

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 $\frac{1}{2}$ ". (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 turn-buckles 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 necessary 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, (over 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 distributed 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 aerobating 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 local 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.

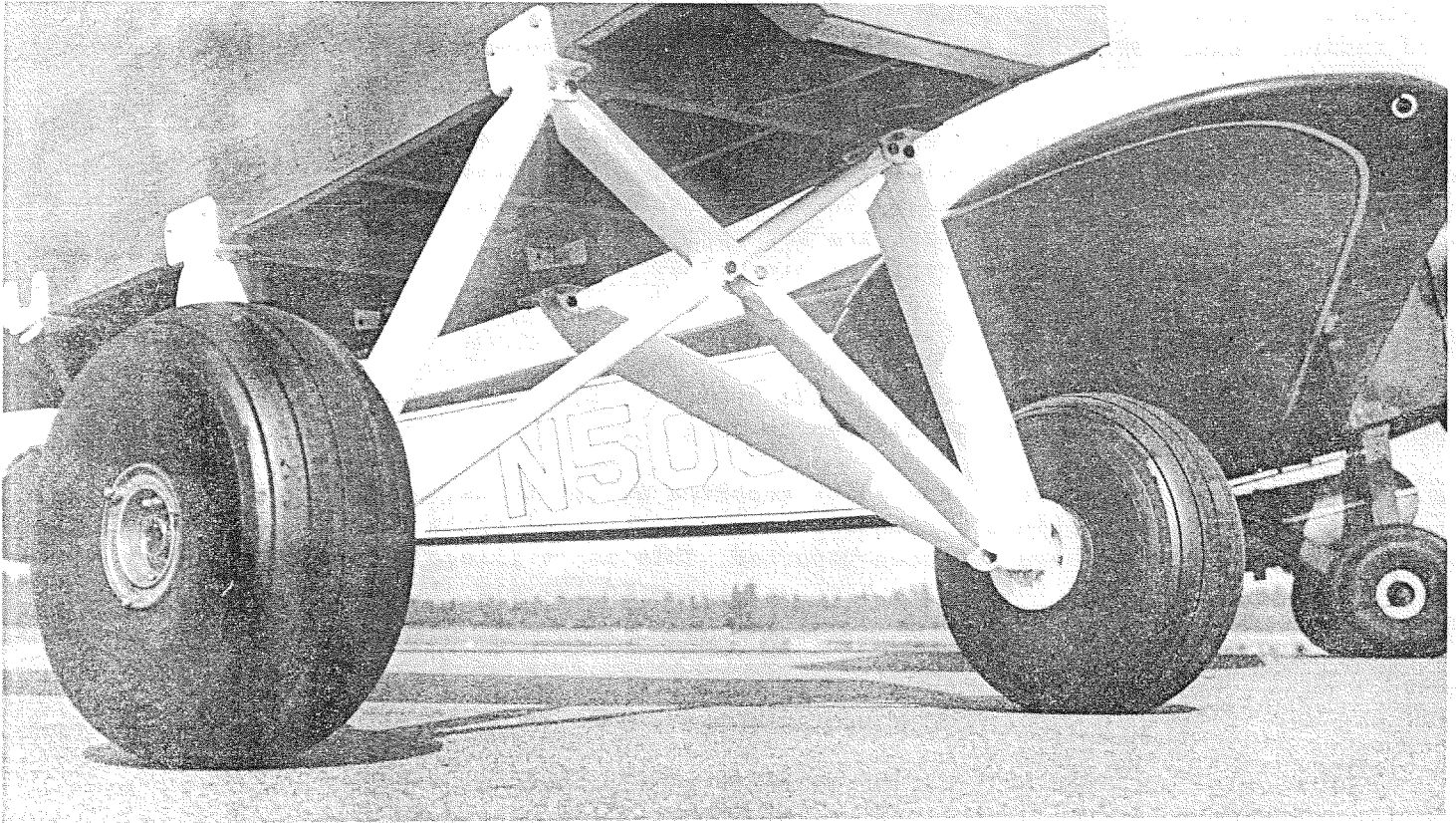


PHOTO CAPTIONS

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 with 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.

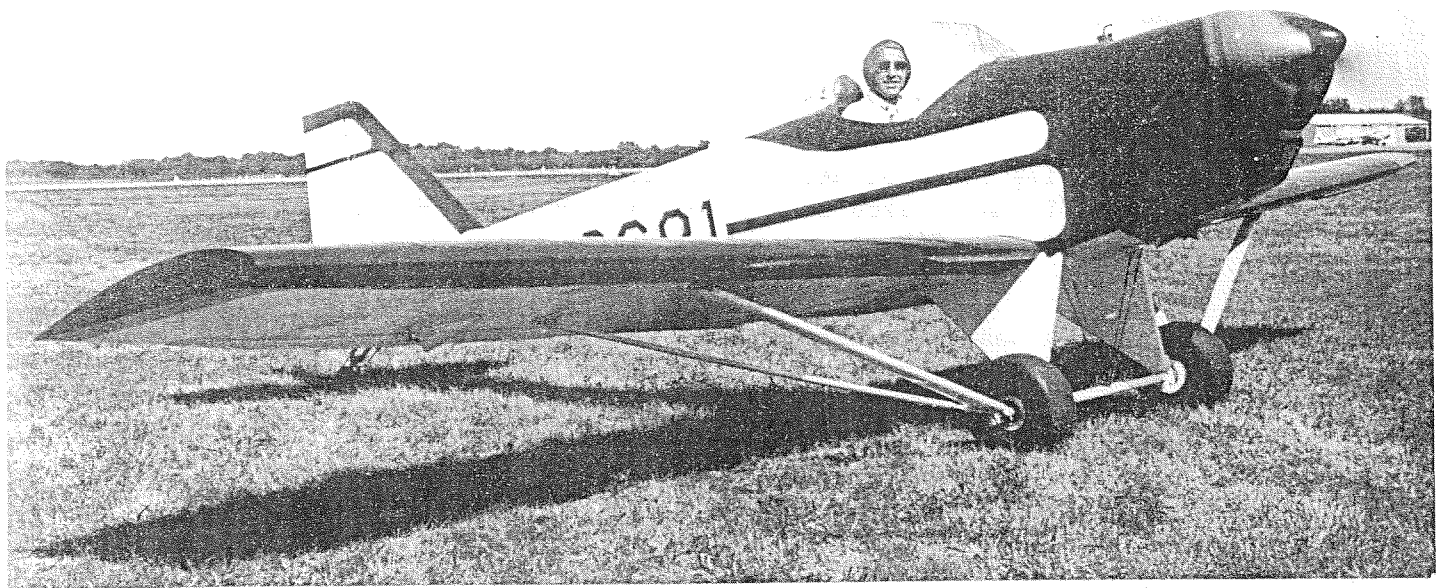
Bowers photo

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.

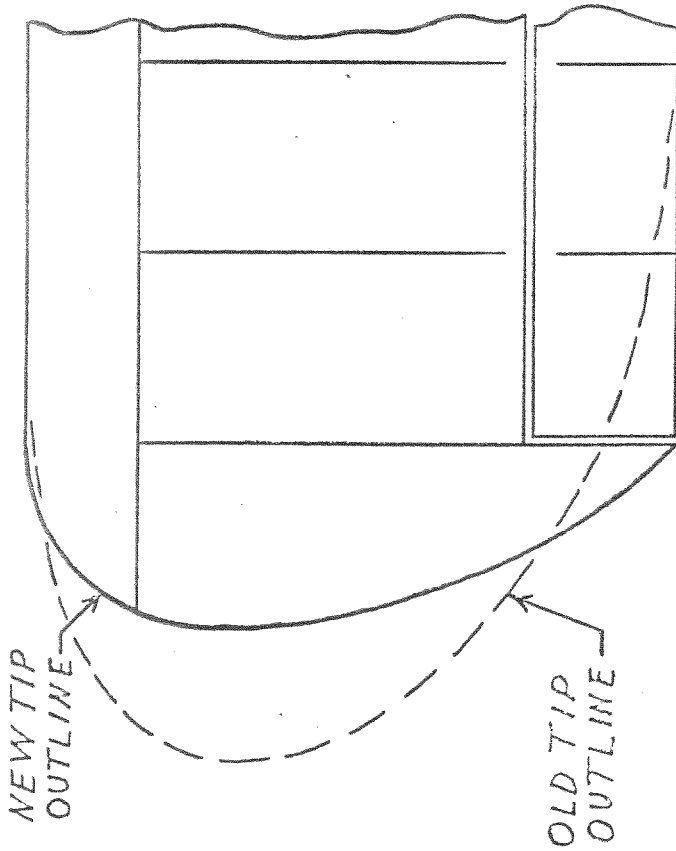
Hal feels that eliminating the wires and the attach fittings on top of the wings gives him a little extra speed. However, in eliminating the upper wires he has also eliminated the closed-loop of the bracing system. Since the struts are attached to the landing gear, the only things taking the roll loads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

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

Bowers photo



AL JOHNSONS MODIFIED WING TIP

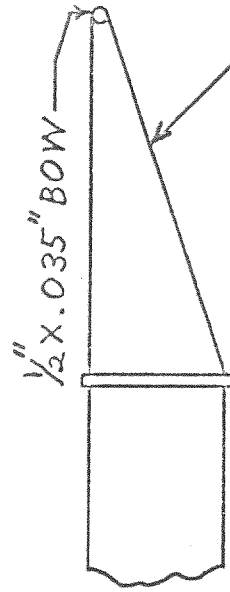
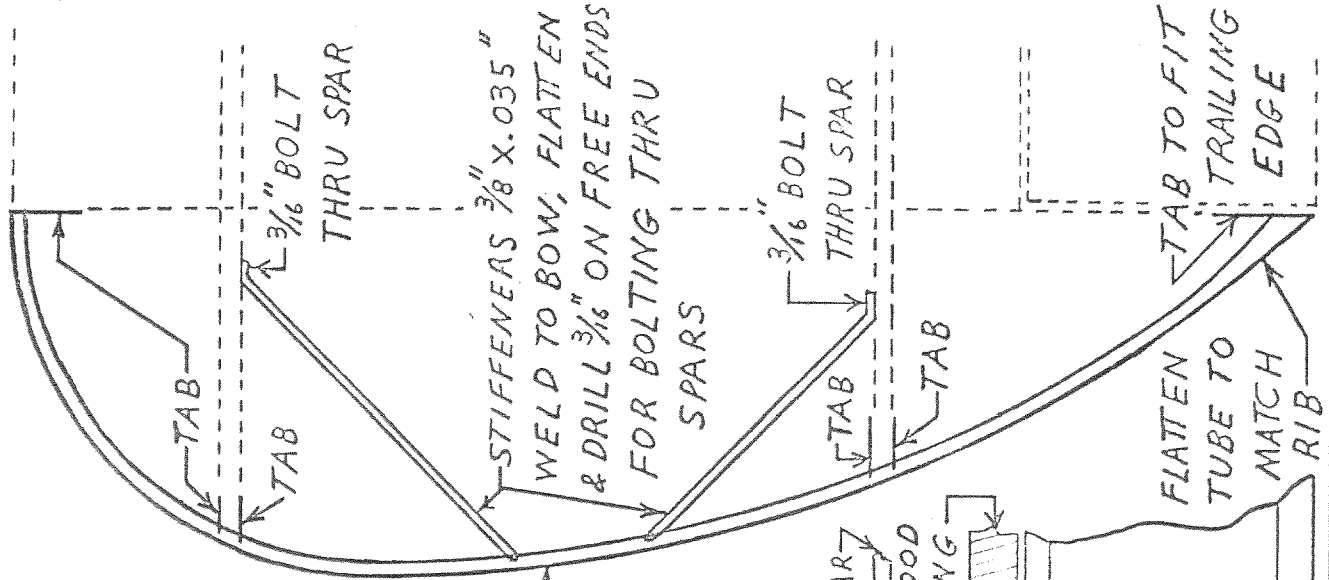


MOUNTING TABS
WELDED TO TIP
BOW

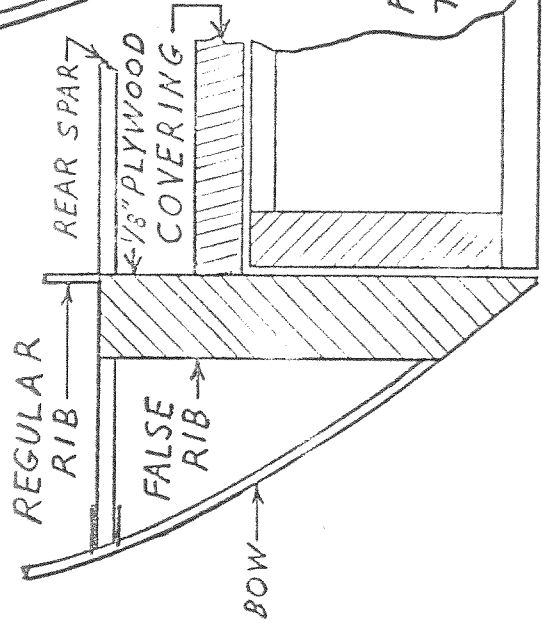


DRILL $\frac{3}{16}$ "
FOR 2 BOLTS
THRU SPARS &
TIP RIB

$\frac{1}{2}$ " X .035" BOW

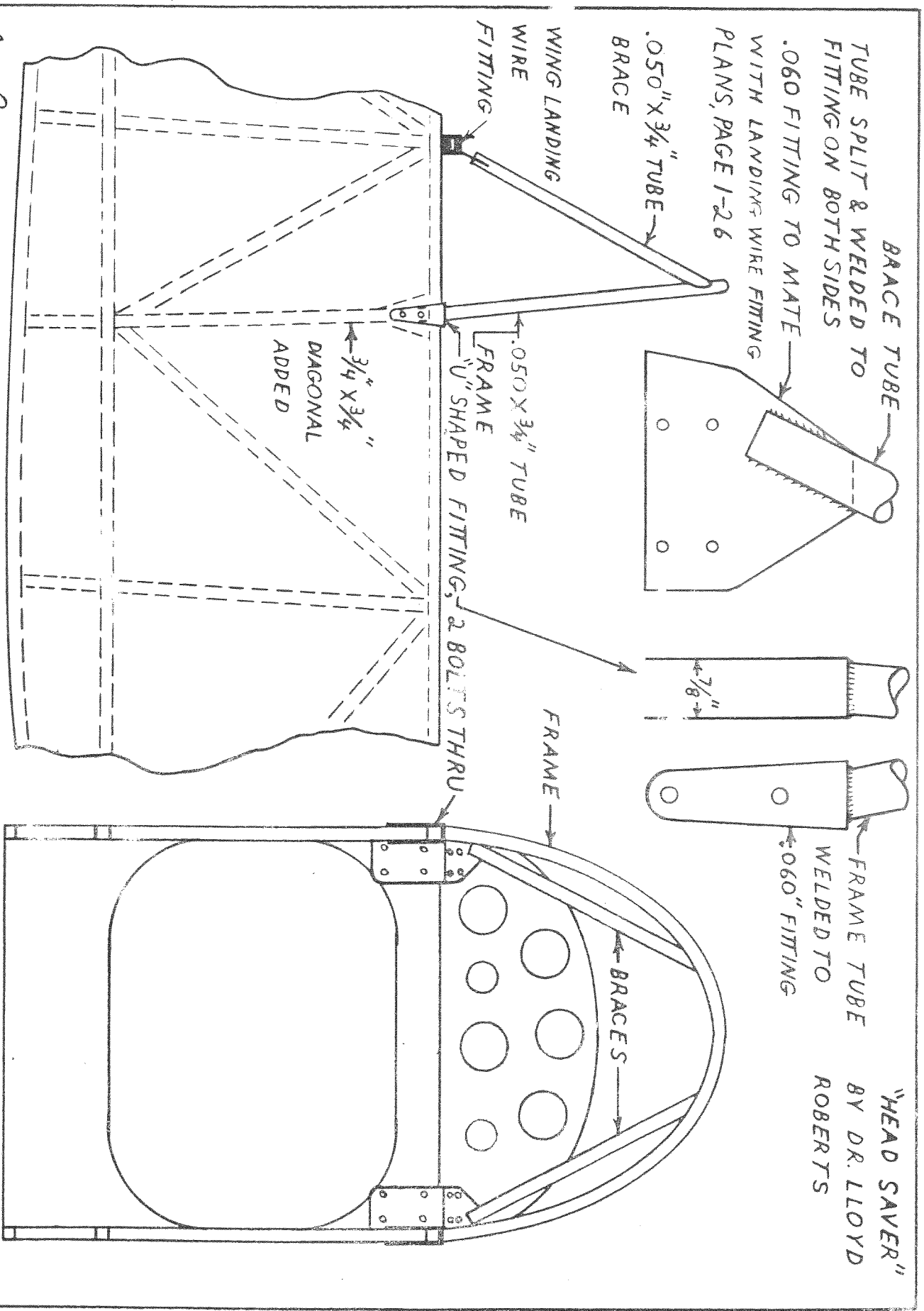


BEND BOW TO MATCH TOP LINE
OF RIB



Joe. Papp 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

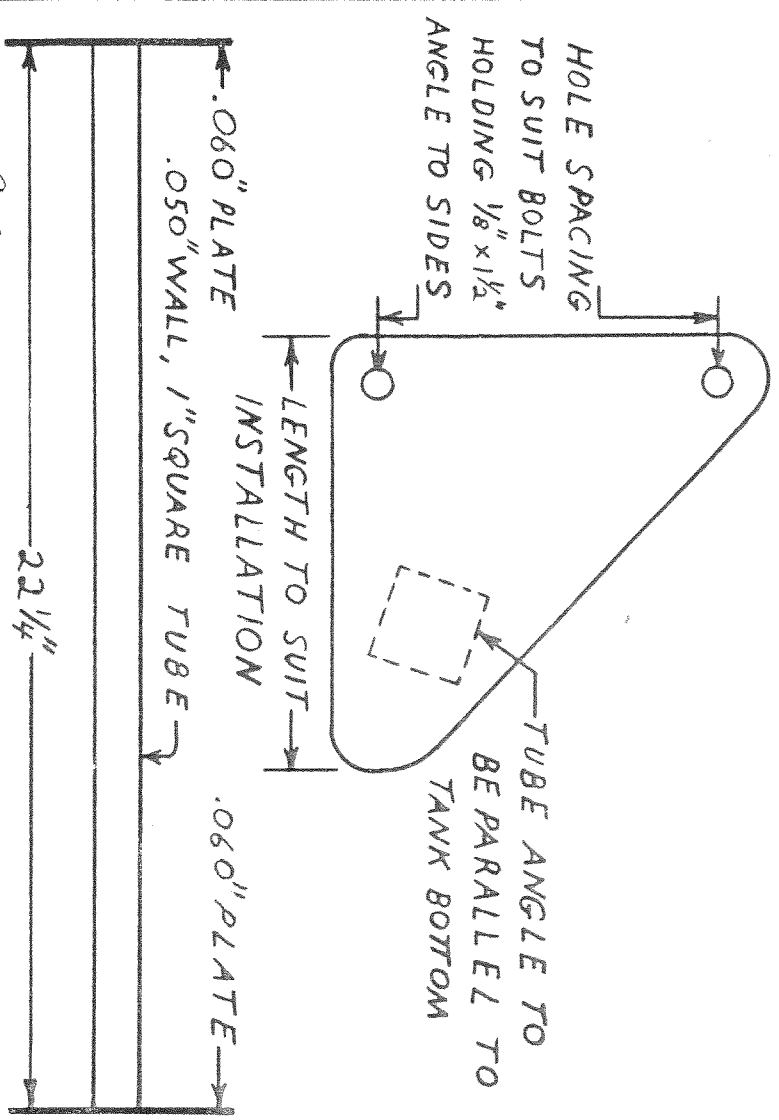
FRAME

BRACES

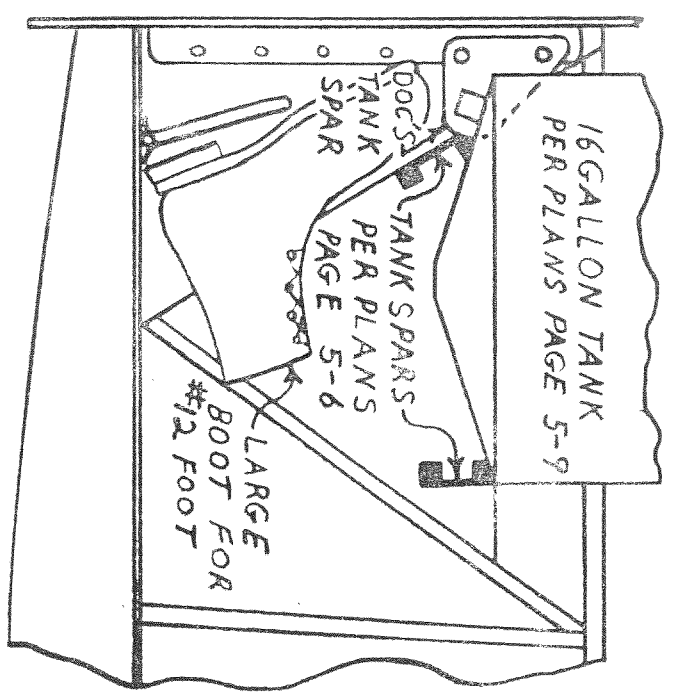
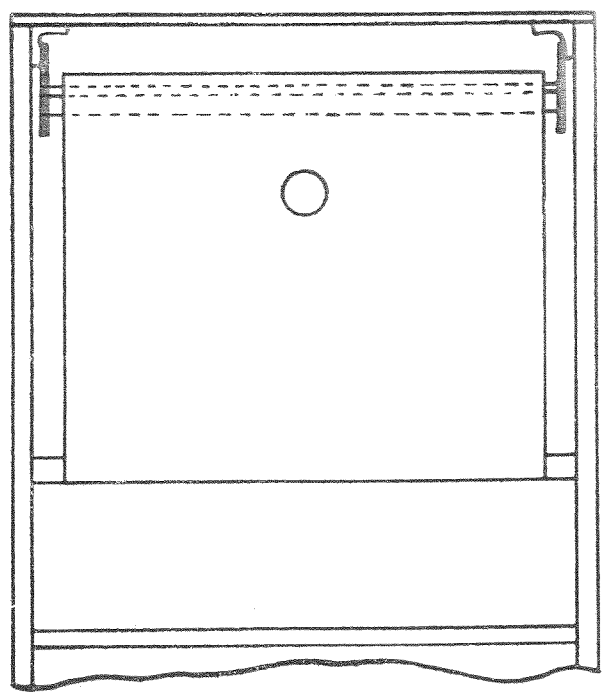
FRAME TUBE
 WELDED TO
 .060" FITTING

Doc Roberts 11-30-67

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!



Doc Roberts 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.

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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 drinking ??? 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 tendency 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 $\frac{1}{4}$ " 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 optimistic. Instead, when a new man wants the Bulletin, his five bucks gets him all back issues from the beginning and his 1 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 on 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.)

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