

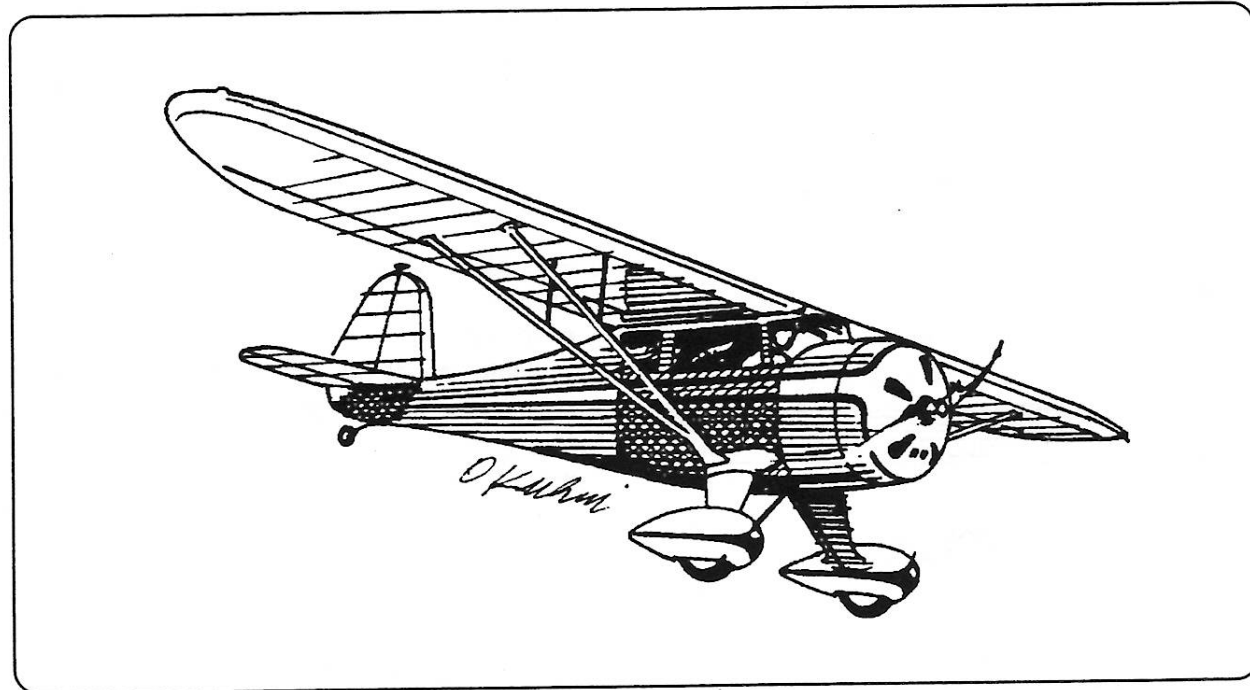
MAX FAX

Journal of the D. C. Maxcuters

... home of the dreaded POTOMAC PURSUIT SQUADRON of the Flying Aces Club

Editors: Hurst Bowers & Ray Rakow

March-April 1998



COMING ATTRACTIONS

APRIL 5, 1998, Sunday

NATIONAL BUILDING MUSEUM Fun Fly
For info: PAUL SPREIREGEN 202-337-2887

APRIL 25 & 26, 1998

EASTERN U.S. FREE FLIGHT CHAMPIONSHIPS
15th ANNUAL AAA CONTEST at INGLESIDE, MARYLAND
TOM HIGG'S FARM (Includes several FAC Events)

May 16 & 17, 1998

CDs: TOM KERR, 410-778-4939 & JOE WAGNER, 410-778-3933
BRAINBUSTERS 1998 SPRING CONTEST, PETERSBURG AIRPORT
Timed events (both days)- Peanut Scale, and Embryo
Mass Launches (Saturday) - Dime Scale, W.W. I, W.W. II, and Golden Age
CD: ABRAM VAN DOVER 757-877-2830
112 Tillerson Drive, Newport News, Va. 23602

JULY 17, 18, 19 1998

FAC NATIONALS at Geneseo, New York.
Contact LIN REICHEL at 3301 CINDY LANE, ERIE, PA. 16506

AUG 29, 1998

D.C. MAXECUTER'S SUMMER FUNFLY at COMSAT, Clarksburg, Md.
contact CD ALLAN SCHANZLE 301-840-5884
at 20008 Spur Hill Drive, Gaithersburg, Md. 20879

SEP 5&6, 1998

FAC OUTDOOR CHAMPS CONTEST, AMA Hqtrs., Muncie, Indiana
Contact LIN REICHEL

SEP 13 --18, 1998
SEP 25&26, 1998

SAM CHAMPS at AMA Hqtrs., Muncie, Indiana
KUDZU FAC LAKE AND LAND CONTESTS at Goldsboro & Raeford, N.C..

OCT 10,11,12, 1998

Contact DAVE REES 919-778-6653
at 606 Walnut Creek Drive, Goldsboro, N.C. 27534
GATHERING OF THE TURKEYS FF MEET AT Pensacola, Florida.
Includes several FAC Events. Contact Jack Bolton 904-939-3354

This month we have two planes by Hurst Bowers which were drawn some thirty years ago while he was stationed in Paris, and published in *MRA*, also an article from the February 1931 *AeroDigest* Junior Activities section with a plan for the "Giant Chickadee" ROG which was influenced by Tony Fokker. Since the passing of Rolfe Gregory, we won't have any more of his C.A.V.U. personal observations and experiences of aviation in the '30's, so I have reprinted two which were published 20 years ago, that man of the our recent readers haven't seen. I've added a related *AeroDigest* article about Clayton Knight who Rolfe refers to in one of the C.A.V.U. stories, and some plans from Joe Ott's 1931 Model Airplane book.

Hope you enjoy.

Ray

major attraction. I heard that the airplane was a Monocoupe, and the pilot was Annette Gibson. She held some sort of women's record for altitude. Needless to say, I hurried home and ordered another Monocoupe kit from Star. Since then I have built several Monocoupes, all of which were red except the one featured in this newsletter, which was blue, with white trim and registration. I built this model in about 1963 while I was living in Paris. I built it to be powered by a Cox .020 Pee Wee engine and flown free flight. We flew from time to time on Sunday mornings, weather permitting, at the old Mordne-Saulnier Flying Club field located just across the major highway from Villacoubly, an airdrome well known in the history of French aviation. Unfortunately, due to weather and other things, I was unable to fly it and it ended up in the AMA Museum, badly in need of repair.

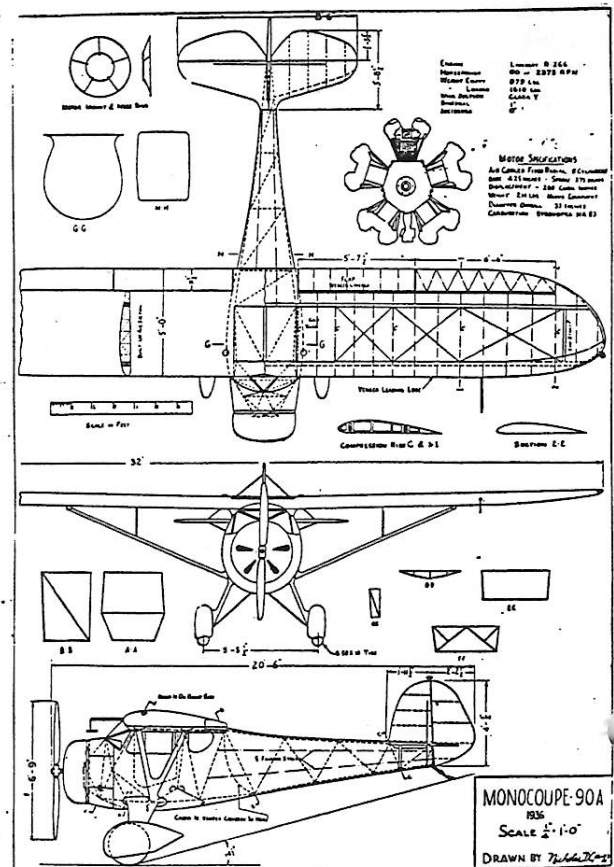
With its short nose moment it is a great candidate for electric power, using one of the many fine motors currently available, such as the Hi-Line Mini-6. In fact, I think I'll get out the old board and build another one, but this time it will again be red.

Monocoupe

By Hurst Bowers

My fascination with monocoupes began in about 1932 with a 25-cent kit produced by the Star Model Airplane Co., 10 Pearl St., Newark, N.J. My cousin, an expert modeler about 6 years my senior, recommended this kit as highly suitable for beginners. It was ordered, and on the big day when it arrived, my cousin took over and I followed him through on each phase of the construction. The model turned out quite well, but when given to me, my enthusiasm for flying it exceeded my ability, and it went the way of most flying things in the hands of an 8-year old; however, the seed was planted.

At about this time our local airfield, which was frequented nearly every weekend by "barnstormers," became the local gathering spot for the "air minded," as my father called us. He was most patient and supportive of me, driving out to the "liteing ground" on Saturday and Sunday afternoons to watch the sights. A small red monoplane flown by a beautiful lady who always wore a red flying suit, became the



THE MAXECUTERS AND THEIR WORKSHOPS

Throw out the gauntlet and another modeler succumbs to the challenge for the most cluttered workshop! Sorry Al, your photos do not even come close to displaying the disarray we have witnessed in some of the facilities for modeling mayhem, or for that matter the neatness seen in others. Al Lawton tried to blame his clutter on his pet kitty; come-on Al, there is plenty of room for 'Jet' to nest in your working area. That's a pretty lame excuse!! Seeing that it is hopeless for this writer to surpass the erudite communication from Al concerning his workshop, the remainder of this is a direct quote from Al.

"Your invitation to submit a photo of my work area (MAXFAX Sept/Oct) was greeted with some wariness on my part at first: was it a classic Redskin trap play? Would it engender a bunch of less-than flattering nicknames? But since Russ Sandusky was a good sport and allowed his area to be displayed (nice job, Russ) it seemed that I had to anti-up. The Stew Meyers' pics were outstanding also! Stew is certainly a worthy contender! So here are pics of the center of my iniquitous den of operation. The rest of the room is dedicated to storage - and dedicated hardly describes it --- not even room for a pin-up! One family wag looked at the photos and allowed as how they looked like a double exposure; they were so 'busy'.

In addition to the ubiquitous lumber yard, a large part of the clutter is usually paper. In the usual FAC cycle, we're typically building one, designing or studying the plan of the next one and gathering reference for the one down the line--takes sketches, possibly calculations, new letter articles and such, The action/gathering process is with a stretch, analogous to the M.O. of arguably the best fighter pilot of W.W.2. Hans Jochim Marseille was not only a superb flyer but while boring in on one adversary, he was 'seeing the whole field' and planning his follow-through maneuver to get lined up on the next victim.

Oh, 'Jet', the cat was more than a little put out by the picture of the impostor cat who was shown with the 'Clutter Commando' article.(ed. blame Don for that one) (Jet after all is jet black except for his white spinner and landing gear). He did lighten up a bit later--wanted to know if her number is available, if indeed this hep cat is female (ed. you'll have to ask David Franks about that?). He just doesn't get what that certain trip to the vet's was all about).

Perhaps the available working area looks crowded; somehow I think it is concert with one of Murph's remote corollaries---something to the effect that "For every cubic foot of storage space, only a square inch of work space is required'. Or is it vice versa?"

Great job Al! Can we prevail upon you to write all of these if we send the photos??

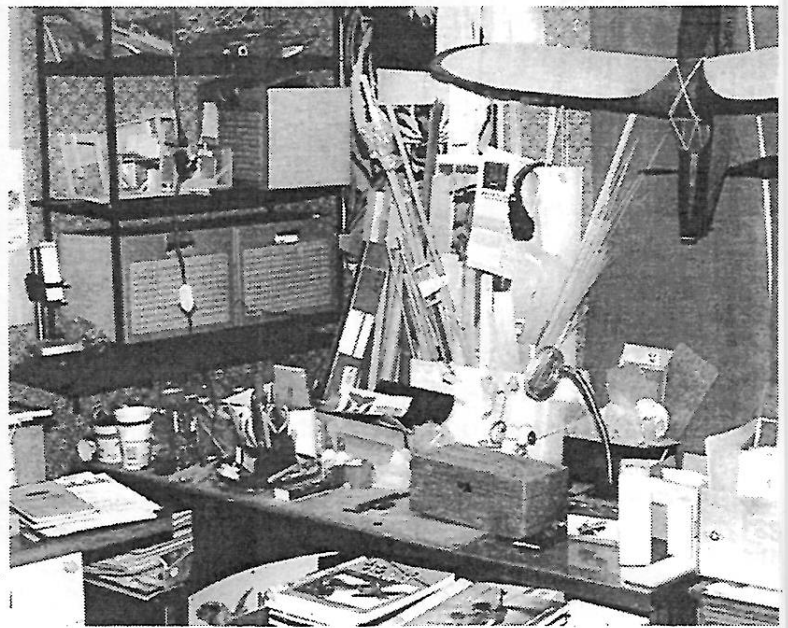
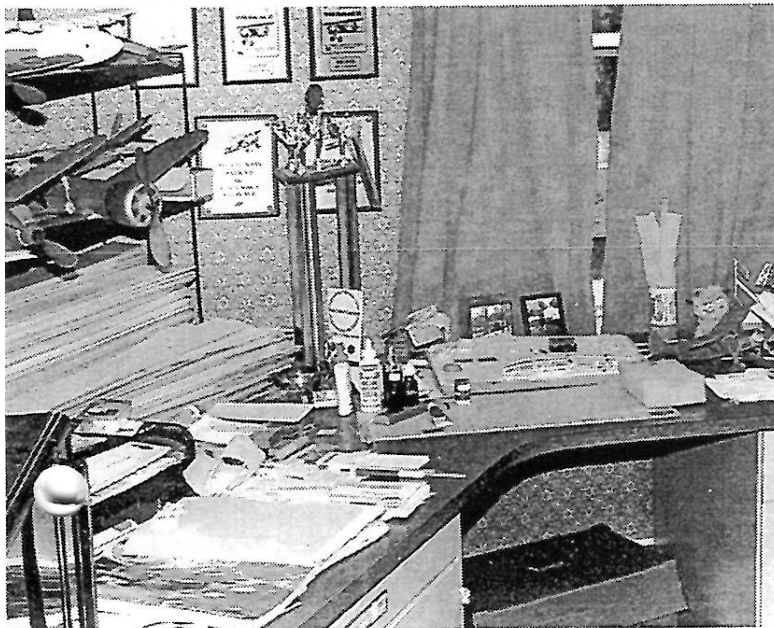


PHOTO PAGES

1. Bill Hannan sent this photo last year, which was printed by Jim Alaback, with a commentary on one of Stew's 'Ten-Center' issues. It is Bill's Bellanca from the same Comet plan that Stew used. See the accompanying letter by Bill for the entertaining details.
2. Russ Sandusky, our Baltimore NoCal 'guru', sent this delightful photo of his wife Carol with her Midwest Wildcat. It was proxy flown by none other than David Franks to a second place at the Maxecuter Funfly last summer.
3. From out of the dusty archives (actually Bill Winter's) comes this nifty photo by Bill Noonan of his Missel Thrush rubber scale framework. The wings actually fold on the rear spars just like the real one.
4. Our proxy flyer and cinema photographer, David Franks, from down Richmond way with his Lanzo 'Pusmoth'
5. Another of Bill's masterpieces from the archives; this one a 3/4 " rubber scale of a Dornier "TNT" experimental. The two motors were to be anchored at the stab leading edge. For you younger fellows and late arrivals out there, Bill is an accomplished artist, photographer and model builder. Sadly, he has been gone from the model building ranks for a number of years. We would be happy to welcome him back.
6. Dave Rees launching his rubber scale 'Foxmoth' at the AMA site in Muncie.

FROM HANNAN'S HANGAR

Dear Stew,

A note from Hannan's Hangar to Stew
Congratulations on your MAX-FAX newsletter!
Having edited the Flightmasters newsletter many years ago, I well understand the time and effort involved. Another editor once told me that each newsletter represented another model he DIDN'T get built.

In any case I was particularly interested in your comments on the little Comet Bellanca. The enclosed photo, printed by Jim Alaback, shows my model, constructed some years ago. My own interest in modeling began with Comet kits during the 1930s, and I've always been fond of them. Many years later, probably during the 1970s, it was my good fortune to meet Comet company founder Bill Bishop, and spend considerable time with him, since he had retired in a town close to my home. Was also able to meet a couple of the former Comet designers, and exchange letters with others.

To make a long story short, my little Bellanca was sort of a nostalgia trip, and was covered with genuine pre-war Comet brand tissue that someone was kind enough to give. The model was essentially built from the plans, with the following changes or additions: Added spar to the top of wing, and extra members to

stabilizer. Rear rubber peg was moved one bay. Since more nose ballast was needed anyway, installed modified Williams Brothers radial engine from one of their plastic kits. Added thread bracing to tail, per the full-size machine. (Had to mightily resist temptation to change landing gear struts to where they belonged!).

Wings and stab covered only on top, as Comet intended, but covered both sides of vertical tail. Fuselage was covered with orange tissue, while the flight surfaces were covered in yellow. Deft application of a yellow felt pen to the raw balsa on the uncovered lower side structure improved appearance while retaining the intended kit "character". Markings via black tissue except for painted front of cowling.

A "cottage cheese" type prop was substituted for the proper carved balsa type, for reasons that escape me now, probably a perceived need to finish it quickly. Had the satisfaction of showing it to it's Comet designer, Ed Lidgard and someone sent me a picture of him holding it! Great fun.

It was only a mediocre performer, although I didn't spend much time trying to improve it. Needed a prop in a hurry for a Pistachio being mailed for proxy-flying, so swiped the one off the Bellanca. The little craft still hangs propless, alongside me."

1

**HY-GRAD
ODEL TISSUE**

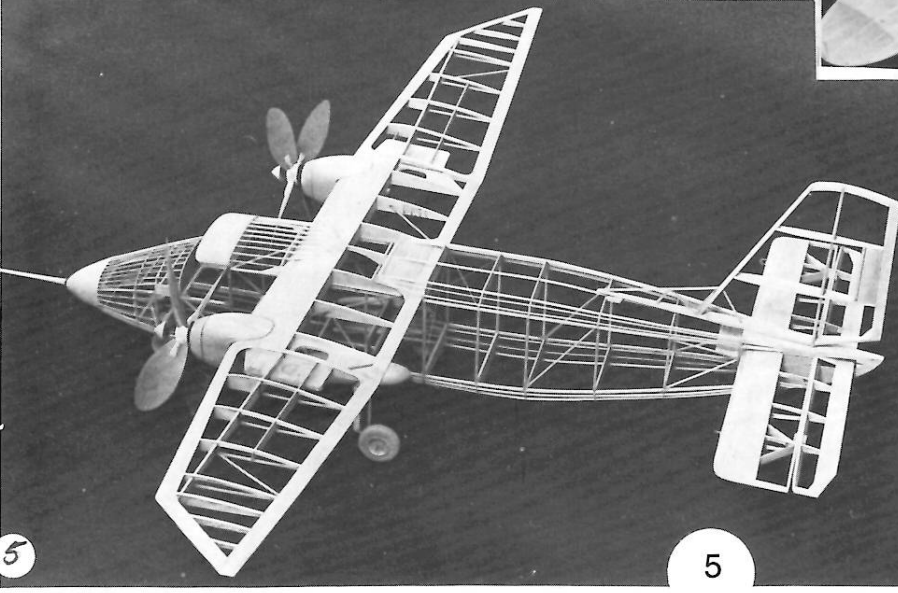
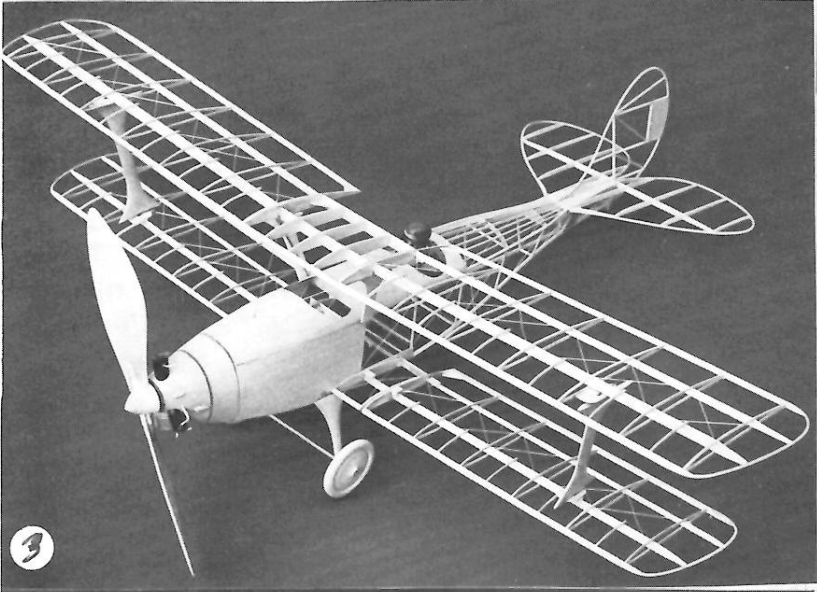
quality tissue. Very strong and light in weight.
Made when sprayed with water for shrinking.

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ODEL AIRPLANE & SUPPLY CO., Inc.



C.A.V.U.

Ceiling and Visibility Unlimited

by Rolfe Gregory

Along about this time of year my thoughts always turn to the impending NATS, the World Series of Aeromodeling. This year we can enjoy a double header because it will be preceded by the FAC Nationals at Wright Field on August 8, 9, & 10 as you probably know. Some of the many interesting features are the racing events—Thompson, Greve, Aerol—copies in the miniature of those long-ago trophy events of the National Air Races. Funny thing, the model events arouse almost as much excitement today as the full-scale races did years ago, to a small group of course!

Along about this time of the year many thoughts turn back also to those *full* scale Nationals at Cleveland, the World Series of air racing. Looking at my small rubber powered model of "Suzy" brings back memories of those days and of the pilots name lettered under the cockpit: R.A. Kling.

In 1938 a fellow employee at Luscombe Aircraft Co. in Trenton, Ralph Coston who hailed from Corpus Christi, Texas, and I drove to the Cleveland races. One thing we should have learned from previous races was never go without room reservations unless you are prepared to sleep in your car, under the wing of an airplane, or on a park bench. We had left Trenton, N.J., at 4 a.m. and at 1 a.m. next morning we had not found a place to lay our weary bones. We stopped at a drive-in hamburger stand and Coston asked if they knew of *anyplace* we might find a room. Someone in another car overheard and say "I know of a place, follow us." They led us on a merry chase all over the Ohio country side and for a while we began to think they were just having fun at our expense. However, they finally stopped at a house in a small town name BERA near the Cleveland airport. A girl from the car ran into the house. A few minutes later lights came on and we were invited in. I hate to disappoint you but it's not going to be *that* kind of story!

The girl's mother said they had a bedroom they usually rented only during the

Air Races each year and that it was vacant. We were so tired we would have slept on the floor. She showed us the room and I noticed a framed picture of a man and woman who seemed familiar. "Yes" she said, "Mr. and Mrs. Rudy Kling always had this room during the races but, unfortunately, they won't be here this year—you know Mr. Kling was killed in a race at Miami last December. What a shame. They were such a nice couple."



The Curtiss Robin

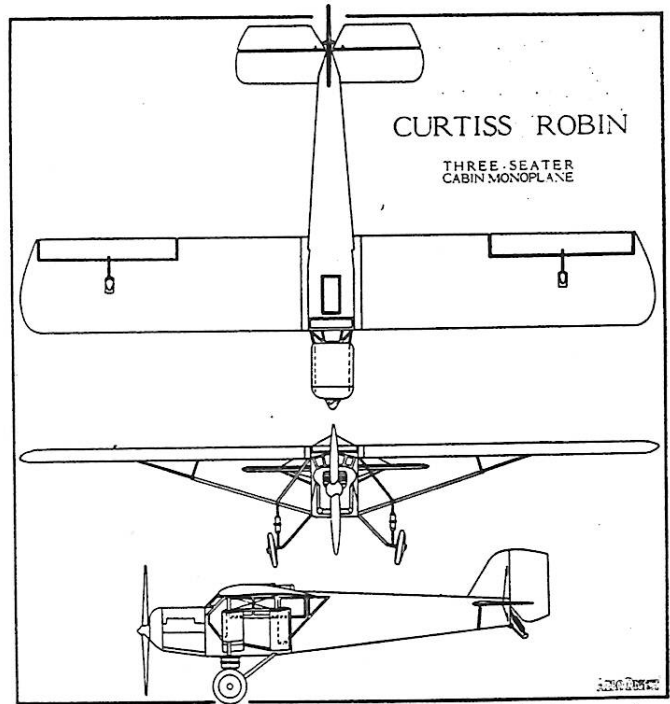
By Hurst Bowers

The Curtiss Robin has always been one of my favorite airplanes ever since I had a ride in one many years ago. It was rumored that that particular airplane had been used by a "rum runner" during "Prohibition," the two rear seats being removed to allow room to haul several cases of spirits. I certainly can't vouch for this, but it made a good story for its barnstorming owner to drum up business. Many years later I got another ride in a "Robin" owned by the late Sid Shannon of Fredericksburg. Later still I had an opportunity to fly a robin (See *Model Airplane News*, August 1981, page 15, article by Gene Thomas), the restored old "St. Louis Robin," which set an endurance record in 1919. It was the most inherently stable airplane that I have ever flown.

I first modeled it in the 1930s from an old 25-cent Comet kit and the model portrayed the same stability characteristics as the full-size machine. The accompanying plan was done while living in Paris and published by *M.R.A.*, a popular French magazine. I later built several more small rubber models of the Robin, including a Bostonian "Wong Way Wobin"; a caricature of the famous Doug Corrigan's airplane which took off in New York bound for California but landed in Ireland. A tale was spread around Limerick that he had a Leprechaun navigator named "Nutsy" Fagan. Anyway, the "Robin" was a most remarkable airplane and in addition to being a great rubber model, it was a fine power free flight. My

attached plan was .020 powered and a great little flyer. It was done in the classic factory colors of burnt orange and red. I later enlarged the plan and built a 60" span radio controlled model which I gave away and I understand still exists some 25 years later. My first R/C Robin venture was about 45 inches in wing span with a Cub .049 engine and Babcock Radio, with a citizenship escapement. It was fine at the time but needless to say, think of how much better it would be as a 1/2A Texaco category scale with two channels of proportional radio control. It was published by *Model Airplane News* in September 1961, and the plans may possibly still be available.

At present I'm building an electric powered 35-inch R/C version of the Wong Way Wobin, and fully expect it to be as successful as all my other "Robins" have been. Will keep you posted on the project.



Outline drawings of the production type OX5 engined Curtiss Robin monoplane.

Dear Friends,

It is a privilege to extend my sincere gratitude to all of you for your condolences and prayers, your E-mails, and your moral support at the time of Rolfe's death.

At the nursing home, visits from faithful friends meant much to Rolfe when he was aware of their presence. Just a few weeks before Rolfe died, he was shown a framed painting of an airplane which Rolfe painted years ago. 'That's a Pitcairn,' he said. Indeed, it was!

The superb eulogy authored and delivered by Allan Schanzle at Rolfe's Memorial Service will long be remembered by all of us. Thank you, Allan, from the deep recesses of my heart.

It was very generous of you to include the articles: "Rolfe Gregory—an appreciation" and "Rolfe Gregory's Memorial" and the photographs, in the Jan.-Feb., 1998, issue of MAX Fax.

God bless you all.

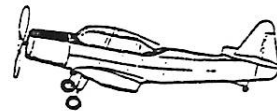
Sincerely,

Nancy Gregory and Family

PLAN BOOK OF THE AIRDEVIL MODEL CO.

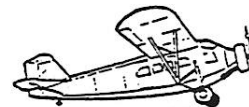
SIX SCALE RUBBER FLYERS AND ONE SOLID IN EACH VOLUME. PROFESSIONALLY DRAWN PLANS. FLIGHT PROVEN MODELS.

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16" STEARMAN LOW WING (ILLUS.)
18" PITCAIRN FLEETWING
20" HOLLYWOOD HAMILTON
16" ALLIANCE ARGO
20" NICHOLAS BEAZLEY FLYABOUT
16" ONG CONTINENTAL
1939 LINBERG SPL. RACER SOLID

V
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2



16" FAIRCHILD PILGRIM (ILLUS.)
18" FOKKER B-1
18" LAIRD LIMOUSINE
18" WACO EXPEDITIONARY
16" TRAVEL AIR CABIN
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19. Motor stick, bearing and rear hook

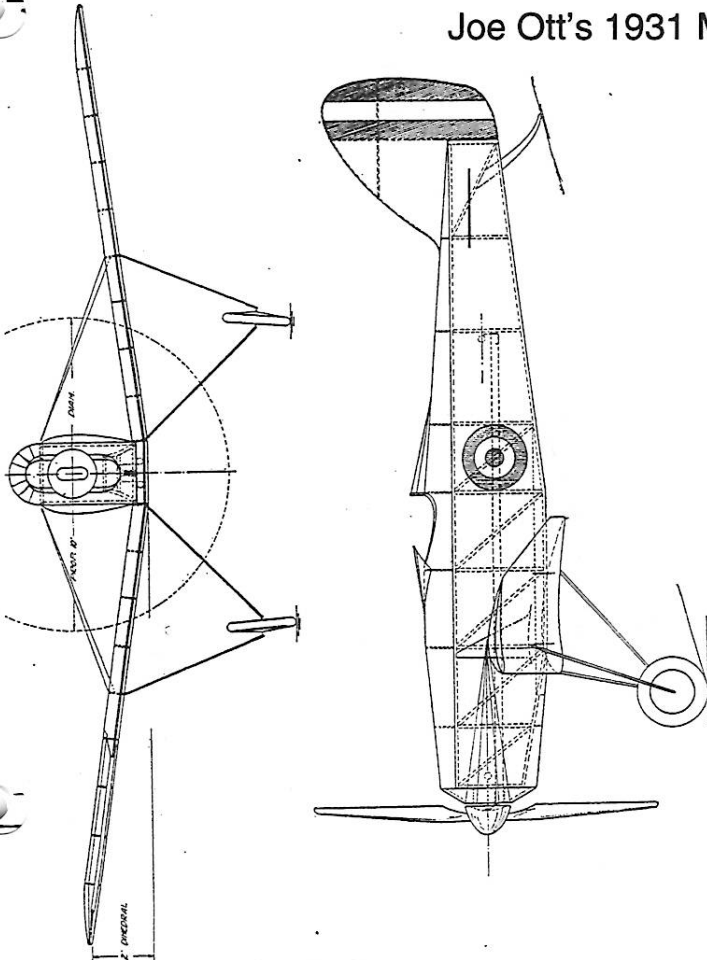
20. Propeller, nose spinner
21. Decorate and emblems

22. Flying

Stabilizers, white striping
Rudder, white, allied military

All struts, black
Head rest fairing, black
Allied emblems circles

Joe Ott's 1931 Model Airplane book.



(Front and Side View—D. H. Interceptor)

Color Scheme

Wing, white
Sides, white

Body, white or red cowling,
top

Nose, black

Propeller, aluminum, red tips

Wheels, black

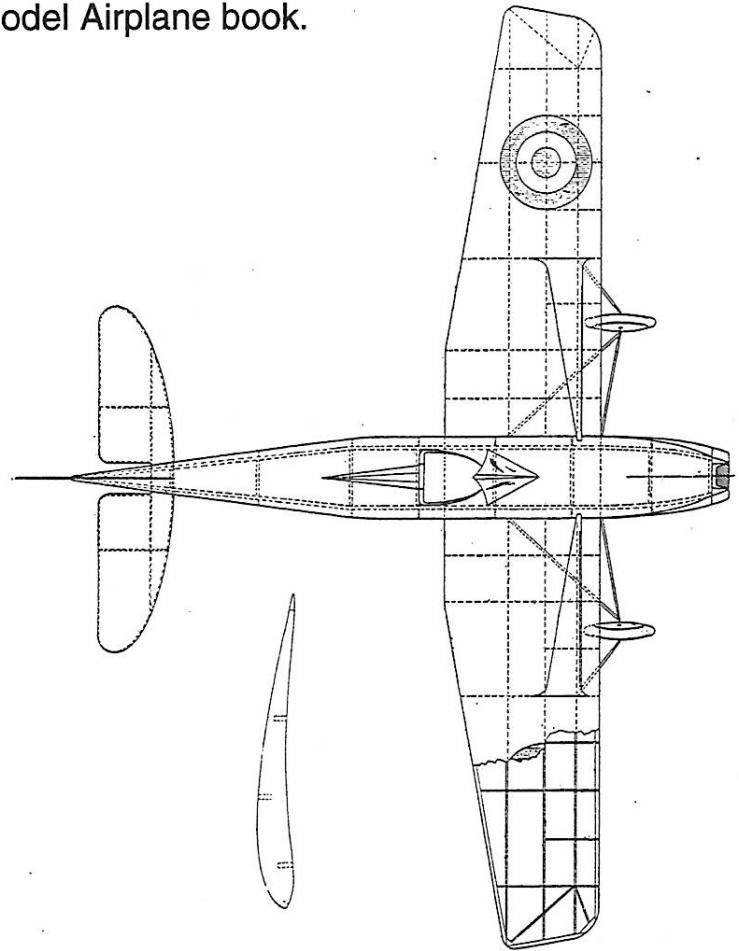


Fig. 117—Plan—D. H. Interceptor

DOMEBUSTER PLANS

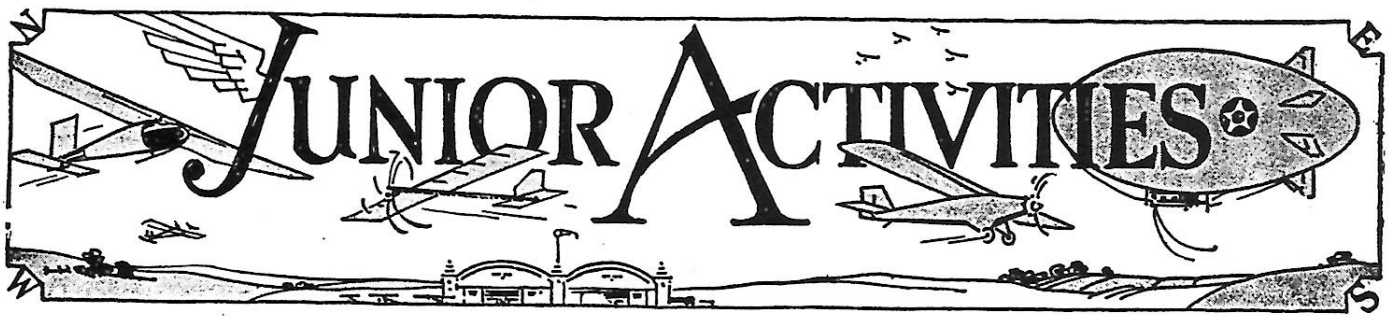
Stan Fink has been producing 'Domebuster Plan Packets' for many years and his latest is Number 7. His selections are always eclectic and Number 7 is no exception. It contains 12 plans from several draftsmen including 5 by Stan. Take a look at the list and we are certain there is more than one to tickle your fancy and get your building juices flowing. Stan charges a nominal \$15.00 for all 12 with postage and handling included. His address is Stan Fink, 1810 Pine Street, Philadelphia, Pennsylvania 19103. Also check out his previous plan packs.

Flying Aces Magazines For Sale

Dorothy Bergman wishes to sell her late husband's collection of *Flying Aces* Magazines. If interested write her at:

1051 W. 47th Place
Chicago, Ill. 60609-4321

or call her at: (773) 254-1165



THE GIANT CHICKADEE MODEL

THE great Dutch airplane genius, Anthony H. G. Fokker, has been an inspiration to many youthful experimenters in aeronautics. His genial personality and democratic manner have made it possible for many newcomers in the aviation game to make his acquaintance. He seems particularly to like talking to boys who are studying aviation. Perhaps this is true because he is even now a boy at heart; his enthusiasm is boundless.

Mr. Fokker in 1909 was a model builder. In 1910 he produced his first airplane which is shown in the photograph. It was called the "Spider" and was an outstanding success. In this machine, Mr. Fokker, then only 21 years old, taught himself to fly. In 1912 with the same plane he won the Russian Military Competition at St. Petersburg, which launched him on his spectacular career as a designer and manufacturer of airplanes.

By this time you will perhaps be wondering what all this history has to do with the "Giant Chickadee." A reference to the photograph of the Spider will clear this up if you are observant and have already studied the drawing of the Chickadee. Note that the wings have a pronounced dihedral. Note also that the principal weights, engine and pilot are high up in the dihedral angle formed by the wings. Subsequent models of the Spider had a sweepback to the wings as well as the dihedral. These features we find also in the Chickadee.

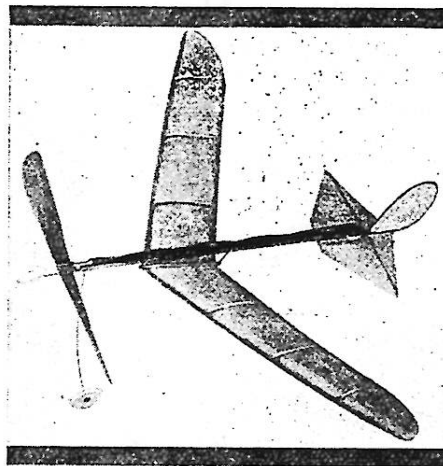
This arrangement of weights and surfaces gives remarkable stability. In fact, the early Fokker planes had no ailerons nor warping wings for lateral control. The stability was inherent.

In discussing this feature with Mr. Fokker a short time ago as we amused ourselves with a paper glider he expressed the opinion that sometime we might return to this design of plane. The prevalence of the low-wing type of airplane would seem to support this contention. At any rate the Giant Chickadee is an excellent flier and its stability is little short of marvelous.

For its design we are indebted to Mr. A. O. Heinrich, pioneer pilot and designer, and Mr. J. B. Billings, a veteran model builder, both of Long Island, N. Y. In commercial form the Giant Chickadee is manufactured by the Broadfield Aeroplane Company of Hempstead, Long Island. The kits sell for one dollar (\$1.00) and the finished model for two dollars (\$2.00). Any

R. O. G. TRACTOR HAVING MARKED STABILITY

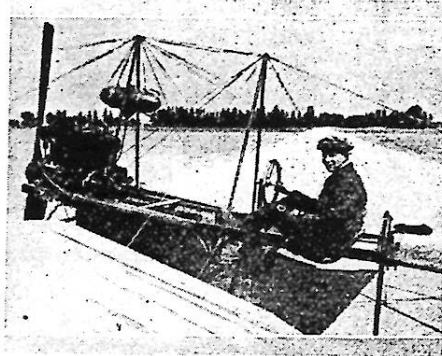
By
R. E. DOWD



The Giant Chickadee

inquiries for materials or models should be addressed to the factory, for the Junior Activities Department does not handle them.

The Giant Chickadee is one of the simplest models to construct that we have described in this department. It is light enough to be flown indoors and yet, because of its great stability, outdoor flights are possible in a considerable wind. Durations of more than seven minutes have been made with this model, the only change being a



Mr. Fokker in the "Spider," his first airplane

lighter construction. This was accomplished by trimming the spars, ribs and other members down in size, and also by selecting the balsa wood for extreme lightness. The dimensions given in the drawing, however, represent a model which will be more rugged and satisfactory although slightly heavier.

Let's get out the tools and make the Giant Chickadee. Here is the material list if you wish to make your own kit.

BALSA WOOD

Two pieces 1-16 by 7-32 by 11 $\frac{3}{8}$ Front spars
Two pieces 1-16 by 7-32 by 9....Rear spars
One piece 1-16 by 3 by 4.....Ribs
One piece $\frac{3}{8}$ by 5-16 by 15.....Fuselage
One piece 1-16 by $\frac{3}{8}$ by 8.....Stabilizer
One piece 1-16 by 1 $\frac{1}{8}$ by 9.....Propeller

ROUND RATAN OR REED

20 inches, 1-16 diameter..Wing tips and Fin

STEEL MUSIC WIRE

.025 diameter by 11 inches....Landing gear

.020 diameter by 12 inches..

Propeller shaft, rubber motor, hooks and wing clips

MISCELLANEOUS

Thread for stabilizer.

Paper for covering (Japanese tissue)

Dope (Commercial airplane dope thinned with acetone—about one part dope, five acetone)

Celluloid wheels one-inch diameter (two required)

Eyelet or bead for propeller bearing (1 required)

Ambroid cement

Sandpaper

Rubber ($\frac{1}{8}$ by No. 30 by 4 ft.)

Sheet brass for propeller shaft bearing.

Tee pins for assembly parts.

Assemble the Main Wing First

The main wing in the Chickadee model is made up of two separate wings. The spars are not continuous. The best procedure is to lay out the actual size on a piece of smooth board or cardboard and then build over this drawing. The spars should be tapered and the ribs cut to the patterns. The ribs are simply ambroided to the top surface of the spars and the ends trimmed flush. One wing should be made complete first. Only a light touch of Ambroid should be used at the center rib, and of course the inner ends of the spars should be cut accurately to the correct angle. This finished wing is then propped up with a block three

inches high as shown in the photograph. When the other wing is all complete the final assembly of the two halves may be made, using a liberal coat of Ambroid all around the center rib where the spars butt against it. The wing clips may now be ambroided in place. The short clip attaches to the front end of rib No. 1, and the long clip to the rear.

The secret of constructing rather special forms, such as the Chickadee main plane with its dihedral and sweepback, lies in the generous use of pins to hold each part in its correct place. When everything is all properly lined up, then the Ambroid can be applied. This is the magic touch which makes a true and accurate assembly of all the parts. The process is much the same as that used in making a fuselage or landing gear of a full-size airplane. The welder gets all parts cut to length and clamped in position. He then proceeds to make a unit of the whole with his welding torch. In our work the Ambroid serves as our welding torch.

The Giant Chickadee will fly well with covering only on the upper surface. This arrangement has the advantage of light weight and simplicity. However, the resistance is necessarily high which means greater power is required. It is possible that the lift of this particular single surfaced sec-

tion will be *greater* than if double surfaced. This may affect the flying speed. We should remember in any case that the model must fly sufficiently fast to sustain itself. Resistance does not control the speed if we apply only sufficient power to fly our model horizontally. By using a double surfaced wing section the efficiency is, of course, greater. Although the speed may be increased by the increased weight, and by the loss of lift, which will necessitate faster flying, still we should be able to fly our model with *less* power. The glide, too, would be considerably improved.

It is therefore proposed to cover only the top surface, trimming the paper flush with the outline. After flight trials are made, the lower surface covering may be added and a series of comparisons drawn. This is the real fascination in model experimenting.

The Fuselage, Tail and Landing Gear

The first thing to do in making the fuselage is to plane the balsa stick down so that it is $\frac{1}{8}$ inch thick and tapers from 5-16 inch deep at the center to 5-32 inch at the ends. Only one edge is tapered. The bottom edge is straight.

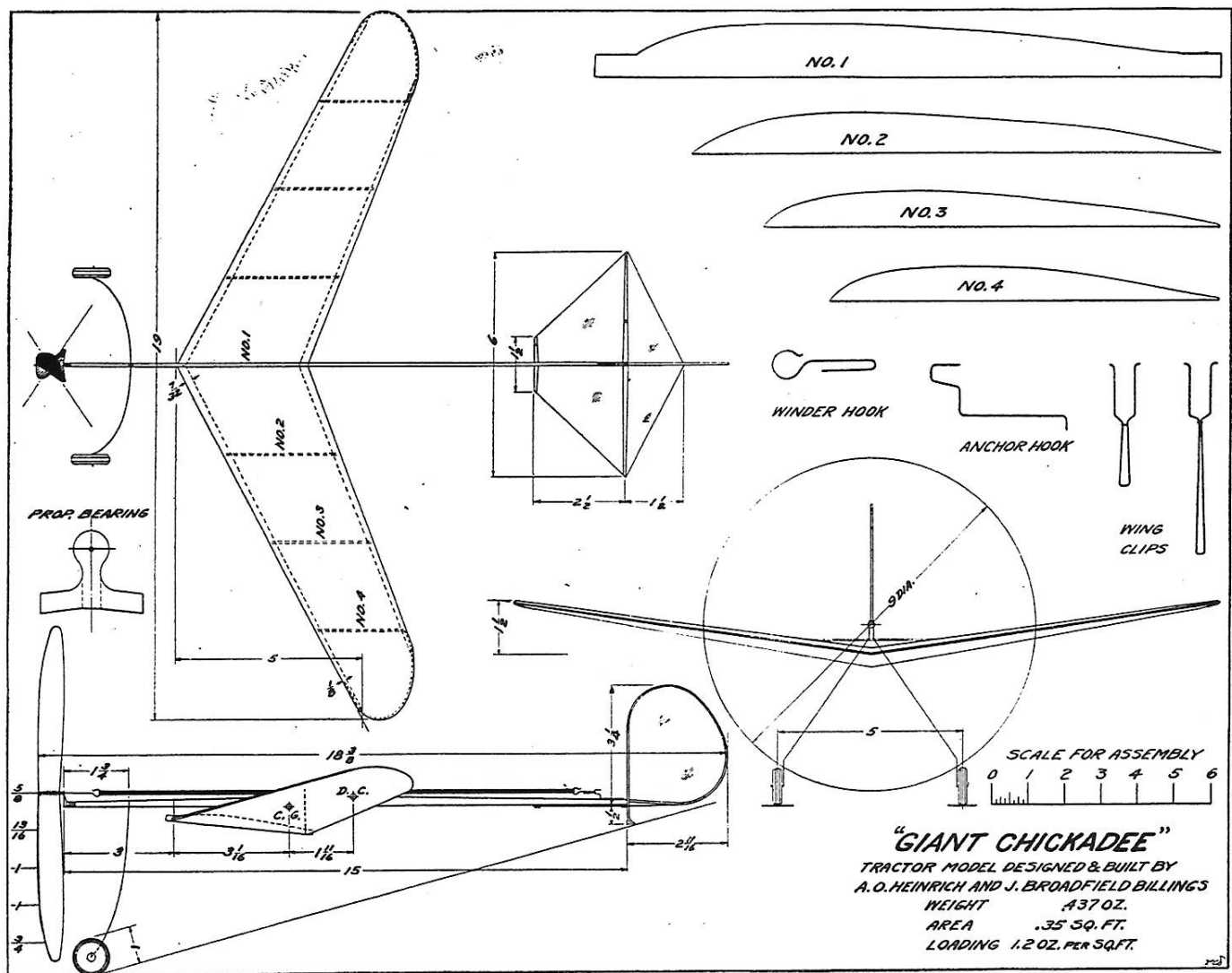
The Fin—The fin should be formed next and ambroided to the very end of the stick.

Note that the leading edge of the fin continues down to form a tail skid. The other end of the reed butts against the vertical part at a point level with the top edge of the fuselage stick. Before proceeding with the stabilizer, the fin should be covered with tissue, using a single surface only and one coat of dope. A safety razor blade will trim the excess paper from the edges. No lapping over the reed is employed. It is best to cover the right-hand side of the fin frame, because the shrinking of the paper will distort the frame slightly to counteract propeller torque.

The Stabilizer—The 1-16 inch by $\frac{1}{8}$ inch stabilizer sticks are planed or cut to a taper so that the ends are 5-64 inch wide. The thread outline is then wrapped around. The rear point attaches to the bottom edge of the fin. Here too the covering is applied only to one side—in this case, the bottom. The excess paper is trimmed off flush with the outline.

The Landing Gear—A single piece of .025 wire, 11 inches long, will make the landing gear. The drawing shows the correct form. To hold the wheels on the axles, the end of the wire is bent up about $\frac{1}{8}$ inch. The fastening to the stick is made with Ambroid.

(Continued on following page)



USED PLANES AND MOTORS

SPECIAL 1929 American Eagle, private owned; licensed, beautiful paint job. Compass. Always kept in hangar. Quick sale, \$1,275. James Taylor, Box 64, Dickens, Iowa.

EAGLE ROCK Combination wing Curtiss OX5, turns 1450; just overhauled. Ship in perfect condition, new paint, always kept in hangar; also extra landing gear wings and struts, all for \$700 quick sale. For information write Milton O. Shosie, 110 Globe St., Peoria, Illinois.

FOKKER STANDARD UNIVERSAL—Like new. Total time 105 hours; motor completely modernized by Wright; 5 hours since modernization. Fabric excellent. Will sacrifice for quick sale, act quickly. Bellanca Aircraft Corp., New Castle, Delaware.

SPECIAL BARGAIN, Fairchild 51, just entirely overhauled and reconditioned, equal to new, never cracked, 5-place Cabin Monoplane, J6 300 H.P. engine; total time since new 256 hours, 3 hours since overhaul. New type J6 rear section, pistons, etc. Complete with air speed, compass, bank and turn indicator, brakes, steel prop; cruising speed 100 mph. Can be used in small fields. Attractively finished in red and silver, leather cabin upholstery, \$4,500 cash to quick buyer. Westchester Airport Corp., Armonk, N. Y.

FOR SALE: WACO 9, 3-place, full tubular frame, NC license, duals; always hangared; privately flown, never damaged, five hours since overhaul, priced right. W. E. Slentz, 1243 North Cleve. Ave., Canton, Ohio.

OX CHALLENGER, 3-place Biplane, license No. NC 7039, licensed till December, 1931; new motor and new Scintilla magneto, special \$895. Westchester Airport Corp., Armonk, N. Y.

FOR SALE: TRAVEL AIR 6-place cabin plane with J6-300; 98 hours. Travel Air 3-place biplane with J6-165; 350 hours. Both ships are like new. Ward S. Lent, Poughkeepsie, N. Y.

FOR SALE—Travel Air Speedwing Model 11, Wright seven cylinder R-760 engine. Engine and ship have had 254 hours. Engine 13 hours since top overhaul. 23 gal. in wing tank, 40 gal. in main tank. A1 condition. Excellent racing ship, 160 M.P.H. top. Formerly owned by Eric Wood of New York. A buy at \$3,500 for the sportsman pilot. Detail specifications on request. Write or wire. Bellanca Aircraft Corp., New Castle, Delaware.

FOR SALE: American Eaglet demonstrator, Szekely motor. Condition good as new. Cost \$1605 with extras. Price \$1100. L. W. Ford, West Plains, Missouri.

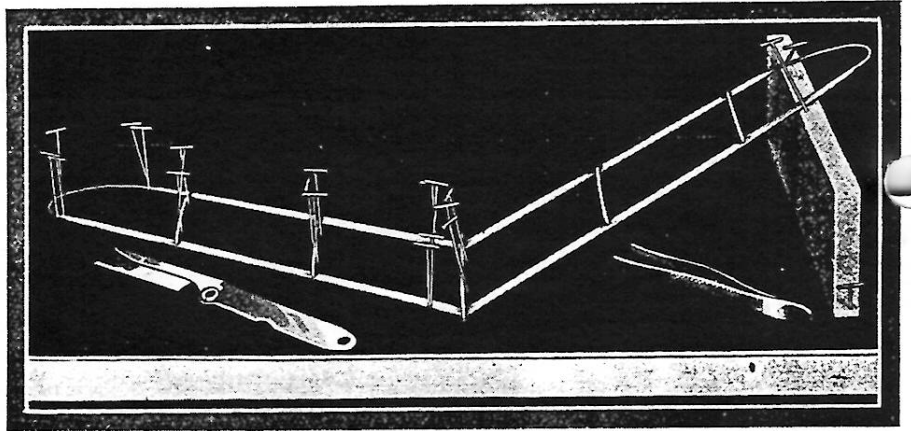
FOR SALE: Model F Warner powered Waco, 43 flying hours. Private owner. Always hangared. Equipment—steel propeller, airspeed and compass. Purchased August 1930; priced to sell. L. H. Richards, Pottsville, Penna.

FOR SALE, one Monocoupe two-place 90 H.P. Lambert engine, steel propeller, air wheels. Also one Bird 3-place plane. 100 H.P. Kinner engine. Both ships practically new. Price \$2,750 each. One double pack exhibition Irving silk parachute, good as new, \$350. AERO DIGEST, Box 1148.

FOR SALE: One Dk 5-passenger New Standard airplane as good as new, \$4500. AERO DIGEST, Box 1149.

FOR SALE: OX5 Travel Air completely overhauled, special paint job. Will take in trade late model enclosed light car. Floyd Eltroth, Fairmont, Minnesota.

FOR SALE: Licensed Waco Ten, total 210 hours. Scintilla Magneto, Pioneer Compass, Irvin parachute, winter flying suit, moccasins, all for \$1500. See Clayton or Page, Pitcairn Field, Willow Grove, Penna.



How to assemble the wing holding the parts by the use of pins

Propeller Bearing

About .012 thick sheet brass or tin will make a good propeller shaft bearing. The drawing gives the details. The greatest problem in making propeller bearings is the drilling of the hole for the shaft. If a drill is not available, the hole can be punched first in the form of a depression. By filing the point of the depression flat a tiny hole will appear. Now by using the same pointed punch, which may be only a nail, this time as a reamer, the hole can soon be enlarged to the correct size. Thread is used to wrap the bearing in place on the end of the stick. Ambroid over the thread will make this very secure.

Winder and Anchor Hooks

The scale drawings of the hooks will enable any builder to bend the .020 wire to the correct shape. The anchor hook is ambroided to the fuselage stick after the end of the wire has been forced into the stick. No thread wrap will be necessary.

The Propeller

Limitation of space makes it quite impossible to reproduce a propeller pattern. However, it is simple to lay out. In the first place the trailing edge is not straight. It has a sweepback, so to speak, of $\frac{1}{8}$ inch. The various widths at points along the blade are given in the side view of the model.

When the blank has been prepared and the edges sandpapered to reduce resistance, the blades are formed after dipping in hot water. The correct pitch is given in the top view. It represents the pitch at a point three inches out from the hub. After the blank has been thoroughly dried out and resandpapered, the shaft is ambroided in place. Allow plenty of time for this to dry and be sure the shaft is true with the blade.

General Assembly

We are now ready to assemble all the units. Three to four strands of $\frac{1}{8}$ inch flat rubber strand will be sufficient. The exact position of the main plane on the fuselage will be somewhere near the point indicated on the drawing. Adjustments are simple inasmuch as the clips may be sprung over the fuselage stick at any point.

It is of interest here to note that D. C. or directional center lies 111-16 inches to the rear of the center of gravity. To apply the

formula which has been suggested in this department previously, we have Span 19. Length $17\frac{3}{8}$, or $19 + 17\frac{3}{8} = 36\frac{3}{8} \times .046 = 111-16$. It will be recalled—that most models which have been investigated have revealed a factor ranging from .025 to .050. In this case it seems to be .046. It is also of interest to note how greatly the appearance of the model is improved by using the sweptback wing form. Instead of a long stick forward of the main plane in order to obtain a correct balance, the distance from the front of the fuselage to the leading edge at the center is only about three inches. Note that the center of gravity—and consequently, the center of lift—is almost at the trailing edge of the center section.

Flying

For initial flights, hand winding may be used. Two hundred fifty to 275 turns may be given to the propeller. In launching it is best to release the model so that the prevailing wind blows *under* the wing, which tends to be lowered by the propeller torque. This will be the left wing if the propeller has been pitched as indicated.

Once in the air, the Giant Chickadee flies with easy grace and shows a peculiar responsiveness to side gusts. The dihedral angle and the sweepback, however, quickly stop each tendency to roll. The lateral stability is so pronounced that the action almost seems as though someone were manipulating controls.

After the balance has been worked out and hand-wound flights are satisfactory, it is time to get out the winder. Right here is where your Chickadee is going to give you the surprise of your life, and then you'll know where it gets its name, because Jimmie Smith and Billy Jones are going to say "Boy! Ain't she a bird?"

Just a Check-Up

Where did Mr. Fokker build his first large airplane?

What were the outstanding features of the Spider?

How does sweepback aid lateral stability?

With a given amount of power, does resistance control speed?

If we supply just enough power for horizontal flight, what determines the speed? Which is more efficient, a single or double surfaced wing section?

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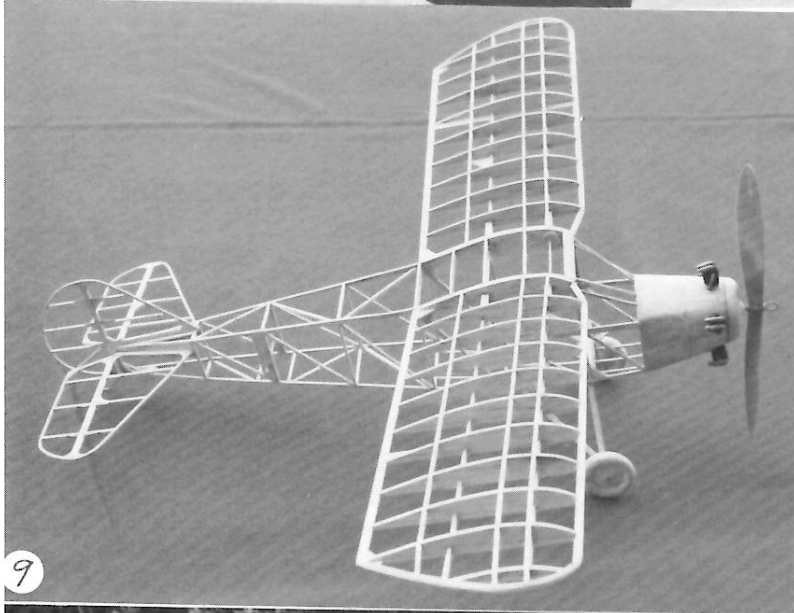


PHOTO PAGES CONTINUED

7. Bob Schlosberg sent this great photo of his Stinson Gulfhawk. It is built from a 30" Megow plan and is powered by a Brown B-200 CO2 Motor with a 20cc tank. You really should see this aircraft in living color.
8. Another of our faithful correspondents and photographer, Jiro Sugimoto, sent this photo of himself and one of his larger aircraft, a Pilatus Porter.
9. Not to be outdone by Bob, Jane Schlosberg's aircraft production continues without hesitation. Bob sent a photo of one of her latest, a Lincoln AP from Hurst's MAXFAX plans.
10. A good close-up of Jiro's Porter. Look at that terrific lettering!
11. Another of our members across the seas to the East, Allan Clarkson of England, sent this pic of his Vultee from last year's MAXFAX.
12. A bit of whimsy in this photo from Jiro; his 7.5 gram PEANUT Fairchild 24!
13. Another PEANUT by Jiro; great photo of his 7.8 gram Ford AT-2 built from Dave Livesay's plan in the Cloudbuster's newsletter.
14. Our good friend Phil Cox of the 'Calumet Escadrille' was seen at Muncie last September with this pretty 'all foam' Cessna AW.

More Indoor Flying in the National Building Museum

First, note the following dates:

Sunday, April 5/ Fun Fly/ All Day.

Saturday, April 18/ Airplane Workshop
11:00 AM-2:30 PM.

The first event, **April 5**, will be a repeat of our fun fly event, the *third* time we do it. The Building Museum loves to have us, so again we'll be most welcome guests. I sent a thank you letter to the Director, Susan Henshaw Jones, with a check for \$105, collected on Fun Fly #2, Nov. 2. We have much to be grateful for. Their hospitality included providing refreshments.

Susan told me that their normal Sunday attendance is about 300 people, but due to us they had well over 500! She'd be happy to have us to fly every Sunday.

Which brings up the question of how we might improve on our sessions. Is there a better way to relate to the spectators? Does anyone think they pose any problems for us, and, if so, what might we do? Maybe, though there's no problem on that score.

Several people, including Dave Aronstein, commented that we might have a

special event particularly suited to the Museum. Any suggestions? Maybe an event for Dave's proposed new class?

The second date, **April 18**, is related to a special event at the Museum, a program on engineering. For that I've offered that a few of us help maybe 20 or so kids, with their parents, build AMA Cubs. I'd appreciate volunteers for this.

Finally, since we arrive on Sunday morning before the Museum opens, we should enter through the east door. Don't try the front before noon, as John Houck did.

I'm extremely pleased that this new venue is working out so well for us, and I hope the maximum number of Maxcuters come and enjoy it, too.

Paul Spreiregen

Building Museum Contest Events

Phantom Flash
Bostonian
Dime Scale
Washingtonian
No Cal

C.A.V.U. Ceiling and Visibility Unlimited

by Rolfe Gregory

Most of you have heard of the famous aviation artists such as Charles Hubbell, who painted pictures of all the Thompson Trophy racers; Keith Ferris, who did that spectacular mural of the B17 in the Smithsonian Air & Space Museum W.W.II Gallery; and, of course, all of you are acquainted with our own talented, mysterious 'MAX.' However, how many of you are old enough to remember Clayton Knight? He wielded brush and pencil during the decades of the 20's, 30's, and 40's. U.S. Service magazine of July, 1938, referred to him as America's leading aviation artist.

Clayton Knight was one of those early "Knights of the Air." When World War I was booming in 1917, he enlisted in the Aviation Signal Corps and was shipped to England where he received his flight training. He somehow became a Lieutenant in the Royal Air Force and went to France as a combat pilot. In 1918, during one of his scraps, he was shot down behind enemy lines. Wounded, he was taken prisoner and hospitalized. Returning to the U.S. in 1919, he began an art career that lasted at least through W.W. II, when he painted portraits of the various air chiefs of the allied forces.

All those guys are not the only aviation artists. I, too, have sketched and painted, and penned pictures of airplanes for years. In fact, I spent many hours of class time perfecting my artistic skill during study of Geography, History, Algebra, Geometry, trigonometry, etc., by drawing pictures of airplanes around the margins of the pages of all my text books. I often sketched, with reckless abandon, unmindful of the sins of plagiarism. If another's art work appealed to me, I copied it, often enlarging or adding color, always improving it, of course.

One day during my "Improving Period", when I was in High School, I was copying a magazine illustration which caught my fancy. It was a picture for an aviation story which included a pilot, in helmet, goggles, etc., with a big problem. He was bailing out of a disabled

Curtis Robin, headed straight for terra-firma. What made the picture interesting was that the pilot had a second problem. He had an attractive young lady clinging to his neck. "That's a problem," you say? Well, the problem was that she had no parachute. I don't recall the story, but I think they landed safely with a single chute. While I was making the drawing, my sister came into the room, looked over my shoulder and remarked that the girl in the picture was rather pretty. "You're not kidding", I said. "I surely would like to meet the girl who posed for that picture."

A couple of months later, the mother of one of my schoolmates asked a favor. Friends of theirs from New York City were visiting over the week-end. They had a young daughter with them who would be bored to death all Saturday evening, with nothing to do but listen to old folks talking. Their son had a date with his steady girl friend. If they paid for the evening, would I be willing to take the girl to the movies, and double-date with their son and his date? Reluctantly, I agreed.

The four of us were at the movies when a bunch of airplanes appeared in a scene. The girl I was with yelled, "Airplanes! I just love airplanes, do you?" I admitted to a mild interest in them as people around us started shushing us to quiet down. As soon as we left the movies, she started telling me of their friend in New York who had an airplane and often took her up. She said I may have heard of him, as he was a well known illustrator named Clayton Knight. Of course I had heard of him, I said, and, as a matter of fact, had only recently drawn a copy of one of his illustrations for an aviation story. "Which one?" she asked. I described it. "I posed for that picture!" she said. Mr. Knight's regular model was ill, he had a deadline to meet, so she substituted.

Now I ask you, of all the people in New York City, what would be the odds of meeting a particular one of them in a little town in Virginia—one in whom you had expressed an interest just two month's earlier? That's what I call a coincidence!

She asked for the picture I had sketched. I mailed it but never heard from here. Funny, I remember Clayton Knight, but I can't even recall the girl's name.

PERSONALITIES



by Caldwell

AMONG the ghosts from the past that occasionally rattle their bones in these pages, I mentioned recently the R. E. 8, or Harry Tate, and I didn't speak at all respectfully of it. This so infuriated Clayton Knight, famous illustrator of air stories, that he takes his stenographer by the hand and deposes as follows:

"The old busses must all be dead and gone and it is downright disrespectful of you to speak of them as you did. Mind you! they had their faults; you had to use your head and considerable top rudder in a turn—if not the latter, then the head was just no use afterwards. And, as anyone who can appreciate beauty will testify, never has there been such an ugly contraption take the air. Plenty of dihedral, a sweep-back, and a comic scoop in front to catch what breeze there was to cool its fevered cylinders. Plenty of wires and a habit of settling itself on the ground like a two-ton truck. And an undercarriage built up of slightly hardened spaghetti. But they were doing their job right up to November 11, 1918. And a tough job it was, ranging artillery. Most of the time the pilot did the shooting, hanging over the side and watching for the gun to flash, then swinging back towards Germany and waiting for the shell to strike, heave her around and send down dots and dashes to correct the aim, then round about and repeat the dose. Fly? Of course they'd fly, with an old hand at the stick. And they were very apt to be required to fly out of the center of a mess of Fokkers who could fly too. I went one day to the depot to get a new machine and there was a fellow getting an R. E. 8. His face was well covered with plasters and I asked the sergeant what had happened to him, and he said, 'Oh, we get a lot of these R. E. 8 merchants coming back for new machines and looking about like that.' So God rest the old R. E. 8's; they must be tired even where they are."

Clayton sent me his book for boys, *The Non-Stop Stowaway*, but I don't hold that against him—we all have our off moments. The illustrations are excellent, but they have poor literary support. Clayton, you should imitate these ocean fliers and get a ghost writer to write your book for you—I think the public would also prefer that procedure. C. B. Allen remains today the only human, living or dead, who has ever written an interesting book about an ocean flight. And he didn't go on it. But I forgave Clayton for writing that book and asked for his biography, for he is one of those daring lads who leaped into the fray to depose the Kaiser and elevate Volstead.

"For the information of your customers," says he, "I sailed across the sea with that daring band that have come to be known as the War Birds, with Elliott White Springs as cadet in charge." (By the way, don't miss Springs' stories as they appear in *Liberty*; they may not be literary gems,

but they're certainly entertaining. His latest book, *In the Cool of the Evening*, is recommended.) "Arriving in England we fraternized considerable with the populace." (Especially, I imagine, with that portion of the population that decorates Piccadilly after dinner) "After numerous delays at ground schools we took to the air, I in a Quirk with Capt. Flossie Brand (now Sir Quentin Brand) as instructor. I liked the life; it kept you out in the open, although there were complaints. One of my friends, still alive, objected because he said it was both dangerous and draughty. And he still says so. After a few washed-out undercarriages on BE's, RE's and DH-9's and a stay at the fighting school at Marske. I turned up at Room 29 at the Air Ministry and was given a chit sending me out with the forces. Crossing over on the Channel boat, I glanced casually at the news of the war and discovered that there was 'continued activity by the enemy, and fifty of our machines failed to return.' It made me feel funny. At 206 squadron they seemed not to be so worried. And in no particular hurry either, for it was three days before I saw the lines, and looked down on Ypres—like a poor battered graveyard in the setting sun."

"No. 206 was the Intelligence Squadron for the British Second Army and we did a lot of nosing about behind the lines from Dixmude to Armentiers. They very nearly



Clayton Knight, illustrator, in correct pose

had to pack up my kit at the squadron one afternoon when I was acting as escort to another fellow out getting information. Four Huns kept picking away at me all the way back to the lines, but I had a good observer, and after considerable twisting and turning they gave us up and went home, one of them out of control. My tail was in shreds, but that could be charged up to the observer. He wanted to fire *all* the time.

When we did get shot down on October 5th, we were too far behind the lines to get back. I got an explosive bullet that went in my knee and out my hip, fortunately breaking no bones. They must have hit my tank too, for the engine quit and we flopped down in a field near Courtrai and went over on our backs. I learned that an Oberleutenant Affarth got the credit—I was his 23rd. Then I was a guest at five different German hospitals until the Armistice, then a couple of Belgian, a French, and a few English hospitals. Then Home. I brought back a few sketches and a lot of memories. They all rested dormant until I ran into Springs one day and he said he had a story or two that needed illustrating. Could I do it? All I wanted was a chance, and Pelmanism did the rest."

Knight's airplane illustrations are spirited, dashing, and—wonder of wonders!—technically correct. His sketches of war airplanes are a delight to the old pilots who flew them. But I told him that his officers were too handsome—we never looked like that!

"Didn't we?" he writes. "Don't forget that you are looking back with misty and rheumy eyes, and that when you meet the old crowd they are not as they once were, but tougher and fatter and bald. Look at Tipton these days! I have some old uniforms in my studio that I wore and that some of my friends wore—and just try to get a regular sized person into them or the boots. When I need a model I have to depend on largish boy scouts or chorus men."

I guess he's right. No matter what we are now, God pity us, we once were handsome, dashing young men.

DID you hear this one? Lloyd Yost vouches for its truth. It seems Captain Elliott White Springs, the sheet-tester of Fort Mill, S. C., had a speaking engagement in Chicago. He hired a plane to take his party to Chicago. Since the pilot didn't know the route, the bold Springs up and says, "I'll navigate for you." After an hour or so of the best Springs navigation—and it should be pretty good, because Elliott has written articles on flying about the country—they landed at Knoxville, Tenn., for gas. Whereupon the personnel of the Greenville, S. C., airport rushed up to greet them and to inform them that they had landed at that charming city, and not Knoxville!

May 16 and 17

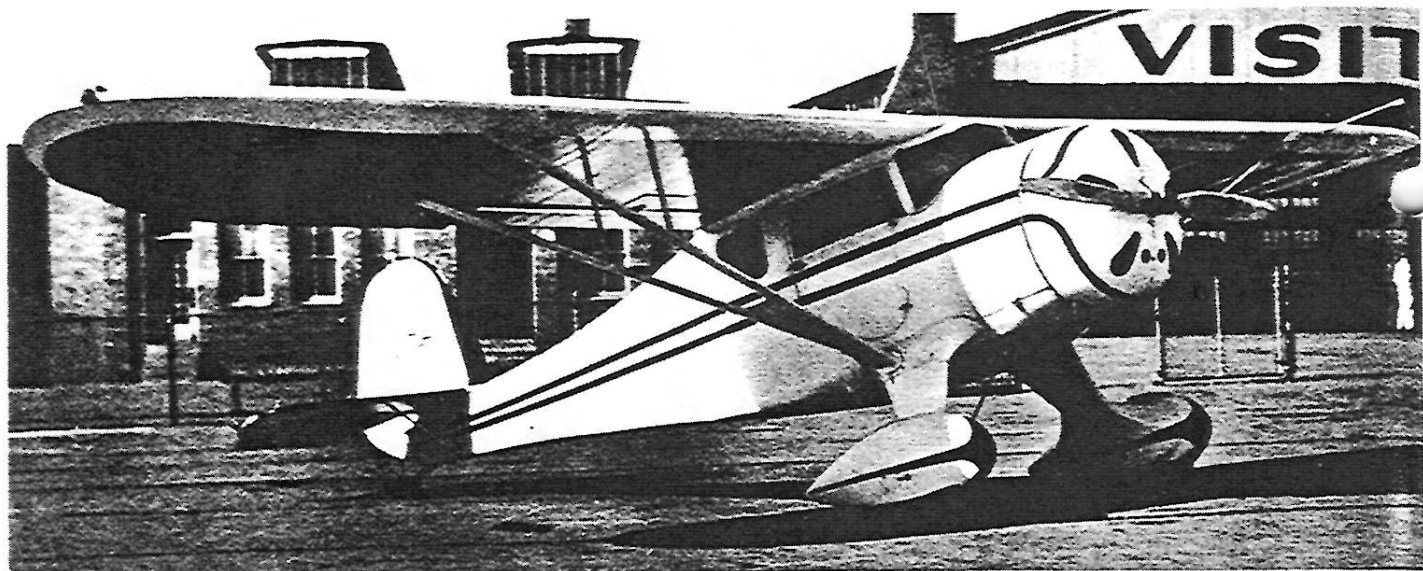
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July-Aug 96: OUT

Sep-Oct 96: Pittman- Jabiru comments Libella 11 Bates Monoplane E-mail Allan's Shop

Nov -Dec 96: Schanzle-Pasped Skylark, Tail wheel tales, Felix Gutman Outdoor Endurance Job, 96 Maxecuter Fun-Fly results, Pearl Harbor, Clark Y airfoils

Jan-Feb 97: OUT

Mar-Apr 97: Schanzle-Ben Jones S-125 and Index to 20 years of MaxFax

May-Jun 97: Meyers- 4th Dimescale Issue Airdevil Gregor FDB-1 Air-King Monocoupe Dimescale Bellanca Jr. and Taylorcraft (20") Majorly Morphed Megow Nieuport Scout. Nickelscale Bellanca Jr.

Al Flesher on "Propeller Efficiency"

Jul-Aug 97: OUT

Sep-Oct 97: Pittman- Double photo pages Gasu Denki Koken A* 10 cent plan by Dave Aronstein also his "Washingtonian Proposal" Al Backstrom's Maubossin Hemiptere 10 center No-Cal Hellcat by Ralph Brady and Wildcat by Mike Nassie Russ Sandusky's work shop E:mail stuff on Geneseo

Nov-Dec 97: Srull- Vega Issue Comet Dime Scale Vega plans & details of Kudzu Vega Event. Peerless Vega plans Kuzu and Comet contest results Many Vega 3-views and schemes.

Jan-Dec 98: Meyers- 5th dimescale issue NBM fun-fly writeup, Washingtonian rules, Dave Aronstein on building the Comet Lusombe50, Comet Curtiss P-36, Phantom Flash, 5¢ Baby ROG, 20" Comet style Miles Mohawk, Comet dimescale listing with Penn Valley price list, Doug Buchanan's workshop, Comsat contest correction, Rolf Gregory Memorial.



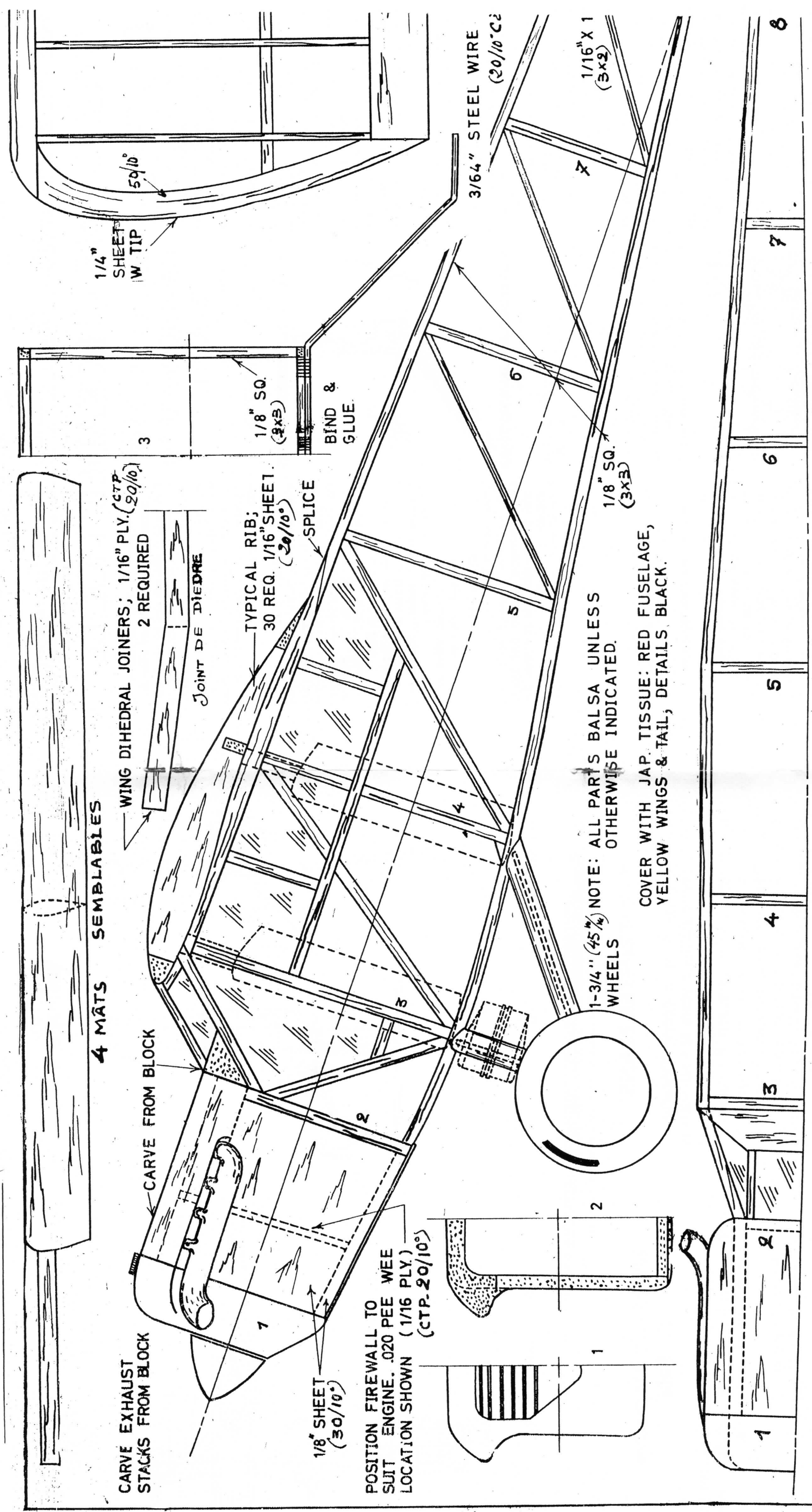
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COVER WITH JAP. TISSUE: RED FUSELAGE, YELLOW WINGS & TAIL, DETAILS BLACK.

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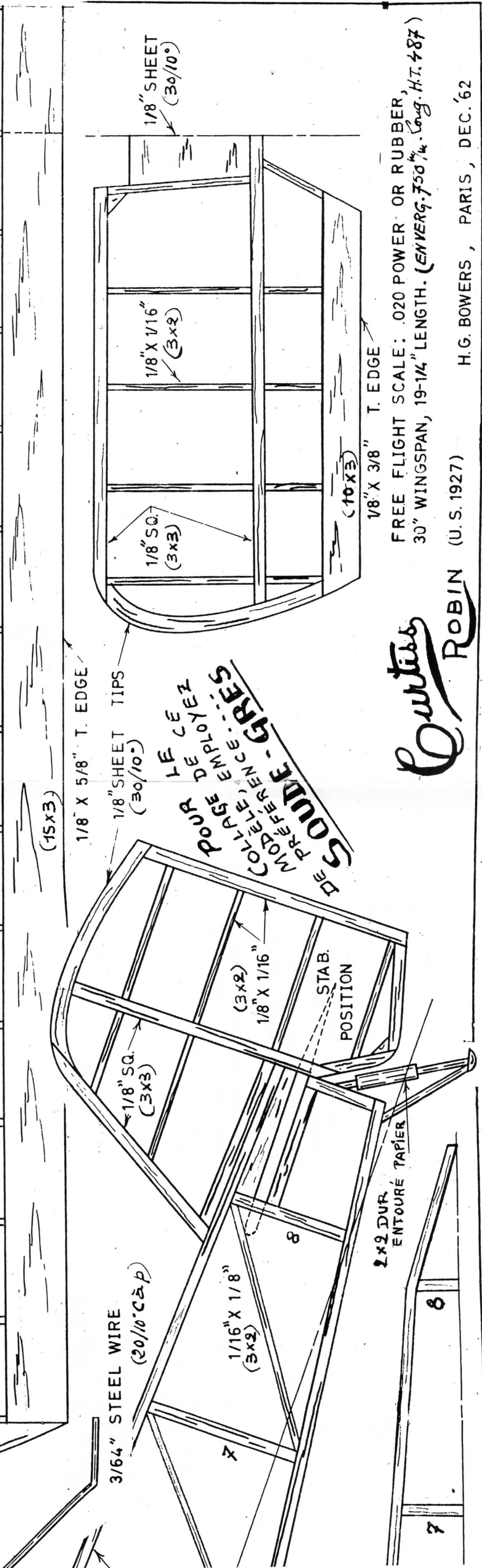
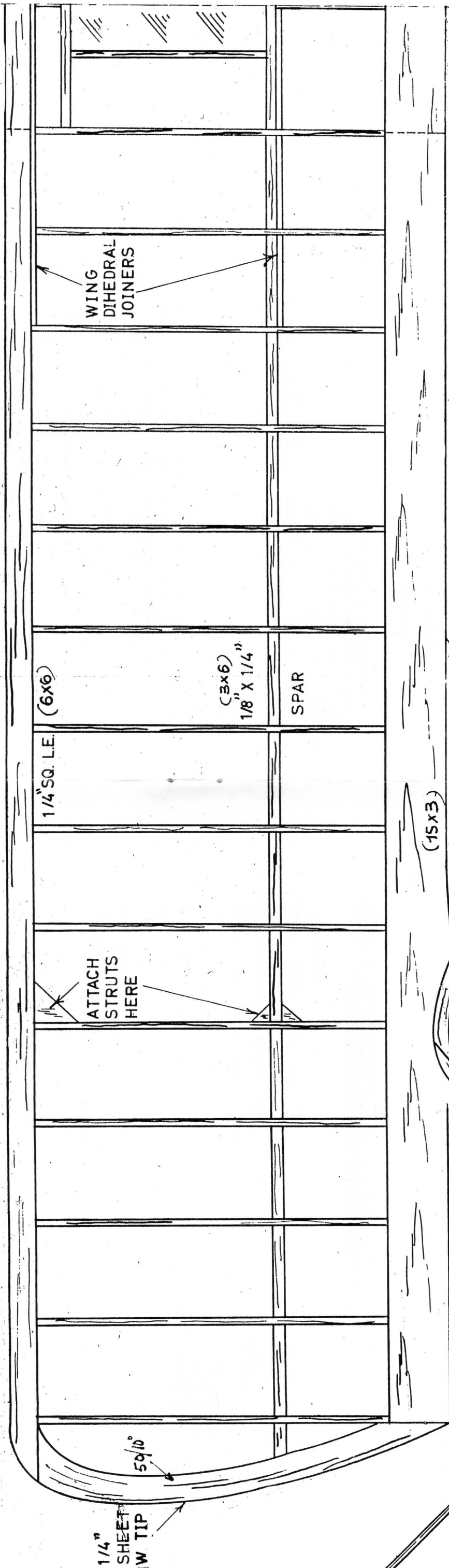
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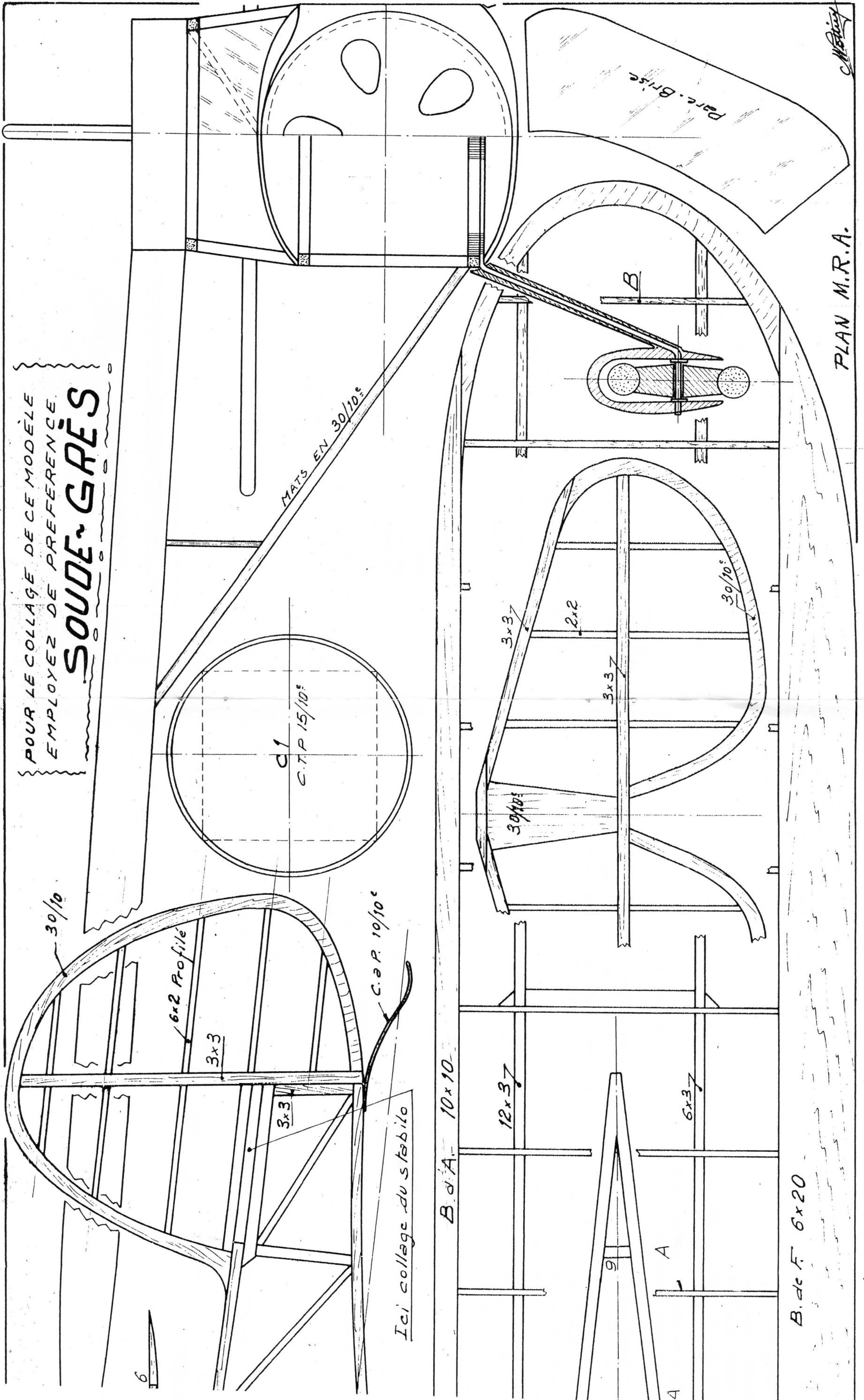


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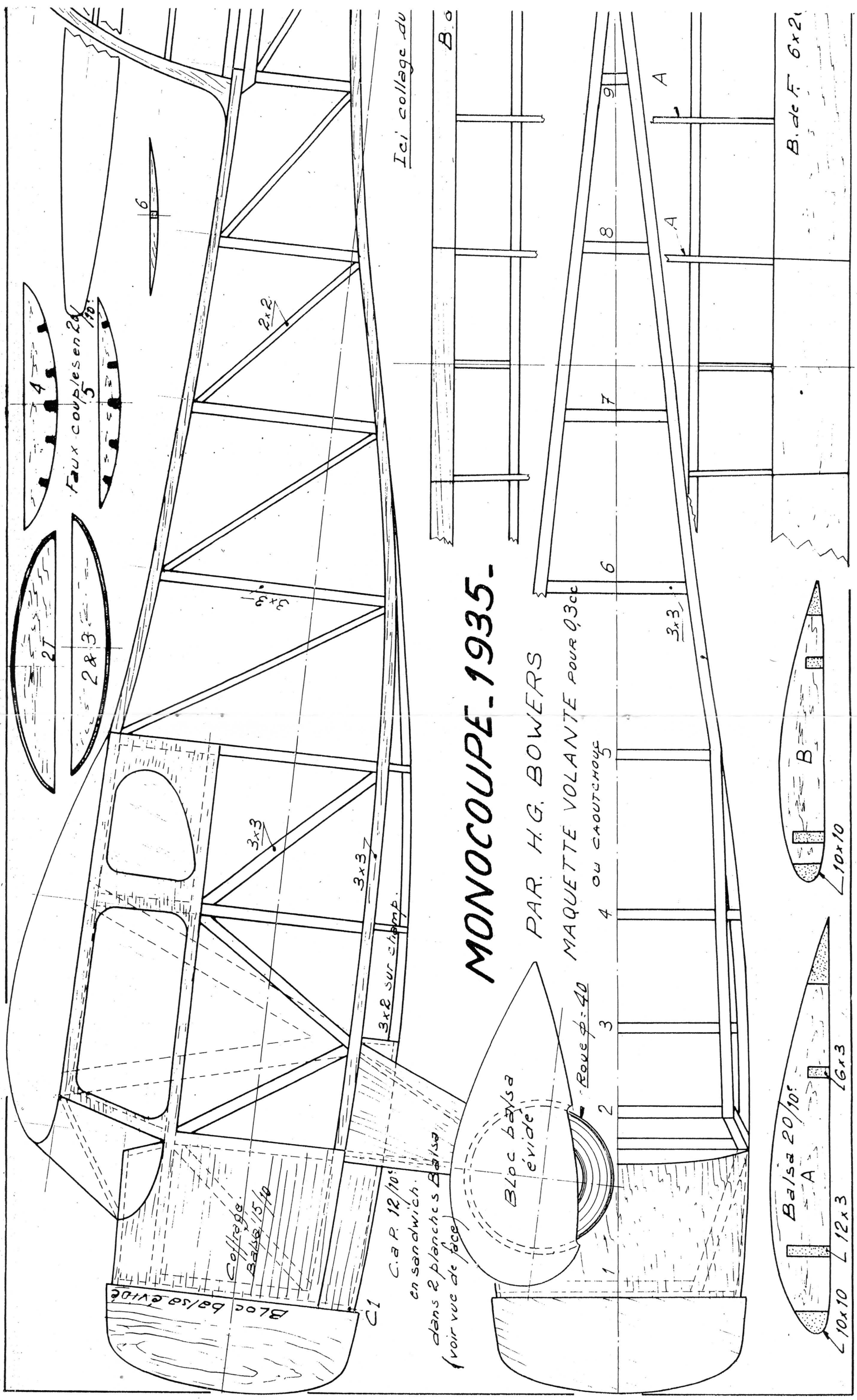
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POUR LE COLLAGÉ DE CE MODÈLE
EMPLOYEZ DE PRÉFÉRENCE
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PLAN M.R.A.

C. M. B. 17



MONOCOQUE - 1935.

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MAQUETTE VOLANTE POUR 0,3cc
4 ou caoutchouc

Bloc balsa évidé

Coffrage
Balsa 15/10

C.a.P. 12/10
en sandwich.

dans 2 planches Balsa
(voir vue de face)

Bloc balsa évidé

Roue φ=40

3x2 sur champ.

Ici collage du

B...

Balsa 20/10

12x3

16x3

B

10x10

B.de F. 6x2