a separate paper master.)

First Page:

These are some shots of various construction details taken by Joe Pope on his way back from Rockford last year. The builder is unidentified, but obviously is well along on his project. Seems to have several phases of construction going at once which can be a real time saver, so we are told.

We can't pick out any evident modifications, but the guy seems to make liberal use of lightening holes and uses them anywhere there is room. Should result in a lighter than usual ship. (there is quite a bit of debate as to whether the lightening holes in Fly Baby are worth the time and effort.) Guess it depends on how much time and tools you have.

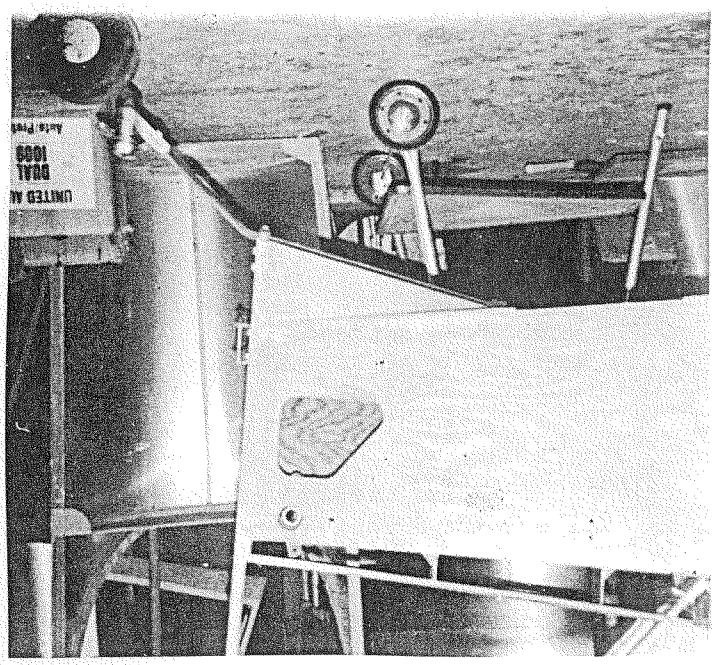
Second Page:

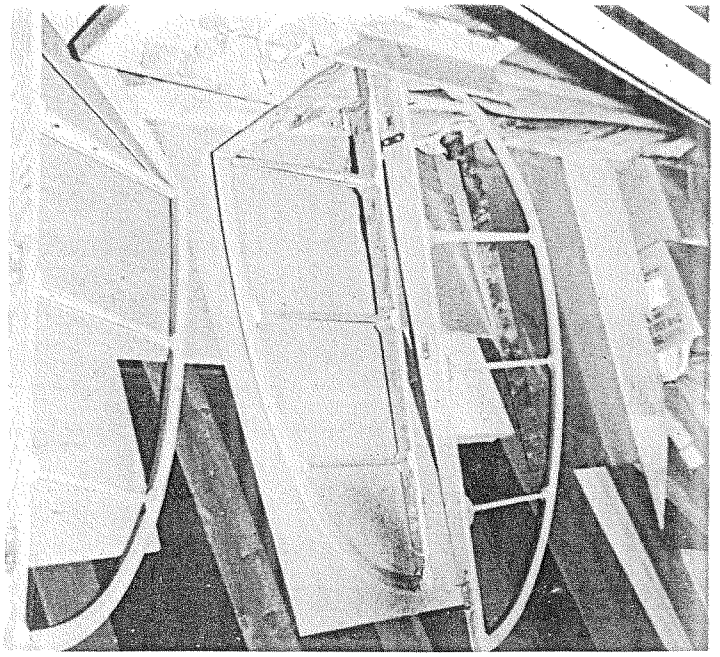
Top: This is a shot of FRANCIS LONDO'S ship that is quite an improvement over the photo of the same airplane in last month's issue. As you will recall, 2288Z was on her beautiful back in an awkward position.

This is a PETE BOWERS photo and as usual, the photography is excellent. So was the caption Pete sent and we lost. Not really lost, but "misplaced" temporarily. He told us what colors she carried, but we don't remeber. Will tell you when we turn up the caption. Be sure to see this ship at Rockford. From all reports, it is among the most beautiful Fly Babies ever built.

Bottom: All we can tell you about this ship, 366RZ is that it belongs to RICHARD ZEDIKER. This is also a Bowers photo and to be consistent, we lost the caption for it too.

Notice the lack of a headrest fairing and the one-piece windshield. Dick, like Mr. Piper of Cub fame covered his gear struts. Again sorry we can't tell you the paint job, but will later.





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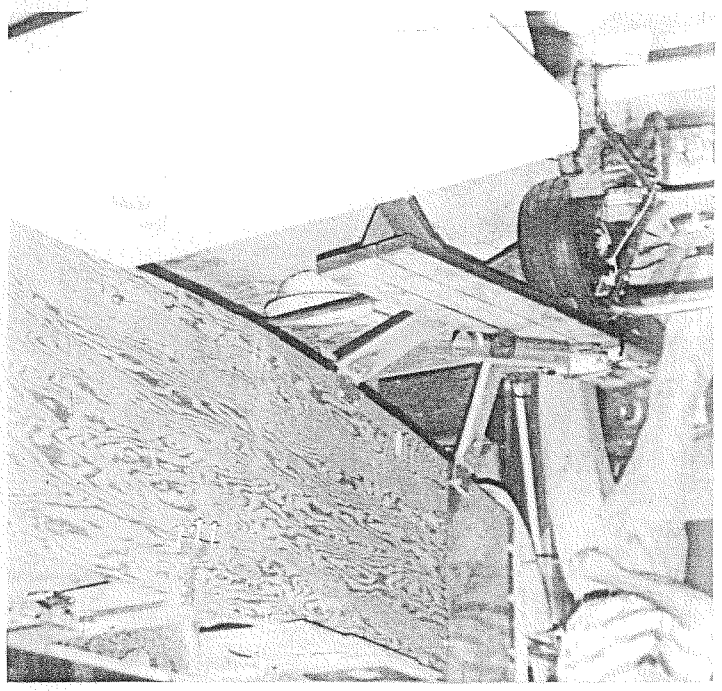
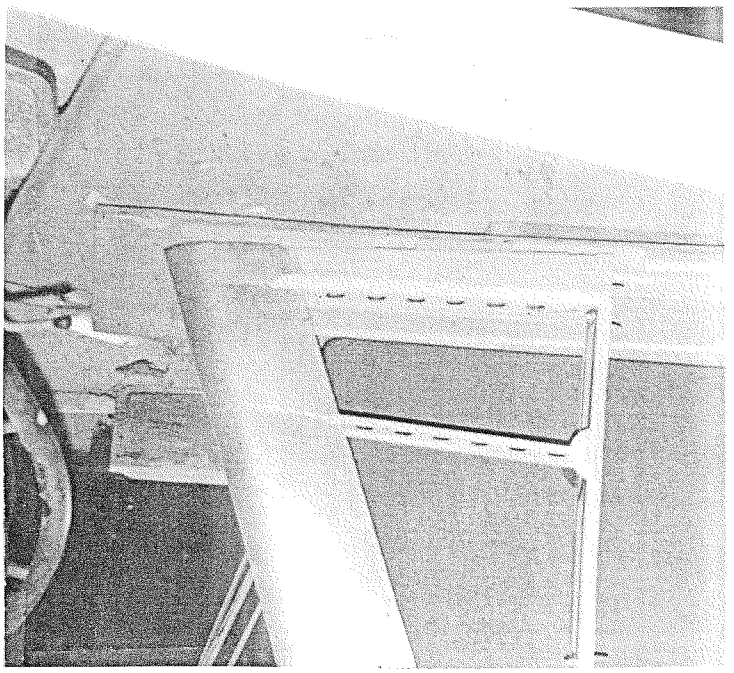
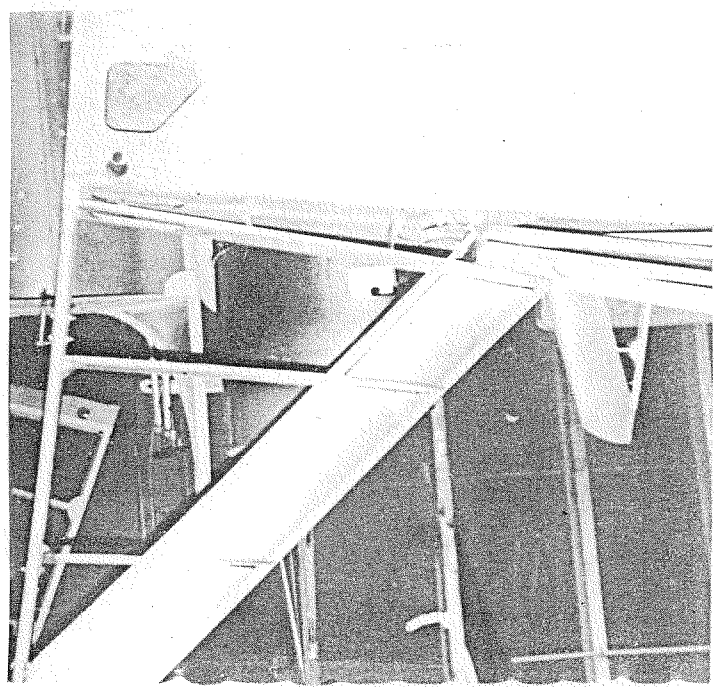
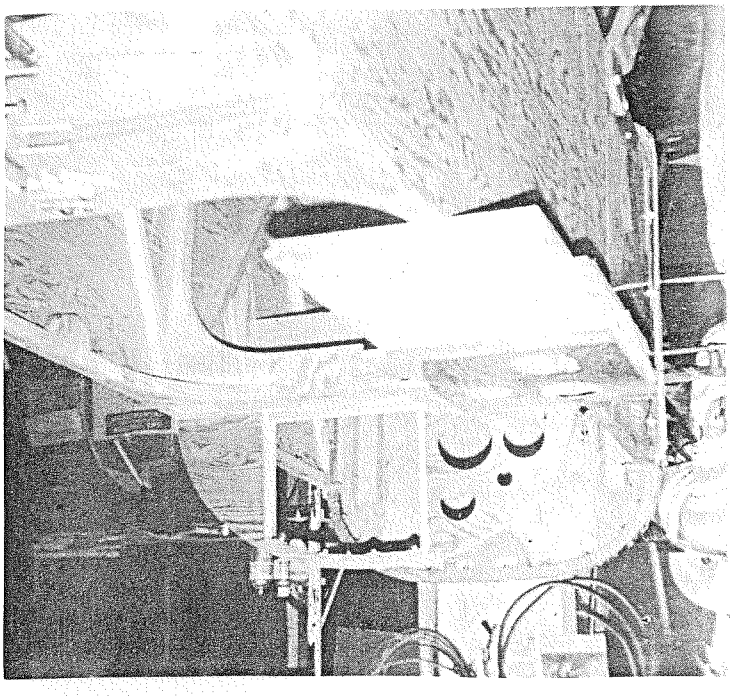


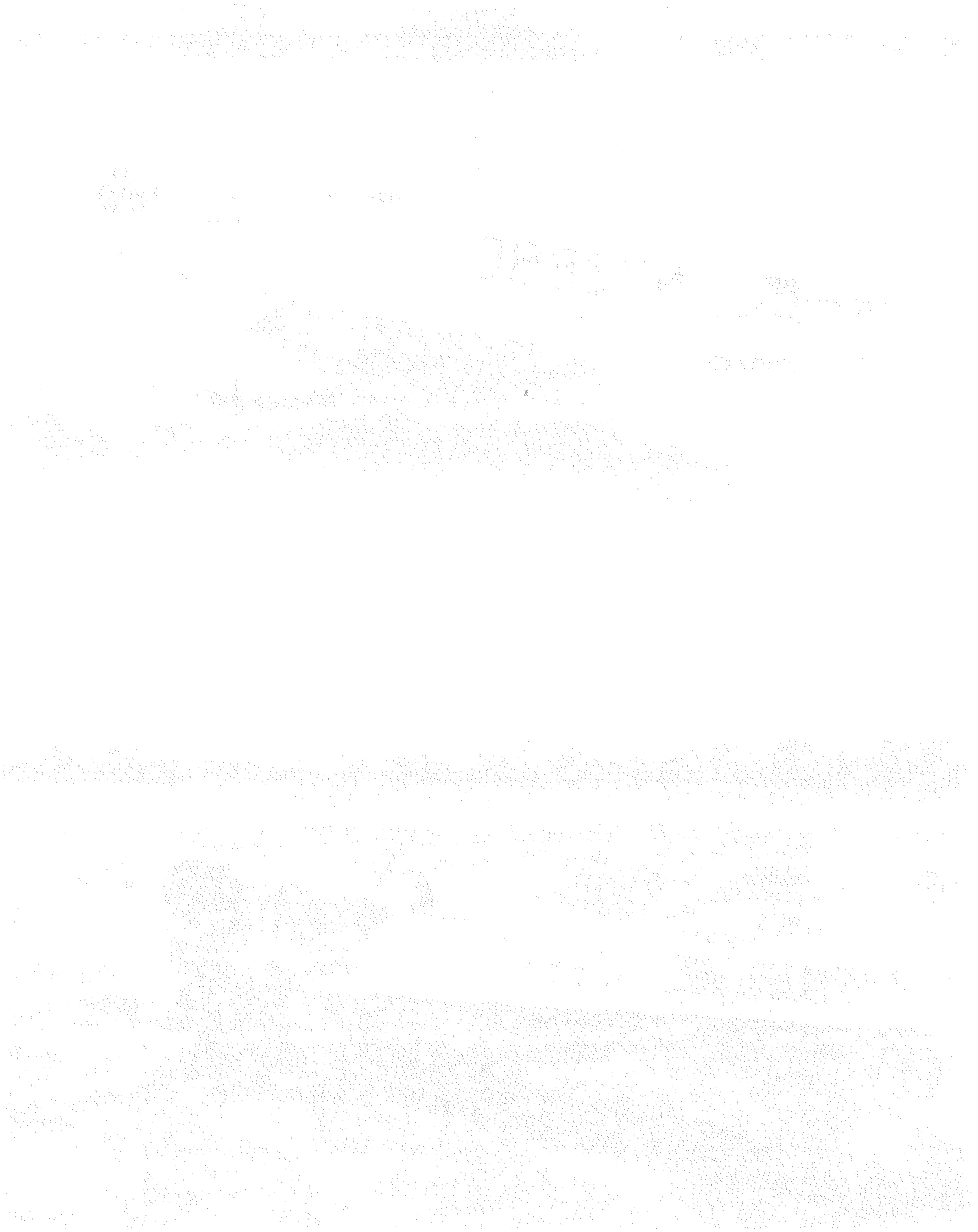




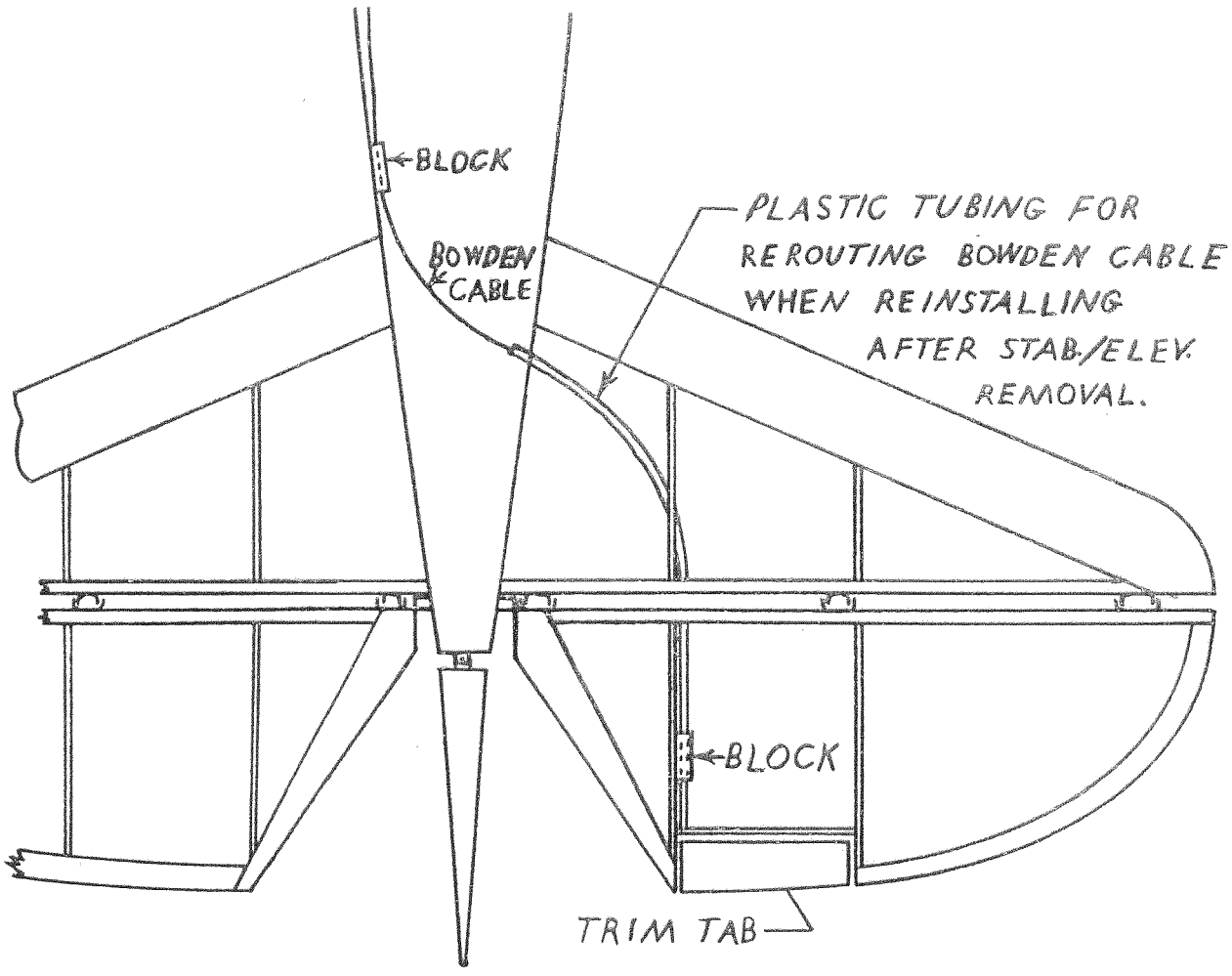


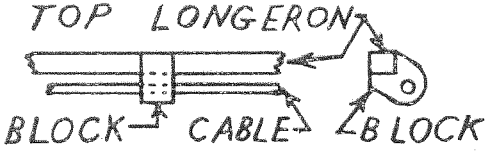

N2288C

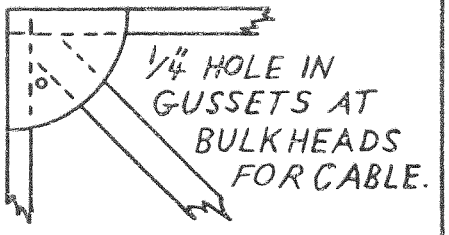

EXPERIMENTAL
N366RZ

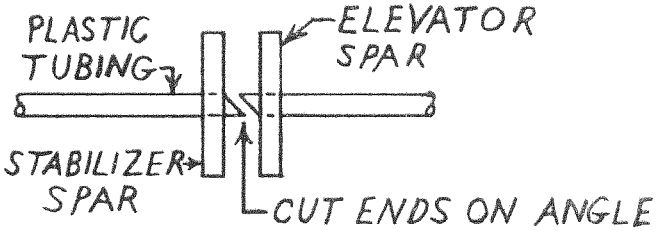


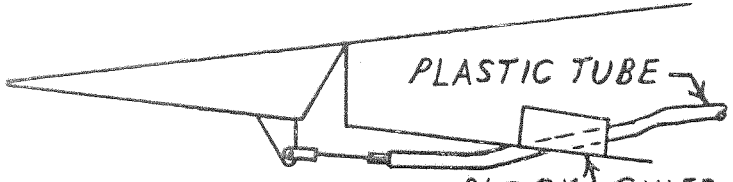
TRIM TAB MODIFICATION
BY
GEORGE NOBLE
RICHMOND B. C.











Joe Popp 3-3-68

111

THE FLY BABY BULLETIN

ISSUE NO. 9 MARCH, 1968

THANKS "YOU ALL"

To those who were kind and generous enough to renew their subscriptions a few months early, we say a sincere "thank you". Although we didn't pay for the typewriter in full, we did get enough to hold the man a couple of months till renewal time comes for everyone else. So, now all we have to do is learn to type on this beautiful machine and justify the expense. We will try to run a photo of it soon to give you an idea of what it looks like.

A select few sent us more than the five bucks we asked for. Most tagged it as "a little something to help with the typewriter" or words to that effect. To these we say a special thanks and assure you we will do everything possible to improve the Bulletin and justify your confidence in us. Oddly enough, the ones who sent the "something extra" were for the most part people who are building their ship on a limited budget. Guess by now we should be accustomed to this attitude of comradeship on the part of Fly Baby builders, but it never ceases to amaze us.

By the way fellows, our two ladies were among the first to respond to the request for help. To top it all, the letters from both MAUREEN ROUTLEDGE and LULA RODGERS arrived in the same mail. How about that? From Ontario and California. Thanks again all of you. You are a wonderful group of people.

NOTES FROM AN EAA DESIGNEE

Most of us are familiar withe the EAA Designee Program to some extent, but it has never been discussed in the Bulletin. Mainly because we have not been in contact with any of the Designees and there is not one in our immediate area. We have just recently learned however that we have one in our midst, EDWIN R. MORE, of Simsbury, Conn. who is building a Fly Baby.

If you want to know more about the Designee program, get out your back issues of SPORT AVIATION or contact EAA Headquarters, and you will find plenty of information. We don't have time or space here to go into the program, but you may rest assured that it is a very worthwhile project and has brought expert help and advice to a lot of builders who otherwise would have had to "make do" on their own.

Ed has written us more or less in response to the "guest editorial" by WOODY BOND and given us some thoughts from the standpoint of a Designee as well as a few comments on his own Fly Baby. His letter follows;

"The January Bulletin came today and has been read through. According to the dictionary a guest editorial is the written views of a guest of the editor. The end Woody does a good job at is well served by his letter.

I understand his comment. For several months now I have been an EAA Designee. Most of the work I have viewed has been very good but some has also been misguided. It is not that I set myself up as a judge and jury of other peoples' work to make this statement. It is a statement of fact in that some universal principals of design application have been negated in some of the projects in our area. I am sure that other areas have a similar condition. Because of this presence and also because I do not want to impolitely "tromp" all over someones homebuilding "toes", I have omitted all platitudes from my Designee Inspection Reports.

DESIGNEE LETTER (con't.)

Beside the fact there is not enough to go around, I strongly feel that a simple, direct statement of the features of the project is more important and less controversial.

The purpose of the Report is two-fold. One, it gives proof positive that a review of the project has been made by the designee, recording the visit, persons involved, and the second is that it provides a major source of information on projects for the EAA. When I find detail design changes, problem areas experienced, materials variations, noteworthy design applications by the builder, or other similar significant observations, these are duly noted. Hopefully somenne at EAA Headquarters will find the time to sort out the comments and make them available thru bulletins like your efforts. I believe this to be the prime function of a Designee as a consultant and a conscienctious outside opinion.

Getting back to Woody's comments, the EAA does indeed need the "Fly Baby philosophy" but this is not the end of all aircraft homebuilding. Some people genuinely like a small, draggy, over-powered, spiffy bomb like a 125 hp Miniplane. If it can be reasonably operated without hazard to life and limb, I am very happy to see it around. Even though several people have bought it without investigating what it is and are expecting "Cub" handling in a winged bomb. A non-chapter member bought a 65 hp. Fly Baby, 1A configuration from a Chapter 166 member after it had been flown only about 10 hours. He expected a "sport plane". What he got for the price of a fair Champ, well used, was 80 mph, 800 fpm., 5.5 gph., and an airplane without all the bugs worked out and never intended to compete with the commercial jobs. His definition of a "sport plane" was about 150 mph., 2000 fpm., 5 gph., first-rate handling characteristics, professional trim, and complete aerobatic capability. He finally sold it. I don't blame him, but I could have told him that they don't come to his specifications very often, and a Fly Baby is a long way from meeting it. Like the world, it takes all kinds to make an EAA. I for one am not willing to throw any out on their ear because they have different tastes than mine. When I can PROVE by adequate references or by demonstration or by logical and commonly understood argument, I will then inform the individual simply and directly with genuine interest in HIS project that a feature or the whole project is unwise. This is as far as I can go. The fact that I am a Designee makes me go to the builder or him to me even if I do not know him. It does not make me the final expert on all things aeronautical. The action that results, if any is strictly up to the builder unless I physically pitch in on a permitted basis and do it for him.

Rewarding is not the question to be solved. The question is how much information is being made available to the homebuilder? How good is it? Does he actually use it? Is it enough to cover his needs? Make his airplane safe? Will it solve his problems? This in a nutshell is the reason for the Fly Baby Bulletin or even Sport Aviation. What the individual builder comes up with is his own enjoyment and responsibility. I do not propose or pre-suppose to tell him what the best rout to an airplane is. There is no corner on that market and I feel that the EAA is one of the few organizations in aviation that deliberately fosters and protects an open market in the business of building airplanes.

So much for the preaching. N59229, the light of my life, is coming along well. The fuselage top is now covered with aluminum. (cockpit area back to the fabric turtle deck). The whole business is mounted on the fuselage and swings back on it's three mounting arms as elegantly as a ballerina. The canopy is going to be made up of flat sections of such sizes that they can fit under the cover. Presto, a CONVERTIBLE Fly Baby, where you can take to the air covered or uncovered without leaving anything behind. After seeing Pete Bowers come out of the hole after landing at Rockford, '66, this arrangement was a must. Finish the fuel tank, cowl, install the instruments, attach a number and get the FAA on board will put me in the air. (con't next page)

DESIGNEE (con't)

Rockford, '68 is on the itenerary so enter my Fly Baby census at (censored). If Pete pays off to that amount, it will go to the museum.

Are you aware? The FAA recently got out an IA aid that notes the breakage of wing cables, (strands, so far) at the thimbles. I have been notified by three different people at Hamilton-Standard where I work, none of which have anything to do with homebuilt airplanes. Now that is what I call letting people know what one is doing when building an airplane! Unfortunately, they all want to come to the roll-out party.

Tell Pete I think he should entertain the idea of wheels over the cockpit and numbers upside down on one side. Then he can direct the snapshot artists to which ever side is appropriate to the occasion. (Ed. note----hoooo boy!) Kidding aside, it does admirably point out the ruggedness of the Fly Baby's HEAVY construction. (end of letter)

Thank you Ed More for a Designee's opinion. Frankly, we are proud that one of EAA's Designees is building Fly Baby. Sort of adds a little prestige, don't you think?

C.E. MULTOGS WINGS A LITTLE DIFFERENT

Mr. Multogs name is familiar to most of our readers, as his ideas have appeared before in the Bulletin. Here is his latest. (see phot's elsewhere in this issue.)

"A picture of my wing is enclosed. The aluminum trailing edge on the aileron has since been installed. When I laminated the wing tip bow, I used 2 5/8" wide slats and carried it around the needed length for the aileron trailing edge, then split that part in half so both ailerons have exactly the same curve. Bothe ailerons are complete, one to fit the completed wing, the other to match and the wing, when assembled will be to fit the aileron.

This wing will have 13 ribs, spaced 12". The ribs were made in a jig, and have the cap strips run almost to the front end with a small piece of 1/8" plywood glued on each side at the nose. A lot of extra work and maybe not worth the effort. I think the weight may be about the same as the nose web is 1/8" stock and there are, at this stage anyway, no intermediate nose ribs. The wing as shown weighs 52 lbs, with fir spars. Marine AA grade fir plywood. Wing tip of Port Oxford cedar slats, 1/8" more or less. I like it. It's strong and not heavy, but work.

Ralph Zorn, a Birmingham builder with his Fly Baby near completion told me the aileron push tube will not line up with the control yoke without a dog-leg in it and the swing link set out about an inch farther from the spar. Might be the front bearing (see fig. 6-1) could be let right into Sta. 3. I haven't come to it yet, but it doesn't look like it would line up from my wings, and I have all those fittings made, but no fuselage. I'll try to make the fuselage fit the wings if I ever get that far.

Note: Mr. Multog keeps talking about "if he ever gets that far" in his letters, but if he keeps on "getting" like he has been recently, he may wake up some fine morning with an airplane on his hands, whether he likes it or not.

BEAUTY WINNER, "BUSTED"

After reading WOODY BOND'S article in the January issue wherein the "beauty" was discussed somewhat in homebuilts, ROBERT REEVE of St. Paul, Minn. sent us a card saying that last year's winner of the Beauty Award was clobbered near Cambridge Minn. sometime in Sept. or Oct. Per Bob, the owner-builder may have been seriously injured. His own source of info was sort of sketchy so no postive statements. According to newspaper reports of the incident, "hand tooled leather saddles belong on large horses, not small airplanes.

That sort of publicity we can do without, Fly Baby or any other ship!

SOME MORE ON BRAKES

Seems that brakes are one of the favorite items for using whatever is available. TOM WILEY who had some items in last months "buy, swap & sell" sends along these brake ideas.

"Note to hydraulic brake fans; the twin aluminum master cylinder on foreign cars such as Ford Anglia, Perfects, Consul, and many others are about $5.00 per pair at the local junk yards, and they are perfect for aircraft brakes. They are 3/4" bore and have separate reservoirs. The parts for rebuild are stock Gerling brake parts, real light too."

FIBERGLASS TANK OR GO-GO GIRL?

This also from Tom Wiley. "I have made my gas tank out of fiberglass cloth. Make the form as per Pete's drawing, out of cardboard and tape all seams with plastic tapes. Cut filler neck hole but not outlet. Heat some parrafin wax and apply liberally over entire outside surface with paint brush. Use pieces of cloth cut with approx. 2" overlap at corners. Two plies (plys)? make a 10 lb. tank with filler and outlet. My filler neck was from a Corvair and epoxy cemented to the tank. Outlet is from a rusty Cub tank. Hot water will dissolve cardboard and you can pull it out with the plastic tape. Don't forget to dissolve the parrafin that remains inside the tank after the cardboard is removed. When dumping the hot water remember there is no vent at this time and the tank will distort like a Go-Go Girl with a bellyache, but mine held. (ehd)

FOR SALE

Items like this we could do without, but it is one of the purposes served by the Bulletin. We really, sincerely hate to see someone have to give up his project, no matter what the reason. Sometimes the reason is voluntary, sometimes not, but always in the beginning you had someone who had the spark that we all carry and even though the project is given up for one reason or the other, that spark will always be there.

ED LANSING, 8803 Shadowcrest, Houston Texas, 77036 has the following:
For Sale: Fly Baby Components;
Tail, 100% and signed off.
Both wings complete less tips and ailerons.
Ed's phone number is area 713 PR1-5218.
Please address all inquiries direct to him, and not the Bulletin.

While not a subscriber to the Bulletin, Ed is a member of a select group of people and we feel obligated to pass on his offer.

WHICH WAY THE GRAIN IN 4130 STEEL?

A good question has been raised by one of our favorite readers, AL DOUGLAS of Florham Park, N.J. We like Al because of a statement which he made turned out to be "not neccessarily so" and he was quick to tell us about it. We could use more of this way of thinking. Here is how the situation came up.

Al wrote us a while back saying that 4130 steel had a definite grain and that the "grain" should be taken into consideration when bending the fittings. One way to determine the grain was to bend a piece and inspect it, or better yet, look at the printing on the steel sheet. The way Al heard it, the printing was always in the direction of the grain.

Well, to make the point, Al soon learned by more research that what he said might be true and again might not. He promptly sat down and wrote us that effect and that the information in the earlier letter was not certain enough to be used for publication. Now he isn't sure about "grain". Does metal have a grain, and if so how important is it in making fittings and how do you determine it. There seem to be conflicting opinions and if anyone has some information we would like to have it to pass on to Al and anyone else interested. Surely some of our readers who are experienced in metal working can shed some light on the subject.

This item was not intended to belittle Al on his idea, but rather to compliment him on being able to admit that what he thought was the gospel, might be wrong. This is the kind of attitude we need among all builders.

Before leaving Al's last letter, we might mention that he sent us a sketch of a jig he came up with for bending landing gear fittings. Al worked this out the hard way and it appears that it should work like a charm. Will print it soon as we get some drawings made.

JOE POPE WORKING ON NEW RATINGS

One of the most helpful and unexpected "bonuses" the Bulletin has received are the drawings and sketches by JOE POPE of Lynchburg, Va. Without Joe, the drawings would have been few and far between and the quality would have been lacking. As we have mentioned before, Joe does them "gratis" and apologizes for not returning them to us in the next mail after getting them. Along wit the drawings Joe has contributed several items of interest.

Why go over all this when it has been covered before? Well, for one thing, Joe deserves the credit but there is now another reason. At the moment he is working hard to wind up the requirements for his commercial and flight instructor ratings. This coupled with a full time job as a Research and Development technician with G.E.'s communications division, doesn't leave a lot of time for his ship or the Bulletin. He doesn't seem to think so however, since a recent phone conversation revealed that he was working on the drawings in the wee hours of the morning. Knowing how much the ratings mean to Joe, we have asked him to take his time on the drawings and work on his flying. Not that we expect it to do much good, but we feel obligated to make the request. So if you see fewer drawings by Joe in the next few issues, it will be because he has taken at least a little of our advice.

A closing thought here before moving on to other items is to say a sincere thanks to Mrs. Pope and the kids, who must surely come out on the "short end of the stick" when it comes to the time Joe devotes to the Bulletin. Being the wife of a home-builder is not an easy lot, and most of the time a thankless chore. What was that verse, "they also serve". Seems to fit well here. Thanks Mrs. Pope.

MORE TWO-PLACE FIGURES

The two place builders have two schools of thought about the seating arrangement. Some favor tandem while others want side by side. To date we haven't heard anyone favoring the only other possibility of seating, one above the other, to maintain the C.G. and not widen the fuselage. Well, guess that is stretching the credibility gap a little far, but after seeing some of the weird configurations at Rockford last year, (not Fly Babies), anything is possible.

In an earlier issue we mentioned that ROGER DUPERRON was working on a side-by-side version and promised some figures on it soon as we got them from Rog. Here they are in his own words.

" First the wing panels will each be a foot longer. With the three foot wide fuselage, the overall wing span will be 31 ft. Bower's ship has a 120 ft. wing area, where this one will have an area of 139.50 sq. ft. If we add 170 lbs. to the gross weight for the second passenger, the wing loading remains about the same, with the greater wing area. (7.7 for Bower's and 7.8 for the two-seater.) This is assuming that the empty weight hasn't increased too much, due to the longer wing spars, etc. Also, the figures are based on the same fuel capacity of 16 gallons as Bower's single seater.

To take care of the towing problem, the horizontal fins will be detachable, and the wing panels will be carried in special mounting pads on the trailer. Many sailplanes are carried in this manner, with satisfactory results.

The tailend of the fuselage comes out 1½ in. wider, so the tail post has to be cut out accordingly. (end)

In a later letter from Roger, he says that although progress is slow because of "making a living" getting in the way. However the fuselage is fairly well complete now and the upper part has the longerons fastened from aft of the seat to the vertical fin. Now working on the forward part of the horizontal stabs.

Roger closed his letter with some kind words about the Bulletin and a vote in favor of Woody Bond's opinions.

Oops! Almost forgot. Roger also said that he would be glad to help out anyone with any special fittings they might come up with and not have the proper tools to work with. The cost would be only the cost of material and labor. If you are interested, send him a sketch at 8515 Cherob Court, Santee, Calif. 92071.

CANADIAN SPRUCE SUPPLY

Here is an item dredged up from an old letter from BILL STURGEON of Victoria, B.C. Thought we better pass it on before we lose it in the files again. Bill got his spruce from Dalziel Box Co. Ltd., 2800 Bridge St. Victoria, B.C. They quoted him a price of $500.00 per thousand board ft. Bill <u>did not</u> mention if this was aircraft grade.

Bill is the same guy as you may recall, that gave us the address of Princess Auto and Mach. in the Oct. 67 issue. We sent for one of their catalogs and found several goodies in it. There was no charge for the catalog and we found aircraft cable, rod-end bearings and several push-pull controls.

FUNGICIDAL TREATMENT OF WOOD

This is a new subject for the Bulletin and hasn't been mentioned before that we recall. Maybe it should be discussed in some detail. At least one builder is taking it into consideration.

W.L. "OLE" OLESON is treating his fuselage with "Woodlife" before varnishing and says it should render it "uninhabitable for detrimental fungi." Guess that means it won't mold, mildew or dry-rot. We have asked for a little more information on how to go about it, when, etc. Assume that "Woodlife" is a trade name and don't know what the ingredients are.

Ole, by the way is one of several interested in the biplane version of Fly Baby. Hey "Ole", why not call your ship "Ole Baby"? Just kidding.....

REAR SPAR PIN PULL-OUT

An item worth watching for on Fly Babies that have had rough treatment is evidence of outward movement or elongation of the rear spar pin holes through Station 5. So far, this has been found on only three that we know of: two that had previously been involved in accidents that produced sudden forward acceleration of the wings (as nose-overs and running into the side of a hangar) and one that has been used extensively for rough aerobatics.

It may surprise many pilots without aerodynamic training to learn that the load on the wings is FORWARD in flight, not aft. This puts a tension load on the rear spar fittings at the fuselage. The wood area between the spar pin holes at Station 5 and the side of the fuselage in Fly Baby is more than adequate for normal flying. Mild aerobatics were considered in the original design, but not the rougher stuff like snaps. However, since the ship does them very well, the boys are having fun and pushing their planes beyond the intended limits. Fortunately the fix is easy and there are several ways.

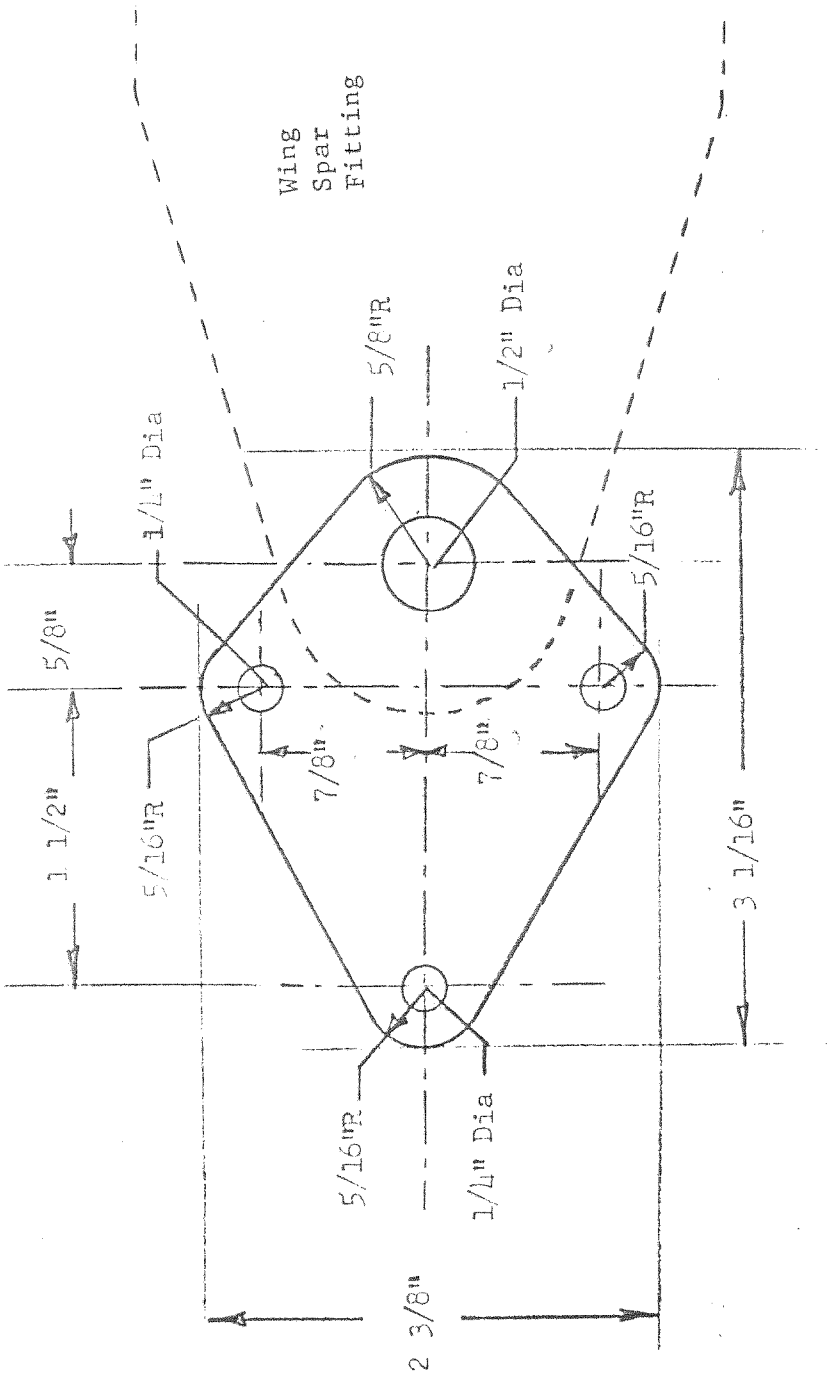
Probably the quickest is to run a loop of 1/8" stranded wire with a turnbuckle in it around the two rear pins, under the heads. An alternate is to connect the two pins with a 3/32" steel strap. Either of these methods calls for cutting passage holes through the seat support rails.

The method used on Pete's ship and Francis Londo's is to bolt steel plates around the pin holes as illustrated. (see next page). These don't look like much, but the three 1/4" bolts more than double the bearing area for the spar pin loads, and the plates fit into the available space. To avoid a lot of measuring for installation, remove one rear spar pin, slip the reinforcement under the fitting, replace the pin, and clamp one reinforcement in position while drilling the 1/4" holes through Station 5. Repeat on the opposite side of the fuselage and then bolt pairs of reinforcements in place.

SOME COMMENTS BY PETE BOWERS ON PARASOL VERSION

With Pete's permission, we are printing a letter answering an inquiry from a builder considering the parasol version. The inquiry was from LLOYD J. POLLOCK of Moline Ill. The letter follows.

Dear Lloyd: Thanks for your letter of March 6 and continuing interest in the parasol version of the Fly Baby. (con't on page 9).



STATION NO. 5 SPAR PIN HOLE REINFORCEMENT - MAKE 4 .062 STEEL

120

Open Previous Section FBB section five

Open Next Section FBB section seven

PARASOL VERSION (con't from page 7)

The original idea for a parasol wing version of Fly Baby was to use a swept-back wing attached to the biplane cener section. Without running an actual weight & balance study, I knew that this would require a lot of sweepback on the wing. When one of the other homebuilts, the "Jungster" (quite similar to a scaled-down version of the Bucker "Jungmeister") tried the same thing, the wing sweepback was extreme. This kind of wing on Fly Baby wouldn't have an appearance that any anyone would want. The major advantage of the swept wing was to have the center section ahead of the cockpit so that the pilot could get in and out more easily, and have better upward visibility.

One look at the monoplane "Jungster" convinced me that the parasol Fly Baby would have to be a straight wing. This offered a couple of advantages in that standard straight Fly Baby wings could be used or straight wings from other lightplanes could be used. My original intention here was to use the stock 13-ft. Fly Baby wings fitted to a center section. This would make it possible to switch back and forth from a parasol to a low-wing. When somewone else who wanted a parasol version called and asked me if a Luscombe wing could be used, I did some checking and found they could.

Using these wings, no center section is required. They will join at the cener-line pretty much as on the Corben Baby Ace. Since the Luscombe ailerons are worked by cables, the control hookup will be different than for the center section version using stock Fly Baby Wings.

The main disadvantage of the straight-wing parasol, of course, is the job of squeezing under the wing to get into the cockpit. On some other parasol designs, like the Smith Termite, "big" builders have raised the wing some to improve the access. Moving the wing up introduces other problems, so the answer in the case of Fly Baby is to cut a drop door in the side of the fuselage. Fortunately, the arrangement of the diagonals permits this. A little weight penalty involved because other pieces have to be put in to serve as anchors for reinforcing the plywood skin on the inner side.

So, scout around and see if you can find some cloth-covered, two-spar Luscombe 8A wings if you prefer to go that route. If you prefer to use the regular Fly Baby wings, it's easy to go that route too. Just let me know and I'll do some sketching.

Thanks for sending a stamped envelope. You'd be surprised how few people are this considerate. While one stamp doesn't sound like much, and isn't, it adds up on this end of the line where I get several dozen requestsletters a month. (end of letter)

ANOTHER FIRST FLIGHT

In the same mail with the above letter, Pete also sent us news of another new ship in the air. Here is his report of the event.

DON ENOCHS of Seattle got his new Fly Baby into the air Sunday, March 24, S.A. Since Don is only a 30-hour Cessna-type pilot so far, he got a friend, ROY BARKER, to make the first flight. Roy took it up for 20 minutes while I flew chase plane with 500F and took some pictures. Then I took it up for about half an hour for some careful checking. (con't on page 10)

"FIRST FLIGHT" (con't)

Works fine. Stall breaks straight ahead, control response good. Performs just like a Fly Baby should. Not quite a "hands off" ship yet, however. While the weight and balance puts it just a shade on the tail heavy side of center, the nose drops when the stick is released. Needs to have the leading edge of the stabilizer lowered about 1/4"

MORE ON THE DR. AUGUST RASPET AWARD

While we are on the subject of PETE BOWERS, this is as good a place as any to pass on the information promised last time on how to help in getting him named for the Dr. Raspet Award.

All it takes is a letter to the Board of Directors, Experimental Aircraft Association, P.O. Box 229, Hales Corners, Wisconsin 53130, telling them that you think Pete has earned this award and that you would like to see him get it.

May we suggest that you get a letter off right away as Rockford is only a short time away and the decision will have to be made soon by the "powers that be". We all owe Pete a great deal and this may be the only chance we have to show our appreciation. Don't put off writing till it's too late, because it is going to take all of us pulling together to swing it. EAA is a big, big, organization and it a lot of effort to do something like this. ('scuse please, left out "takes" in that last sentence and can't correct it. For what it's worth, this is being typed at 1:45 a.m.)

"ON TO ROCKFORD!"

Last year saw at least 50 builders, and would-be builders at Rockford, that we know of. That many showed up at our little impromptu "forum" at ERNIE HARBINS tent. This year as you will note in a letter from PAUL POBEREZNY elsewhere in this issue, we will be alloted time in the big tent for a "formal" forum. Pete of course plans to be there and he has hinted at the possibility of bringing Fly Baby as a biplane. Naturally we are looking for a lot more new Fly Babies to show up this year as well as the "old standards" of past years. These are just some of the reasons that this will be a good year to go to Rockford if you ever plan to go. Pete only makes it every-other year on even numbered years and wont't be there next year. Although we were there last year, we will probably follow the same schedule in coming years.

So ....., if you were, or are, still undecided, this is a good time to make your plans. If enough of us show up, we could turn the evenings into some "hangar flying" sessions to end them all. Think it over.

If you are planning to be at Rockford, or are even considering it, how about dropping us a line and saying so. The idea is to make up a sort of roster of who we might meet and possibly get some guys in touch with each other on similar ideas. This way the biplane builders, two-placers, aerobatic types, etc. could hold their own "sub-forums" on a particular phase of building. We, for our part will be glad to coeordinate such meetings as much as possible and maybe post the times and places on the bulletin board or announce it on the P.A. system. Whether or not we do it will depend on getting enough response to justify the effort.

EXPERIMENTAL AIRCRAFT ASSOCIATION

An International Non-Profit Organization Dedicated to the Advancement of Aviation Education, Homebuilt Aircraft and Private Aviation

OFFICES & AIR MUSEUM: 11311 W. FOREST HOME AVE., FRANKLIN, WISCONSIN

PHONE 425-4860 AREA CODE 414

POST OFFICE BOX 229, HALES CORNERS, WISCONSIN 53130

May 7, 1968

Hayden Ferguson
114 White Drive
New Albany, Miss 38652

Dear Hayden,

I received the latest Flybaby Bulletin and want to congratulate you on an excellent job of presentation. There is alot of valuable material in the bulletin which can aid all aircraft homebuilders. In looking to the future, it would be real nice if we could use some of this material either in Wood manuals when we up-date our present one, or SPORT AVIATION.

If we could use any of this material or your photos; I would be very pleased as it would serve a useful purpose.

Also, thanks for your letter regarding Pete; it's going to help. I received a nice letter from Pete the other day and he plans on being at Rockford and I would like to see him hold a Flybaby Forum. We can allot the time in the Meeting Tent. You might pass the word to the fellows. We could have a very good meeting which other wood builders should attend.

Your friend,

Paul

PAUL H. POBEREZNY
President

PP/p

The "Fly Baby" Bulletin
Page Eleven, March, 1968

LETTER FROM EAA PRESIDENT

Page eleven of this issue is a photo-copy reproduction of a letter from EAA President, PAUL POBEREZNY and is self-explanatory.

Naturally we were quite flattered to receive such a request from Paul and hasten to say that anything appearing in the Bulletin may be used in any manner he sees fit. To see anything from the Bulletin appearing in Sport Aviation or a Builders Manual would be quite a thrill to any of us.

The Bulletin as we have said many times before, exists soley on items sent in by the readers. Consequently the letter belongs to all of you. Anyway, you don't think we could keep a letter like that to ourself do you?

We have always been staunch supporters of Paul, (not that it means a great deal), and will continue to do so. The pages of the Bulletin will always be open to him for whatever comment he wishes to make. Not many organizations have had the benefit of an individual like Paul and there is absolutely no doubt in our mind that EAA could not have been where it is today without him. We won't go into a lot of fancy adjectives telling about it, since his record speaks for him. Let's just hope that he can keep up the pace for a long time to come.

While speaking of Paul, we want to extend our sincere sympathy to him and his wife, Audrey on the recent passing of her mother, Mrs. Lillian Ruesch. Mrs. Ruesch had been living with Paul and his family for some time and her death came as a blow to all of them.

Mrs. Ruesch, while not directly connected with EAA did make her contribution in her own way, for which we, and all EAA members should be thankful. She more or less took full responsibility for keeping up the "home front" to permit Paul and Audrey to devote as much time as possible to EAA. It was through her love for them that they were freed of the thousand and one worries, problems and chores that go with keeping up the home and looking after things around the house. If anyone qualifies as an "unsung heroine" of EAA, surely Mrs. Ruesch does.

Obviously we are not very adept at expressing ourself in matters such as this, but maybe we have given you some idea of what we are trying to say. We are quite fortunate to have a wonderful mother-in-law, (a term we dislike) and to that extent have some small idea of the loss Paul and his family have suffered.

THIRD CLASS MAIL MEANS JUST WHAT IT SAYS

Our apologies to those who were later than usual in getting the last issue. As you may have noted, it went out "third class" mail and some copies were 3 to 4 weeks reaching the readers. It was an attempt to save a few dollars postage to plug on the typewriter but wasn't worth it. It makes us feel good though that the Bulletin is looked forward to enough to make you anxious to get it. For the remainder of this subscription year at any rate, we will go with first class mail as that is how we are budgeted. We hope to get on a regular schedule in the coming year and may try it again then. That however will have to be a "wait and see" proposition since we have never been able to get an issue out on schedule.

While on the subject, we want to offer again, any back issues that you may be missing for any reason. If you have lost a copy or didn't get all the back issues, let us know and we will send them. NOTE! ALL FIRST YEAR SUBSCRIPTIONS EXPIRE WITH THE JUNE 1968 ISSUE. All new subscribers during the year have been sent all back issues and we will have a clean cut-off with no hangover subscriptions. If you didn't get yours, let us know.

PHOTO CAPTIONS ON OPPOSITE PAGE

(The arrangement of the photos on the sheet, while not delicately balanced, does give us more mileage on having the expensive halftone negatives made.)

Upper Left & Right Center:

This is the 13 rib wing C.E. Multog was talking about. Rib no. 10 is 11" from bottom end of spar. The rib, second from the tip is double plywood on 3/8" square center strips. (look real close and you can see two pieces of plywood.)

Upper Right:

It took us a few minutes to figure out which side was "up" on this shot of Joe Byrnes ship taken a year ago. We finally decided that the light bulb must be in the ceiling. Probably the next time the fuselage will get in this attitude will be in a slow roll to the left. How about an up-to-date photo Joe.

Center Left:

This is a profile of what Joe Pope hopes his tail feathers will look like one of these days. Joe is eliminating most of the sub-rudder and the vertical fin is a mock-up of cardboard and paper. The rudder however is ready to go and only needs an airplane to control to be ready to fly. Just poking fun Joe, but after all, most people start at the front of something. (Joe, by the way, relaxes by wringing out a buddy's Clip-wing Cub on the weekends when he isn't drawing for the Bulletin.)

Lower Left & Right.

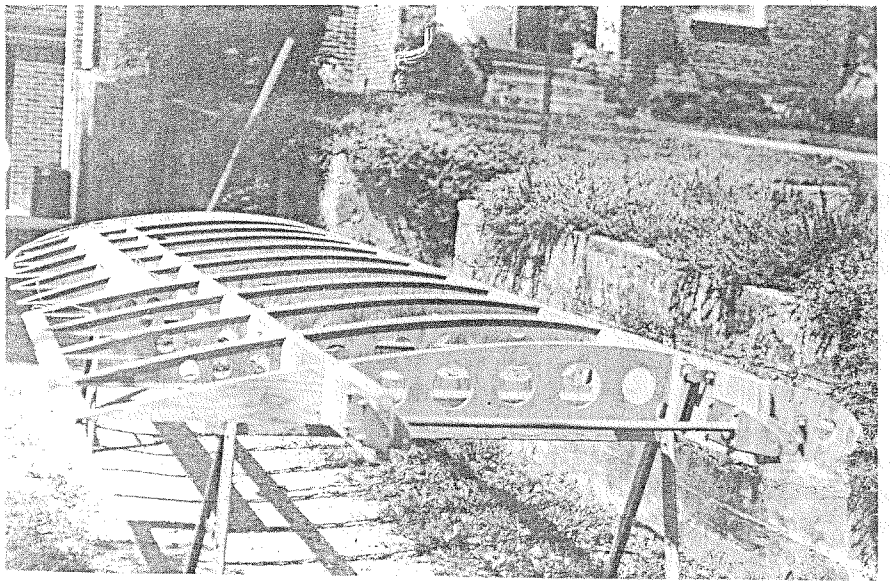
This is Riley Bumgardner's pride and joy. Forgive us Riley, but the first thing that flashed into our mind when we thought of a caption for this was "Moby Dick". We shouldn't even comment though, since our own ship is not even this far along.

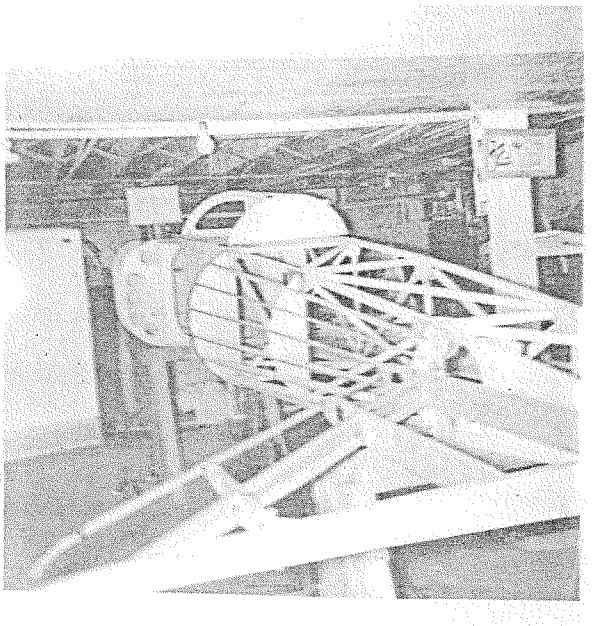
This sheet of photo's turned out a little on the low side of the quality scale because we tried to get some very light shots on the same sheet with some very dark ones. When you do this, it demands a compromise between the two when you print. Ordinarily we try to group dark shots on one page and light ones on another, but at the time these were made up, we did't have many to work with.

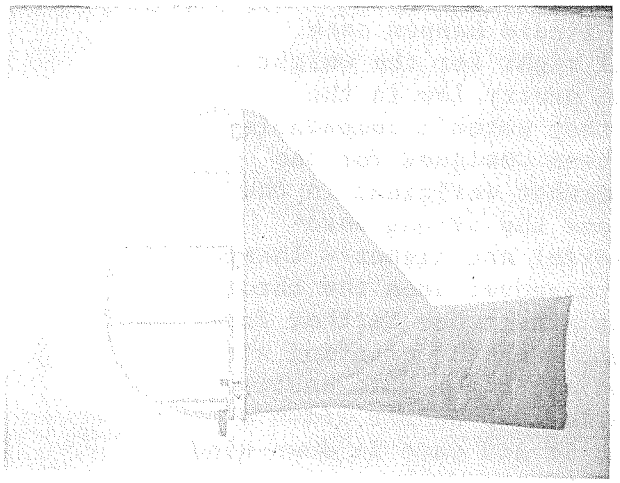
We are working on a "deal" to try to get the captions printed directly under the photos like the "slick page" boys do.

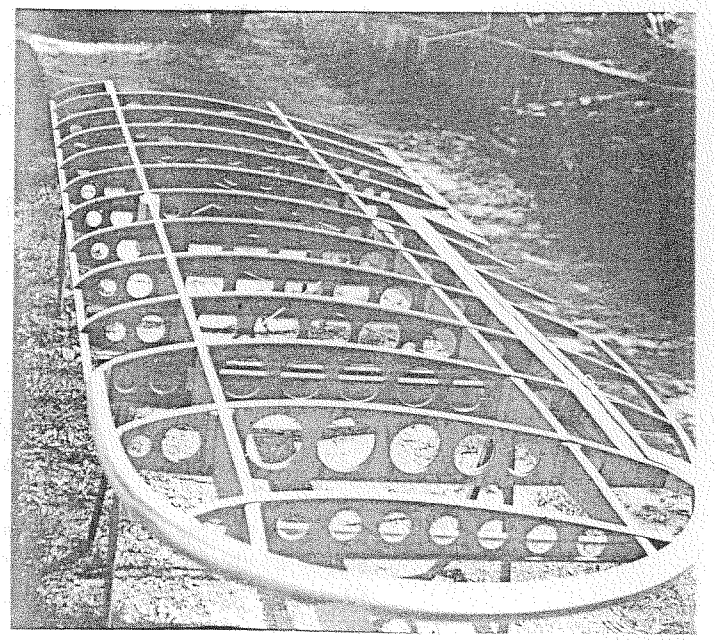
WE STILL NEED SNAPSHOTS Send us yours. We have a little back-log of photos to work with, but would like to have more. If you have sent us one that hasn't been printed, that's where it is, so sit tight and it will pop up before long. The photo-page has proven to be quite popular with most of the people we hear from. If you like them and want more, write and say so and we will try to oblige. Actually the cost per negative goes down, as you have more done at one time, so we may be able to swing a few more this coming year than previously.

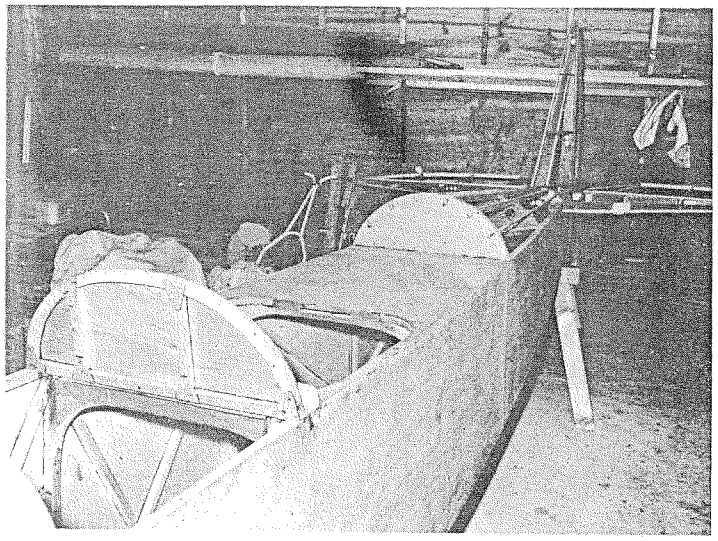
12d

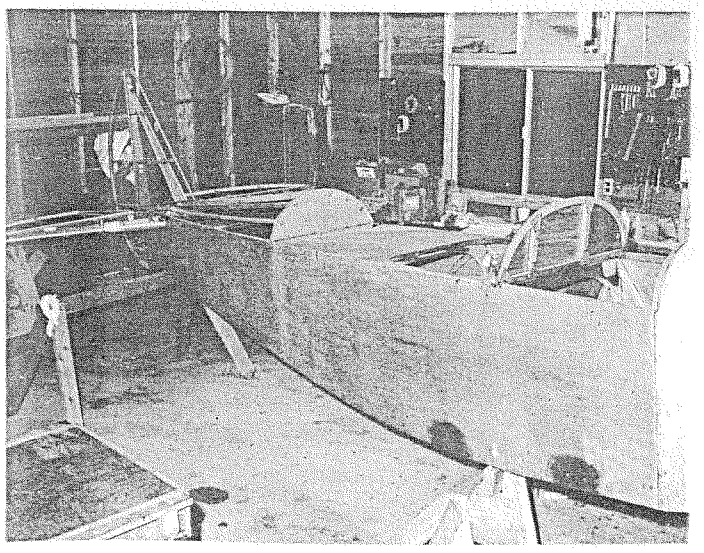












PHOTOS ON OPPOSITE PAGE

Top: A beautiful two-inches-to-the-foot scale radio-controlled Fly Baby model built by BOB PARKS of Bellevue, Washington who did the Fly Baby drawings that appeared in the August -September, 1963 issue of Air Progress magazine.

Bob has been working up plans of this model for American Modeler for the past several years, but has been putting in most of his time restoring World War II airplanes.

There are plans afoot to try and get some flight shots of the model and the real 500F in formation. More on that later if anything develops.

Bowers Photo

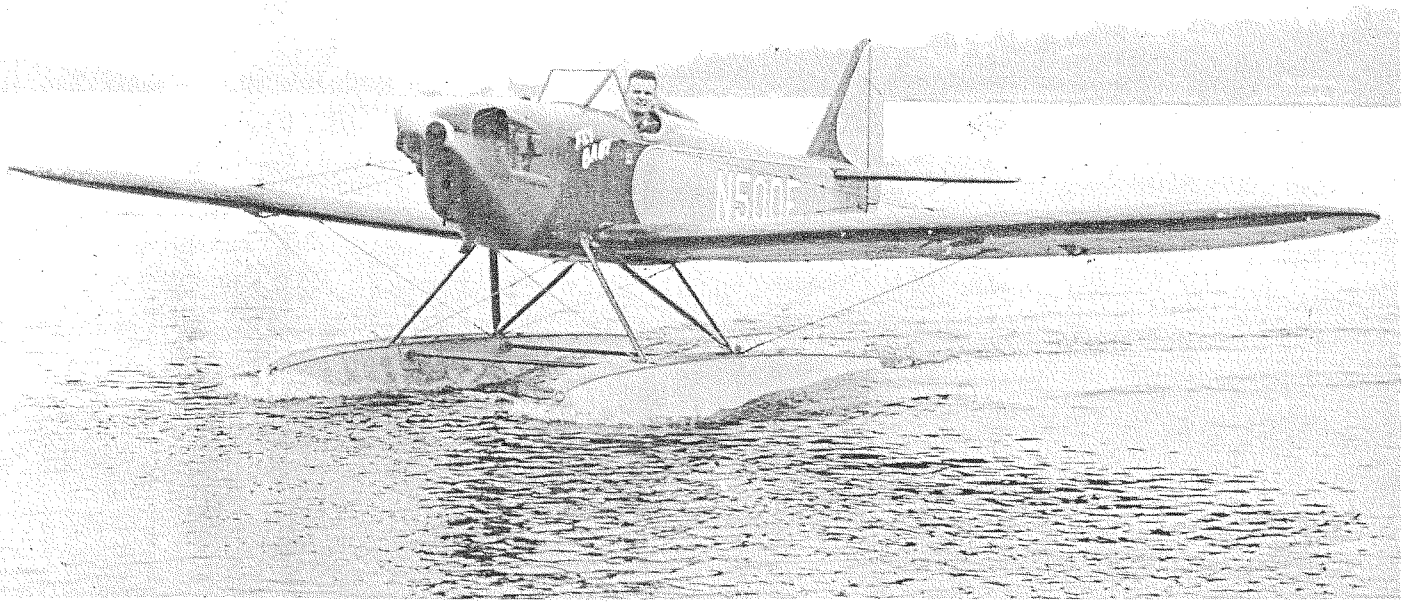
Bottom: One of the few shots of Fly Baby floating right side up as a seaplane, but to prove that it did happen once. the Edo Model 990 floats were all right for the weight of the ship, but even so, it rode pretty low in the water as you can see. However, they weren't compatable with the dynamics of it, having been designed for the 30 h.p. Aeronca C-2 and being somewhat deficient in the forward buoyancy needed to overcome the strong nose-down action of the much more powerful and higher - located 85 h.p. engine. After the first noseover when the throttle was opened, Pete moved the floats six inches farther forward, as far as he could get them, with the existing struts, and was able to take off and land all right with caution. The second dunking came when a pilot who hadn't flown a seaplane for 10 years had a go at it and came in down-wind.

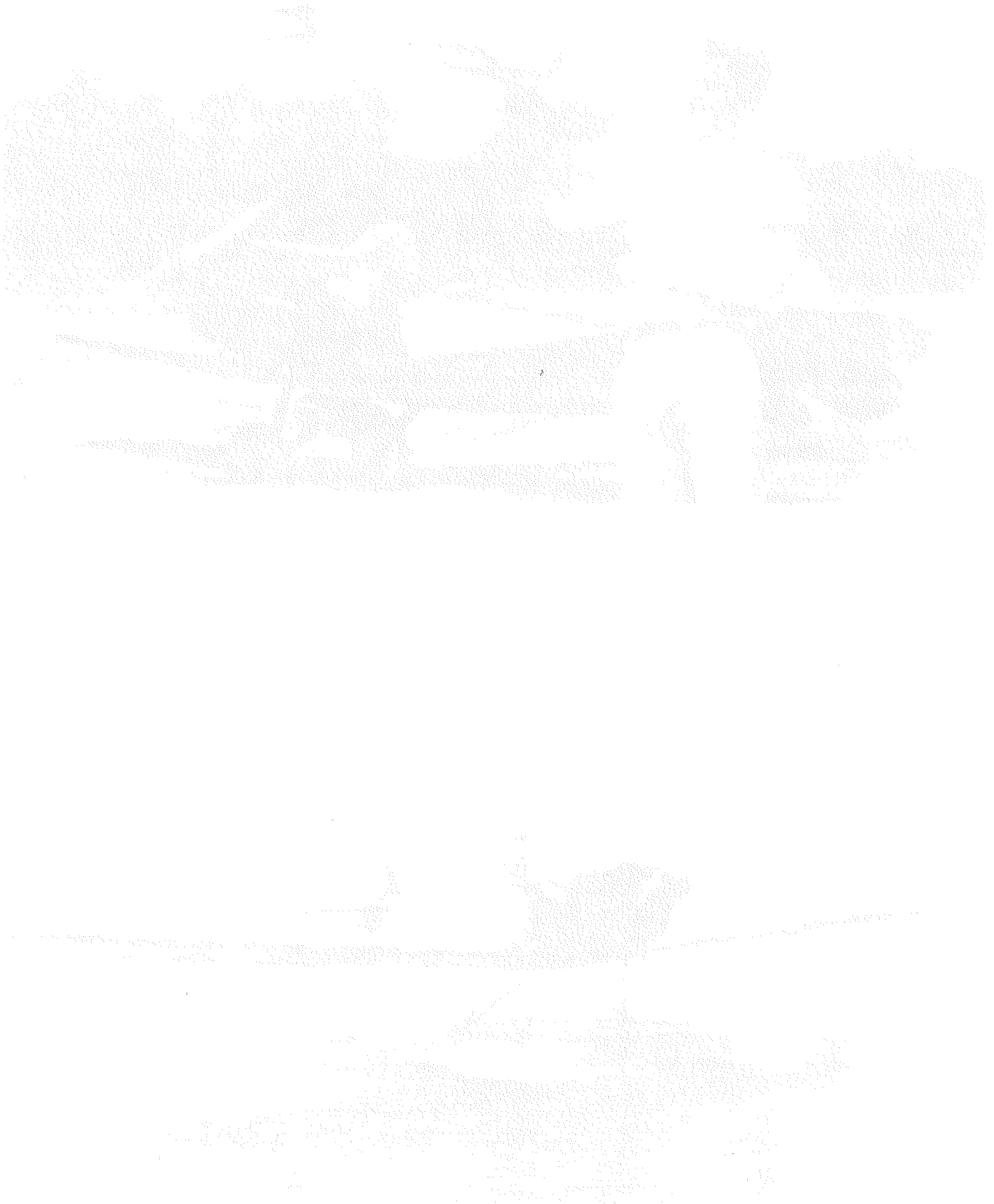
Pete has now obtained a set of Edo 1070's, the next larger size with 80 pounds more buoyancy per float and hopes to fly off the water again this year.

Photo by Jim Slauson

128


N500F
FLY BABY


N500F



SOME COCKPIT PROBLEMS:

(The following article was written to go with the photos we ran last month of N2288C, Francis Londo's bird and N366RZ, belonging to Richard Zediker. As you will recall, we had lost the write-up at the time and promised to find it and pass it on. We suggest you get out last month's issue and look at the photos's as you read this.)

The photo's printed last month show two Fly Babies with some variations in the cockpit area that are NOT design improvements. N366RZ was built by RICHARD ZEDIKER of Ashland, Oregon, a beautiful white and light green ship with an interesting modification in the form of a filled-in landing gear. However, the headrest and the rear portion of the cockpit fairing have been left off, and a considerable undersize windshield is used. Maybe the buffeting the pilot takes from the slipstream with such an arrangement doesn't bother Dick, who may figure that your're supposed to be buffeted in an open cockpit, but it sure bothered Pete when he flew it because open cockpits can be comfortable and his certainly is.

It's not exactly an accident that it turned out that way, either. Considerable experience in flying other homebuilts went into the design of Fly Baby, and the good and bad points of several other cockpits were well in mind. For this reason, the windshield was made big and the rear cockpit coaming was kept high to protect the pilot's shoulders. Some smaller pilots sort of get lost in there without a cushion to sit on, but Pete's six-foot one-and-a-half sticks up pretty far. Even so, his shoulders are well protected. He stuck pretty far out of Dicks ship, and the cockpit criticism was the only one he had to make on it. (Note that Dick has his initials, RZ on the end of his registration number.

N2288C is FRANCIS LONDO's magnificent yellow and white bird in a better attitude than show elsewhere in a previous issue. It is almost stock in the cockpit area except for a slightly lower windshield and a lower rear fairing. This is just fine for Francis, as shown in the flight picture in Issue No. 2, but Pete had pretty much the same problem as in Dick's ship - no shoulder protection.

The flight shot on page 8 of Issue no.3 shows Pete making the first test flight in DAN DUNNINGS 125 h.p. long-wing bogey-gear Fly Baby. Pete's shoulders really are out in the open here because the seat is high and the cockpit sides are real low.

So, if you are planning a lot of cross-country work, or cold-weather flying, think twice before enlarging that cockpit cutout.

"ON MARKING OF AIRCRAFT STEEL"

JIM COX, Houston, Texas, of "8-day fuselage" fame, had some comments regarding an article in an earlier issue with the implication that it is alright to scribe 4130 steel in layout. (This guy Cox is a tremendous individual when it comes to diversification and someday when we have time and space, we will elaborate.) Suffice it to say at this point that he knows what he is talking about when it comes to working with aircraft steel. Among other things he is an aircraft mechanic with a licensed repair shop that is used for the most part for his own ship. Jim writes as follows:

"My main reason for writing is the implication that it is permissable to scribe 4130 aircraft steel in layout. Under no circumstances should 4130 or any other aircraft material be scribed unless it is an outline only with this area filed or ground off. (Con't.)

MARKING AIRCRAFT STEEL (con't.)

Certainly not on any bend area whether it be to the inside of a bend or not. Also any scratches on the steel should be removed before using.

To mark steel I use a silver pencil (Verithin Silver 753). This works very well for me. On aluminum I use a very soft black pencil. Prefer to chromate the piece before layout work. This helps to prevent scratches. Scratches are the start of cracks in metal.

Vise jaws should be padded with a soft steel or aluminum. This helps prevent multiple marks and scratches on material. Maple vise blocks along with white pine blocks are also used in my shop. The main thing I use as a guide in selecting pads is to use a material softer than the work.

As to glues I am very happy with Weldwood Plastic Resin. Since I don't plan to subject my airplanes to being boiled in water, I feel that it will give me the best results. Short of withstanding a boiling test for several hours this glue is adequate. Mix it to a thick cream consistency as per instructions with water about 75 degrees. Keep room and material temperature above 75 degrees, and below 90 degrees and I don't think you will have any trouble. I feel that resorcinal is too temperamental for the average woodworker. The portions are too exact for small quantity usage. Whereas Weldwood Plastic Resin lends it'self to small batch mixes very well. As to the newer epoxies, there again I feel that their usage should be limited to well controlled conditions. I feel that their strength is critical depending on the accurate blending. This is something for which the average builder is not qualified.

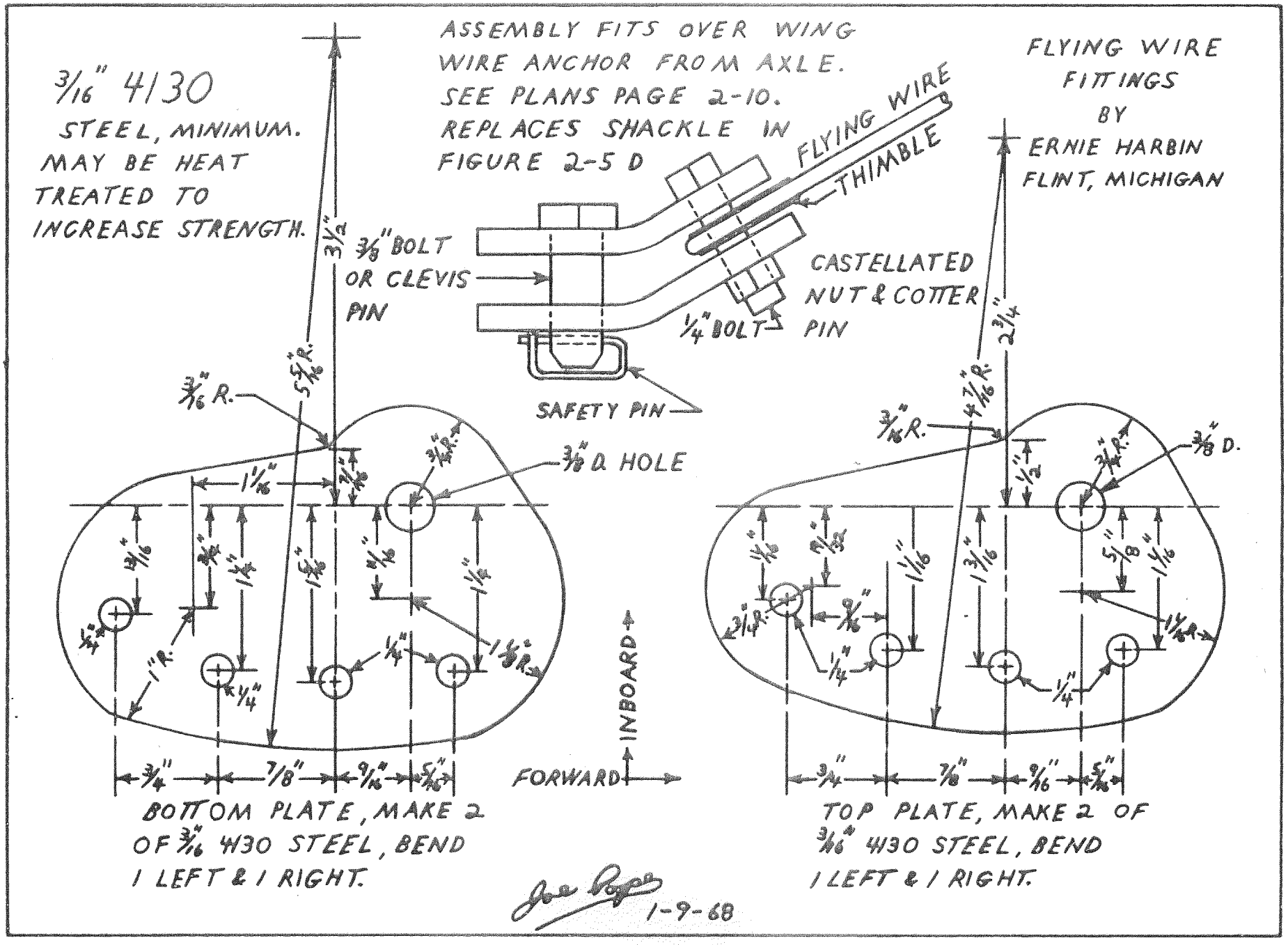
I have used the plastic resins for years on both aircraft and cabinet work with a minimum of trouble. Like I said, I am happy with it. I do wipe all excess glue away from a squeezed glue line both for appearance and to prevent possible crazing of old surplus glue. A wet rag of material such as an old undershirt works very well for this. Slick material just won't wipe. (end)

Jim also added some rather critical remarks concerning the "Buhl Pup" modification proposed by Eugene Wise on page 7 of the September 1967 issue. The upshot of his remarks on this was that the modification was a very unsafe move and that if pursued, would bring much harm to Mr. Wise's person.

Although Jim Cox is an expert aircraft metalworker, he is buying some of his fittings from Dick Weedin, which we feel is a strong vote of confidence in Mr. Weedin's quality and workmanship. The reports continue to come in praising the Weedin fittings. If you haven't checked them out, suggest you do so.

"A BELIEVER" WELL RECEIVED

How many liked the lines of "verse" we ran last issue by "A Believer" and didn't write and say so. Several did write, some with nothing else to say except they would like to see more of this sort of thing. If you did like it, let us know and we will try to persuade "Believer" to do some more for us. We feel that little "off beat" items like that make the Bulletin more enjoyable. It gets away from the flight reports, modifications and technical data a little and sort of balances them out. If you didn't like it, also let us know. After all this is your sheet and you are paying for it, so let us know what you want. For our own part, we enjoyed it tremendously and will publish more if you want us to and we can get it. We have to know however, so write.


3/16" 4130
STEEL, MINIMUM.
MAY BE HEAT
TREATED TO
INCREASE STRENGTH.
ASSEMBLY FITS OVER WING
WIRE ANCHOR FROM AXLE.
SEE PLANS PAGE 2-10.
REPLACES SHACKLE IN
FIGURE 2-5 D
FLYING WIRE
THIMBLE
3/8" BOLT
OR CLEVIS
PIN
CASTELLATED
NUT & COTTER
PIN
1/4" BOLT
SAFETY PIN
FLYING WIRE
FITTINGS
BY
ERNIE HARBIN
FLINT, MICHIGAN
3/8" Ø HOLE
3/8" D.
INBOARD
FORWARD
BOTTOM PLATE, MAKE 2
OF 3/16 4130 STEEL, BEND
1 LEFT & 1 RIGHT.
TOP PLATE, MAKE 2 OF
3/16" 4130 STEEL, BEND
1 LEFT & 1 RIGHT.
Joe Popp 1-9-68

JUST RAMBLING

This is the page we always have mixed emotions about. We are always glad to wrap up another issue and get it out to you, because thats the whole idea. All the work we put into it isn't worth a darn until we get it in your hands. Also we are always anxious to get started on a fresh issue. On the other hand, we always wind up with several items that we meant to include "for sure" in this issue and run out of space. (We have to quit somewhere).

Like for instance, some stuff from BOB GAEDE that we promised would be included a long time back. Also a sheet we found in the typewriter when we came home from work one night. (Guess who authored it.) There are quite a few more. Still, the back-log can't get too large. The bigger, the better.

We would like to see the mail come in so, that we would have to go to a 3 ounce limit for mailing purposes instead of the present two ounce. If we can round up a few more readers in the coming year, (just three issues away), we may just be able to go to three ounces. We are willing, if we can get the guys to sign up. If you know of any that haven't and need prodding, see that they get it. There are several dozen builders and pilots around the country that don't "belong", and we would like to have them.

At the moment, our subscription list stands at 197 total. It can probably be raised if we will get busy and contact some of the people who we read and hear about, if we can just find the time.

If you have written us and don't have any answer yet, please don't be angry. We will get around to it sooner or later, but the Bulletin takes precedence and we fill in between trying to catch up on correspondence. We plan within the next 60 days to get current with our correspondence and then keep it that way. It seems that once you get behind, you stay that way.

Please don't mis-construe this as our not wanting you to write. Nothing could be more wrong. We do want to hear from you, even if it is just a note telling us that you finished a wing rib or the wife chewed you out for nicking the dining table with your saw. We enjoy it all. The letters are the most vital part of this whole lash-up and we wouldn't last 30 days without them.

A CLOSING "BRAINSTORM"

By this time you should be pretty well convinced that we are practically pleading with you to be at Rockford if at all possible. The motivation, we must admit is a selfish one from our standpoint. We want to meet as many of you as possible. It is much easier to write about someone when you have met them and you also feel a little more freedom in what you can say and when. We are already getting a surge of excitement even though it is over two months away.

The "brainstorm" we had was to bring to Rockford a photo album of pictures sent in by different people, and pass it around for others to see. We will try to work it up complete with captions, in a 3-ring binder in plastic holders, if time permits. This isn't a promise, but will come up with something.

Well, see that the bottom of the page is coming up, so guess that is about it for this time. If you like what you have read, say so and if you don't, be sure to say so. At any rate, let us hear from you. "See you" next time.

THE FLY BABY BULLETIN

Issue No. 10 April, 1968

This issue of the Bulletin was a long time coming, but finally, here it is.

Publication was interrupted for a time for several reasons and we won't waste a lot of space here going into all the ramifications of why. We do however feel that some explanation is in order and sincerely apologize for the delay.

Our primary problem was temporary loss of our printing facilities, and the secondary was time to spend on the actual preparation of the Bulletin. However, with a little luck, we will have our printing back soon and the time situation should improve considerably. The fall and winter months are our "slow" seasons and we will be able to devote a lot more time to the paper. Needless to say, our own "Fly Baby" project has suffered from the same ailment of time.

Starting with this issue, we plan a "crash" program of getting up to date and staying that way. (there must be a better word than "crash"), oh well, what we mean is, get back on schedule and stay there. Don't hold your breath though, as we have had this same ambitious plan before and always got shot down one way or the other.

So much for explanations, now to get down to the business of passing on the "stuff" of which the Bulletin is made.

BOWERS WINS RASPET AWARD

PETE BOWERS has been awarded the DR. AUGUST RASPET AWARD for 1968. This is the highest honor that EAA has to offer and the task of choosing the recipient is not taken lightly. The selection is made by the EAA Board of Directors, and there are literally dozens of aviation "greats" that must be considered. We can all take great pride in the fact that "our man" made it. On behalf of our readers and contributors, we want to offer Pete our most sincere congratulations. He has earned it.

On behalf of Pete Bowers, we want to thank those who took time to write the Board of Directors recommending Pete for the award. We had several letters to this effect and like to think that maybe they had just a shade of influence with the judges.

Unfortunately, we were not able to be at the Awards Presentation the final night of the Fly-In at Rockford, to see Pete get the award. It was necessary that we depart Rockford a few hours earlier than planned and consequently did not get a photo of Pete accepting the plaque. If someone did get a shot of the presentation, we would certainly appreciate your sharing it with us.

That is the extent of the Rockford news for this time and it may look a little awkward in the April issue to see August news, but we couldn't pass up the opportunity to let those know that are not in EAA and didn't get to the Fly-In this year.

SOME BASICS ON METAL "GRAIN"

After reading the comments in the March issue by AL DOUGLAS, we had a letter from ED MORE, of Simsbury, Conn., which we found to be very enlightening and educational.

Ed is a Project Engineer on aircraft propellors and related products and consequently speaks with some authority on the subject of metal "grain". His letter follows.

"The March issue of the Bulletin arrived today and I was struck by the comments reported by Al Douglas. I felt I should send in some comment on metal "grain" for two reasons. One is that it is a very fundamental concept that is involved and the second is that it is a very commonly partly-understood and misunderstood concept of materials application.

To start the comments, I would like to state that all metals that are in a solid state, that is not gas or liquid, have a crystalline structure. A crystalline structure is one where the molecules are arranged in a fixed geometric pattern, that is, each in a row with a constant dimensional relationship between its neighbors. When a metal solidifies on cooling the molecules assume this pattern naturally. The gross or general direction of the crystalline lines are random in nature and start at many locations in the molten metal. As the metal continues to cool, the growth of the crystals meet at boundaries on all sides. Finally the entire amount has solidified with these randomly oriented crystal structures completely intertwined on themselves. If one polishes the surface of the metal and then etches it with an acid, the boundaries are clearly discernable. The size of the crystal structures depends on the type of metal, alloy, and the rate of cooling. The pattern of boundaries is called the metal's grain structure. In cast material it is randomly orientated and equal in size in all directions.

Now, if we take this metal with a random grain structure and beat on it with a hammer or pass it between rolls under load with sufficient force such that the metal is deformed the grain structure is compressed and the roundish grains are flattened in appearance. Metal is virtually incompressible so when we flatten in one direction, the metal "squeezes out" in the other direction. This gives rise to a "strung out" appearance of an etched specimen of flattened metal which is called grain flow. The whole process is called working the metal, whether hot or cold. Forging, rolling, peening, hammering, or bending are all specific forms of working the metal. Sheet stock is formed by rolling and the material is identified usually by passing it under a printing roll in the same direction that it is worked or rolled.

So much for the physics of the situation. The next question is, "So what does the working do for you"? The answer is rather complex because it does many things, both good and bad. When the material is worked, it gets harder and stiffer. It is more resistant to fatigue, resistant and stronger. An analogy can be drawn with the benefits of twisting rope with the long fibers all orientated in one direction as opposed to loose fibers like absorbent cotton. These are all good changes, however you can only work the metal in one direction at a time. That means that it is stronger in one direction than another. In fact if we bend it too severely with the grain, it will crack. Whereas across the grain at the same bend radius, it will survive. Try that on a piece of aluminum alloy sheet to get a graphic demonstration. This makes it very neccessary to observe the grain flow in making sheet aluminum and sheet steel parts. Bends lined up with the grain flow are to be avoided in all structural parts. Ninety degrees to the grain is best for strength reasons but compromises up to 45 degrees are generally acceptable and greater angles if the bend radius is increased some. (Con't.)

METAL "GRAIN" (Con't.)

Since we do not usually go around etching and inspecting with a microscope, it is a great convienence to have the manufacturer tell us in which direction the metal is rolled or worked. This, incidently, explains why forged parts are stronger than cast parts and why forged parts are generally not repairable by welding, unless additional strengthening is also accomplished. A weld is cast material and needs to be thicker to be as strong as the rolled sheet parent metal. That is why we build up the weld bead. Otherwise the metal is only as strong as cast material.

This could go on at some length into heat treatment of metals and its effect on grain structure. Corrosion properties are also a consideration. Maybe some day this will come up in the Bulletin and we can talk some more. (end)

Our thanks to Ed for this, which may be "old hat" to a lot of you, but is brand new information to some of the dyed-in-the-wool "wood butchers". When he has time, we would appreciate Ed elaborating on some of the fine points in aircraft grade welding. A lot of us will probably never do any welding to speak of on our bird, but you can bet your "sweet bippy" that we will be watching the guy who does, real close. It would be quite helpful to have some idea of what is going on, and what to watch for to be sure good practice is being observed. Keep that in mind Ed and let us hear from you.

For those looking forward to Rockford, you may get to see Ed's ship, N59229. He claims that being a glider pilot has spoiled him on trim and consequently, he has installed a rudder trim on his ship. (He also has a Musketeer reserved, just in case his own ship can't make it by then.) Will be looking forward to meeting Ed and a lot of other Fly Baby builders.

LIKES LONDO'S WHEEL PANTS

Had a letter from BILL HARGREAVES, of Chicago asking for FRANCIS LONDO'S address. Bill likes those wheel pants. (Don't we all.) Don't know if Francis made them or not, but since he will be at Rockford, as will be Bill, they can get together and swap info. Bill hopes to have his ship finished by this time next year and sent along some photos which we will work into a future issue. One of the shots, by the way, is of Bill perched in the fuselage framework on a "flight of fancy", which Pete warns us about. Wonder if anyone has ever built his airplane without indulging in several hours of daydreaming flights along the way?

Speaking of Londo's pants, wheel that is, we will visit with him at Rockford and get more info on them. Actually, Francis' airplane has caused quite a lot of comment in our correspondence and we are looking forward to seeing it. The photos we ran on it, are among the most popular to date. Everyone writing, comments on what a beautiful ship it is. This is the same fellow who built his ship first, and then learned to fly. Must be quite a guy.

STANLEY SURFORM GAINS SUPPORT

GENE OLSON, of Eau Claire, Wisc. signed up for another year, and added his own comments on the Surform. Although he hasn't been able to get started on his ship yet, he has used the tool on some "homebuilt" furniture and really liked it. Several others have had similar comments and if you haven't tried one, we suggest you do. We did ourselves and were very pleased. It takes about half an hour on scraps to get the hang of it, but from then on, you are a "pro". If anyone has any other hand tools of this nature let us hear from you.

"MISTAKES I MADE"

The above is the suggestion of LOWELL D. MORROW, of Yorktown, Ind. for a page in the Bulletin devoted to errors made by builders that could be helpful to others.

We like the idea ourselves, and will be glad to incorporate it into the Bulletin if we get the information to print. This feature could very well save a lot of builders time and effort wasted, to say nothing of the money saved.

Lowell doesn't mind admitting that he has made a few goofs along the way and to get the ball rolling, sends them along with the hope that it will save someone else some trouble. His comments follow.

To start with, try your wheel bearings on the axle before going too far. Mine were .005 oversize. Took an awful lot of emery cloth and sweat. Would have been easy at a tool shop or between improvised centers.

Goof No. 2: Thought I would clean up the axle a bit and use the Cub axle nut, threaded axle, etc. Looks good, except --- don't have room in the hub to insert the 3/16" bolt through axle and wing wire anchor. Solution? Use a nipple from an MG wire wheel spoke, (they are 10/32 thread) and a short bolt. Better still, go by the print.

Suggestion: Use a 1/4" plate nut on the top bolt going through the Dural angle. (Fig. 1-16, page 1-22). If this bolt is placed close to the top, the cowling will be held down by this bolt, thus making it tricky to put on a loose nut.

On page 1-26, fig. 1-19 shows 3/8" holes in the wing wire fitting. On page 1-25, par. 10 it says to drill 5/16" holes. I used 3/8" bolts but had quite a time installing them. Close quarters in that corner! Seems to me all the pressure would be on the wood frame anyway, so maybe the 5/16" is correct. How about that Pete?

For you fellows, that are going the "cheap" way, like myself, I found that a truck power take-off control makes a swell throttle. A locking device can be made by silver soldering a 1½" washer to a 1/4" brass flare nut. File one tapered end off a 1/4" tubing ferrule, saw four slots in the other end about 1/8" deep. Remove knob from control shaft, slip on ferrule, filed end forward, then screw on nut with attached washer. Ferrule will butt against threaded body and nut will squeeze ferrule on tightening. Slots will let it spring back for loosening. File notches in washer for finger grip. Flare nut has the same thread as control. Compression fitting nut does not.

Have run out of do's and don'ts so had better close. Still waiting on the dope on the moulded seats. Oh yes,---the little woman has a bit of advice. Don't let Orville build wing ribs in the kitchen! When he gets down to the last three or four nails at the trailing edge, the glue just has to go somewhere, mostly on the @$%#*&¢%** wall! Thats all folks-- (end)

Thanks Lowell, and keep working on the plastic moulded seats.

If you like the idea of a regular "Mistakes I Made" feature, let us know and we will do our best to work it in.

Open Previous Section FBB section six

Open Next Section FBB section eight

"BRAIN STORMS"

One of our favorite people is BOB GAEDE of Baltimore, Md. We have never met the guy, but know without doubt that we would like him even more if we did. One reason for this is Bob's attitude. He attacks any problem that arises with enthusiasm and ingenuity. Like a lot of us, Bob has "brainstorms" about how to do something, but unlike others like ourselves, he takes a moment to jot them down so as not to forget. Some of these he has sent to us and we would like to pass them on. Rather than try to group them in any sort of order, we will just list them as Bob did and you can pick out what you like.

1. If at all possible, team up with another energetic builder, even if he is not building a Fly Baby. It is surprising how much money can be saved by pooling purchases of material, dope, tape, steel, etc. As an example, freight is prepaid by the factory on a 40 gallon dope order and saves about $25.00.

Just be sure the other guy is a builder and not a talker. I am teamed with Paul Schauber, who is building a "Skycoupe". I am borrowing his welding outfit and talent, and he can lean on me for a spray outfit and covering experience.

2. In spite of the power tool ads, the only power tools that can really do work on Fly Baby as far as woodwork are the circular saw and the saber saw. A jointer is nice if you have one. The saber saw almost doubles for the band saw it replaces providing you equip it with Black and Decker hollow ground blades. (Listed below) These hollow ground blades, (taper ground) leave an edge that does not require much finishing. They do not tear up thin plywood and spruce. Average retail is $1.25 to $1.80, but since they are high speed steel and can be sharpened 15 times without binding, they are worth it. Sabre saws, which start at $15.00 are ideal for apartments, etc. where noise of a big saw is objectionable. Here is the listing of various blades available.

Black & Decker Taper Ground Blades

No.	Description	Approx. price
U-1364	Short coarse tooth for cutting spruce and spars.	$1.00
U-1361	Long heavy blade for miter cuts, etc.	$1.35
U-1359	Fine tooth long scroll blade, ideal for ribs	$1.35
U-1360	Same as U-1359, but coarse tooth. Ideal for roughing out ply and spruce to size.	$1.35

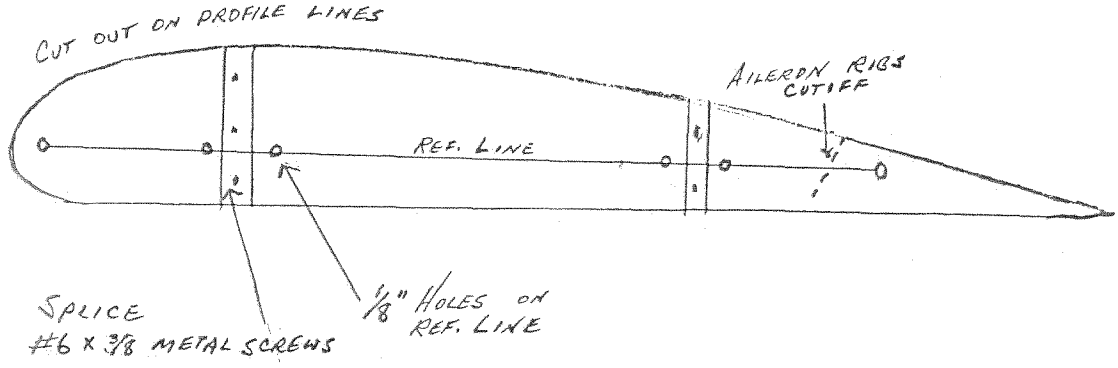
3. For a fine set of ribs all matched with minimum labor, take heed:

Step 1. Paste your rib layout on aluminum or steel sheet with Pliobond- Splice sheet at spar cutouts with sheet metal screws so you can work nose, center, and trailing edge sections separately, then put the works together with the screws for a profile check when you assemble ribs. (Con't)

BOB GAEDE (con't.)

Step 2. (Making ribs) Drill some 1/8" reference holes exactly in a straight line on the reference line shown on rib template. When you mark out ribs on plywood, mark and drill these holes also with a 1/8" drill. Then you can insert small nails thru the holes and stack sand 6 or 8 ribs at time on a sheet of sandpaper glued to a plywood disc in the circular saw. You can also sand by hand without a circular saw.

Step 3. When you assemble ribs, put a couple nails, (with heads cut off) to correspond with master layout, into a piece of heavy hardwood. By putting the rib sections on these pins, this will insure accurate alignment and profile of the rib sections.



Tip # 4. Probably one of the biggest "hangups" a lot of builders have, is a place to assemble their ship once they get all the pretty little ribs and parts out of the basement. The sketch shown on the next page is the FB-1 shelter that was built as a summer workshop and dope room for projects going thru Orlando Road. (Bob makes it sound as if they have a whole flock of homebuilts going.)

The 4 mil Pliofilm can be picked up for $12.00 for 12 ft. wide, by 100 ft. long roll. (1200 square ft.) This is sufficient to build a 25 ft. long, 8 ft. wide, (at the roof) and 8 ft. high. The curtains can be raised on good days for spray-work and dropped at night. Total cost is $35.00 to $40.00 if new wood is used. Hope it will get a few projects going . My own shelter will have 5 cover jobs going thru it during the summer of '68. It can then be dismantled until next year. The shelter also takes the overflow from my thirty foot winter hangar that I can heat in winter.

Tip # 5. Fred and I, (No. 1 son) were on a fire job, (restore a burned out building) and had 2x10 floor joists spiked in with 20 penny spikes to take out. We had two choices: Go get some gas at the corner station and burn it down completely, which is called arson, or use our head. Well, we came up with a Disston "soft back" hacksaw blade, cut a tang on one end and put it in the sabre saw. We dropped the blade between the joists and timbers and sawed the nails out! We got paid for 12 hours of hard brutal bull work and didn't even work up a sweat. Well, to get on with it, we developed smaller blades for cutting micarta, plexiglass, sheet aluminum etc. using the same idea of hacksaw blades in a sabre saw. They do not distort or crack the material. Use 32 tooth for fine work and 24 tooth for rough work. Cost is about 3 or 4 cents per blade to make them. Just be sure you get soft back blades and cut with airplane snips to fit your saw. Don't cut thru the hard tooth edge. Just cut within 1/16" or so and break off. Be sure the teeth point to the saw, otherwise no cut. (Bob sent us a sample blade and it was amazing what it would do. Much better than the finest tooth regular blade.). (end)

Bob sent some other time-saving tips, but will save them for a later issue. He also has some ideas for the most un-beautiful airplane at Rockford that are a riot. More on that later.

142

SAMPSON GOES LEGAL

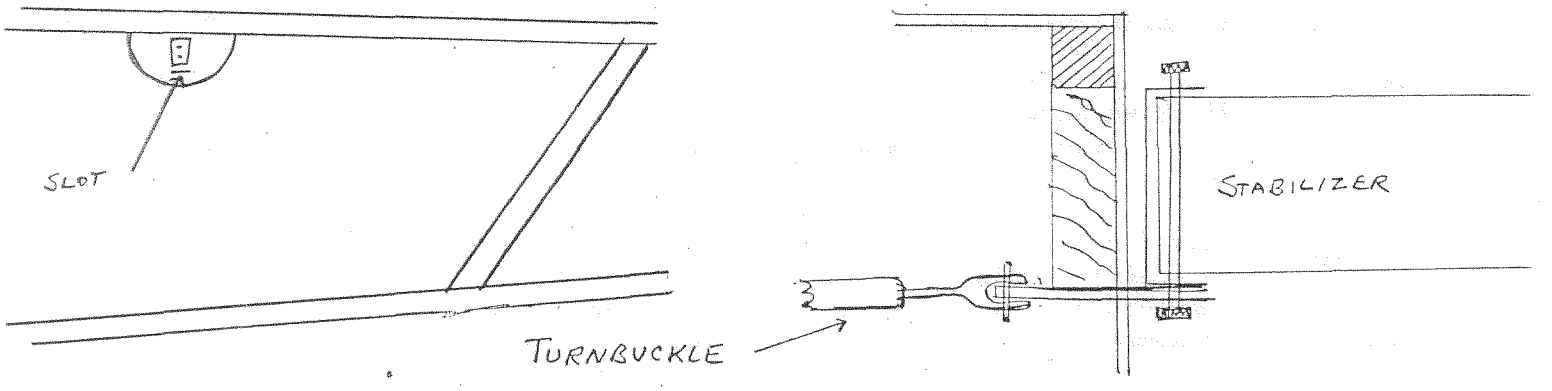
Can you imagine bringing your Fly Baby to Rockford and then not be able to fly it because you are still banging around the sky on a Student Ticket. Well, ED SAMPSON decided that with around 200 hours on his student permit, he had better get his Private License, which he did on the last day of the student ticket. Since 150 of his time was in Fly Baby, he conned the flight examiner into flying it before going up for his check ride. The "man" said Ed's ship was "very responsive", but made him take the check ride anyway. So, Ed will be seen flying at Rockford this year, and will be legal!! Congratulations Ed.

Progress on the two-seater Fly Baby is very slow says Ed, but some progress is reported. Although he is still waiting for gear material, he has the tail spring mounted, stabilizers and rudder mounted, seats in, control column mounted and turtle deck fairing completed. Also has the wing strut mounts on the fuselage installed. The same fellow who welded up the gear for Fly Baby is going to do this one also. The welder has give Ed, to use, a zero-since-major 253 C Lycoming for the new ship. It is a 100 hp. engine complete with prop. All Ed has to supply is a gasket set for it. The engine was overhauled 16 years ago and has been setting on a stand in the shop ever since. The owner does want to tear it down and balance it before using it, but that should be all. Complete with prop and mags, it weighs in at 202 lbs. which is only 25 lbs. more than the 85 Cont. They are going to make up a swing mount for it after the ship is on the gear.

Ed sent along some photos which you will see elsewhere in this issue. (if we get them back from the half-tone camera in time.)

Here are Ed's comments on the front stabilizer fittings as outlined by WOODY BOND. "I agree with Mr. Bond on the front stab fitting. I wrote Pete, but never got a reply. My remedy was this. I cut a couple of pieces of 3/4", .060, 4130 steel about 2 or 2¼" long, drilling a 1/16" hole in each end. A slot was made in the fuselage side in line with the lower side of the front fitting. When the stabilizer was attached the tabs were inserted thru the holes and bolted on the 3/16" x 3 bolts used. Thus all that remained to do was place a turnbuckle with two forks on it between the fitting and draw it up. As a result, the 2 forward stabilizer fittings are fastened together. I'm doing this on the 2-place also. I think I used 1/4" bolts thru the stab instead of the 3/16". (end)

Here is our own crude sketch of what Ed sent us. If you have any further question on this, contact Ed at Box 38, Belview, Minn. 56214.



ANOTHER TIME, ANOTHER SAMPSON

There was one other item in Ed Sampson's letter, that we want to pass on. Although it isn't connected with Fly Baby, it is interesting.

In the February issue of Sport Aviation is an item on page 30, about the Sampson "Wildcat",how it was built, by whom, etc. Well, anyway, this was Ed's uncle, and as you can see, another homebuilder. Art, his uncle, flew for 43 years and died in bed of cancer at age 62. He started flying in 1919 and flew in Alaska in 1924 & 25. Ed still has the original outline drawings of the airplane and a few photos. Must be hereditary, this home-building virus.

Ed, in closing, asked help in locating an engine. He would like to get his hands on a 90 hp. Le Blond, a 100 hp. Kinner or a 110 hp. Warner. If anyone can help, Ed would certainly appreciate it. You can contact him at Box 38, Belview, Minn. 56214.

PLYWOOD PRICES AND SOURCE

DR. E.G. SHANNON of Oceana, West Va. came out with some prices on plywood that we think will interest you. The source is Harbor Sales Co. of Baltimore.

We have mentioned Harbor Sales Co. before as a plywood source, (marine grade) but didn't have any prices at the time. This wood is Okume Mahogany, Grade A-B, which means good two-sides with solid innerplies and waterproof glue.

Prices on 4' x 8' panels are as follows: (prices dated April 4, 1968.)

Thickness	Pcs. per bundle	Price per panel	Wt. per panel
1/8"	15	$6.64	11.5 lb.
1/4"	10	9.84	23.0 lb.
3/8"	10	13.60	34.5 lb.

If less than a full bundle is purchased, a bundling charge of 2.75 is made. All shipments are freight collect. They suggest sending money with order. The address is; Harbor Sales Co., 1401 Russell St., Baltimore, Md. 21230. The phone number is Area 301-727-0106.

Thanks, Doc, for the info.

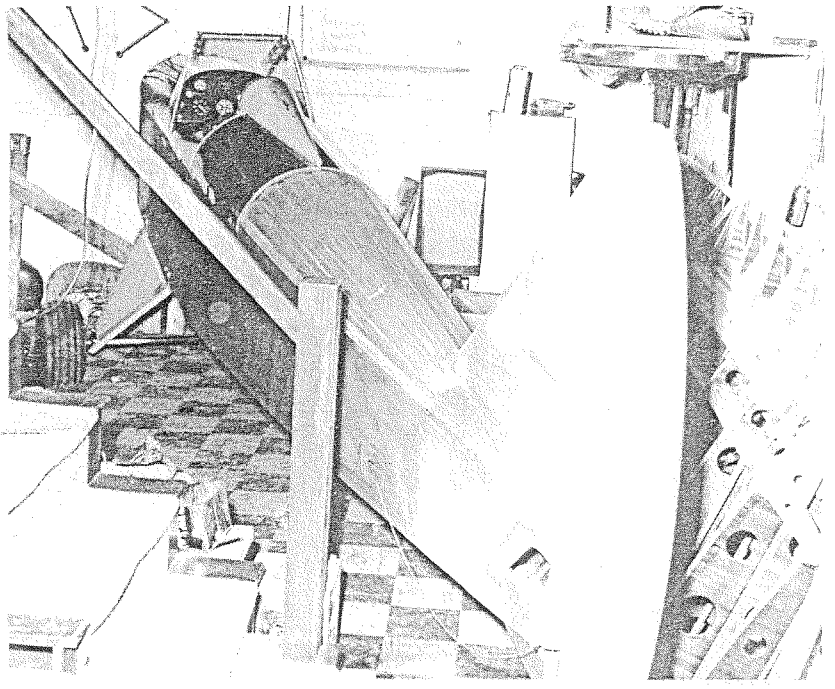
PHOTO CAPTIONS

All left side and bottom right: These are various angle shots of ED SAMPSONS beautiful N 4629T. The little man on the vertical fin is a plumber with his bag of tools and pipe wrench over the shoulder. This figures, as Ed is a plumber by trade. 29T as we have mentioned before is not Ed's first homebuilt and won't be his last. He already has a "Headwind", and is now building a two-seater Fly Baby.

Top Right: This fuselage looks as if it is about ready for final touches, and belongs to CHARLIE HONER, of Newton Square, Penna. Unless Charlie has a big door somewhere not in the photo, it would appear that he has the classic "boat in the basement" situation. Hope you get it out Charles. Actually, the ship should be flying by now if everything goes as planned.

Center Right: Another ship nearing completion is that of NICK SOMBORETZ, of Cincinnati, Ohio. Nick had anticipated his first flight sometime in 1968, and would like to know if he is on schedule.


N4629T

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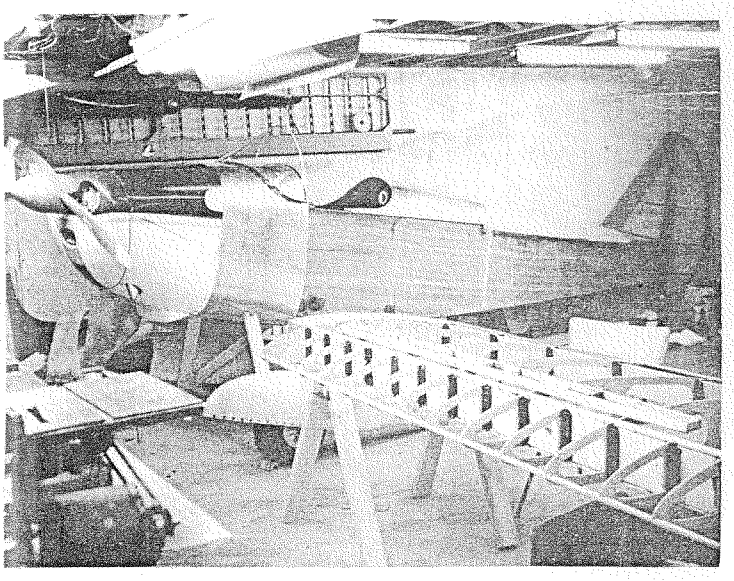


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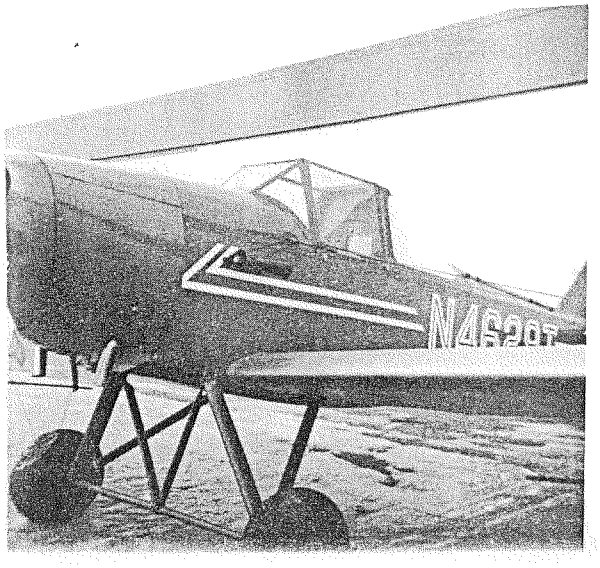
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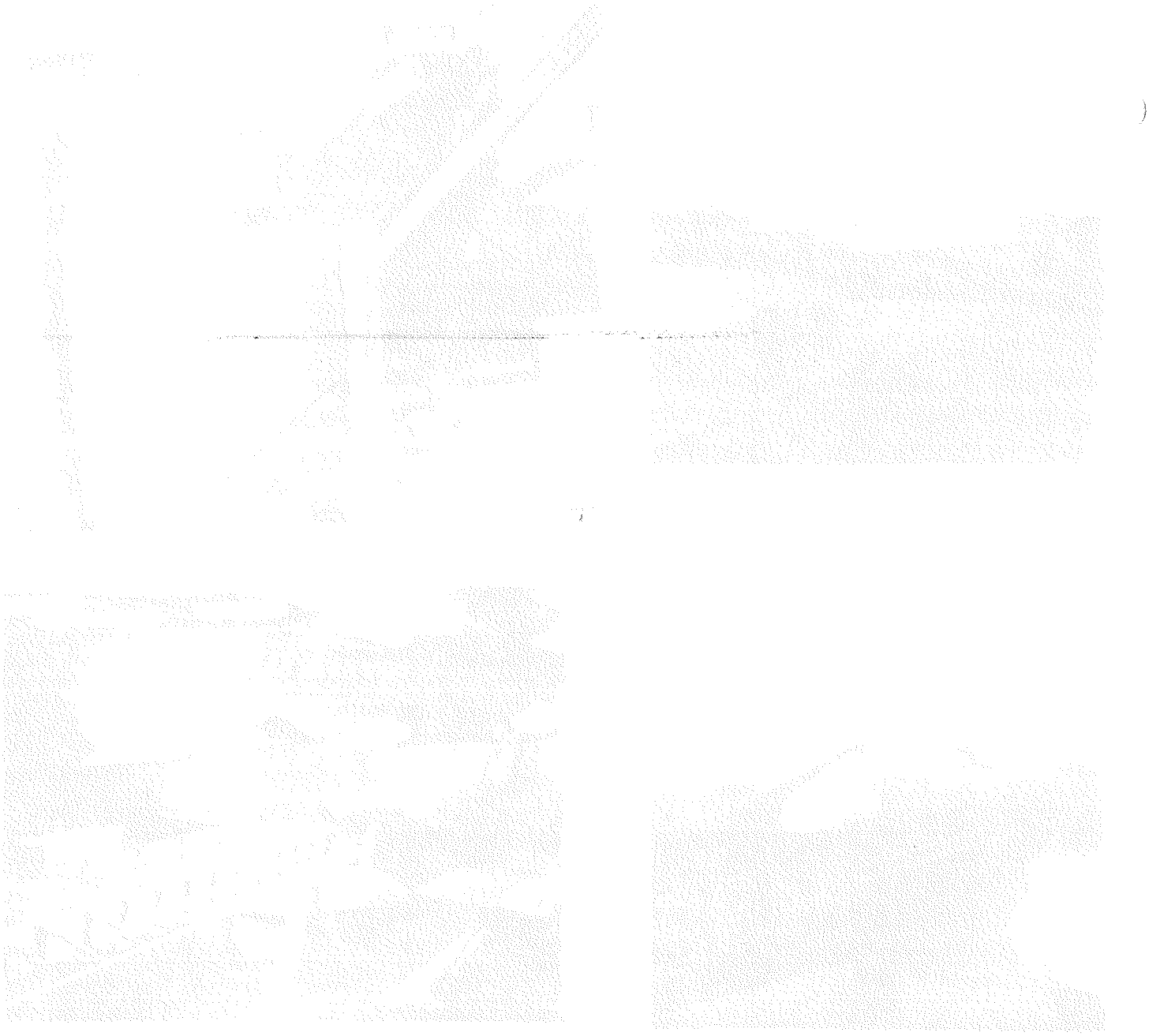


150

THE FLY BABY BULLETIN

ISSUE NO. 11 & 12 MAY & JUNE, 1968

As you will note from the heading, we are combining two issues in this mailing. Since the first issue was July, 1967, this in effect constitutes the first year of publication as far as the Bulletin is concerned. We promised 12 issues for your five bucks to begin with and with this issue we fulfill that promise.

Most of you have already renewed your subscription for the coming year which will consist of 10 issues. However a few have not yet let us know whether or not you want to stay with us another year. If you are in the latter group, please note that this will be your final copy unless you do renew. Unlike the "slickie" magazines and papers, we can't send out "renewal reminders", "final issue notices", and all the other little goodies that they flood your mailbox with to get you to "re-enlist". All we can say is, "this is it fellas and the rest is up to you". We say "fellas" because both gals, bless 'em, have long ago renewed.

To say that this first year has been well organized, orderly, punctual, and otherwise perfect, would give everyone a good chuckle because it has been anything but those. What it has been though is an experience that we wouldn't trade "for all the cows in Texas" as they say. We have learned a lot about what is required to get a "newsletter" off the ground, getting organized, and in general that we waded in up to our neck in a lot of hard work. The most important thing however is that we have learned that we have a long way to go and a lot more to learn. Oddly enough though, we are looking forward to it.

As we have mentioned before, one of the most wonderful results of the Bulletin has been the development of a "kinship" among the readers and builders. This spirit of helping each other and wanting to "get in the act" was more than we had ever dreamed of. Our words on the subject bear repeating. "Fly Baby" builders are the most wonderful group of people in the world. Homebuilders in general usually have a common bond, but nothing like the rapport shared by the "specialized field" of Fly Baby builders. We seem to have our "own thing" going.

One of the personal assets to accrue from the Bulletin for our own part has been the formation of several long-lasting friendships with other builders. Some, we have met, others simply by letter and telephone, but true friendship nevertheless. None of these would have been possible without the Bulletin.

So much for the soliloquy. Just wanted you to know that we have enjoyed it and are looking forward to the coming year.

As you all know, publication has been erratic at the best and we aren't making any rash promises at this point, but will make one. Sooner or later, you will get all the issues coming to you. We are going to make extra efforts to keep on an even schedule this year, but don't be concerned if the past trend continues for some time.

NEEDS ENGINE MOUNT

Some of you "scroungers" take a look around and see if you can help BOB GOWAN find a good used J-3 / PA-11 engine mount. If you should finger one, Bob would appreciate you sending him the price and condition along with the address of the owner. Bob's own address is 8418 Virginia Ave., St. Louis, Mo., Zip 63111. Our "buy-swap-sell" items may be a little scattered as we are taking them as they come, so others may pop up later on.

A WORD OF CAUTION ON FPL-16A GLUE

We have here a letter from HARLAN BJERKE of Azusa, Calif. concerning information that he has received regarding FPL-16A glue. As you will recall, we have had several comments and articles regarding this glue and all have been favorable. This comment is an exception, but in keeping with our policy of "telling it like it is", we want to pass this on for what it is worth. An excerpt from Harlan's letter follows.

"I started to use FPL-16A glue and have switched to Weldwood Plastic Resin. I have one side with FPL-16A and the other with Weldwood. Maybe I should placard "slip to left only"! I found epoxy type glue mixed in the small quantities that we use, yields inconsistent results. I work for the Forest Service and contacted the Forest Products Lab and they confirmed my suspicions. Following is a paragraph from the letter:"

> "We are not in a position to recommend FPL-16 epoxy adhesive for bonding wood aircraft because our data indicate that uncertain bond quality may develop. We would suggest that resorcinol, or phenol-resorcinol adhesives that have a long and successful history of satisfactory performance be used, particularly in structural members that affect safety."

"I hope this will not shake anyone up. I am sure it is good; it is just that if you are not exact in everything, which I am not, it would be better to use something else." (end)

There it is verbatim, as we got it from Harlan. Use your own judgement. We plan to continue using it, but you can bet your last turnbuckle that we will measure carefully as directed by Custom Woodcraft, who supplied ours. The old adage, "when all else fails, follow instructions," would apply aptly here.

If any of the proponents of FPL-16A would like to say something in reply to the above, get it in to us and we will in turn get it in an early issue. O.K?

ANY "HAMS" IN THE CROWD?

Radio operators that is, not actors. There is a little "ham" in all of us when it comes to acting, but not radio. Reason we ask is that ROY ORVIS, Dryden, Ontario, Canada is "one" and would like to contact any others on the air. Roy's call letters are V E 3 B J D. Now, what we know about ham radio could be covered by the period at the end of this sentence, but we do know that aircraft and radio experimenters go hand-in-hand to some extent and there is a good chance that there are others among us who maintain a station. If you want to contact Roy and set up a call, his address is 195 Casimir Ave. in Dryden.

It would be interesting to know if anything comes of this, so if you do make contact by radio, how about letting us know.

While on the subject of radio, we are still in need of more research and information on radios suitable for Fly Baby. We have some information that will be printed later, but if anyone has any suggestions and ideas on the subject, let us have them.

52

PARTS NEEDED & PROGRESS REPORT

ED LANSING, Houston, Texas, reports his wings complete, signed off, and ready to cover. Sides are done and now being assembled.

Ed, as you may recall, at one time contemplated selling his project, but has now decided to go ahead and is doing just that at a rather brisk rate.

A recent note from Ed asked us to help him locate some parts as follow;

> Pair of aircraft wheel and brake assemblies. "Cub" type or equal. To fit tires 8.00 x 4, 6.00 x 6, or 5.00 x 4. (already has master cylinders)
>
> Tail wheel for 1½" or 1¼" spring. Prefer small & light, steerable type. Solid wheel.

If anyone can help, contact Ed at 8803 Shadowcrest, Houston, with price, terms, condition etc. In closing, he added that he is still short all the instruments for his ship and needs a source for them.

JUST TALL, THAT'S ALL

Here we have a letter from ERIC WHITTRED, up in Calgary, Alberta, posing a question that someone else may have already faced and solved.

Standing six-four with a size 13 shoe, Eric has tried the cockpit of another Fly Baby in the area and concludes that some modification is going to have to be made for his knees and feet. So far, he has considered a molded gas tank with foot grooves, lowered floor boards, knee cut-outs in the instrument panel and movement of the firewall forward a couple of inches. Any one of these will help, although he is understandably reluctant to move the firewall, but it may be that other builders, with an ample frame, have come up with something better. If you have a solution or any thoughts on the subject, let us know.

In addition to some very nice words about the Bulletin, which we lapped up, Eric added that he is concentrating on doing all the small assemblies possible before starting the major structure. This, he says will prevent the large hulk of the fuselage from laying around the place for many months. Among the goodies mentioned is a low-time Cont. 85, certified and ready to bolt on the ship.

Thanks Eric, and let us know the outcome of your research on the leg-room bit.

FLUTTER CURED

Remember BOB MITCHELL and his flutter? It wasn't serious, since you had to work at it to get flutter, but he balanced the ailerons and no more problems.

Bob, who is a PBX man for General Telephone out in Santa Barbara also sent along some color shots of his ship, which unfortunately we can't reproduce. We can however pass on some statistics on his ship, which are always in great demand. (con't.)

BOB MITCHELL Con't.

Following are some excerpts from Bob's letter with facts and figures on his bird.

"As you can see from the photos, I covered the top and bottom of the fuselage with .009 aluminum which gave a nice smooth surface. The whole fuselage was covered with silkspan, doped on and then painted."

"The canopy is my creation and I haven't flown with it on yet. The weather is pretty nice out here. (Ed. note: Will have to remember to send the Chamber of Commerce a bill for that plug.). Except for the canopy and squared-off wing tips, I didn't make any major changes. I did go to a heavier axle to preclude any bending."

"My ship cruises at 78 and I was a little disappointed about that. Am wondering what others do. I have not yet met anyone who has one flying. The power is a 65 Cont. turning a 71-48 metal prop."

"She spins normally for about three turns and then flattens out a bit. It takes a nudge of power to break it quick, but will break without power. The C.G. is 14.99 aft of the leading edge, empty. A friend once did a 23 turn spin, in which the engine quit. On recovery, he dived and got a restart. The ship has 48 hours on it as of March, '68. She will fly hands-off, no problem and did not have to adjust the rigging." (end)

Thanks, Bob, for the report. This is the type info we like from those who have already flown and tested their bird. In line with this, we are working on a "poop" sheet to be mailed out to all the known flying Fly Babies to gather some information on performance in something of a uniform manner. More on that later after we get a little more caught up on our schedule.

DRAWING FOR ISSUE NO. 6 APPEARED IN NO. 7

JIM PETRELLA, of Woodbine, N.J. mentioned that he couldn't locate the hinge detail drawing of DOC ROBERTS that was covered by an article on Page 8 of the No. 6 issue. Take a look at page 13 of No. 7 Jim. Looks like we goofed on No. 6 and tossed it into the No. 7 issue. As they say on T.V. "sorry bout that".

Jim, in addition to the question about the drawing, had several other comments which we pass on for general information.

"Congratulations to JOE POPE for the excellent drawing and also to the other builders and their great ideas they are sending in to the Bulletin. I think these ideas and the Bulletin will someday make FLY BABY one of the most famous of the home-builts. (Flattery will get you anywhere Jim).

"I have been getting my material through a friend who is a crop duster, forest fire pilot, mosquito bomber, etc., and who is also an A & E mechanic. In addition he is a Fly Baby builder, but has had to put his project aside for the present due to work. Due to a long wait for 3/4" spruce for cross-pieces, I used some beautiful 3/4" marine mahogany plywood a friend secured for me. I know a lot of you readers will frown on this, but my pilot-mechanic friend saw my project and has decided to use the same for his." (con't.)

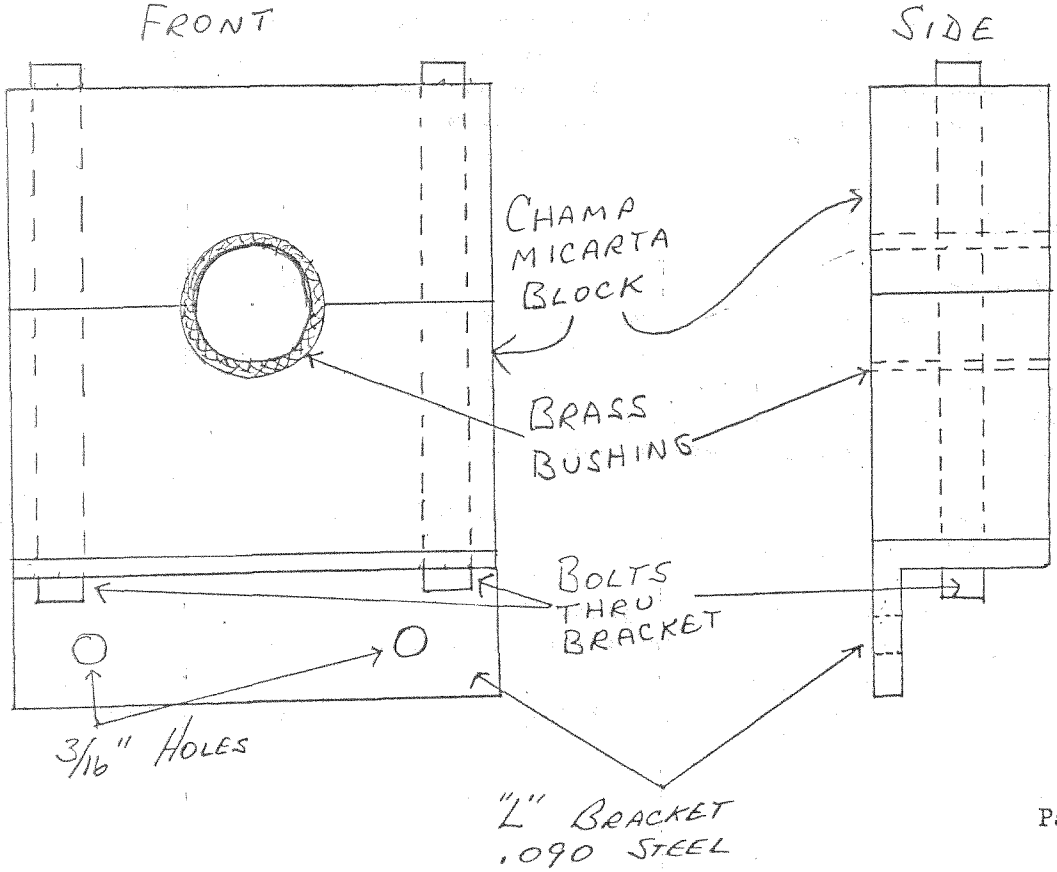
"JIM PETRELLA (con't).

"Living on the East Coast, it is hard to obtain parts, material, etc. J-3 Cubs are scarce and I have a set of 6:00 x 6 wheels and tires which I plan to use, with the struts made up of a "Champ" streamline wing strut. My torque tube and control stick are made up of tubing out of an old Vought Corsair 02U-1 built in the 20's. I picked up one in 1939, minus engine, but had to store it outside. I still have the instruments, which are somewhat on the antique side now, and may someday go to a rebuilder. When I returned from service, I found that the airplane had been dragged to the edge of a wooded lot and left to rot away. The April '68 issue of Air Classics shows one on page 6 & 7, and it makes me ill to think of my old bird being left to rot away."

"Micarta or aluminum blocks of the size for the torque tube bearing block are hard to come by, and here is my solution. I am using the micarta torque tube block from a "Champ". The bearing hole is larger, so I cut off the ends of a new brass plumbing "ell", (no threads), turned it in a lathe, bored the hole to take the 1" torque tube. The outside diameter was just right, and when the bolts were taken up, made a nice firm fit. These blocks are not long enough to bore holes to bolt in the cross pieces, so I made two "L" brackets out of .090 steel. They in turn are drilled to take two 3/16" bolts through the cross pieces. The same tow bolts holding the split blocks together, bolt through the top portion of the "L" bracket. (see sketch)

When I get the fuselage done, will send you some pictures of it. I know this isn't much but hope to contribute more as I get more done on my project. (end)

Thanks Jim, for the idea on the "Champ" torque tube block. These are still probably available from the supply houses and "junkers". As a matter of fact, we know where there is a wrecked "Champ" and may just "requisition" this part. If anyone knows of any other "Champ" parts that can be adapted, let us know.



BACK ISSUES MISSING ?

Once again we want to remind you that if you are missing any back issues or have lost any, just let us know and they will be sent. There is no charge for these back issues, as you are supposed to get them when you join the group. If you joined after the Bulletin was started and didn't get yours, just let us know. Our filing system is fairly accurate, but it is always possible that we overlooked sending someone their copies and they are yours for the asking. Although the supply is not "unlimited", we did run several extra copies of each issue in anticipation of some being lost in the mail, or after they arrived.

Another thought while on the subject is missing pages. We have had only one instance of this and then it was a case of about half the Bulletin being missing and evidently was done in the mail. If you should come up with a page missing, let us know and we will send it.

If you should change address's for any reason, let us know. Even though the Bulletin is sent first class mail, a few have come back undelivered, and evidently were not forwarded. We don't need all this malarkey about sending in your old address label like the magazines, but just drop us a card. We maintain an address file, and it is just a matter of entering the new one on your file.

The Bulletins are numbered consecutively and if you skip a number, it means you didn't get a copy, so let us know. This particular issue is made up of Number 10 11 The first issue of the second year will be Number 13 and so on.

We are rather surprised that we haven't had any complaints about the Bulletin this first year. Must mean that we are doing at least a half-way acceptable job. If you do have a complaint, don't hesitate to let us know, as this is the only way we can learn. Likewise, if you have any suggestions on how it might be improved, we would like to hear about that to.

FIBRE-GLASS CANOPY

TOM ABLE, of Stanfield Ore., is planning a fibre-glass canopy for his ship and will try to get more on it from Tom. It is beefed-up for roll over protection. If everything goes well, we should have a first-flight report on it before long. Would appreciate a couple of photos of the ship and canopy if you can spare them Tom. The canopy sounds interesting and a lot of interest is being shown in canopies recently.

We have some information on canopies from various builders and hope to work some of it into this issue later on.

There is a rumor afoot that someone is going to build canopies for Fly Baby on a "for sale" basis. Don't have anything definite yet, but hope to pick up more on this at Rockford. Will keep you posted if it is on the level. Guess these things are a necessary evil up in the "cold north country".

J-3 PARTS NEEDED

Someone who lives near an airport or supply house might be able to help VIC BANKOWSKI, of Huntsville, Ala. Vic needs the top and bottom cowl for a J-3 as well as the gas tank. These are of course for his Fly Baby and not a J-3 rebuild. He would also like the basic instrument group from a J-3. (Wouldn't we all?). If you have a lead on any of these parts or some surplus lying around, you can contact Vic at 2100 Chambers Drive in Huntsville, zip 35811.

Vic, who is a T.V. Station Engineer says that he can seldom get away for any length of time but may possibly try to get to any future gatherings of "Fly Baby Types" in this area in the future. Sure hope we can have one in the next few months.

NEW LETTERHEAD IN THE WORKS

The "letterhead" that is used on the first page of the Bulletin is something that we sort of put together from what was at hand at the time. Although we tried to follow the lettering on 500F to some extent, with the words "Fly Baby", we were never quite satisfied with the results. So, when we learned that we had a commercial artist in the crowd, namely JACK FERENCE of Reynoldsburg, Ohio, we immediately started plotting on how to get him to give us a hand on a better letterhead. We could have skipped the plotting, as it turned out, all we had to do was ask. Jack has come up with a nice design that is tailored strictly to Fly Baby.

You won't be seeing the new artwork until next issue however for a couple of reasons. We still have a supply of the original already printed up that we can't afford to throw out. Most of them however will be used up on this issue. Also we thought it would be a neat way to kick of the second year of the Bulletin. (Whoever would have thought it would survive the first year, let alone a second?)

Hats off to Jack for a job well done and another example in a long line of the great group of people building Fly Baby. There seems to be no end to the spirit of help and cooperation among this bunch. It just goes on and on.

SUBSTITUTE FOR WAXED PAPER ON JIGGING

This neat tip comes from JIM MANOLIS, Los Angeles, Calif. It seems that Jim found it much easier to use aerosol spray wax, (2 or 3 coats) at the glue joints on the fuselage jig, instead of the wax paper. Easier to use and not forever getting in the way or blowing off the table when not weighted down. Jim says that the spray was is not expensive and is usually available at the local super market. Sounds like a winner Jim. Thanks.

Jim, by the way has finally found a garage to work in and is underway at last. A place to build has been a real problem for him for a long time and now not only did he get a garage to build in, but it is rent free. How's that for falling into it?

FLY BABY "SYMBOL" NEEDED

There have been several people mention that they would like to see someone come up with some sort of emblem or design that could be used to identify them and their airplane as "fly baby types".

It seems that most of the builders who have mentioned it, have in mind some sort of decal or sign that could be placed on all ships in something of a uniform manner to identify the airplane. Some have carried the idea a step further in that it would be nice to have the same emblem or sign on a cap or jacket to identify the pilot of the ship.

We like the idea of having some sort of identification, but don't relish the thought of trying to come up with something. Here is what we do like however, and see what you think of it.

Those interested, sit down and give the idea some serious thought, taking into consideration all the ideas and principles behind the design of our ship and then come up with some thoughts on what should go into such an identification. For practical reasons, it should be kept relatively simple, but at the same time be very distinctive and very "Fly-Babyish".

One idea that has been broached by Jim Manolis will give you some indication of what we have in mind. Jim suggests a baby with cupid wings, a three corner diaper and cap and goggles, "ala snoopy" with a flowing scarf.

Once you have some idea of what you would like, make up a pencil sketch, you don't have to be an artist, and send it in to the Bulletin. We will in turn try to get some of our members who are handy with a sketch pad to translate it into a line drawing. These drawings will then be run in the Bulletin and everyone pick out one. The one that gets the most votes, wins. O.K. We don't want to over-simplify it, but this is the most logical way of coming up with something that is acceptable to the largest group. The old democratic way of doing things you might say.

That however is just the beginning. There remains the problem of getting the sketch into a finished product we can all use. This is the area where maybe some of our members can help. We already have our hands full and would like to see someone who is familiar with the problems involved, do the work of getting in touch with the outfits who do this sort of thing.

It may be that none of the people who make up such decals and emblems are interested a group as small as ours, but this is something we will just have to find out.

There you have the basic idea, now we need help. It is a good idea and a sound one, but is going to take some work on the part of several people. As we said, we have our hands full with the Bulletin and prefer not to take on any additional work, but will certainly act as a clearing house for those that are willing to help. If you are familiar with the problems involved in such and undertaking, then by all means let us hear from you and let's get the ball rolling. Also any comments or elaboration on the subject is welcomed. If you have something different in mind, this is the place to sound off.

FLY BABY "PUBLICITY" CHART NEEDED

Here is an area where we need help and a lot of you are in a position to do so. It is also an opportunity for those who haven't even started to build, to make a contribution to the Bulletin.

Several fellows have requested information as to where they can find magazine articles and photos of Fly Baby in print. There are many sources of this since nearly every aviation publication going has written about the ship ar at least pictured it at one time or another.

What we need is going to take a little work. It will require sitting down and carefully thumbing through all your old magazines and taking notes of references to Fly Baby. It will have to be rather thorough thumbing, because she sometimes only got a couple of lines of "honorable mention", but we would like to get them all.

Our aim is to compile a complete listing of references and publish it. There is a certain satisfaction in being able to prove at a moments notice that your ship is not an "unknown" in the aviation world. The list can also be a time-saver when inquisitive friends and neighbors drop around to hiner your work. Just hand them something to read about the ship rather than explaining and answering a lot of questions.

When preparing the list of references, please list the publication name, issue date, and page number, in that order. Make it up in a sort of table if you can. A brief note of what the reference is would be helpful. We will in turn take the lists and put them all together.

SOMETHING TO GET THE "PUBLICITY" BALL ROLLING

To give you some idea of the coverage that Fly Baby has received, we have an article by Rev. G.W. SHEERES of Grand Rapids, Mich. outlining some of the sources he has found. These will of course be included in the master listing when we get it made up. Here is Rev. Sheeres article.

"If you are anything like me you'll want to read whatever has been written about Fly Baby. The following info might possibly be of interest to some whose affection for Fly Baby is of recent vintage, and who like to know what has been said about her in the past..

If you have a good public library nearby, or if you can get hold of back issues, it may be worth your while to take a look at the following publications:

Popular Mechanics; February, 1963 ran an eight page article with pictures on "Fresh Flock of Fold-Wing Planes", and quite a bit of attention is paid to Fly Baby.

Air Progress; The August/September issue of 1963 devoted nine pages to the bird, mainly sketches and drawings.

Sport Aviation; The December, 1962 issue had an eleven and a quarter page article written by Pete Bowers called "The Fly Baby Story". Twenty-three pictures accompany this well-written account of the conception, birth, infancy and early youth of N13P whose "after-crash" status became N500F. (con't)

"PUBLICITY" (Con't)

SPORT AVIATION; Perhaps EAA Headquarters in Hales Corners have some back copies yet. Other issues which carried items about Fly Baby were the Jan, Feb, March, April, May June, July, Sept., Nov. & Dec. issues of 1963. In the August copy of the same year an article appeared on Fly Baby Gets Wet, relating the aquatic experiences of the ship. The January and May issues of 1964 had something in them too. Of course you remember the article which appeared in the April 1967 issue written by Pete on the test flight of Ernie Harbin's "Glue Sniffer" N4284C. Now lest you get all riled up about the articles appearing in the Jan, 63 - December 63 issues, they were a summarized serialization of the plans.

LIGHT PLANE GUIDE; (Homebuilt Issue) which was published in 1965 by Superior Publications in Duluth Minn. devoted four pages to Fly Baby.

AIR PROGRESS HOMEBUILT ANNUAL; The 1965 issue had quite a story on that "simple-to-make, low-cost, easy-to-fly beginners aircraft" which according to Pete Bowers estimate should take about 720 hours to build.

I realize that this is an inadequate listing in terms of all the articles that have been written about Fly Baby; it merely represents the articles of which I am aware. Perhaps you know some other publications with interesting material on the bird. If so, send your info to Hayden, and I'm sure he'll print it for the benefit of all "Fly Baby nuts", including yours truly. (end)

Print them we will, Rev. Sheeres, and thanks for kicking it off so well. Take it from there fellows.

FITTINGS

There seems to be no end to the letters from satisfied customers of DICK WEEDEN and his fittings. It is beginning to appear that Dick has done more to promote speed in getting the airplane in the air than anyone else. Now the only thing left to do is to get him started on a Fly Baby himself.

WRITTEN PRIOR TO ROCKFORD

Since Beloit Wisc. is only about 30 miles north of Rockford, ~~we are looking forward to possibly seeing Dick there.~~ We understand that he has been attending mechanics school at night and is about finished. Anyone who has to wait a little while on their fitting order might keep this in mind while waiting. We understand, but have not had it confirmed by Dick that he may after graduation, be able to offer welded up assemblies of parts. That, however, will have to wait until we get the word from him.

As a note of interest on Weeden's fittings, Pete Bowers, after looking at some of them made the statement that he would use them if he was building another Fly Baby, which he said he just might. How about that!

Anyway, if you don't like the idea of hacking out all that steel, you can save a lot of time by contacting Dick. As far as we know at this time, he is the only person offering them. If anyone else decides to do so, they will have to go some to come up to Dick's standards of quality.

SQUARED-OFF WING TIPS

H.H. KULOW is another advocate of the square wing tip and was kind enough to send us a sketch of what his looks like, along with the "copy" to go with it.

> "The attached (see below) sketch illustrates a change I am making in the wing plan form of my FLY BABY.
>
> I don't particularly like the "Cub" shape of the wings. Mr. Bowers suggests this may be a good place to express individuality. I am making the changes for practical construction reasons.
>
> The modified panel emplays a single rib layout. This means a single wing rib jig can turn out all the necessary ribs quickly and accurately.
>
> The aileron is moved out to the tip and should be more efficient aerodynamically. The tip shape is the simplest possible.
>
> Although the modified panel is about 10" shorter than the original version, it has approximately the same total area.
>
> I intend to square off the tail surface tips for aesthetic reasons. Leading and trailing edges, unlike those on the wings, will have some taper.
>
> Finally, I'd like to emphasize that these modifications have nobody's approval but my own...and mine isn't worth much. If you intend to reproduce them in your newsletter, it might be wise to get a reading on these sketches first from Mr. Bowers." H.H. Kulow. (end)

We would like to add to Mr. Kulow's comments, that nothing you see in the Bulletin is "official" or "approved". If you like what you see or read, feel free to use it, but remember that in most instances, it has not been proven in flight.

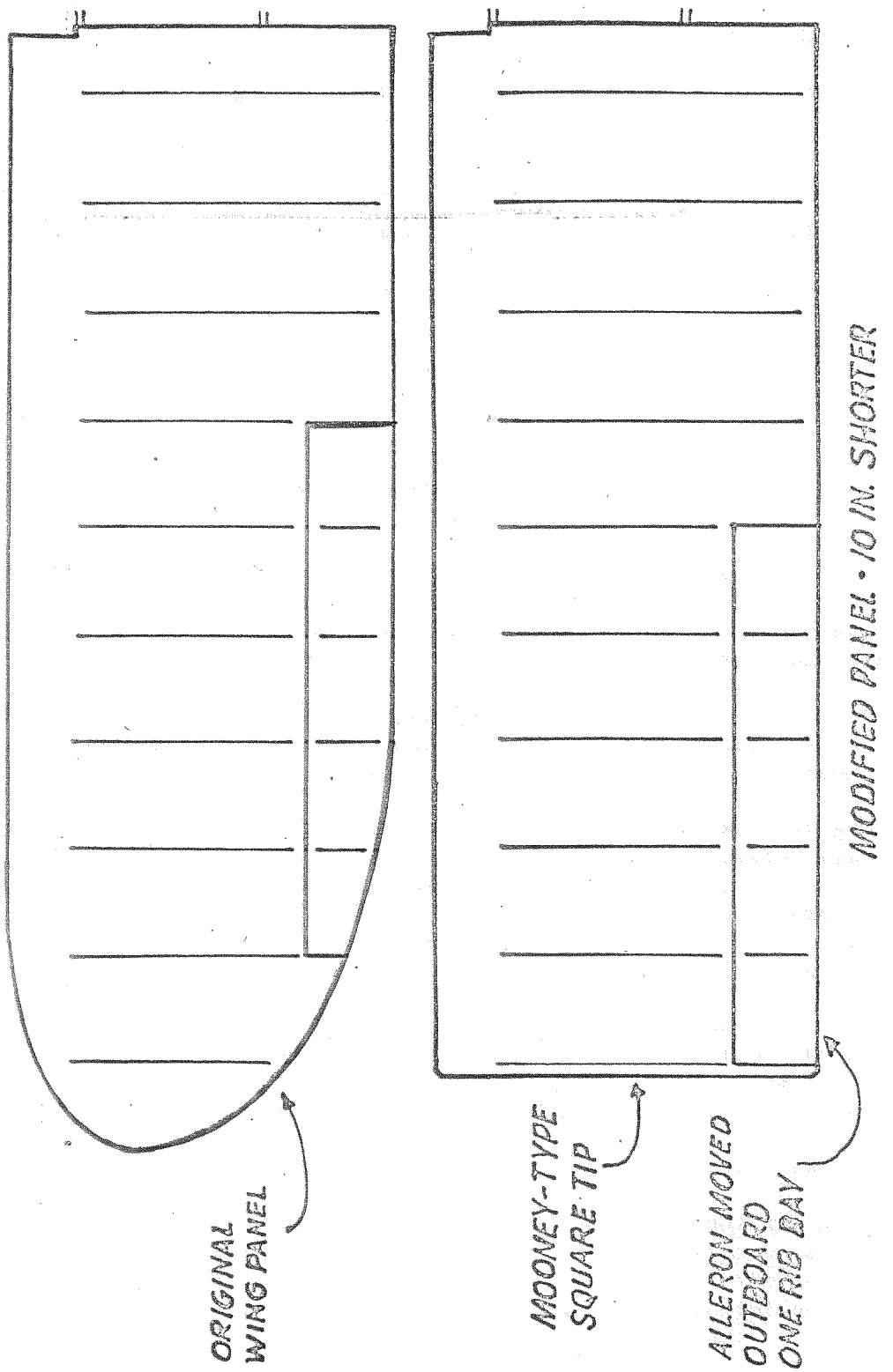
As for sending your sketch or any other for that matter, to Pete Bowers, Mr. Kulow, it would defeat the purpose of the Bulletin. One of our prime motives for starting the Bulletin was to try and take some of the load off Pete on answering letters concerning questions and modifications. This in turn will give him more time to concentrate on refining Fly Baby and her modifications, such as the biplane version.

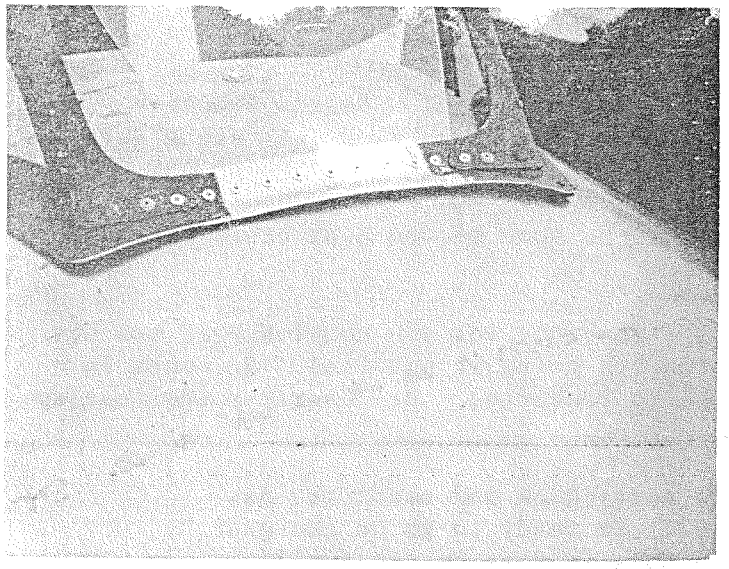
Rarely will you see ideas or modifications outlined in the Bulletin that deviate from the original basic plan of Fly Baby. This is especially true when the change will effect the basic structural integrity of the airplane. If you should ever contemplate such a departure from the design of Fly Baby, for your own safety, consult Pete Bowers or someone equally competent and experienced before you actually go ahead with construction. It can only be to your advantage to do so.

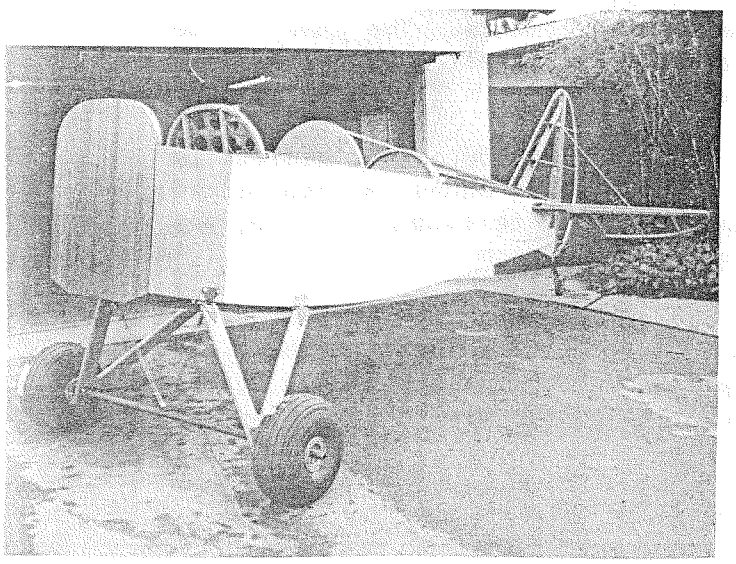
We don't intend for the above to sound dour and foreboding, but it is wise to occasionally remind ourselves that this is not just another shop project that we can re-do or toss out if it doesnt perform as we expect it to. That attitude is acceptable to the fellows building a go-cart, dinghy, or dog house, but not in our crowd. That really isn't a fair comparison however, because if you were that type individual, you wouldn't be reading this anyway. Still, it doesn't do any harm to remind ourselves once in a while of the audicity of our undertaking.

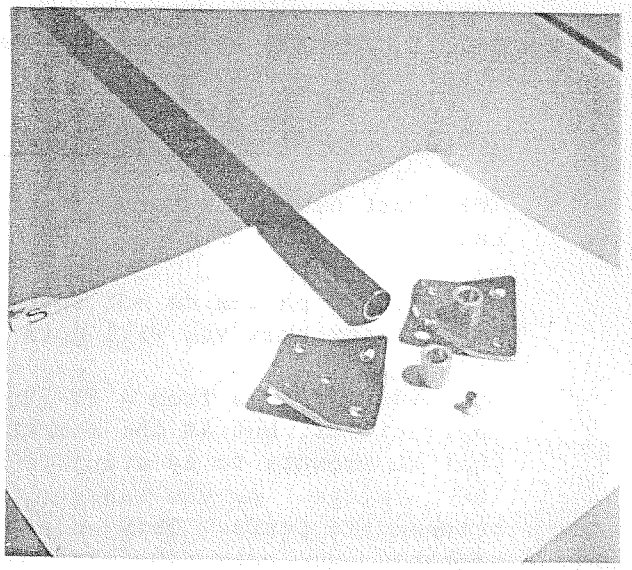
Looks as if we used up all the space on this sheet, so you will find Mr. Kulow's sketch on the next page.

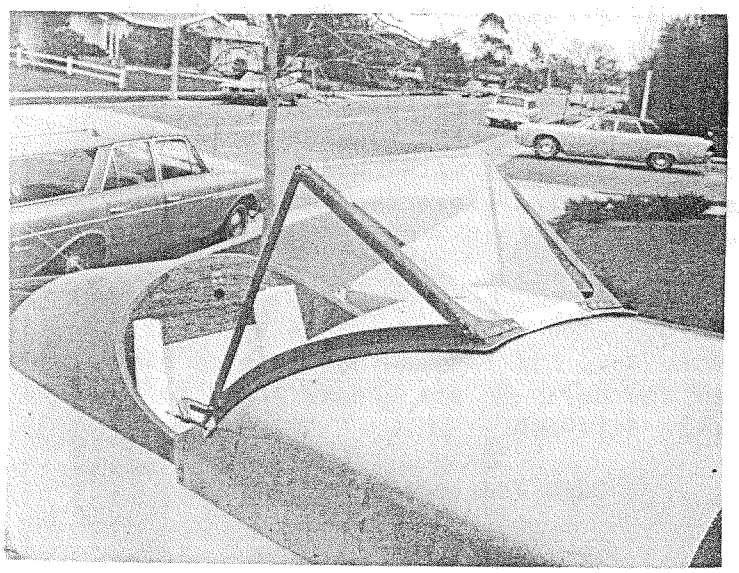
WING PANEL MODIFICATION OF MR. H.H. KULOW, CLEVELAND OHIO











FOR SALE

On the opposite page, you will find a couple of photos of a nearly complete fuselage. As you may recall, this is the same ship we labeled the "eight day fuselage" in the second and third issue of the Bulletin.

At any rate, this fuselage, which appears to be some of the best craftsmanship we have seen, is up for sale.

The owner, JIM COX, of Houston, Texas is a reporter for the HOUSTON POST and has decided that he has too many aircraft projects going at one time. He wants to concentrate right now on the Monocoupe he is restoring. He describes the fuselage work completed as follows;

> "The fuselage is complete up to the turtledeck and needs the gas tank mounted. With this done, it will be ready to go on the gear." Jim estimates that about 90% of the work is done on the fuselage
>
> The vertical stabilizer is about 75% complete.
>
> Jim has a complete set of Weeden fittings which lack on the actual tubing where it is used in the compression members. The ends of the compression members are there, but not the aircraft tubing, which is available locally in most instances.
>
> The asking price for the complete works is $495.00. Jim's address is 2113 Bingle Road, Houston, Texas 77055 and his phone is Area 713-465-7210. In view of the hours that a newpaper reporter is liable to keep, you would probably do better to call person-to-person.

Anyone considering contacting Jim, and having second thoughts about buying another mans work, might keep in mind that Jim is a licensed aircraft mechanic and his workshop is a FAA Certified Repair Shop. At the moment Jim is not doing outside repair work and is using the shop strictly to pursue his homebuilt and antique hobbies.

PHOTO CAPTIONS OF REVERSE SIDE, THIS SHEET

The front of this sheet reflects the work of DICK SCHUMACHER, of Newport Beach, Calif.

Most of the photos do not require an explanation to our "in crowd" but there is one item that you will note is a little different. Look at the windshield.

The windshield is from a PT-22, and has been modified slightly. Dick sent us instructions, but at the moment we can't put our hands on them. However, what it amounts to is a splice in the frame as shown in the top left shot of the fuselage. As you can see, a light colored piece of metal has been spliced between the posts. This enlarging calls for new plexiglass but this would probably have been required anyway, since the PT-22 is now an antique even by antiquers standards.

Dick also came up with a helpful hint that appeared in the June '68 issue of Sport Aviation. This was a method of slowing down his bandsaw and enabled him to cut his fittings on it. (4130 steel, of course). We are always proud to see one of our group make the pages of Sport Aviation.

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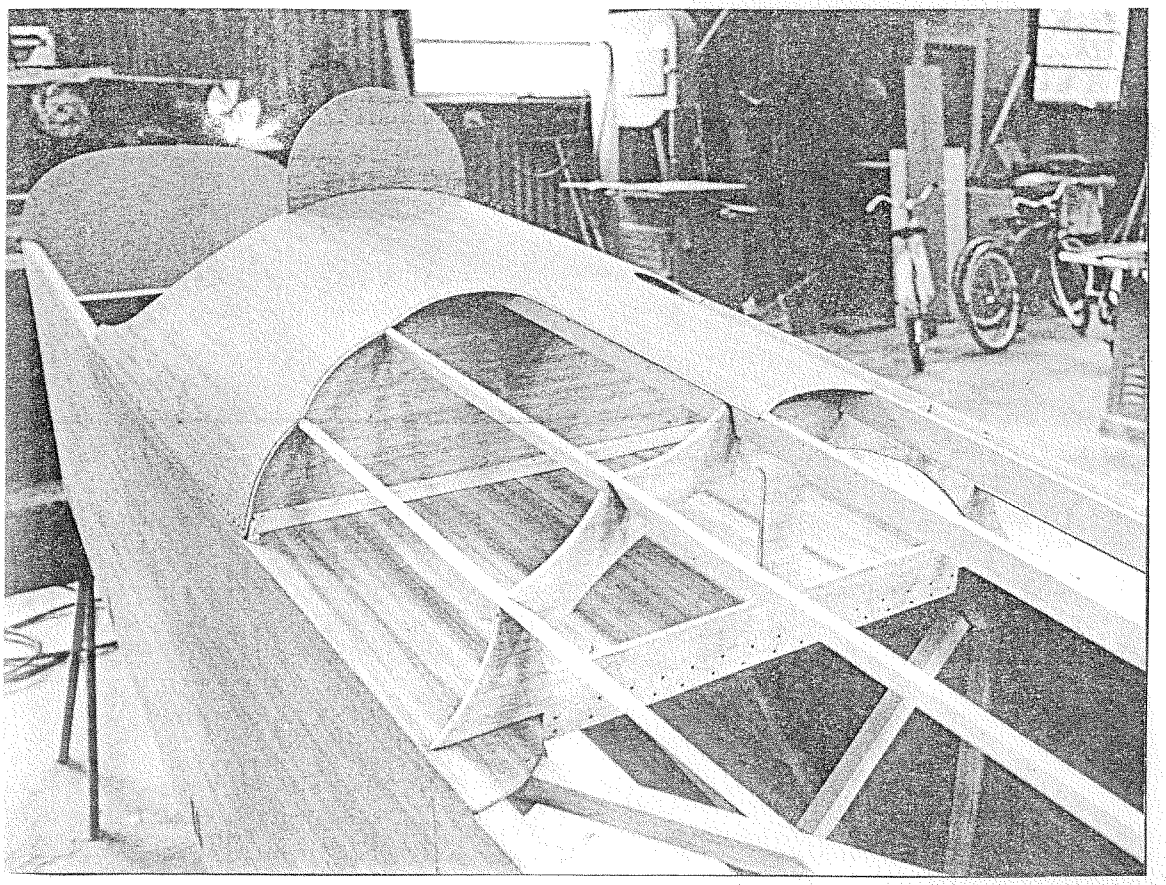
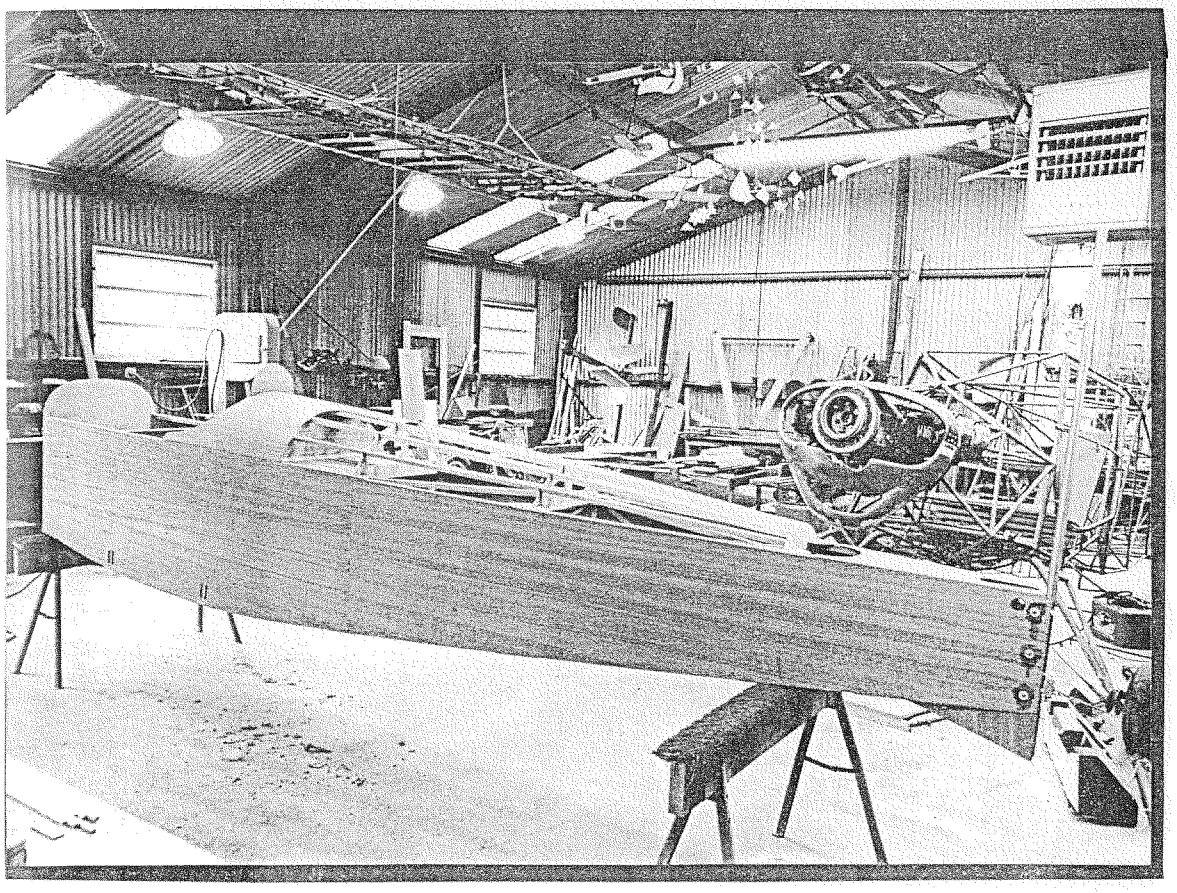
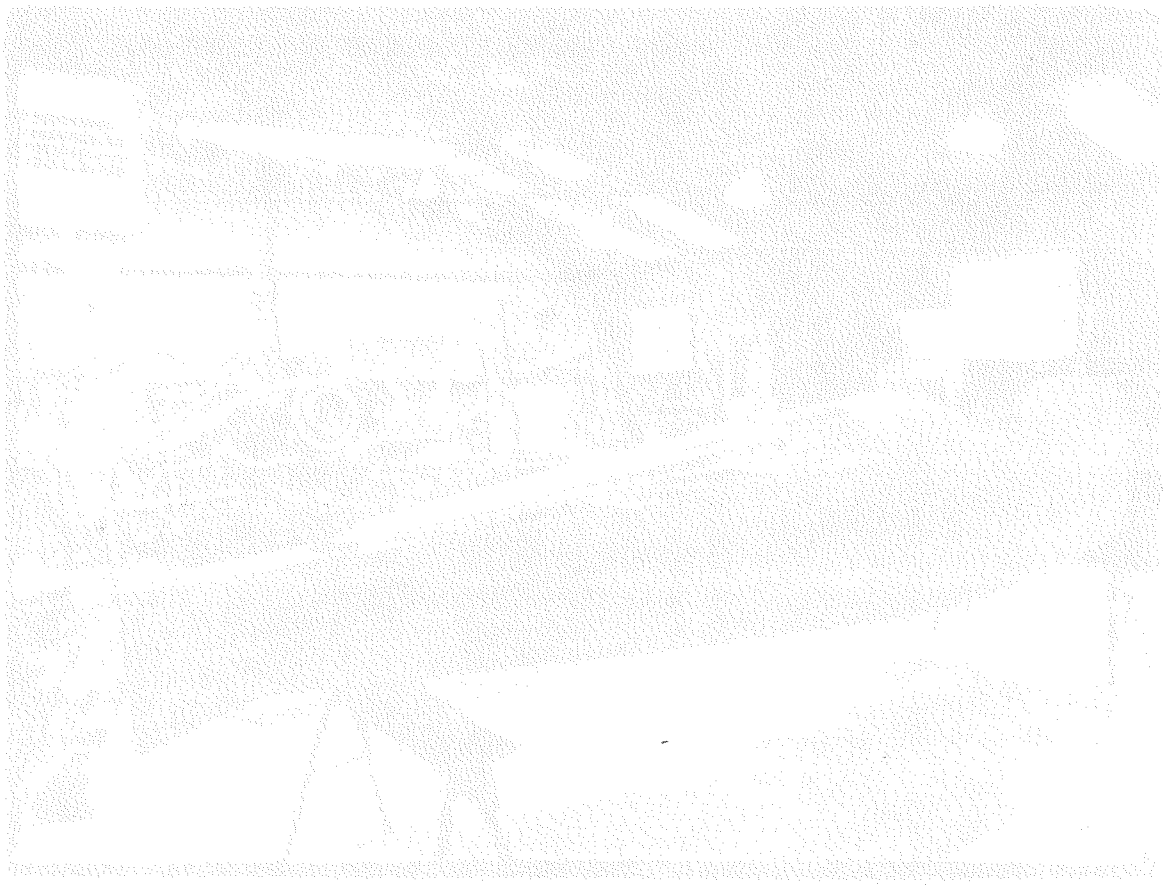
Open Next Section FBB section nine







BUY, SWAP AND SELL, PAYS OFF.

BILL BERG of Sturgeon Baby, Wisc. wrote a while back to let us know that he had purchased the engine that BILL LEISGANG had listed in Issue No. 5. So, you see, although you don't have to pay to advertise, it pays to advertise.

If you have any Fly Baby parts or components for sale or swap, let us have the details and what sort of deal you want and we will put it in the Bulletin and see what happens. Or, as they say on Madison Avenue, run it up the flag pole and see if anybody salutes it. Needless to say, we will have to limit the "flag pole" to Fly Baby builders only.

WIFE LIKES BULLETIN

CARL CARLSON is one of several fellows that have mentioned that their wives enjoy the Bulletin. Maybe this could be one way to help bring your "better-half" around to your way of thinking if you find that you are not always in agreement with her on matters pertaining Fly Baby.

In line with that we will scout around for an article or two slanted a little more to the ladies interest. Better yet, how about some of you who have bridged the gap between non-aeronautical-minded wives and your Fly Baby project, persuading the little lady to sit down and relate how they were won over and send it to us.

To get this little project rolling, we will include in the next issue a short comment that was found in the typewriter one evening on this same subject.

Also we have a little narrative from "A Believer" that we have been saving for Issue No. 13 to help us launch the New Year of the Bulletin. (Not Jan.1, but the first issue of our second year from a publication standpoint.) If you don't recall who "A Believer" is, you better go back to page 10 of No. 8 and re-read "Happiness Is". That little bit of verse made us as many friends as anything to date in the Bulletin. It seems that everyone enjoyed it.

BIPLANE VERSION NEARING COMPLETION

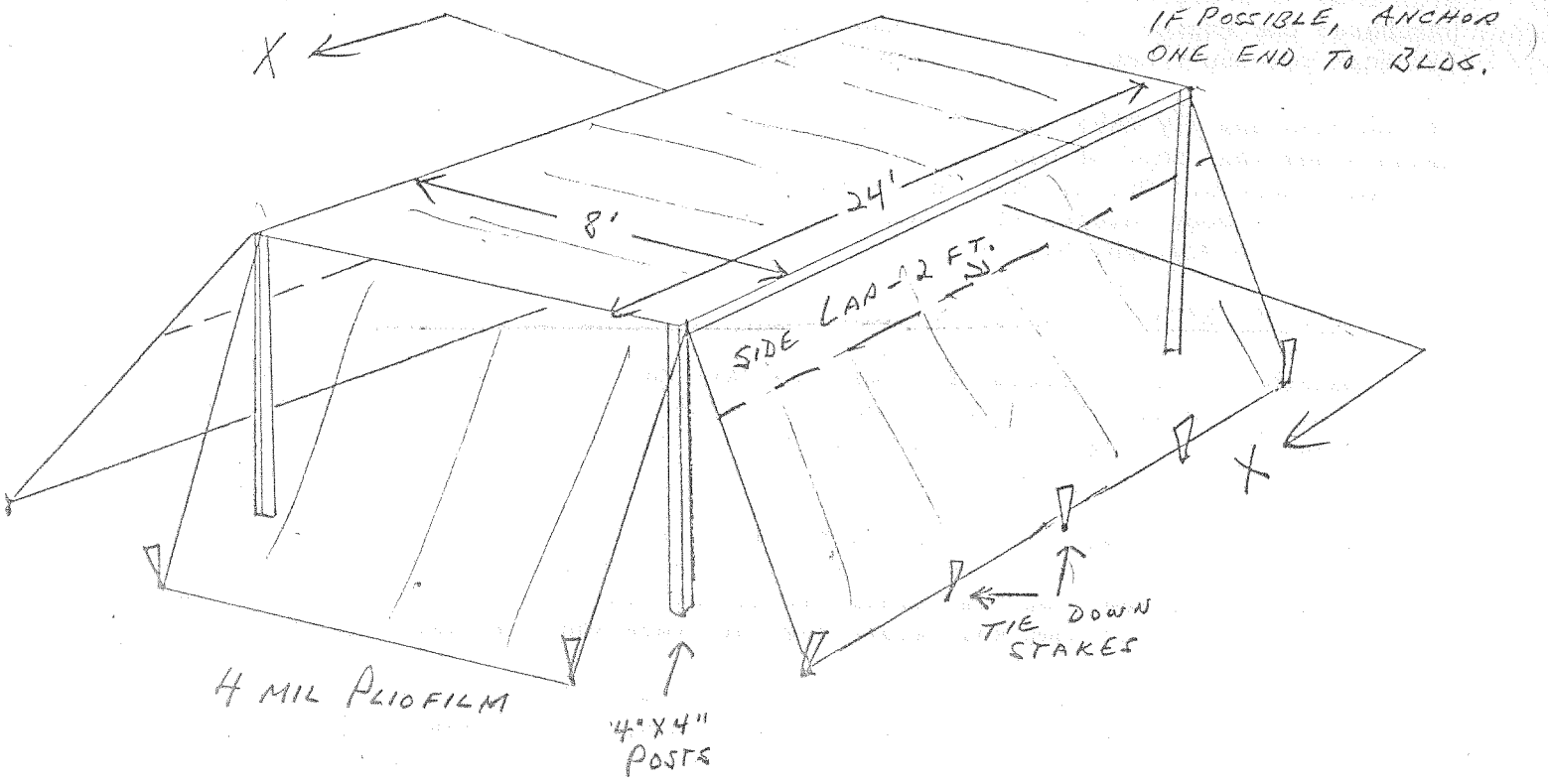
In answer to a question psed by DR. DON GERNER, a dentist out in Kimball, Nebraska, the biplane version of Fly Baby is coming along slowly but surely. Pete Bowers sent us a couple of photos recently that will give a general idea of what the ship will look like. The glossies are at the moment out for negatives and we hope to have them back for next issue.

Pete explained that the photos do not do justice to the ship but will be something to think about until he does get it into the air.

Pete has said on several occasions, and repeated it recently, that he will not release drawings, data, specifications, etc. for building the biplane wings, until he has proven the new ship. Pete has always placed pilot safety above all else in his design and the biplane wings are to be no exception. It is this concern for safety that has earned Fly Baby her excellent safety record and will continue to do so. So, until Pete gets the biplane wings completed and flight proven, don't be in any hurry to start yours.

FB-1 SHELTER
BY BOB GAEDE

NOTE: PUT USAF STAR AND "N" NO. ON ROOF IF LOCAL WINDS EXCEED 50 M.P.H.!



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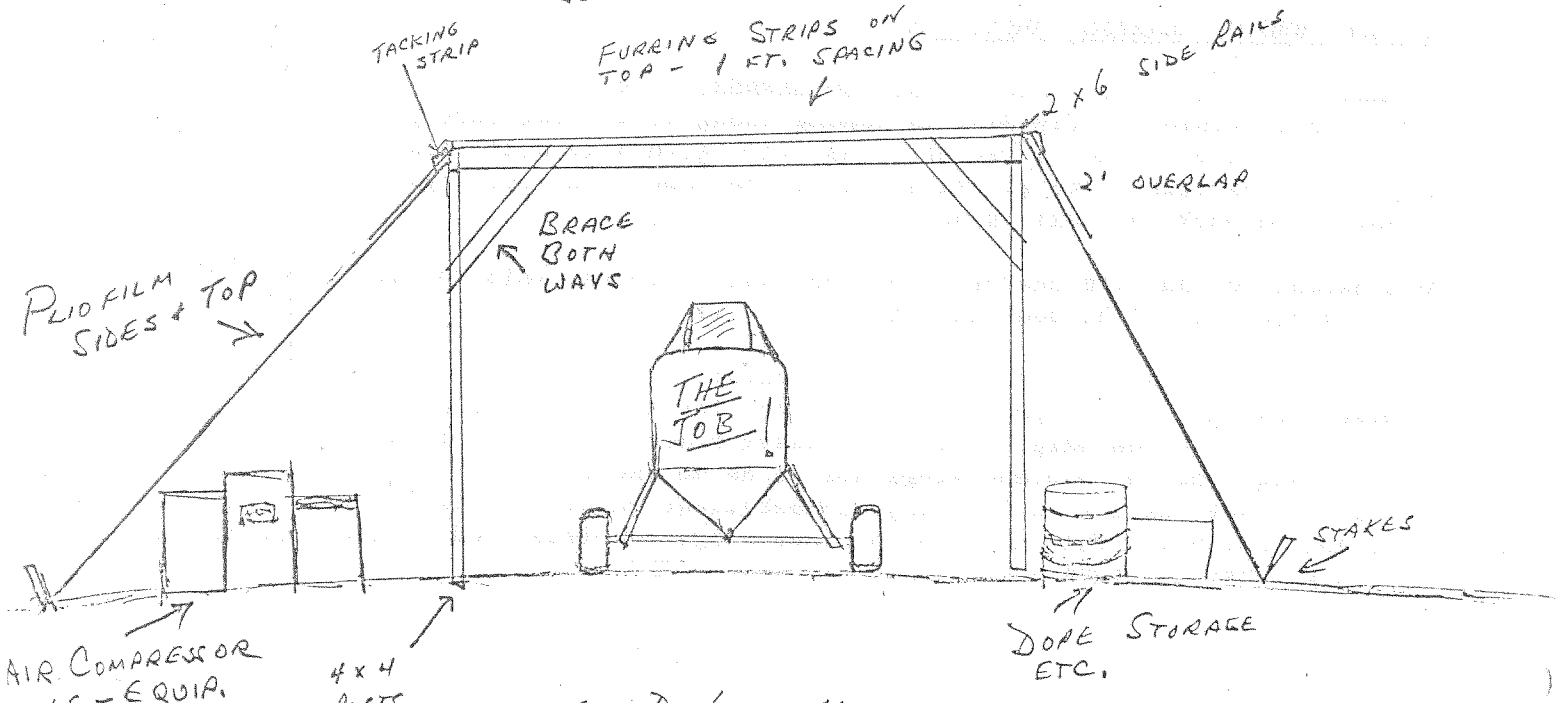


FOR DELUXE MODEL -
ADD T.V. - STEREO -
BEER COOLER - COFFEE URN
BUNK - ETC.

LATE FLASH--------JACKETS AVAILABLE

Just received word from ERNIE HARBIN that he has a deal set up on some jackets that were discussed at Rockford this year.

It all came up when someone suggested that the Fly Baby group needed an emblem, shoulder patch, cap or something distinctive for Fly Baby builders and fans only. Ernie suggested the idea of jackets as being the most practical and agreed to do some research. Little did we expect to have such a quick answer. Here is Ernie's letter.

"The jackets are 2 ply Nylon, waist length - they are a pitchers warmup jacket, if that helps, maroon in color.

The sizes are:
S - 36
M - 40
L - 44
XL - 48

The sizes can range two sizes either way. If someone wanted a 42, he could use either a M or L.

The jackets will have FLY BABY in four inch yellow letters on the maroon Nylon, on the back of the jacket.

It takes approximately 4 weeks for delivery and must be ordered in S-M-L-or XL.

The price is $8.75, including shipping, and the money must be included with the order. Would like to order as many as possible at one time.

Send your order and money to ERNEST D. HARBIN
5706 SUSAN
FLINT, MICHIGAN 48505

FAREWELL TO A FEW

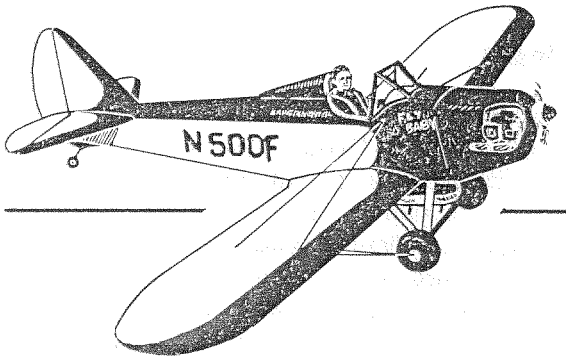
This is the last chance we will get to say thanks to those few who have decided not to stay with us another year. Your help and contributions are appreciated.

It has been a long "year", almost 15 months, but it's been fun. We have enjoyed doing it and hope you have enjoyed getting it.

The best of luck to you on your project, and if we can ever help in any manner, don't hesitate to call or write.

If you haven't renewed, this will be your last issue. Should you change your mind, drop us a line, and we will put your name back on the mailing list. Being a member of the Bulletin is not a prerequisite to friendship and we would like to have progress reports on you ship and especially the "first flight" report.

Thats' it for this time "ah reckon" and will be shooting for the new letterhead on the next issue. See you then.



fly baby bulletin

C/O Hayden Ferguson
114 White Drive
New Albany, Mississippi 38652

ISSUE NO. 13 JULY, 1968

What better way to start the second year of publication than with a new letterhead that leaves no doubt about whose banner we are carrying. Our thanks, on behalf of the members to JACK FERENCE of Reynoldsburg, Ohio for this fine piece of artwork. You will be seeing more evidence of Jack's talent in future issues.

AS PROMISED, SOMETHING FOR THE LADIES.

Since quite a few guys have admitted that their wives read the Bulletin first simply because the mail is delivered while they are at work, we will throw in this little narrative early. Maybe in this manner the lady of the house will get this far before the "old man" gets home and takes it away from her. (Sometimes in our secret Walter Mitty daydreams, we conjure up visions of a frantic struggle over who gets to read the Bulletin first.) Well, why not? After all, Snoopy gets to do battle with the Red Baron in the same fashion!

The lady who wrote the article has referred to herself variously as "Granny", "A Believer", and a couple of other similar terms, but is in fact MRS. FOREST MILBOURNE of South Bend, Indiana. We had the pleasure of meeting the Milbournes at Rockford in '68 and as expected found them to be a wonderful couple. Forest is a "typical" Fly Baby builder, whatever "typical" is. That statement alone is grist for several pages of copy. Suffice it to say that he is a great guy with the usual enthusiasm and spirit of all Fly Baby builders. Mrs. Milbourne, as it turned out wasn't "Grannyish" at all. In fact, if she is a "granny", all grandmothers should have it so good. She is, however, a warm, vibrant person with whom you feel at ease the moment you meet her. Nowhere at Rockford could you have found anyone with more vitality and enthusiasm. You can bet she scrutinized every Fly Baby on the flight line and could instantly point out any deviation from the original plans. Anyone who thinks he can "put her on" about something concerning Fly Baby is just kidding himself. All in all, she is one of the most wonderful people we have met and our only regret is that we didn't get to take Forest up on his offer of a cup of coffee at their tent and have a chance to visit with our "Believer" more. But, as everyone is prone to say when it is time to leave Rockford, "just wait till next year".

After you have read the article, take a look, if you haven't already at page 47 of the October issue of Sport Aviation. That "Happiness Is" was Mrs. Milbournes first contribution to the Bulletin and as you can see, proved worthy of gracing the pages of our "trade journal".

Guess we had better get on with the narrative before the "old man" gets home. It starts on the next page.

Three years ago I was about to give up hope on a new top or even a minor repair on an antique dresser; when out of the blue he asks: "Would you like a top on the "thing" upstairs?" (When I recovered, there was a 4x8 sheet of plywood gracing the dresser top.) It was there for a year, in fact. As the evening wore on, more strange things began to happen. Would you believe a dozen or so C-clamps, tounge depressors, paper cups, wax paper, sand paper, glue brushes; coping saw, chisel, tack hammer, nail set, teenie-weenie nails, a magnet bar, a jar of foul smelling goop, a bundle of rags, a box of cigars, and many things I didn't even recognize. I searched the ad section of our local to see if we were having a rummage sale in the near future!

Then it hit me right between the eyes. I recalled a very thick bundle coming in the mail from Pete Bowers! As I stumbled down stairs I faintly heard the words drifting past my ears: "How'd you like to build a Fly Baby"?

As I said: this was three years ago. The bed room almost looks like one now. As the monster grew too big for the room it disappeared to the dining room, the garage, and the basement.

A call came one night and from the ohs and ahs I thought sure there was an emergency somewhere. There was. A basket case!

The following week I was introduced to the basket case something like this; "Hon, this is a Rearwin Ranger! How about that, a Ranger, no boots or horse!

That's wat it was alright; Six months, fifty-two finger nails, as many knuckles, and a ton of sandpaper later she was airborne. She made her debut at Rockford, '67.

While all this surgery was going on, the Fly Baby got a few gentle pats and a few endearing words of promise every night. No, this wasn't in the bedroom; although there were two more upstairs; I was given the privilege of a place to sleep. (His generosity never ceases!) He found a hangar that almost had a roof and that's where the bird was hatched.

Now, back to the Fly Baby. Talk about neglected children! I do believe we have convinced the neighbors, 'cause the neighbors kids have told their fathers and they drop in ----just to prove their kids are off their rocker, I guess. Grand Central Station never had it so good.

Really, ladies; it isn't so bad. I have only one major problem at the time. The many men coming to the house has aroused the suspicion of the sedate and staid womenfolk in the area... Guess they are wondering if Ole Granny is up to some "hanky-panky"! (Maybe that's the answer to the tight patrol of the local police in the area!)

Our place mats are sheets from the Pete Bowers Design of the tail section; our stainless lays shining bright right next to a hunk of heavy gauge steel, our napkins smell like glue or sawdust, etc., but it is the best therapy for jangled nerves from jangling telephones, irritated customers, dandelion bedecked lawns, bird catchin cats, cigar burned desks and little things that uspet you.

The Fly Baby won't make it to Rockford this year, but Pete has issued her a number. She won't make it, but we will --- nothing less than "The Bomb" would stop us; even the Bomb wouldn't dare fall on Rockford.

Well, make it they did, and were' glad. Although their Fly Baby didn't, it appears from the progress reports that it probably will "make the scene" next year.

VARNISH & "THINGS"

DICK SCHUMACHER of New port Beach, Calif. is one of our favorite correspondents, although it is a somewhat one-sided affair with Dick doing most of the writing. The following is a letter from him that contains all sorts of info and we will just pass it on "like it is".

"With regard to the request for information on varnishing, I've had quite a bit of experience as a boat owner for several years, and for what it's worth, here goes.

Any Good grade of varnish will hold up well inside. Its' the sunlight that gets it. On the interior where you just want protection, just splash it on. Two or three coats without sanding should give good protection. Exterior, or where you want a fine finish, about 5 or 6 coats with sanding is necessary and when exposed to weather, figure on sanding and recoating at least once a year.

On my ship I am using a product called "Varathane" -90 Gloss, put out by the Flector Company, Inc. of Oakland Calif. This is my first try with it, but it was highly recommended and I'm sold on it. I'm using two coats, and the penetration is real good. Drying is good and from a few tests I tried, appears dope proof, both nitrate and butyrate. Where I want a good surface, I'm trying a first coat of Old Colony sanding sealer, 53-070. Old Colony Paint and Chemical Co. of San Francisco and Los Angeles puts it out.

Further, on painting, again from yachting experience, on the metal fittings I'm using Krylon, 2 coats of metal spray primer # 1317, and finishing with 2 coats of #1401 bright silver. These paints in spray cans have a rust preventive agent. They've stood up to the best of anything around salt water. It is a product of Krylong Inc. of Norristown, Pa. who is a subsidiary of Borden Chemical.

A dimension that was not clear on the plans was the bearing tube on the rear landing gear strut fitting on page 2-7, fig. 2-3. The rear tube section on this fitting should be 1-3/8" and the front section 1" even. The distance between the two is 1-1/8". The fellow who welded mine made the bearings even in size like the forward fittings and I had a little juggling to do on the front fuselage fittings. The dimension is critical if the strut dimensions work out.

On the aft turtle deck construction, on page 6-23, fig. 6-15, I found it more economical in material, much faster and better for holding shape, to cut the long strips from a piece of 1-1/2" x 3/4" stock rather than laminate as shown. Also building up former bows from plywood sections is much faster.

Now, for a question. J-3 motor mounts are scarce as hen's teeth and I have a 7 AC Aeronca mount. Has anyone put one on Fly Baby yet? Also how about exhaust systems? I want the J-3 cowl because it is part of the charm of the ship, but has anyone used the 7AC stacks with that cowl? The exhaust system is a lot cheaper than the Cub setup as shown.

Wheels and brakes are also scarce. I finally found some J-3 8:00 x 4 wheels after about 8 months of sending out feelers. How about some of those fellows who adapted another wheel-brake set up sending in some poop on how it's done. A few dimensions are a big help.

DICK SCHUMACHER. (Cont.)

I think if you can slowly build up info on every variation, it will be the biggest step forward we can get for the "Baby". Looking thru the catalogs shows that there are large price differentials, as some of the stuff becomes more scarce, and there are excellent substitutes if a guy wants to work them out. But once you have, spread the word and we will all benefit.

With regard to the firewall, Sta. 1; rather than have the firewall as suggested, it is much better to have the sides extend 3/8" forward of the uprights and get a lock seam.

It is true that the dimension on the top curve of the firewall should be 12-1/8", but it's usually less wasteful of wood to get a 2 ft. piece, and the metal firewall will cover up the discrepancy, or you can build it up with a strip of wood.

Also found the rear cockpit bulkhead to be 10" high, page 6-23, fig. 6-15, if I wanted to get a straight line on the turtledeck, which from checking the drawings seems to be true.

In a talk with PETE BOWERS, he said .060 would be plenty thick for the compression strut fitting. Much easier to weld and saves a few ounces. Also fits what I have seen on other wings for material size.

On page 1-2c fig. 1-20, the 1" dimension on the fitting brings the bolts right against the instrument panel cross member, which means cutting away on the member or dropping the holes. I dropped the holes to 1-1/16" centerline below the "beak" of the fitting. (plans show 1")

Page 1-29, fig. 1-22, detail "A"; here I used Weldwood "touch-n-glue" since the backup strip is non-structural. The glue is fast and no clamp problems and time.

I think 1/4" plywood is plenty adequate for the floor boards.

On page 6-9, fig. 6-5, the walking beam mount support does not show the angling called for in the text to clear the elevator cables.

On the stab attach, take note. 1/8" marine plywood is 1/8", plus. Save the 2-5/8" bend til last and when stab is complete, measure to fit.

Hope you can make out all this rambling. I am trying to fit Pete's plans without inovations as much as possible, since after all, it's his "Baby". Now with all this said, let me get back to work on my ship. (end)

NOT ENOUGH INTEREST IN "CABLE DEAL"

As you will recall, we asked for response in an earlier issue, to the idea of a group purchase of stainless cable for the wing wires. Well, we had a few who did respond, but unfortunately not enough.

To those who did write, we say thanks for the effort, but it appears we will have to do it on an individual basis. It was a good idea, but just not enough people seem to be ready for them at the same time.

AL JOHNSON'S WING MODIFICATIONS

Quite a bit of interest has been expressed in AL JOHNSON'S wing plan and consequently we would like to pass on some words of caution from Al regarding the wing. Al's comments follow.

"All the changes I've made are such that they should be considered "change for the sake of change". They are usually arbitrary and always a little capricious. They have, however, invariably been considered with the objective of retaining the wonderful flying characteristics of the prototype "Fly Baby". I have slightly less than 2 hours in the original and want to go on record as saying I wouldn't trade those gentle characteristics for all the modifications in the world.

As you know, Pete is always in an experimental mood, (we were discussing putting a pair of Luscombe wings on my bird until some "junker" hijacked them). Nevertheless, I'm sure he would be pretty upset if someone revised a basically sound design to the point of it becoming dangerous.

The wing modifications I have come up with do not represent much of a departure from the original, nor do they represent a wild flight of fancy. However, the modification does sacrafice almost two feet of span. This clearly violates Pete's original design concept in the area of span loading. I retain most of the area by going to a more rectangular shape, but I am taking upon myself the responsibility for any performance loss that might rear it's ugly head as a result of the span reduction. THIS WING HAS NOT BEEN BUILT OR FLOWN. It has been worked out by myself and BILL DUNCAN, our Designee. I feelit is sound, practical, and simple, but it is certainly unproven as far as I know.

I also changed the shape of the fin and rudder. The brilliant engineering wizardry and design logic that resulted in this change are based on one unassailable principle; viz. I don't like sub-rudders. As a side benefit accruing to the removal of the sub-rudder, I have added a degree or two to my landing angle and will probably enjoy an immense reduction in my landing speed, somewhere in the neighborhood of six or eight thousandths of a mile per hour. (Wow!, that much Al?) I also may collect more bounces. Here again I should note that I have not strayed very far from Pete's originally specified surface areas.

Among other changes are the extension of the turtledeck stringers to the rear of the cockpit. I have also trifled with the shape of the cockpit opening. These changes are mostly based on what makes me grin as compared to what makes someone else grin. (end).

Thanks Al. That's the kind of letter that makes us grin. The same kind of grin you refer to in the last paragraph of your letter. It also reveals you as another of "our kind" in this great group of people who are building Fly Baby.

Be sure to let us know when you test the wing and how it pans out.

POPE ON PROPS

Our old friend JOE POPE has some info to pass along regarding a question that came up at the '68 Rockford Fly In. The question, posed by one of our Canadian builders concerned the venerable old J-3 Cub, fitted with the Reed clipped wing and a 65 hp. Continental engine. With the Reed wing, a 75 hp. prop is used and gets more zip out of the 65 hp. engine. How come, Joe?.

"The prop is a 71-44 McCauley Klip-Tip, the engine has drilled rod caps and it is turned at 2800 rpm top and 2400 cruise. The Reed conversion plans recommend the 71-44 prop, but don't mention the rpm. Probably because the FAA would "frown" on it. The drilled rod caps are a 75 hp. item, but a lot of the 65's are equipped with them as they are interchangeable. The best thing to do if you don't have drilled caps is to get a set to go by and drill them the same way, or buy a set for a 75 hp. Cont. engine. If you drill them, be careful as the rods and caps are numbered and the holes are not all the same angle. I know of two Reed Clip Wings that have been flying with this arrangement for years and have never had any trouble at all. This is the easiest way I know to increase the performance of the 65 hp. Cont. It is inexpensive, easy and reliable. Would also be quite kosher on a homebuilt and the engine wouldn't be ruined for use on an ATC'd aircraft later on as there are no modifications to the basic engine and drilled rod caps are allowable on the 65. Lots of them have them already. In fact, I have only torn down a couple that haven't. (end)

Thanks Joe for the poop and our congratulations on your crisp, fresh CFI Certificate. If any of our "would be" aerobatic enthusiasts ever get down Lynchburg, Va. way, be sure to look up Joe and get you a couple hours of dual in the clip-wing. Joe can put her through her paces well and can give you some good aerobatic time. His CFI ticket is new, but he is an old hand at aerobatics. You can bet that as soon as his ship is finished, we can expect a full report on the aerobatic capability of his bird.

BECK 'N CALL

The Canadian registration of BOB CHAMBERS ship is CF-BEC and that translates freely as Bec 'N Call per Bob. Anyway, we had a letter from Bob last spring advising of the roll-out of his ship. He also sent along a nice color photo of the uncovered ship but since we can't print color shots we will have to wait till he gets us a black & white copy. Here is how Bob describes the roll-out.

"As my wife says, Spring has arrived and you never know what is going to grow in the Chambers back yard! The occasion was the first assembly of the bird. What a thrill it was to stand back and see 2 years and 4 months of effort start to look like an aircraft. Not exactly a four engine Lancaster, but to me --- better, in so many ways." The big push is on to have Bec 'n Call airborne in a couple of months, but like DON HOOVER, I find work keeps interfering with my hobby. So, work might have to suffer a little. (cont.)

BECK 'N CALL (cont.)

Bob Chambers closed his letter by expressing his appreciation for the help of the other Fly Baby builders in the area. Namely, GEORGE WELSH, ED COOKE and NORM KELLY. He says the Fly Baby "esprit de corps" is tremendous up his way. With Bob's ship nearing completeion, we should have a small squadron of Fly Babies in the Toronto area. The Welsh, Cooke, & Kelly trio flew into Rockford in '67 and only Norm Kelly's ship was missing in '68. Maybe Bob can make it four for '69.

ROCKFORD IN '70

There was a lot of talk at Rockford this year about who was going to be there next year and the year after that. When most of the talking was done, it appeared that 1970 is when a large number of builders expect to have their ship at Rockford for the first time. This talk naturally led to a discussion of when we might have the largest number of Fly Babies there and compete with the Pitts and Tailwinds for sheer numbers. Again, 1970 seemed to be the favorite target date.

In keeping with the general idea, we were approached by several fellows asking that we get the ball rolling by trying to find out how many builders would be finished by August 1970 and to encourage any that might be close at that time. There is nothing "official" or firm at this point, but the general idea is to try to get as many airplanes as possible to the '70 Fly In. We mentioned the idea to Pete Bowers and he, of course, thought it was a tremendous idea. This fits right in with his policy of being at Rockford every-other-year and '70 is when he will be there. In fact, he promised to be there with 500F whether it fitted his plans or not, if we could get enough airplanes there to make a good showing.

The trip to Rockford is an especially long haul for you fellows from the West Coast and East Coast and it ain't exactly a "stones throw" for us "Rebs". Chances are you won't be making the trip every year, so why not make it in '70?

It doesn't take a great deal of imagination to conjure up the thrill of 40 or 50 Fly Babies all lined up in neat array. This can, in all probability, be arranged if we let the Fly In officials know ahead of time about how much space we will need. The figure of 40 or 50 airplanes isn't dreaming either. There are more than that already flying, and in another two years that figure can climb a lot more. Just getting most of them to Rockford the same year is the big problem. If it turned out to be a big enough event, we could probably get a prime position on the flight line, not to mention the publicity for the planes and pilots.

Think it over. We have over a year and a half to prepare and that gives a lot of people the time to finish their ship, including yours truly, maybe. Progress is going to have to pick up on our own personal project if we are to make it.

For those with ships flying, it is only a matter of deciding yes or no, but those not complete, take a look at your schedule and see what you think. Then drop us a card or letter with you thoughts. If you don't like the idea, say so, but, if you think it will work and you want to help, say so. We will start a file on the project and let you know how it progresses. If enough show interest, we will start promoting the idea and report the results. If not enough think it is worthwhile, we'll drop the whole bit. At any rate, let us have you thoughts on the subject.

LIST OF COMPLETED FLY BABIES

This list is dated approximately as of October, 1968. If you can supply any of the missing registration numbers or the names and numbers of any ships not listed, please do so. Only planes that have been test flown should be included. Any help will be appreciated and we will update the list from time to time.

NAME	REG. NO.	NAME	REG. NO.
1. Bowers, Peter M.	N500F	29. Cook, Edward W.	CF-EWC
2. Lash, Robert	N6389T	30. Villenueva, John	N6542D
3. Frew, John	N74896	31. Quick, Jim	N4742
4. Guier, Hal	N86681	32. Johnson - Porter	N59365
5. Sampson, Ed	N4629T	33. Gillingham, Gifford	N74080
6. Welsh, George	CF-RXL	34. Guyton, Walter L.	
7. Elliot, Vern	CF-PIR	35. Enochs, Donald	N1373
8. Loken, Gordon		36. Banks, Douglas	CF-WLN
9. Steinbach, Karl F.	N609X	37. Mitchell, Robert	N7181
10. Bruggeman, Clarence		38. Silvaggio, Angelo	N422A
11. Copp, Bert	N3598G	39. Bell, Kenneth	CF-XEY
12. Bond, Elwood, M.	N374Y	40. Webb, Robert J.	N1878
13. Holmes, Linn	N7525U	41. Ward, Steve	
14. Hughes, W.	N74080	42. Taylor, Donald E.	N2207
15. Harbin, Ernest D.	N4284C	43. Whitehurst, Hubert	N1289F
16. Manasek, Francis	N4729G	44. Gonserkevis, A.J.	N6311
17. Rehling, Richard	N63498	45. Allen, Bob	
18. May, Wes	N93003	46. Elliot, Bob	N8716
19. Worden, George	CF-UFL	47. Williams, R.H.	N4610J
20. Bricklebank, Bernie	CF-SNA	48. Turner, Bill	N5955
21. Londo, Francis	N2288C	49. Portor, Emmor	N59351
22. Zediker, Richard	N366RZ	50. Barron, Rollin	N1584
23. Dunning, Dan	N1682	51. Grigg, Walter	
24. Peel, Walt	N612P	52. Fry, Bill	N59357
25. Boothby,	N4658T	53. Dzuba, Mike	CF-VTV
26. Hoover, Donald	N608X	54. Covington, Brown	N8371
27. Sanford, Charles	N30049	55. Burke, Jim	N4787G
28. Kelly, Norman	CF-SUT		

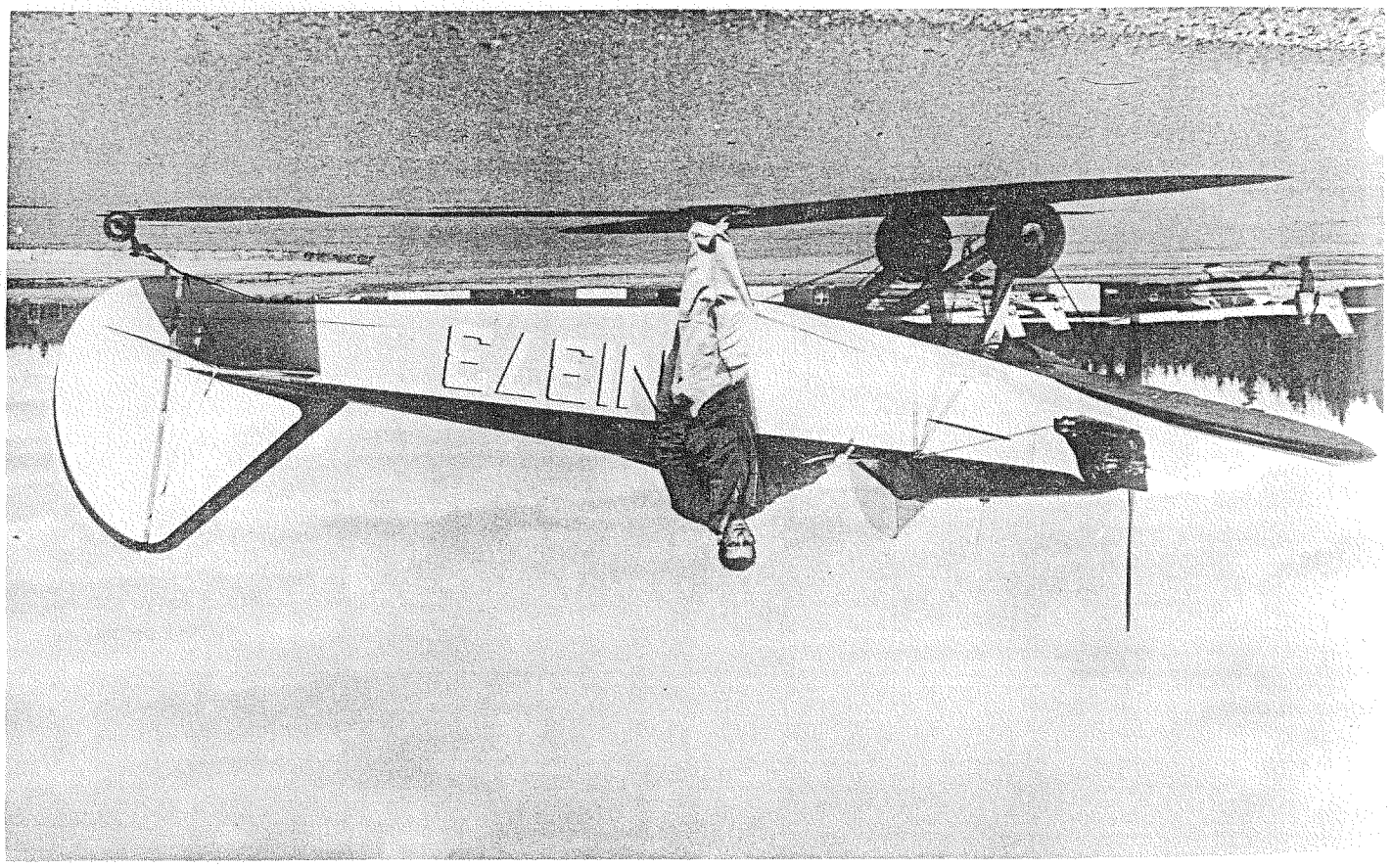
Since this listing was compiled with data from several sources, there may be errors, misspelled names, omissions etc. and we would like to have any corrections you may note. Also some may have changed hands since the original registration and we would like that info also. In other words, if you can add anything to the list, we want it.

PHOTO CAPTIONS

TOP: ROY BARKER making the first flight of DON ENOCH'S FLY BABY. Flight was made March 24, 1968. Photo was taken by PETE BOWERS from N500F.

Only changes from standard configuration are the one-piece windshield and an extra inch of height for the instrument panel. Engine is 65 hp. Continental.

BOTTOM: Here Don Enochs poses with his beautiful two-tone blue ship just prior to the first flight. Photo by Pete Bowers.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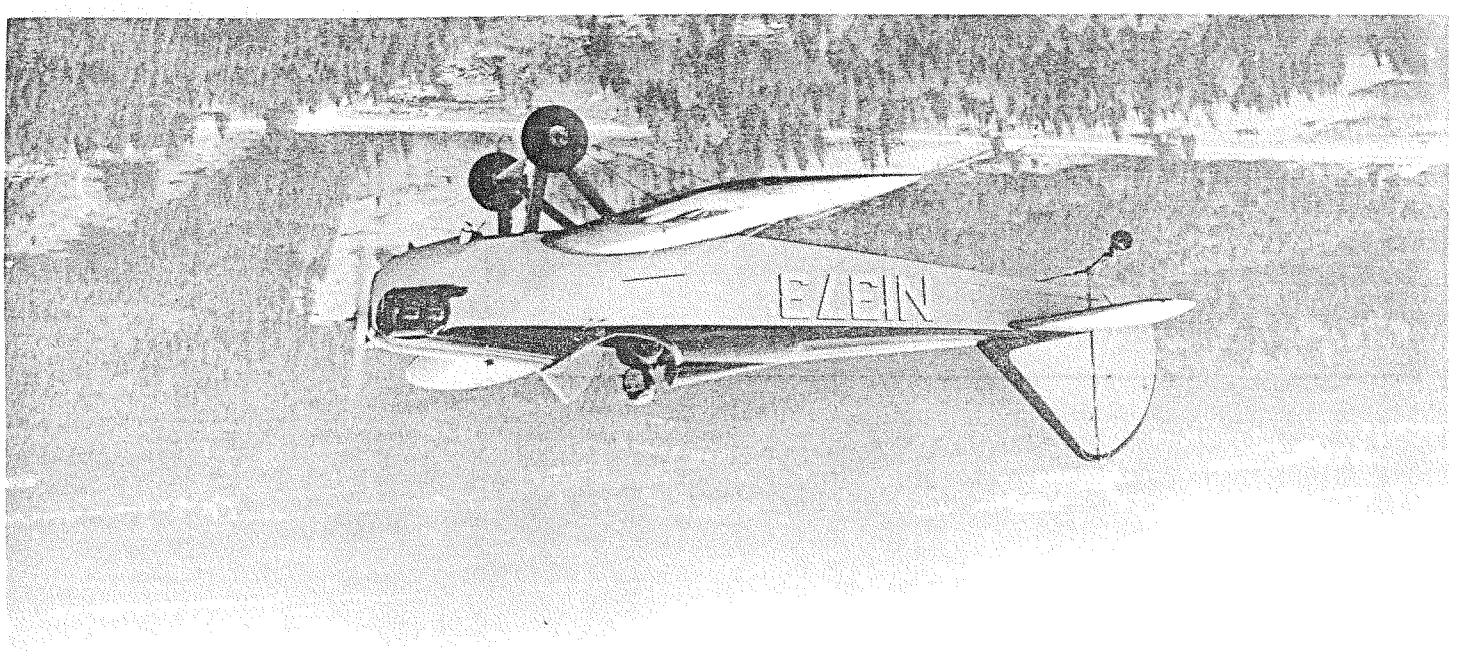
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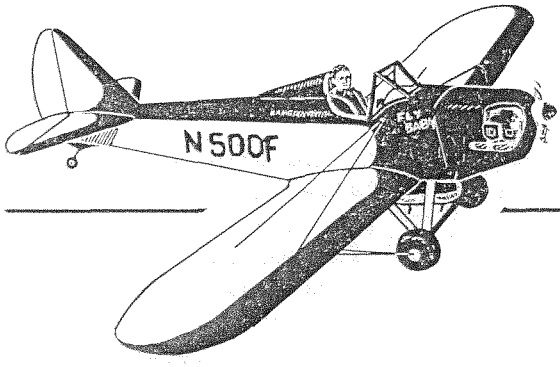

fly baby bulletin

C/O Hayden Ferguson
114 White Drive
New Albany, Mississippi 38652

ISSUE NO. 14

Well, good, bad, or indifferent, here it is again. As we hope you realize, it has been quite a while since a Bulletin cluttered up your mailbox, and if you get this issue, sooner or later you will get the remainder of the issues due on the second "year" of publication. The way things have been going lately, we use the term "year" with some caution. Suffice it to say that we still have 8 issues to go after this one, and they may take a while to get published, but they will make it sooner or later. We sincerely apologize for the delay, but before you throw it out, take a look at the contents. You might find something of interest.

To say that the gap in our publication schedule was "due to circumstances beyond our control" would not only sound trite, but would be quite an understatement. Please accept our apology and as always, our promise to do better in the future. The delay was caused primarily by personal problems and since this is a one-man show, it is tied hand and foot to our own fortunes. Most of our problems are now resolved and we are back in the swing of things.

To those who were concerned enough to call or write, we say a special thanks. If you haven't had a reply to a letter lately, then hang on and you will be getting one before too long. Our correspondence is way behind, but we are making headway slowly, but surely. Keep writing.

AT LAST, THE BIPLANE

The big news this issue is the biplane version of Fly Baby. Pete has completed it and you will have to work at it to miss it on the photo pages. Here is the poop on the new ship direct from Pete.

"Got the new wings on and have taken a few runs up and down the runway to check the rig before the inspector get to it to make it legal. Perfect lateral and longitudinal trim and gets off the ground even quicker that it does as a monoplane.

It actually "floats" in landing, something the other small biplanes can't do. There's a good reason for it. Like the monoplane, it has more wing that its contemporaries. Span is 22 feet, two more than the the EAA Biplane, biggest of the standard plans jobs. Chord 42 inches and wing area 150 square feet.

The conversion added 30 square feet to the wing area while adding only 46 pounds to the gross weight. This cuts the wing loading down from 7.7 pounds per square foot to 6.46, call it 6.5 pounds per square foot. Another reason for the good characteristics is that the biplane wings have a good gap-chord ratio. Gross weight has been increased by the amount of the additional weight, to 970 pounds.

"BIPLANE" Con't.

The lower biplane wing mounts to the same points and uses the same pins as the monoplane wing. The center section of the upper wing is installed ahead of the cockpit to simplify the pilot access problem. Real easy to get into - no squeezing in under a center section or banging knees on it. The bottom of the forward center section strut attaches to a stud at the top of the engine mount angles and the rear strut has a fitting that goes into the same fitting that holds the monoplane landing wires. The roll wires anchor to an extra piece of structure built on the front side of the firewall. The top of the firewall bulkhead is stabilized fore and aft by two tubes tieing it to the top of the engine.

The N-struts for center section and outer wing panels are built up as one-piece units by lamination in the manner of the wooden landing gear. Flying and landing wires are still 1/8" 1 x 19 stranded stainless steel wire.

Because of the more forward location of the upper wing, both wings are swept back eleven degrees to bring the center of lift back in line with the center of gravity. Combined with the dihedral, the shape of the wing tips and the relatively short landing gear compared to the wing gap, this makes the biplane Fly Baby look a lot like a scaled-down De Havilland Tiger Moth. This isn't exactly unintentional.

Ailerons are in the bottom wing only. They attach to the same point on the main controls as the monoplane wing, and are just as effective as the monoplane ailerons. Very little dihedral on the top wing, more, about four degrees, on the bottom.

The inspector is due at the airport soon to license it. After that comes the full-scale test program, then the job of making up conversion plans for all the guys that have been waiting for them. (end)

FLY BABY T-SHIRTS AVAILABLE

Look on the photo page and take a look at Pete Bowers T-shirt. If you like it and want one, the are available at $3.00 each, postpaid.

You can get the picture on either the front or back of the shirt. Specify mens or boys when ordering and whether large, medium, or small.

The picture is done by the silk-screen process in three colors - basic airplane yellow, with red trim and black detail, just like the original. The lettering is red in the same style as used on the original airplane. In fact, the lettering on the title sheet of the plan set is traced from a photo of the nose of 500F and the T-shirt lettering is traced from that. Hows' that for continuity.

One minor we might add, and that is where to get them. Write to:

S.A.A. Engineering
12020 Bellevue-Redmond Road
Bellevue, Washington 98004

Don't forget, specify mens or boys, and whether small, medium or large. Specify also if you want the picture, front or back. $3.00, postpaid.

"ROCKFORD IN '70" GETS BIG BOOST

As you will recall, there is a movement afoot to try and get a lot of Fly Babies to Rockford at one time in 1970 at the Annual Fly In. Pete Bowers has promised to be there if we can get a good crowd. Everyone we have heard from has been very receptive to the idea and the enthusiasm is growing.

Elsewhere in this issue we have reproduced a letter received from EAA President, Paul Poberezny which is self-explanatory. The letter leaves no doubt how he feels about it.

This should give some of us "undecided" crowd the gentle push needed to get our rear end in high gear and get our ship to Rockford next year.

"ROCKFORD THIS YEAR" HELP! HELP!

We regret that we won't be able to make it to Rockford this year and consequently will be grateful to those who do, if they will share their Rockford Fly Baby photos with us for the Bulletin.

Also we will be needing reports of the Fly Baby activities during the week so we can report them in the Bulletin. Please don't everyone sit around thinking others are doing it. This has happened before. Take notes and pictures and send them in. We will take it from there and report it to the others like ourselves who can't make it this year.

SOME "NEW YEAR RESOLUTIONS" (Better late than never)

Maybe the timing is a little off to you, but in keeping with the Bulletin's publishing schedule, here is a little verse by our "Believer". One of our own resolutions is not to print an issue of the Bulletin without a contribution by our Believer. Now, that puts the load squarely on her shoulders to keep us well supplied with material. Here is this month's rendition.

HAIL 1969!

I hereby Resolve, (as I did last year?)
To fix the lawn mowers toothless gear;
To patch the roof, mend the screen,
To "seat" the taps (both Hot and Cold),
And change the latch so it will hold;
Trim the trees, re-sod the yard,
See that the alley is again retarred;
Clean the cellar, hang the tools,
Donate some time to the Public Schools;
Join a Lodge--To participate
In local endeavors to integrate;
Donate more time to Youth, perhap
To close the Generation Gap.
These are quoted words from '68
Resolved in good faith from my lying mate;
He resolved it all again this year--
As he reverently placed Her on the gear!

And I Still Believe!

Likewise Granny.

EXPERIMENTAL AIRCRAFT ASSOCIATION

An International Non-Profit Organization Dedicated to the Advancement of Aviation Education, Homebuilt Aircraft and Private Aviation

OFFICES & AIR MUSEUM: 11311 W. FOREST HOME AVE., FRANKLIN, WISCONSIN

Paul Poberezny, President Ray Scholler, Vice-President S. H. Schmid, Secretary Arthur Kilps, Treasurer Audrey Poberezny, General Mana

PHONE 425-4860 AREA CODE 414 POST OFFICE BOX 229, HALES CORNERS, WISCONSIN 53130

Hayden Ferguson
114 White Drive
New Albany, Miss. 38652

Dear Hayden,

Thank you very much for the latest bulletin on the FlyBaby. As usual, it was very crammed full of information. Rockford 1970 for FlyBabies was very interesting and it would give me a great thrill to see 40-50 FlyBabies all lined up in a row. We will assure you of a complete row to yourself and will see that EAA awards a big trophy for the best FlyBaby in attendance. You FlyBaby owners/builders would be the judges as to who should get it.

We hope to someday have Pete Bowers' original 500F FlyBaby here in the Museum. We hope Pete hasn't forgot what he told me several years ago. But we have got to get the old bird around the country a few more years before it is retired.

EAA is growing in leaps and bounds and in fact, today, Sunday, I opened the mail for Audrey who gets it all lined up for the employees on Monday morning; it took me exactly one hour and eight minutes to open the letters with a letter opener and that's a heap of mail.

You fellows keep up the good work and don't hesitate to call upon us for anything.

Sincerely,

Paul

PAUL H. POBEREZNY
President

PHP/p

185


FLY
BABY


FLY
BABY
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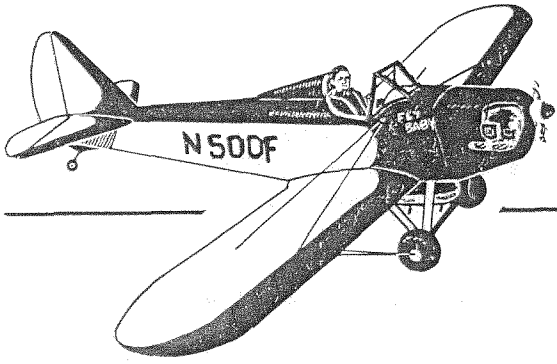

fly baby bulletin

C/O Hayden Ferguson
114 White Drive
New Albany, Mississippi 38652

Issue No. 15

Contrary to what you may have heard, suspected, or plotted, neither Ferguson or the Bulletin have departed this world. Granted, this past year hasn't exactly won any Pulitzer Prizes, but on the other hand, we survived.

The upcoming year looks a lot better from where we stand than the one just passed. With a little luck, this poop sheet could become a quarterly "monthly" instead of a semi-annual "monthly". We aren't making any rash promises as we have in the past, but the prospects are a little better. About the only thing we will promise you for sure is that sooner or later you will get all issues up thru number 22. After that, it will be a brand new ball game and we will cross that bridge when we get to it.

Our true thanks to those faithful few who have kept the faith thru this long dry spell. Without your encouragement and confidence, things might have not been as good as they were.

As always, if anyone has lost any back issues or didn't get their copy, just drop us a line asking for the one you need and we will send it along. A stamp, while not mandatory, is appreciated.

"ROCKFORD IN 70" HANGING FIRE

As we hope you will recall, there was a movement afoot to try to get a large number of Fly Babies to Rockford this year. However, since Rockford is now out of the picture and Oshkosh is "the place", we may want to revamp the schedule.

Not only may the new site change some of the pilots minds about going to the Fly-In, there is also the extra work load assumed by the folks at headquarters of EAA. They will certainly have their hands full just getting the show going this year. It might be more considerate to not bug them about private space for a row of Fly Babies this year. On the other hand, if enough ships are going to be there, it might be an "added attraction" with little extra effort.

If you think you will take your airplane to the Fly-In this year, please send me a card or letter and let me know. This for sure includes the ships that expect to be finished between now and August. If there is any probability of your being there, tell us. Also, we have had a "static" Fly Baby show up at the Fly-In in the past, and these count too.

We also would like to make a list of those who expect to be at Rockf#&$¢%*@# ! Dang it! That word is going to be hard to shake from our vocabulary. What we are trying to say is, "if you plan to be at the Oshkosh fly-in at all, let us know". We would like to make a list of the ones who expect to be there, with or without their airplane, so we can publish a list before the Fly-In . This will help people get together to discuss common problems. This sort of list was requested by several guys at past Fly-Ins, but we never got around to putting it together.

191

1970 FLY-IN Con't.

We will not have our own Fly Baby ready for the '70 Fly-In, but hope to be there anyway. Probably will try to nurse my old J-3 Cub up there if we get her cover back on in time. She hasn't been back to yankee country since she left Lock Haven and gets sort of balky anytime we get north of Memphis.

About all we will have room for in the Cub will be a sleeping bag and change of clothes and unless the motel is next door to the parking area, we may be looking for bag space in someones tent if they have a few square feet to spare. In the meantime, we are going to try to promote a pup tent.

If anyone up in the Oshkosh area gets any inside dope on the new Fly-In site, please pass it along so we can give our fellows first crack at it. The EAA letter was quite informative, but obviously a lot of work remains to be done by the good folks at headquarters.

TAPERED AXLE PROBLEM

We have a builder who has a run-out Aeronca Chief that he is robbing of parts for his Fly Baby and he would like to use the tapered axle if it is possible. It seems however that the method of attaching the flying wire fitting to the end of the axle poses something of a problem. If anyone has used this type axle, we would appreciate any advice you have.

The fellow who needs this information is BERTIS JONES, Route 6, Box 2, Oxford, Miss. He also happens to be the nearest Fly Baby builder and we didn't know he was building until a short time back. He lives about 40 or 50 miles from us and is putting his ship together in a barn. Like a lot of us, the cold weather shuts him down during the winter. Yes Virginia, they do have cold weather in Mississippi. As a matter of fact it got down to seven above recently and slowed things down considerably. Heck, we couldn't even move. Schools close, factories shut down, traffic stops and a good time is had by all. If any of you Yankee fellas decide to come down this way, you better be sure to reserve some decent weather ahead of time.

Back to the subject at hand, if you have the dope on the axle you can write Bertis direct, but we would like a copy to pass on to anyone who might be interested.

NEW FITTINGS SOURCE

DICK WEEDEN who was previously supplying Fly Baby hardware is no longer doing so. He has turned his operation over to RAYMOND NEW who is now providing the same service. Ray's address is 332 North High St., Janesville, Wisc. 53545.

Ray is doing basically the same thing Dick was doing and if possible, we are going to include his price list in this issue of the Bulletin. We have not seen any of Rays work, but have been told that it is up to Weedens standards, and if so, that is enough for us.

Since Ray and Oshkosh share the same state, he may be at the fly-in this year. He hasn't said anything about it in any of his letters, but it would give the builders a chance to meet him and he in turn might sell a few fittings along the way. On the other hand, he may not be able to get away that week and have to skip it. When we know, we will let you know.

BE WARY OF WAXED PAPER SUBSTITUTES

Here is a word of caution from ED MORE, EAA Designee # 214. Ed, of Simsbury, Conn., wrote relative to a previous article regarding waxed paper substitutes. Says Ed, "There is only one substitute for waxed paper to prevent glue flowout from bonding the part to the jig, and that is Saran wrap, aluminum foil or a similar non-adherent film sheet. The strength of bonded joints is extremely subject to cleanliness of the bond joint surfaces. Waxes, oils and silicone release agents are sure death for a bonding agent. Even contact with waxes can leave a residue on soft, absorbent wood which is very difficult to clean off properly. If you add the solvent effect of the volatiles in glues, then the wax can permeate the wood to a considerable depth. Saran wrap works very well as a release film and can be easily held down with a few staples into the jig. The use of wax, soap, or release spray is O.K. for models, but strictly "verboten" for man-size machines."

ANOTHER WIDER FUSELAGE

In the same letter containing the above warning, Ed also mentioned that he had to widen his fuselage to handle his 6'-6" frame and 220 lb. chassis. This need for a wider ship was obvious when Ed tried to sit in a friends Fly Baby. He was unable to get into the cockpit at all, much less work the controls.

The answer for Ed was to widen the fuselage by one and a half inches. He says that three quarters of an inch on each side may not seem like much, but it makes the difference in being able to get in the ship and not being able to get in. With this modification, Ed can even make it in with his 28' canopy seat pack chute.

Ed says, "If this modification is made, one should remember to change the andle of the stabilizer butts to match. I didn't and had to rig up a universal joint between the elevators. This was a real case of serendipity as when the universal went in, I did not have the chore of aligning 12 hinge holes at once to prevent weaving of the elevators."

(In case you have to look up "serendipity" like we did, you will find that in laymans language it means falling into the well known barrel and coming up smelling like a rose.)

PROJECT FOR SALE

We always regret having to put a "for sale" item in the Bulletin, but such is life. One thing we have found is that usually the project is given up for some reason other than getting tired of it or losing interest.

This project is that of JOE BYRNES, 416 Concord Drive, Streamwood Ill. 60103.

If you want to see a photo of Joe's ship, take a look at Page 15, Issue No. 9, in the upper right hand corner. Joe says it is exactly as you see it there and he will consider all offers. He has several instruments, some fittings, some steel, some wood etc. Sounds like a pretty good deal for someone.
Please contact Joe directly if you are interested and let us know if you work out a deal.

Best of Luck, Joe, and we hope that things work out in the future that you may be able to take another crack at Fly Baby.

WE HOPE "THE BELIEVER" STILL BELIEVES

In us, that is. We sure can't blame her if she doesn't. That item heading "Grannny" is our warped way of apologizing for not keeping our end of the correspondence active.

Here is a tidbit from our Poet Laureate that we have been hoarding for just such an occasion when we needed it.

After Rockford--1968

Yeah, the roof still leaks (but not the tent),
Hangar fee is paid, (but not the rent);
Alarm doesn't work, (Altimeter does,)
The sweeper still whines, (but that's because--)
He's been far too busy (for trivial things)
Like household gadgets, (they don't have wings).
So I'll call a repairman (a do-it-all mechanic)
To fix all the "trivia", (I refuse to panic!)
"I'll fix it tomorrow," (as the cliche' goes)
When tomorrow will come (that God only knows)
I'll keep my nerves steady, (can't lose my cool)
I'm resigned to the fact, (I married a fool--)
But a lovable fool, (I'm really not cryin');
Cause I'll rate first again--(After FLY BABY'S flyin'.)

The above is the last of our material from our "Believer" and we hope she will favor us with more. The Fly Baby "verse" has probably received more favorable comment than any other facet of the Bulletin. A great deal of it from non-builders.

Like a lot of builders, we are "blessed" with quite a few good citizens who "just happen to be in the neighborhood and thought they would drop in". What they really mean is "I wanted to see for myself if there actually was an idiot in our town who is building a homemade airplane in his garage". After the initial shock wears off, they invariably start poking around the bench and pick up an old copy of the Bulletin. It is then that we get the comments on the "cute little poems". Since very few of them realize they are in the publishers "office", we like to think their charitable remarks are sincere. There was one exception however, that we recall with a wry smile. One "citizen" made a facetious remark about the "idiot" that composed the Bulletin, and for the sake of the "status-quo" we agreed that the "idiot" had a few shortcomings. We then gently steered the conversation to less controversial subjects and as far as we know he is still not aware that he was addressing the "idiot". For some stupid reason it gives us a feeling of superiority. Explain that one Granny.

From some of the conversations and letters that we have had with various builders, there have been some rather amusing questions and comments from our unenlightened bretheren regarding the building of an airplane in ones home. If you have some that you would like to share with us, pass them along. This is in no manner meant to ridicule any of our friends and neighbors, but there are times when their ignorance of the subject gives us a chuckle. How about yourself.

LANDING GEAR LAYOUT BY JIM COX

Different builders have from time to time expressed some displeasure with their landing gear building methods and it seems there are about as many ways of laying up and jigging the gear as they are builders. Since few of them are sure their method is the best, they are reluctant to write about it. We have asked for articles previously on this subject but not too much has been written about it. We did finally however get JIM COX to give us his method. Jim as you will recall has contributed to the Bulletin previously. You may also recall that he is a newpaper reporter by profession and has a Certified Repair Station for his "hobby shop". Here is his report.

"At long last I can roll my Fly Baby around in the shop.

I have it sitting on the dummy main gear now. Made dummy legs out of the Novaply chip board that I used to laminate up gear legs. Doing this so I can weld up the sutff needed at the axle without damaging the for real legs. After welding will use the dummys for patternes to cut end angles and such for the real legs.

The gear legs are laminated from 2 layers of spruce and 2 layers of VG fir plus a core of 1½ mil birch aircraft ply. The 1½ mil core wasn't planned but had to use it as a filler. The final pass with the planer was about 1/80th of an inch light and when the four layers were stacked, they came out about 1 mil thin. So, it was either rework fittings that were made for 1" or add the spacer. Easier to add the spacer. They look real good and by using 1¼" Novaply chip board on both sides for clamping blocks they are straight. Also glued both legs at the same time with wax paper to separate layers. This saved time and also helped make stiff glue bundle. Used cheap 2" paint brush to spread glue. Time from start of glue spread to end of glue spread was 22 minutes. This includes time for lining up layers and nailing in place with pre-started alignment nails for the layers, as per plans.

For me the lack of base reference lines for the layout of the gear legs caused no end of trouble and doubt. I also tried to use the drawings published in the Aug./Sept. issue of Air Progress which were slightly better layout-wise. I finally established the axle center point as 9" ahead of the front spar on the side of the fuselage and erected a straight edge down to the location of axle on the dummy vee. The 9" point was based on last sentence of gear section that says the axle should be under the leading edge, or words to that effect. I hope I am not the only one who had trouble with this. (He isn't.) Would hate to think I was that stupid. (He isn't). After all, I can layout curved bars, circular stairways and things like that. All in all though I doubt that 1" either way would have much effect on ground handling. Just wanted to put it where the man said it should go. In thinking about it this could be why some of the fellows have found the flying wires did not line up with the fittings and had to make changes. I found that shortening the rear leg 1/8" would move the axle almost a ½" aft.

Also getting a 1¼" hole through the axle plates on an angle of 26 degrees was not the easiest thing. I used this method. After all alignments, the inside and outside axle plates were bolted in place and from fuselage checks established the center of the axle. This was center punched. Drill press table tilted to 26 degrees and gear was clamped down. Started with 1/8" drill and enlarged hole by 1/16ths up 1/2" . Then went to 5/8" and then 7/8". The 1" drill would not cut without slipping off the hole at this angle. So I gave up on drilling.
(Con't next page)

JIM COX GEAR (Con't)

Using the 1¼" ID brake plate sleeve that was already cut to 26 degrees angle I used the silver pencil and marked inside for proper hole size. I then used a 3/4" four fluted end mill cutter and free handed the hole to the drawn hole pattern. This was very successfull and will work as long as you keep a very firm grip on the leg and not let the cutter take the work away from you. Also since you need both hands to hold legs, have someone stand with their finger on drill switch in case the leg should get loose. Also I ran drill press at next to top speed to lessen chance of cutter digging in and taking the work away from me. Also very important part is to have back side legs shimmed up so they will freely slide on drill table and bolt heads not touching.

This probably sounds complicated, but in actual time you can cut this 1¼" hole through plates and gear leg in about 20 minutes. If you did it by hand, it would take several hours of hard work. It doesn"t follow good machine shop practice to the letter and you can get hurt if you aren't careful. The cutter I have is a Weldon 3/4" High Speed Steel with a ½" shank. The flute part is 1-5/8" long. I have used it several times for other odd ball holes that I have had to cut and didn't have drill for. For example I made the 1-¼" inside hole in my brake plates with it. The plates were laid out on small sheet of .090 4130. The inside holes for both were drilled to largest drill size which in my case is 1". The cutter then was used to finish to size. After inside hale cut. the outer diameter was cut with a Porter Cable Bayonet saw with 14 tooth short steel blade.

Don't try to hog steel with the cutter as it will violently take the steel away form you. Ma light smooth filing cuts around the diameter of the hole. Don't dig in more in one place than another. Keep your cuts smooth and leave the same amount to be cut all around the hole. To dig in is asking for trouble. Keep cutter speed high.

Also by using Silicone Carbide cloth discs on a disc sander on on plywood circles on a table saw, you can sand the edges of steel very rapidly to outlines. Cloth should be glued in place.

My brake plates for example, took less than 2 hours to make and I was in no hurry to speak of. The only hand work was to cut notches for brake fluid line in plates. This was two hack saw cuts to depth of notch, break out small piece with vice-grip pliers and file to shape."

Thats about it. P.S. "I am aware of proper way to cut angle holes by using steel plate beveled to horizontal and 11 this but too much trouble for two holes."

Well there you have it, and if you have a different and better way, or different or better way, we would like to hear from you. This is the kind of information we need and you have. Every builder has to solve a few dozen special problems in the course of building and most do it differently.

Don't hold back information or methods because you think they might make you look stupid. Any way that get the job done is the right way. A great deal depends on the extent of tooling you have available and most of us are limited. Consequently, a great deal of make-do, improvision, and yankee ingenuity are brought into play. Your own private, unpatented, weird way of solving a problem may be just what another guy a half-continent away is looking for. After all, as we have said so many times before, that's what the Bulletin is all about.

We can't pass it on if we don't get it. It's just that simple.

FLY BABY FITTINGS

PRICE LIST

1. ELEVATOR AND RUDDER HINGES WITH RUDDER HORN.....$15.63 Set of 9 Pr. or $1.88 per pai
2. WING LANDING WIRE SUPPORTS.....$7.19 With Spacers
3. ELEVATOR CONTROL CABLE HORN & TORQUE TUBE.....$1.88
4. STABILIZER ATTACHMENTS.....$4.69 Set of 4; 2 Front, 2 Rear
5. AILERON BELLCRANK.....$6.25 Set of 4
6. WIRE SUPPORT .....$2.19 Each
7. WIRE SUPPORTS.....$4.13 Set of 6
8. INNER ELEVATOR CONTROL HORN.....$3.84 Set of 2
9. OUTER ELEVATOR CONTROL HORN.....$4.56 Set of 2
10. COMPRESSION RIB SET WITH TUBING.....$25.35 Per Set
12. LANDING GEAR OUTER SUPPORT FITTINGS.....$8.70 Set
13. LANDING GEAR INNER SUPPORT FITTINGS.....$11.00 Set
14. TAIL WHEEL STEERING HORN.....$2.06
15. SWING LINK SUPPORT.....$2.35 Set of 2
16. BELL CRANK SUPPORT.....$3.75 Set of 4
17. SWING LINK WITH TUBING.....$2.50 Set of 4
18. AILERON HORN.....$4.25 Set of 4
19. WALKING BEAM SUPPORT.....$1.56 Set of 2
20. WALKING BEAM.....$1.25 Unit
21. FIN SPAR ANCHOR.....$0.75 Each
22. SHOULDER HARNESS ANCHOR.....$1.88 Set of 2
23. REAR L GEAR FITTINGS.....$4.56 Pair
24. FWD L GEAR FITTINGS.....$4.50 Pair
25. SPAR FITTINGS.....$6.20 Set of 8
26. HINGE SUPPORT WITH GUSSET.....$2.13 Pair

(Continued on reverse side)

27. WING HINGE.....$2.50 Set of 4

28. WING WIRE ANCHOR LEFT FRONT BOTTOM.....$2.00 Set of 2

29. WING WIRE ANCHOR LEFT REAR BOTTOM.....$2.00 Set of 2

30. WING WIRE ANCHOR LEFT FRONT TOP.....$2.19 Set of 2

31. WING WIRE ANCHOR LEFT REAR TOP.....$2.19 Set of 2

32. CONTROL STICK AND ATTACHMENTS.....$15.62 Set ready to weld.

33. TAILWHEEL SPRING AND BRACKET ON SPECIAL ORDER ONLY, SEND DIMENSIONED SKETCH FOR YOUR TAILWHE

34. L.G. WIRE SUPPORT.....$0.94

35. AXLE SUPPORT PLATES.....$6.25 Set of 4

36. RUDDER PEDAL ADJUSTMENT LINK.....$1.25 Set of 2

COMPLETE SET TOTALS $169.97

These fittings are accurately laid out, drilled, edge finished and die formed where necessary to exact Bowers specifications of 4130N steel. They are then sand blasted or buffed, and zinc-chromated one coat. At this time I cannot supply welded fittings, however, all parts for the weldment are furnished. This set includes only those fittings listed and does not include t following:

RUDDER PEDALS AND PEDAL MOUNTS P-6-3 Fig. 6-2
ELEVATOR CONTROL PUSH ROD P-6-9 Fig. 6-3
AILERON CONTROL PUSH RODS AND AILERON LINK P-6-8 Fig. 6-4
SEAPLANE REAR FLOAT STRUT FITTING P-2-13 Fig. 2-7
FLYING WIRES, AND BOLTS AND HARDWARE

All formed parts are formed according to minimum bend radius of stock thickness times 2 to the inside radius. All bends visually checked under 10 power glass for cracks. Your satisfaction is guaranteed and you are urged to return any defective part for any reason for replacement or refund. When ordering give fitting name, page number and number of the fittings as it is listed in this list - for example:

"Outer Elevator Control Horn Page 3-4 No.9"

TERMS

On orders less than $10.00 - cash with order. Over $10.00 30% with order balance C.O.D. On full set, orders, please allow 30 to 45 days for manufacture and delivery. All other orders 15 days. Prices subject to change without notice. Remember, these fittings are guaranteed unconditionally and if there is something about them that you feel isn't satisfactory, I want to know about it.

RAYMOND NEW
332 N. HIGH STREET
JANESVILLE, WIS. 53545

Raymond M. New
332 N. High Street
Janesville, Wis. 53545

BUY, SWAP OR SELL

Here is a note from Dwight Skelton, 34 Aldridge Lane, Watsonville, Calif. 95076 with a few spare items he has. Dwight's phone is (408) 722-4767.

"I have a tapered crankshaft for an A65 Cont. and also a prop hub for same. I also have misc. parts such as a cam shaft and timing gears that are extra parts. I understand the crank has been magnafluxed but it is not certified. Will sell crank for $75.00 F.O.B. Watsonville and $40.00 for hub. Both for $110.00.

I need a good rate of climb indicator, up to 2000 FPM. My mags are Case mags and I would like a pair of Bendix-Scintillas in good condition for a Cont. A65-8F. Contact Dwight if you need to work a deal.

Here is some information that is a little stale but may still hold good.

Warren Gavey of 8 Dale Ct., Walnut Creek, Calif. 94595, writes the following.

"I have a set of Cub wheels 8:00 x 4 with backing plates and bearings. They need one and possibly both expanders, both drums, and one puck is missing and one bearing isn't too good. No tires. I'm into them $65.00 and would be glad to get it out. At GEE BEE AERO, Reid Hillview Airport, San Jose Calif., they have new surplus expanders for 12.00 each and the drums new for 7.50. I got a set of reconditioned wheels with bearings, no backing plates, there for 42.00 and intend to go to mechanical brakes using Bonanza trail bike backing plate and brake assy. 28.00 for complete setup for 2 wheels including return springs and lever arm, and it fits without any alteration as far as I can see. Except cutting out the plate to fit on the 1½" axle.

DIFFERENT TURTLE DECK TREATMENT

Warren went on to describe his method of handling the turtle deck.

"I made my rear turtle deck intergral with the main fuselage and covered it with fibreglass. Haven't checked the weight yet against aluminum. I made up one layer of light weight cloth and resin flat on my work table by coating it with mold release and when this had set up I laid it over the formers and around the cockpit opening previously coated with a good coat of resin and held the whole sheet in place with making tape while it set up. This gave me a nice even curve over the formers. Then I made the headrest the same way and set it in place holding it and at the same time making nice concave curves along each side with masking tape. Then I laminated a second layer of cloth over the whole thing. I think about one good heavy coat of lacquer primer surfacer is going to make it really slick, but will let you know about that later. (Now is later Warren!)

NO PHOTO PAGE

We are intentionally skipping the photo page this issue to get in a little more copy. Will make it up later. We do need photos however for future issues and will appreciate your sending them along. Good contrast black and white print best. Color we can't print, but they sure look good in the scrap book album we are compiling and will try to have at Oshkosh.

MAIL NEEDED

We have our typewriter and enthusiasm both all warmed up now and intend to get this "poop sheet" back on the track. We need help and wont last long without it. If you have been putting it off waiting to see if the earth had swallowed us up, wait no longer. If you do, it may. Hurry up.

Open Previous Section FBB section eight