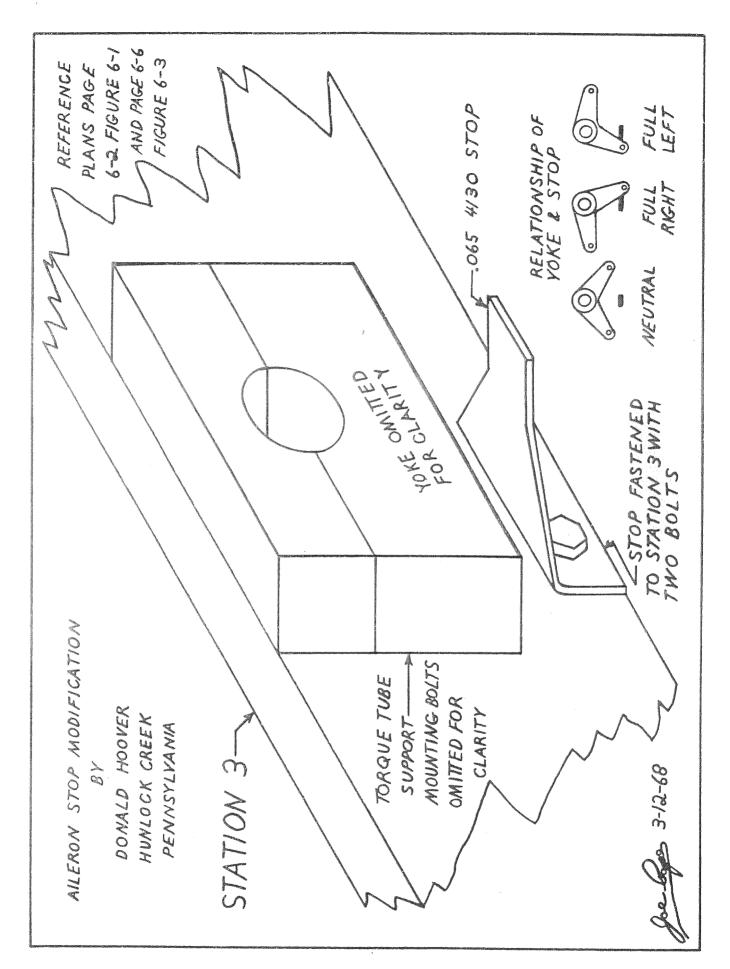
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# EXPERIMENTAL ARCRAPT ASSOCIATION

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

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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 H. POBEREZNY

President

DIRECTORS: PAgrry Zeisloft

Val Brugger

Chet Wellman

Martin Haedtler

Don Hart

Robert Gyllenswan

Robert Wales

SPORT AVIATION

PAUL POBEREZNY Editor RAY SCHOLLER
Assistant Editor

LEO J. KOHN Assistant Editor CLAYTON KING Advertising Manager

#### 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:

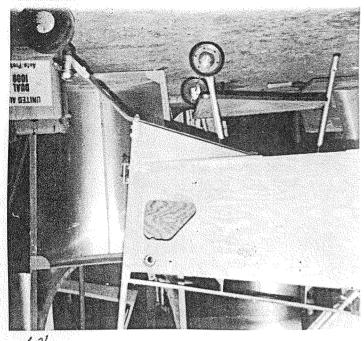
Top: This is a shot of FRANCIS LONDO'S ship that is quite an improvement over the photo of the same airplane in last month's issue. As you will recall, 2288Z was on her beautiful back in an awkward position.

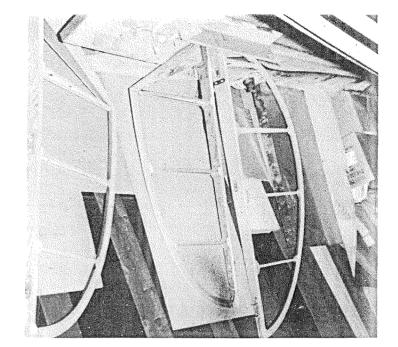
This is a PETE BOWERS photo and as usual, the photography is excellent. So was the caption Pete sent and we lost. Not really lost, but "misplaced" temporarily. He told us what colors she carried, but we don't remeber. Will tell you when we turn up the caption. Be sure to see this ship at Rockford. From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

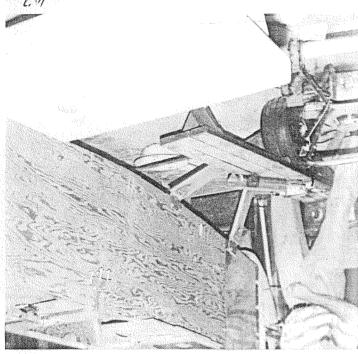
Bottom: All we can tell you about this ship, 366RZ is that it belongs to RICHARD ZEDIKER. This is also a Bowers photo and to be consistent, we lost the caption for it too.

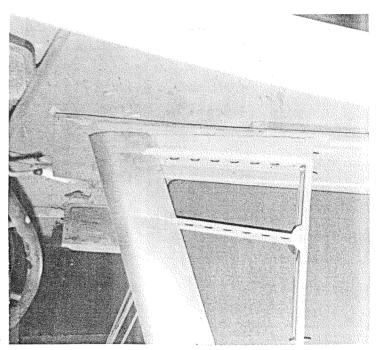
Notice the lack of a headrest fairing and the one-piece windshield. Dick, like Mr. Piper of Cub fame covered his gear struts. Again sorry we can't tell you the paint job, but will later.

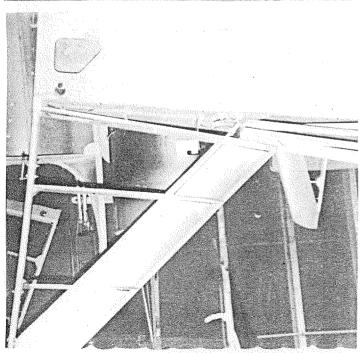
Page Sixteen 2/68

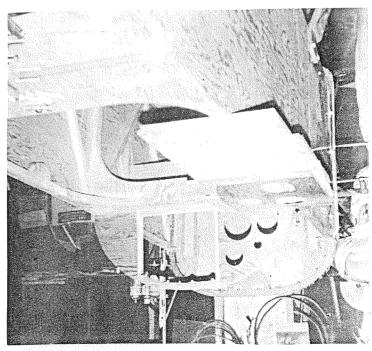








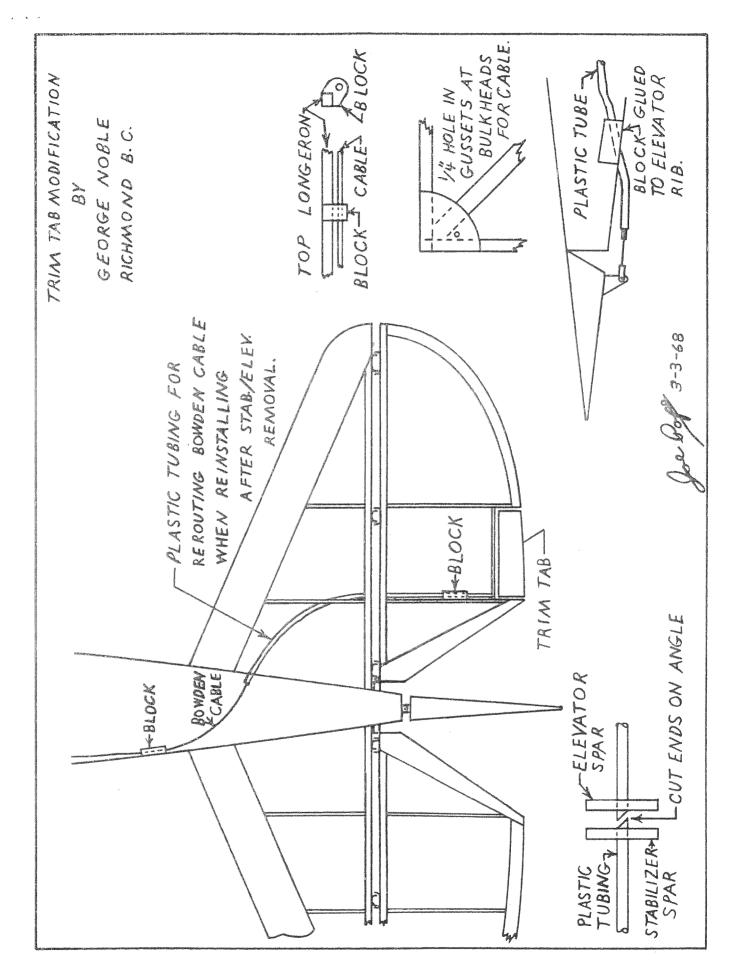












# THE FLY BABY BULLETIN

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 omifted 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 someone 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, Afgany 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 275/8" 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 dogsleg 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.

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#### 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 Gô-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 comecout on the "short end of the stick" when it comes to the time Joe devotes to the Bulletin. Being the wife of a homebuilder 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  $1\frac{1}{2}$  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 did not 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.

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# 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.

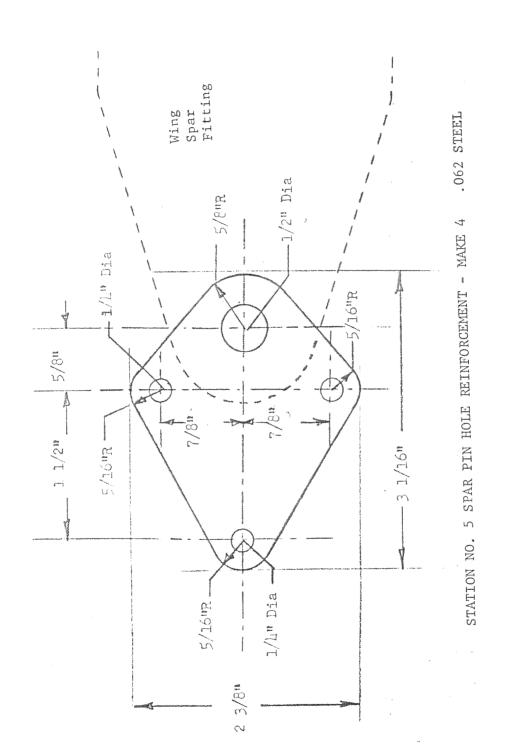
The method used on Pete's ship and Francis Londo's is to bolt steel plates around the pin holes as illustrated. (see next page). These don't look like much, but the three 1/4" bolts more than double the bearing area for the spar pin loads, and the plates fit into the available space. To avoid a lot of 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 III. 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).

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Page Eight

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Open Next Section FBB section seven