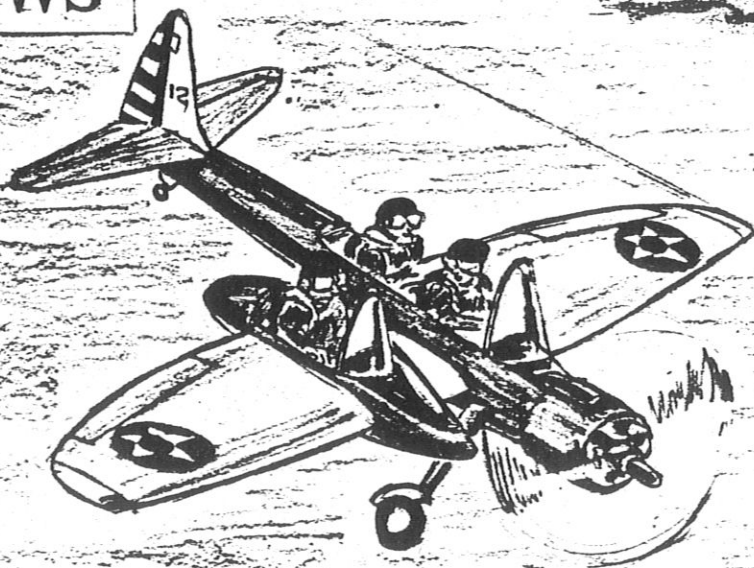


# FLYING ACES

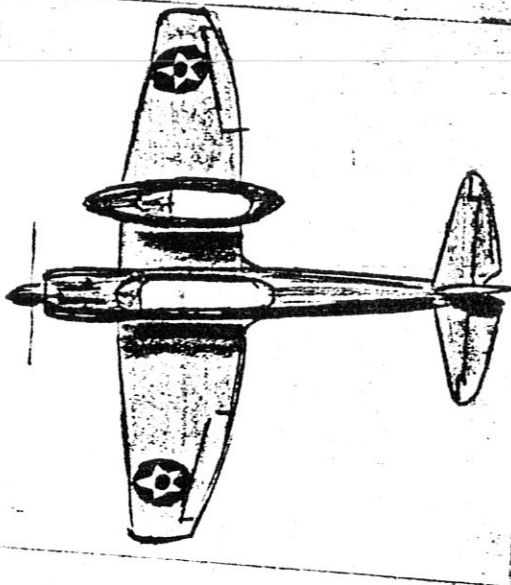
Club News



Issue #66

THE HARLEY - DAVIDSON XMBT-1  
by Captain Frank Scott  
Archivist, McCook Field Sqdn.  
FAC G-2

It is now fashionable, in some quarters, to wear large belt buckles bearing the well known emblem of the Harley - Davidson motorcycle factory. Few, if indeed any, of the weareres will know the story of these buckles, or even suspect that these are relics of World War Two! Only after long investigation and careful manipulation of these facts can we now assert that these belt buckles were purchased in great quantity by Harley - Davidson for use as safety-belt fasteners in the highly secret, and virtually unknown, Harley - Davidson XMBT-1 multiplace training plane.



With the onset of hostilities, it became quickly apparent that flight training establishments would be strained beyond capacity to fulfill the need for pilots. The newly formed Aeronautics division of Harley - Davidson therefore, took the boldly imaginative step of producing a training plane to enable a single instructor to train two student pilots at once, and, if the concept proved successful, sufficient "stretch" was provided for in the design to permit models to be built to accomodate four, eight, and even twelve students.

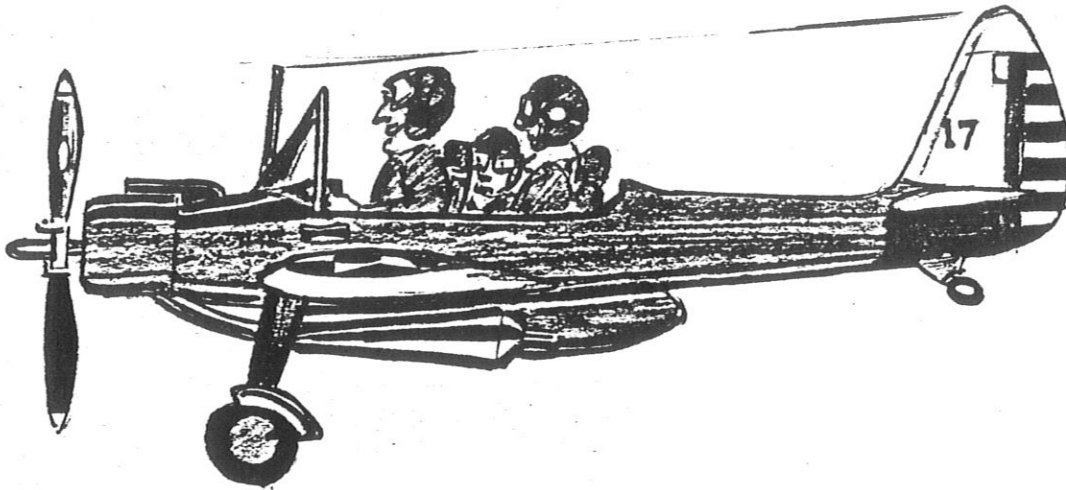
Aerodynamically, the design of the XMBT-1 was considered quite conservative apart from the unusual instructor's pod, which very neatly eliminated the torque swing to port during take-off so troublesome to fledgling aviators. Unfortunately, it was also responsible for a rather worse condition during landings.

In an effort to cut costs, complexity, and weight, only the instructor's cockpit was fitted with instrumentation, inasmuch as it was believed that the student pilots would not understand the many guages anyway. On the other hand, the instructor's station had no flight controls, it being his job, after all, to teach the others the rudiments of flight. The XMBT-1 was, incidentally, the only known aircraft to employ a kick starter.

It is not clearly understood why production orders were not forthcoming for this brilliant concept, although test pilots complained of a certain wing-heaviness, and that their standard AAF parachutes were awkward on the leather saddle type seats.

German agents in the United States, it is known, did take an active interest in the design and details were covertly transmitted to a Doktor Richard Vogt at the Blohm und Voss Werke in Hamburg. It is thought doubtfull, however, that any action was taken on the part of German officials regarding this information.

Discouraged, the directors of Harley - Davidson reluctantly closed down the still-born Aeronautical Division, and following the loss of the sole prototype, nothing remains except for those thousands of seat buckles.



(How many of you FACs ever heard of the Blackburn "Sidecar"?  
Now, that one was for real! Ed.)

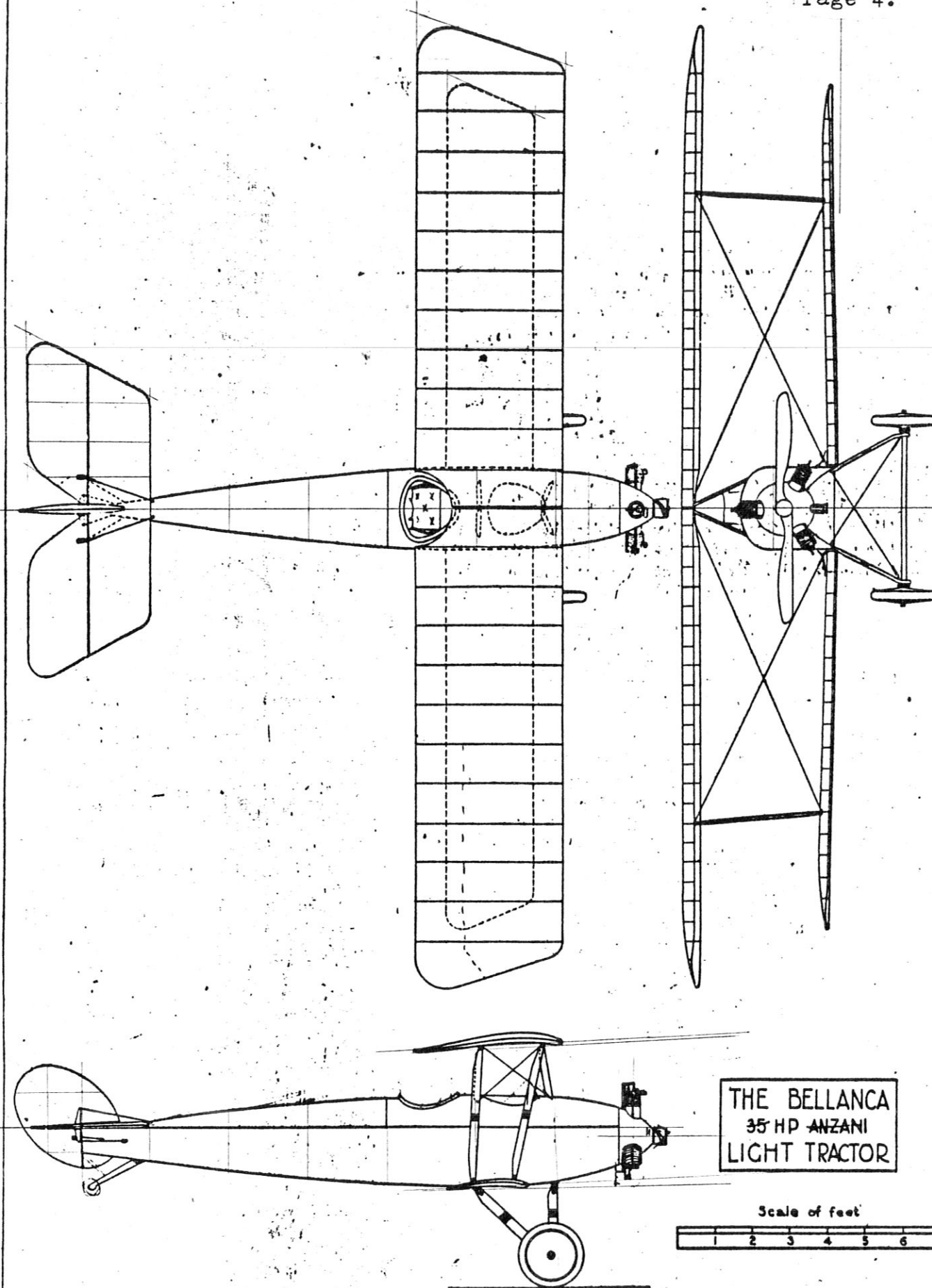
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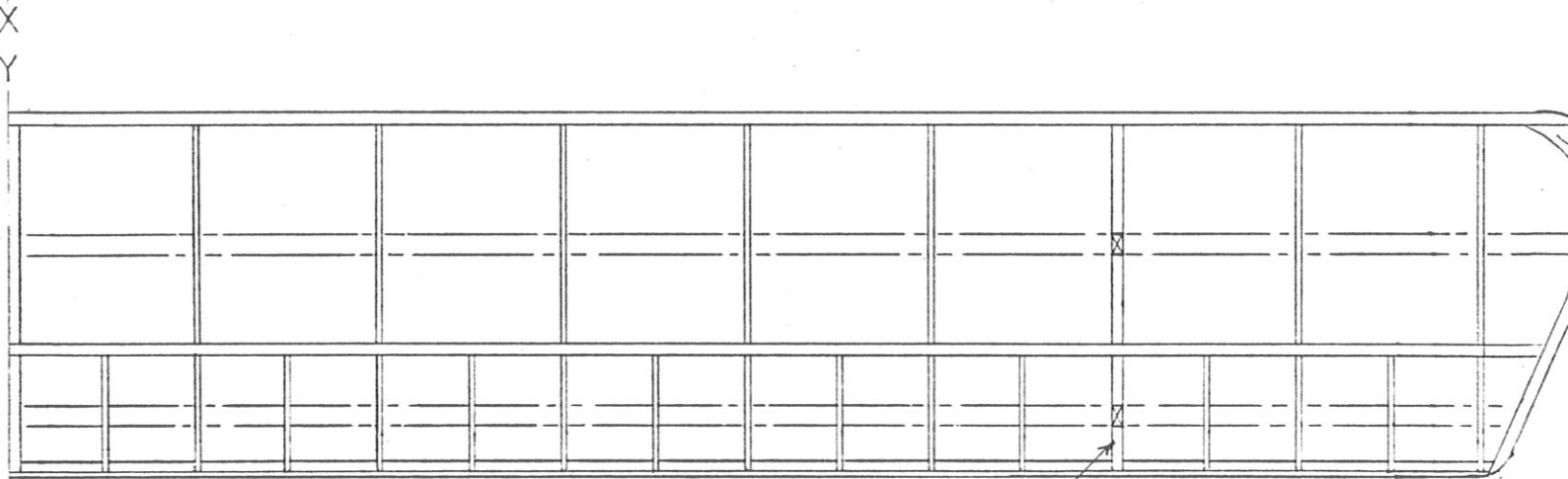
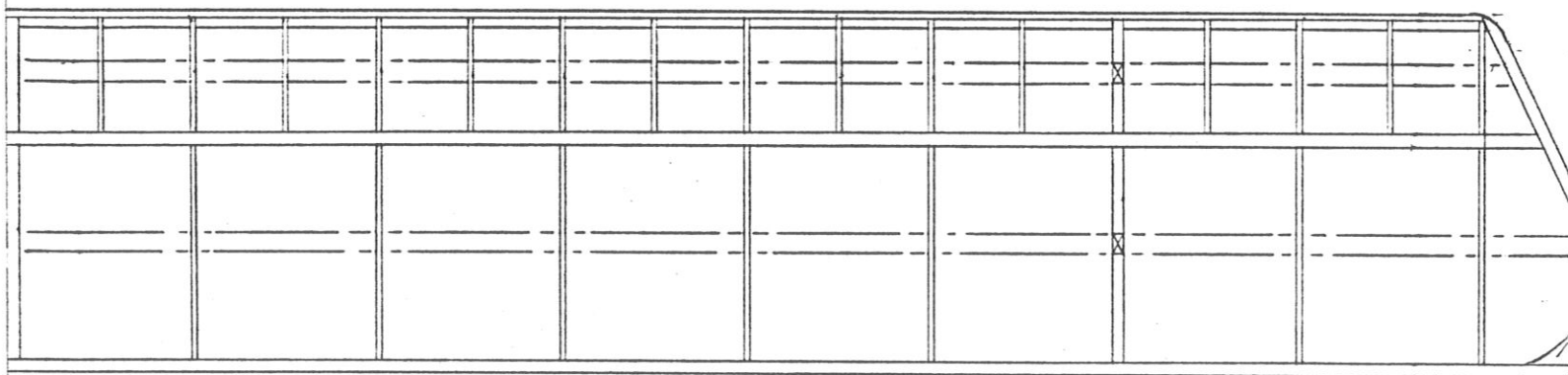
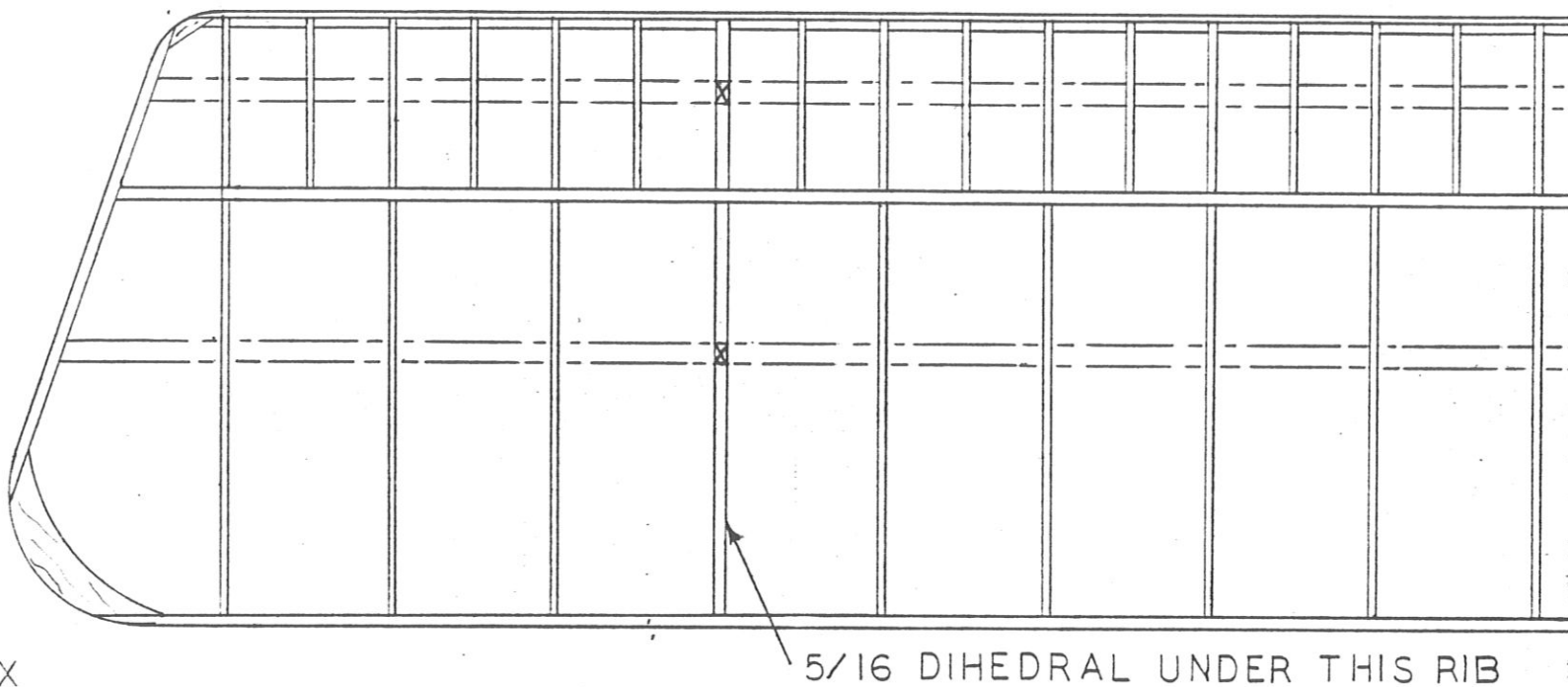
#### FLYING ACES MODEL LABORATORY

##### Bellanca Two Place Biplane

This nifty looking sky slicer was designed by the long time pal of many aeromodelers years before he learned to clip his wing tips in a way that became as famous in aeronautical circles as the signature of John Hancock in the world of normal people. Giuseppe was clever enough to design the cockpit up front tight enough a fit to the average guy, but too snug to fit mama-in-law, hence never overworking the ol' Anzani, which had the nasty habit of flinging cylinders hither and yon until some enterprising mech decided to wrap baling wire around the heads, forming a triangle, and holding each other in place. 'Tenny rate, she's got a sky-flirting look about her that makes her worth a try.

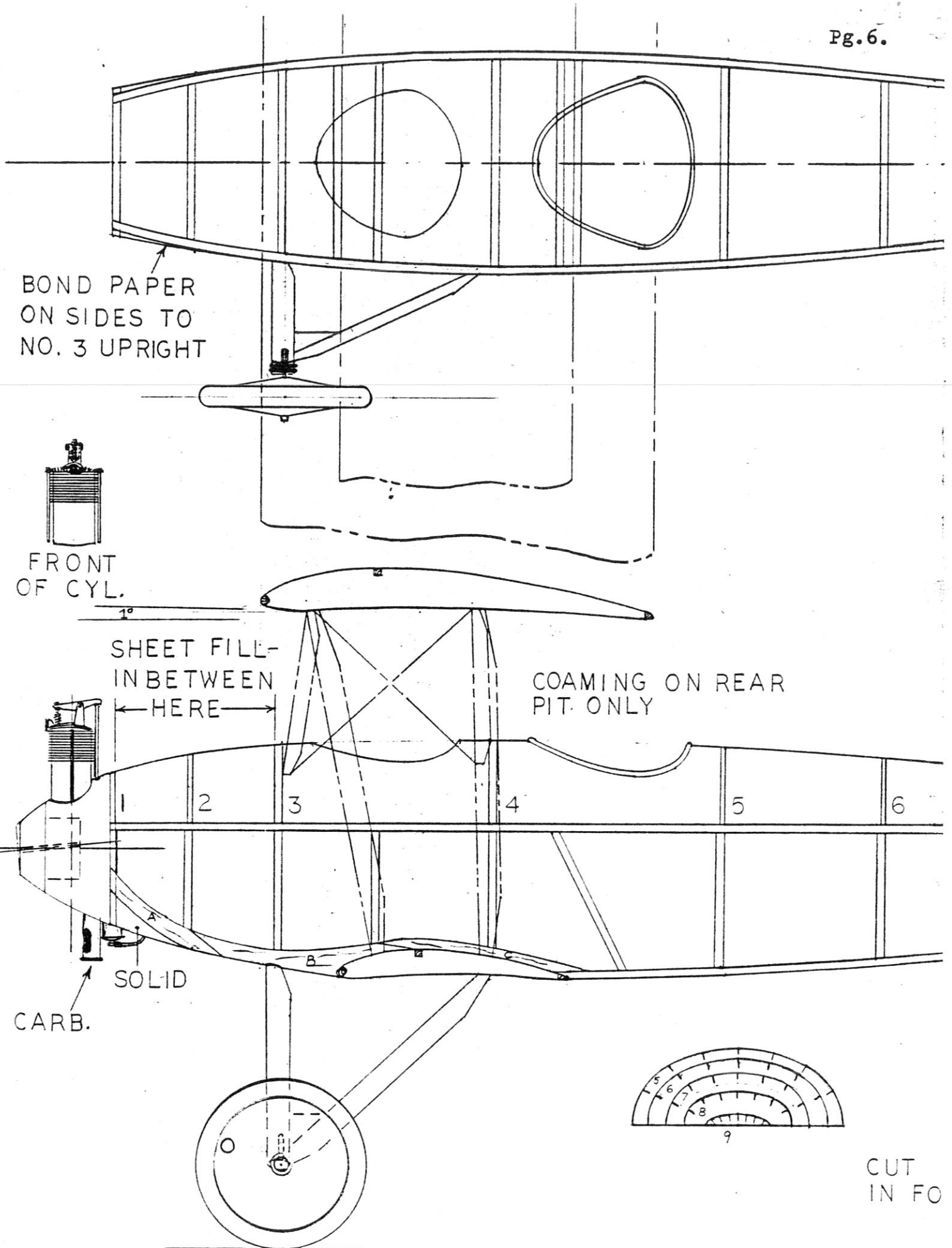
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1/2 DIHEDRAL UNDER THIS RIB





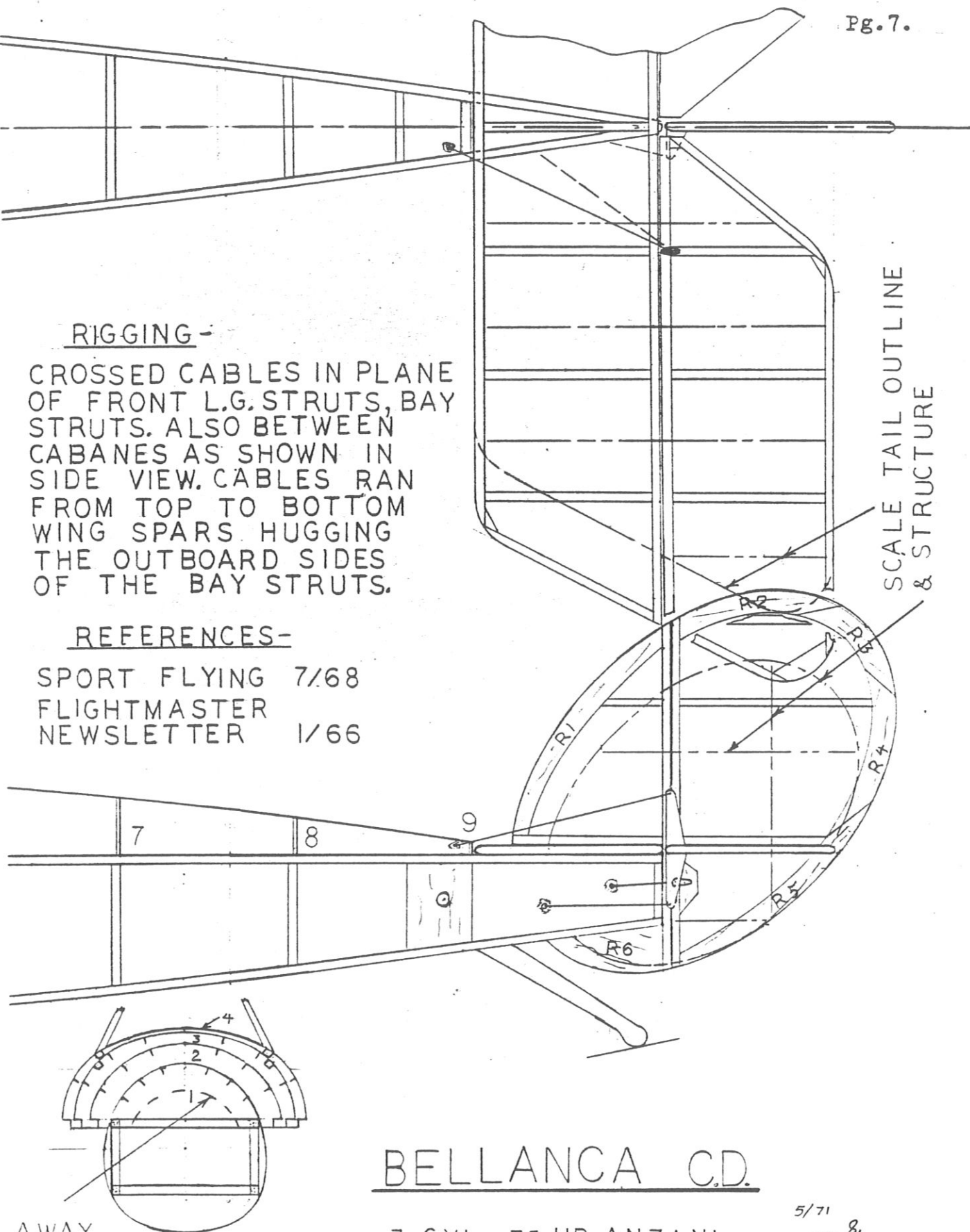
RIGGING -

CROSSED CABLES IN PLANE OF FRONT L.G. STRUTS, BAY STRUTS. ALSO BETWEEN CABANES AS SHOWN IN SIDE VIEW. CABLES RAN FROM TOP TO BOTTOM WING SPARS HUGGING THE OUTBOARD SIDES OF THE BAY STRUTS.

REFERENCES -

SPORT FLYING 7/68  
FLIGHTMASTER  
NEWSLETTER 1/66

SCALE TAIL OUTLINE  
& STRUCTURE



AWAY  
RMERS 2,3 & 4

BELLANCA C.D.

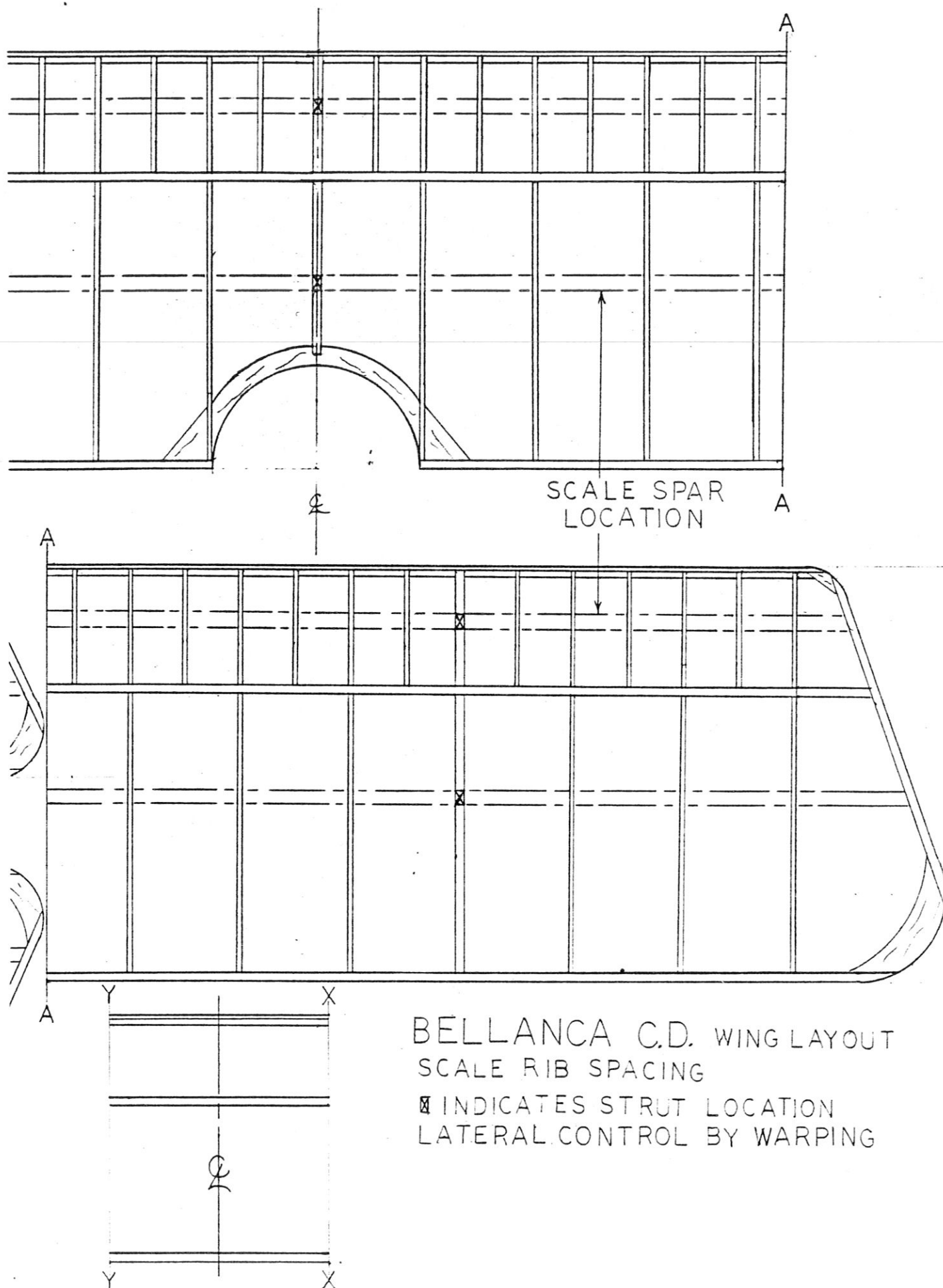
3 CYL. 35 H.P. ANZANI

A <sup>FLYING</sup>ACES CLUB PLAN

5/71

D.A.B.







# With The Model Builders

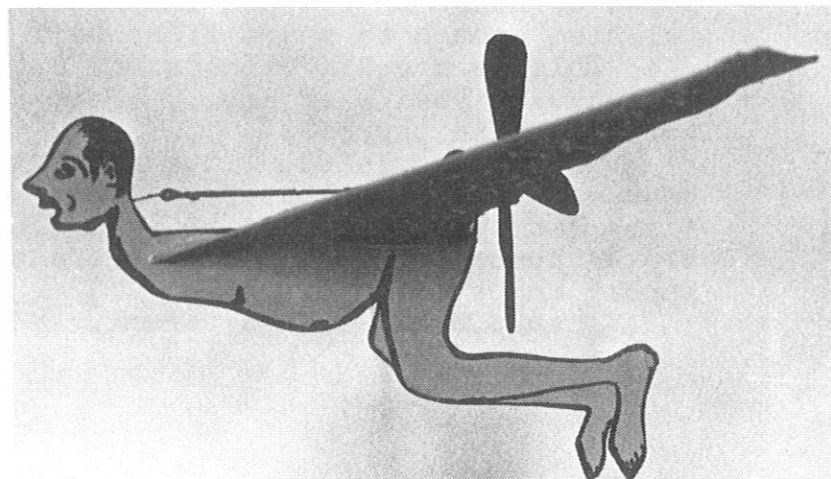
Yoicks, stringer-strippers! Is the good old FAC News turning into some kind of a snail-eater cartoon-strip? Just look at all those bouef Bourguignon buzzards blasting around the borders of Bordeaux and being cruelly shot at by those assassins in feathers! We checked with phineas pinkham's old flame, Babette of Bar le Duc, to get the lingo right here, and she told us the caption meant what we thought it did.....literally "When men will be birds, and when birds will be men." Bill Warner sent this in to us, along with his model rendering of one of those helpless Frenchbirds. Look at that open mouth! I'll bet that's the one shot by those birdlike killers, just as he thought he'd found a family of snails or some wild mushrooms to take home for his bifteks. Bill says this scale Frenchbird will fly about the length of a gym. Maybe your model'd go better if you put (dass I say "insert?), the prop in at the angle the artist shows it at! At least, that's what Babette said when we mentioned one P. pinkham, esq, of Boonetown, Iowa. Very anatomical, the French. These Frenchbirds even beat out the old FA Xmastick for pure novelty!

Thanks, Bill. Your creations are ever welcome on the FAC editorial tarmac. Why, right now, one of the slaves here is modifying your Ms. Peach into Borzec's Bomber...the very plane the Vild One used to defect to the evil Four Faces conspiracy. We'll let you know if the ship ever sees the inside of the winners' circle. The slave isn't much of a builder, less of a trimmer, and still less of a typist!

Adoo, bums!



Quand les hommes seront oiseaux, et quand les oiseaux seront hommes.



And here, front and center of this very page, we have a fanfare of trumpets, a ruffle of drums, nine flourishes, and a twenty-one busting Pirelli salute for

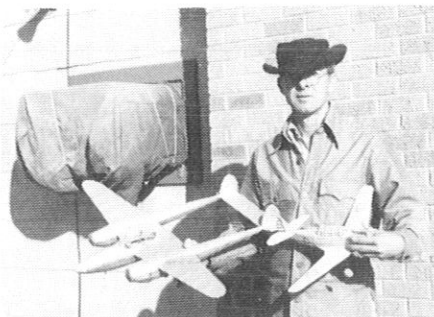


Fig. 10.

Bob Rogers, of the Ponca City, Oklahoma FAC! Bob, as you know from his many covers and drawings for the News, is a real snappy artist s his FA and

its lore just about as well as anyone. (Did we foolya with that jumping of columns? Well, we tried to make this page look as much like FA as we could with this crummy plastic typewriter, and that leap over to the right was about as far as we could get.) Not only does Bob know how to draw and think like an FAC, he knows how to look like one. If it weren't for that air conditioner in the background, we'd say this pic was taken about 1943, when the Comet P-38 was a new sky swisher (and you could say "swish" without being called mean!). Look at that pork-pie hat on his head; the keen, determined expression in the eyes. This is a lad indeed determined to mount into the skyplanes unaided. Why he hasn't even heard of sideburns and wears his hair in a crewcut. The North American BC 1A is still a relatively new ship, and who begrudges one of the gang a naked landing gear (after all, that's about as interesting as a naikid lady in 1943). Alas for you skysters, you can't see the envelopes he "submits" his material in: every one of those is a cartoon, equally as good as the ones we so eagerly use. We'll let you in on a little secret here, pylon polishers: when Bob first began writing in to us and sent in his first letters and drawings, he had the lingo and "world" of FA down so pat, and his line shooting was so good that we thought he was the head of a mighty band of FACs out there, still busily toiling away for their DSCs, their DSMs, their Ace's Stars, and all the other wondrous awards of the original FAC... like those dinosaurs in the Valley that Time Forgot. It was only when we sent out scouts to the Ponca City hobby shops and A & W Root Beer stands that we began to find out the truth... that Bob was all alone and that the local hobby shops were not filled with knickered kids who cut lawns to earn the dimes that bought Burd and Maircraft kits. The Ponca City airport doesn't have any pine boys who polish windshields and gas up planes in hopes of a ride; its manager is the same flinty-hearted type we all know and loathe so well. The lawyers have kicked the kids off the farmers' fields, just like here. And Bob Rogers is alone. There is no FAC in Ponca City, save for Bob Rogers. But thanks to our mag, FA, one man has had a lot of hours of fun and inspiration and he has been kind and talented enough to share it so well with us all.

This is a real "helmets off", fellows. "Eyes right!" as we all pass in review of Bob... chest out, step in trim, no sad sacks here in the FAC.

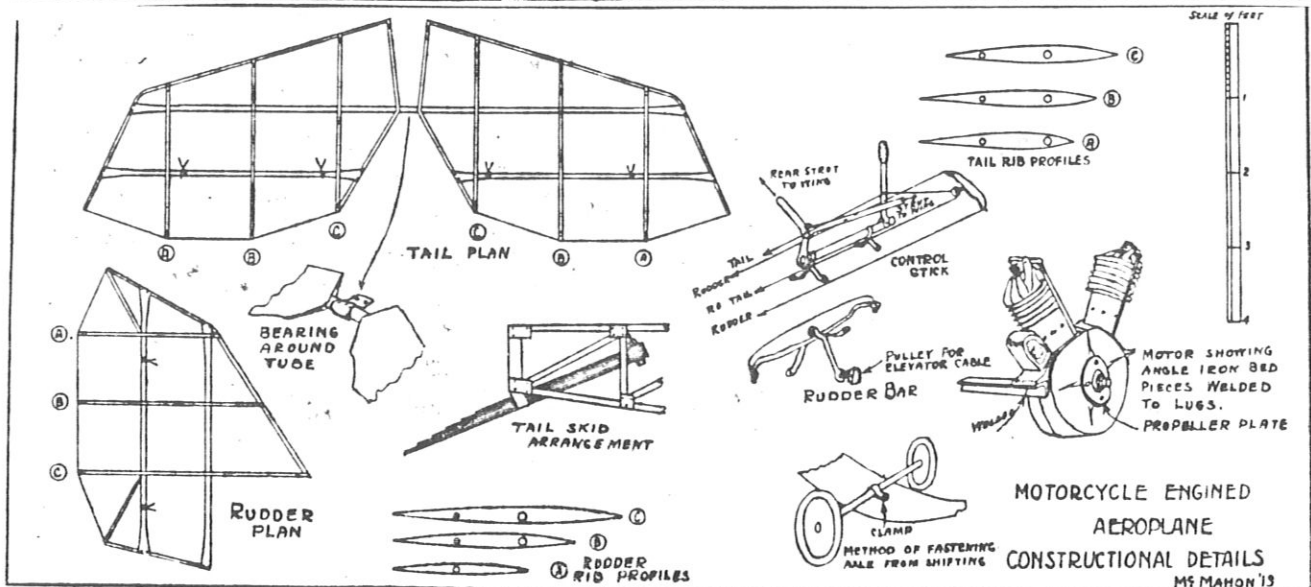
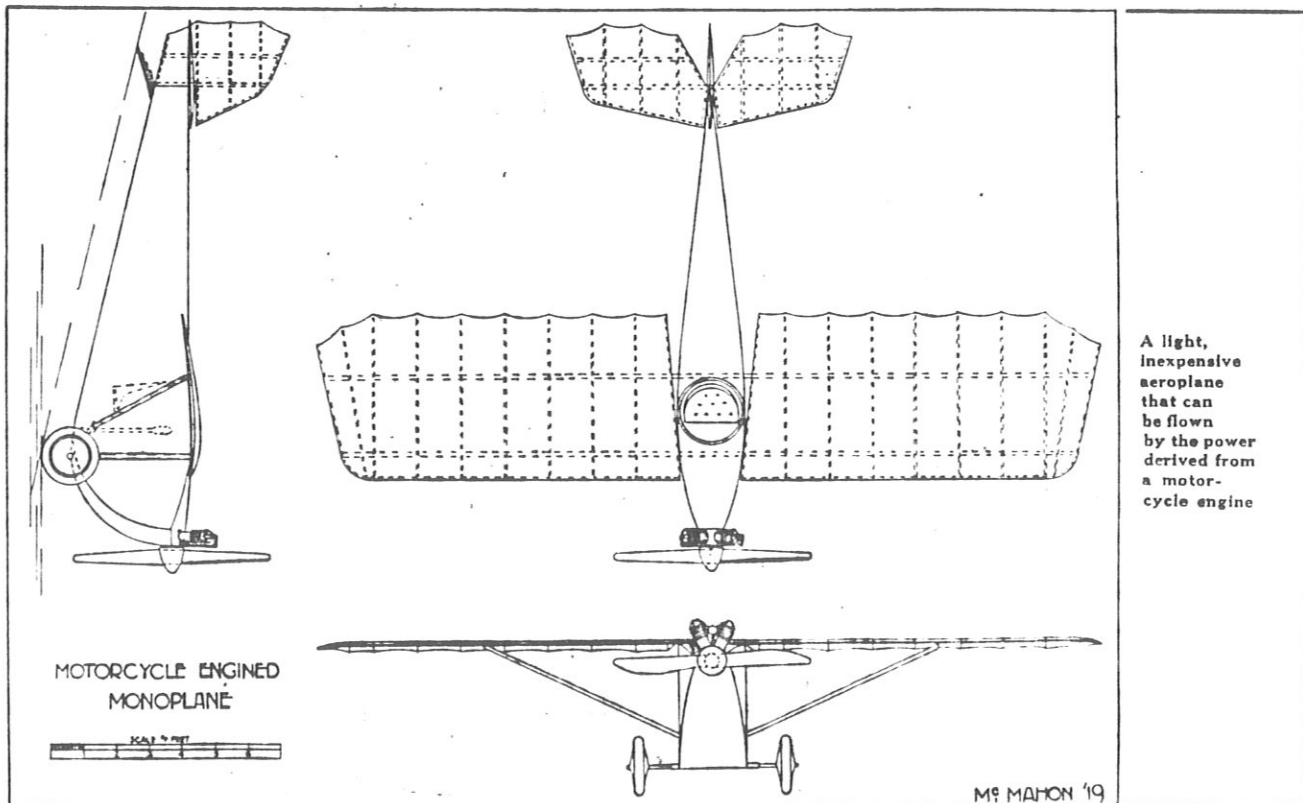
If the people who write and edit the modern model mags only knew what has been lost.... well, at least one does, but the times seem to be against it all. People like Bob and Frank Scott are an honor to these pages, where their labors go for free, if hardly unappreciated.

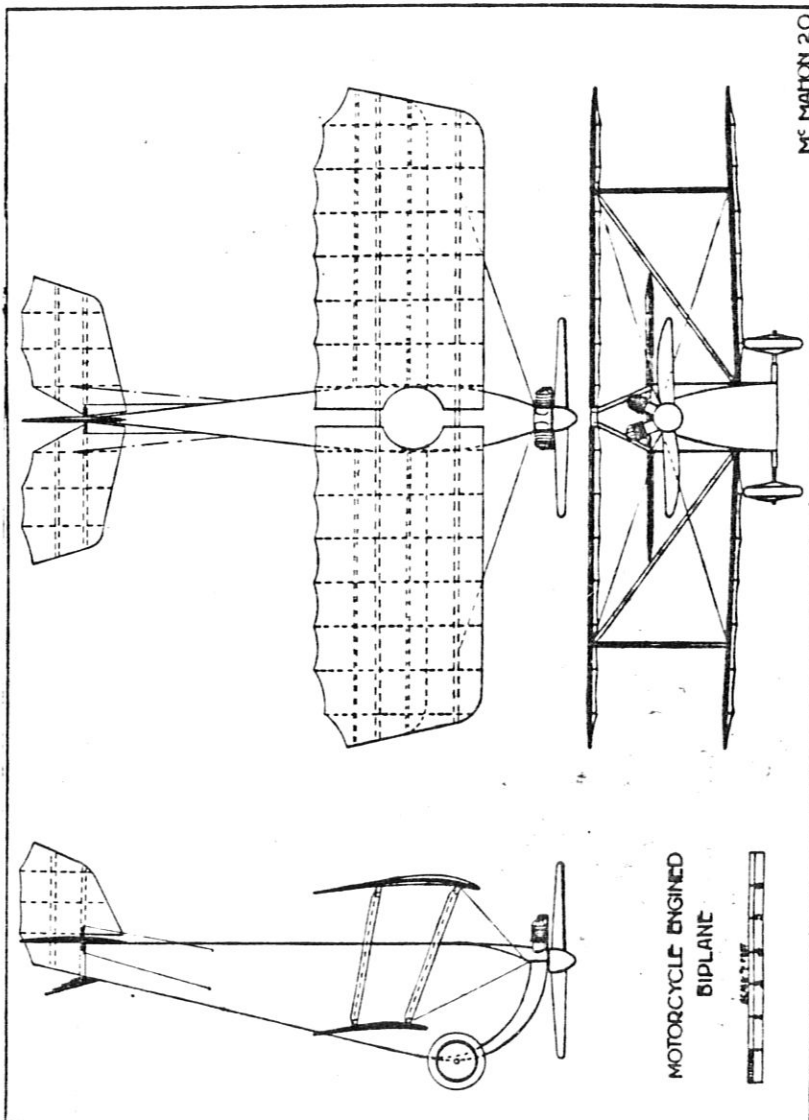
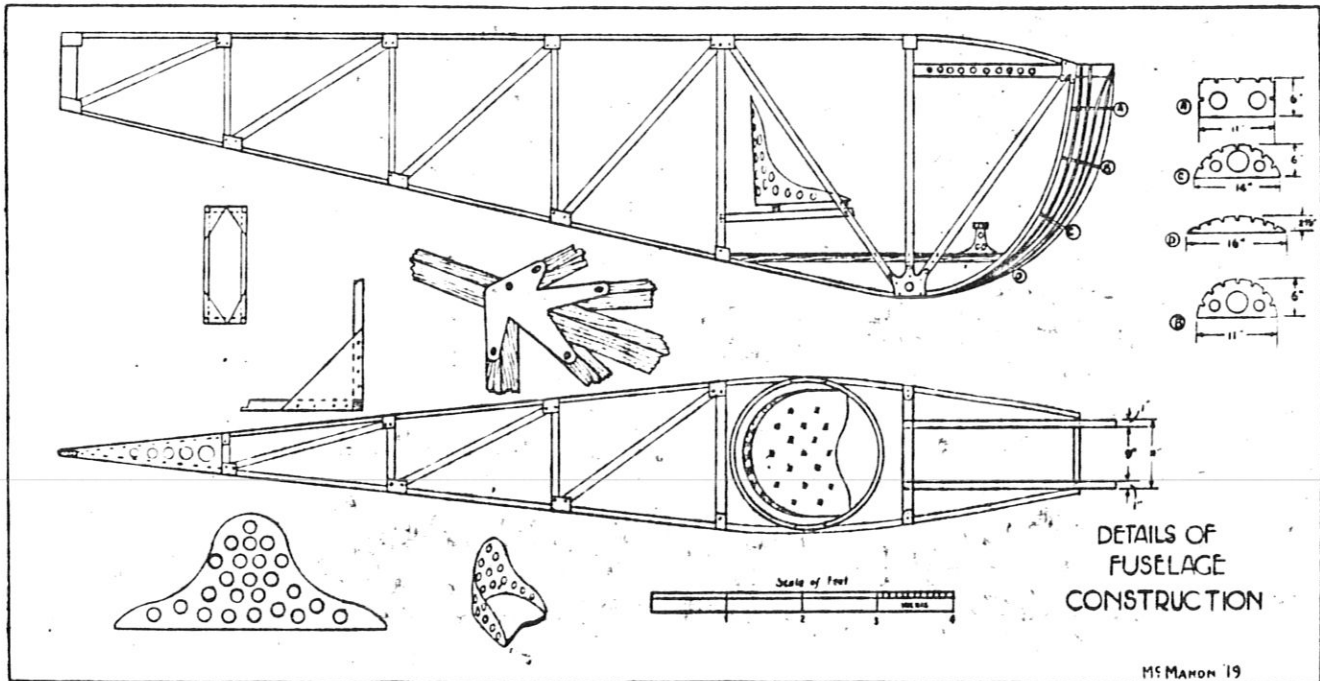
Thanks, Bob. Thanks, Frank.

Not long after the Big Fuss of 1914-1918, sky-spirited souls who possessed craftsmanship were looking for a cheaper way to slice a little ozone than trying to scrape up the price of a Jenny. Enter the motorcycle powered lightplane. Aside from re-worked Lawrence Penguin engines, the motorcycle motor offered the only hope of power for a little light job a guy could put together in his garage, or barn.

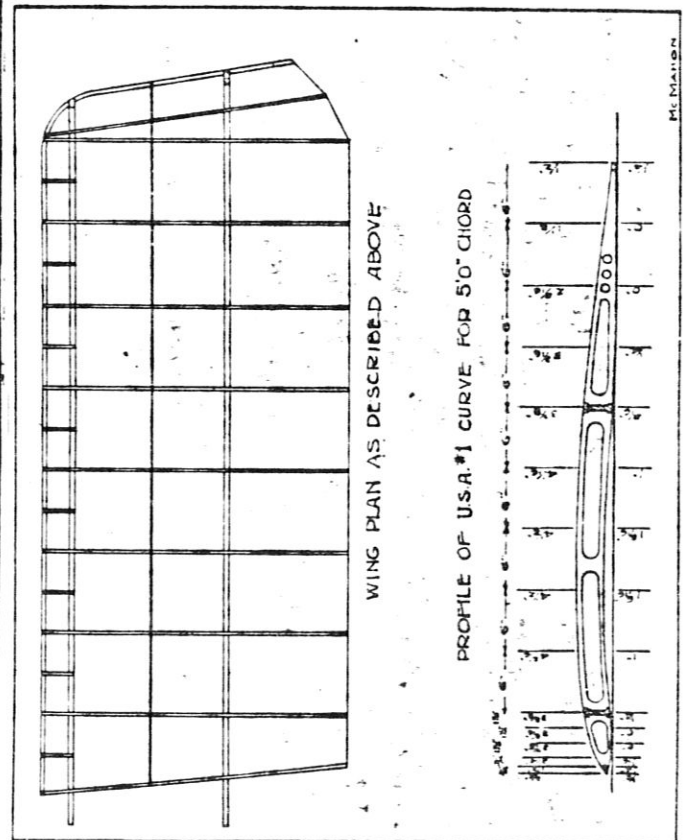
Some designers actually went into the business of selling plans, kits, knock-down airframes, and totally built machines, such as D.W.Huntington, and George White.

For the building enjoyment of our former notchin' clubsters, we are presenting some 3-views of these aerial gnats of yesteryear. About the only one we here at GHQ find familiar to our goggled eyes, is the Huntington. Look 'em over fellas, and head for the drafting table! We can't wait to see one put-puttin' high over Pinkham Field!

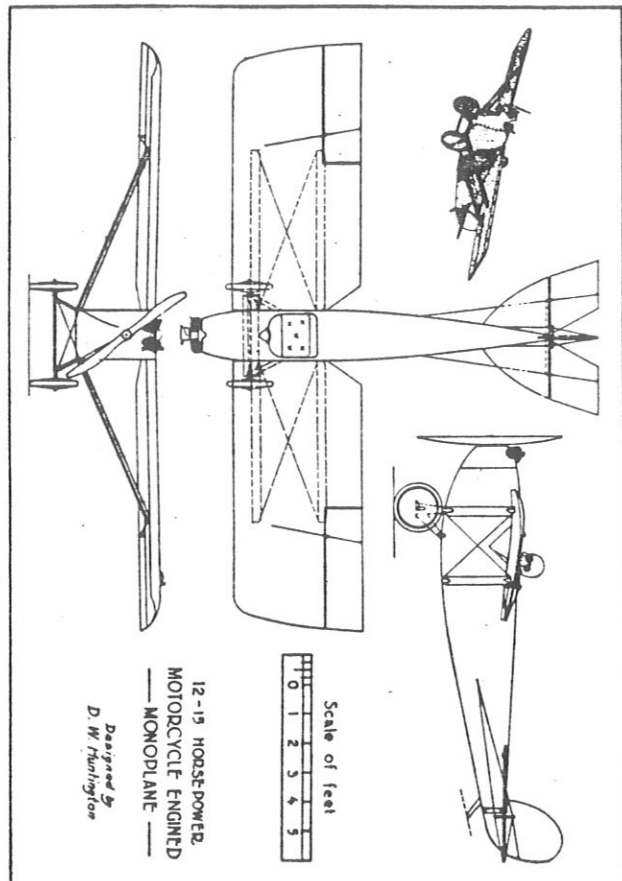




At left is a biplane version of the monoplane detailed here and on the previous page. Note lift and landing wires also serve as drag wires.







**BLUEPRINTS.** Our complete set of prints for building the H-12 comprises four large sheets—over forty square feet of detailed drawings showing exactly how all parts are made and assembled. By making the drawings large we were able to show all assemblies quarter size and the details for the most part, full size. The very best engineering practice has been followed and it is difficult to realize how the set could be made clearer. The prices of the complete set, which also includes any special data in the form of sketches or instructions concerning powerplant installation or upon any point not thoroughly understood in the plans, is \$5 prepaid.

**MATERIALS** supplied by us are of the best quality obtainable and guaranteed. All spruce and veneer is selected stock. All bolts, nuts, the rods and clevis pins are three and one-half per cent nickel steel, screws and nails are brass and tacks are copper. Let us quote on any materials you require.

**PROPELLERS** can be supplied at reasonable prices depending upon size. We shall be pleased to quote on your requirements.

**BILL OF MATERIAL** including woodwork roughed out, sheet steel for fittings, tanks, and all other materials used in the plane except engine and propeller—\$165.

(Above price subject to two per cent cash discount only.)

**KNOCK DOWN PLANE** including all finished parts in the following price list, all ready to assemble quickly from our blueprints, complete except engine and propeller. Special price subject to two per cent cash discount only—\$345. **PLANE** built up ready to install engine and propeller, complete except those items—\$765.

(Above price subject to two per cent cash discount only.)

**TERMS.** On all orders less than \$50 cash with order. \$50 or over twenty-five per cent with order, balance on delivery. All prices are f. o. b. Hempstead and include packing. Where shipping charges are sent with order any excess will be promptly refunded.

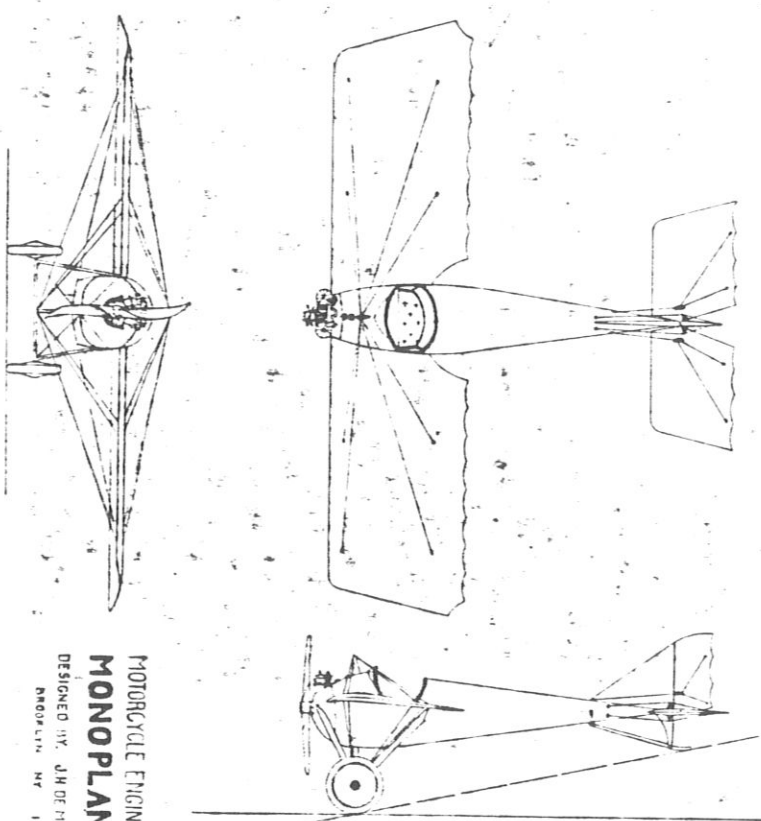
**DISCOUNT.** A discount of ten per cent is allowed on all orders of \$20 and over. On all orders of \$50 and over a further discount of two per cent will be allowed for cash in full with order.

**GUARANTEE.** We guarantee all materials and parts we handle to be fully adequate for the uses for which they are intended. Any parts not found as represented will be replaced free of charge or money refunded, as preferred. **YOU** may use this price list when ordering and save time by merely checking the items wanted and forwarding same together with your remittance. In that case we will gladly send you another copy of the price list.

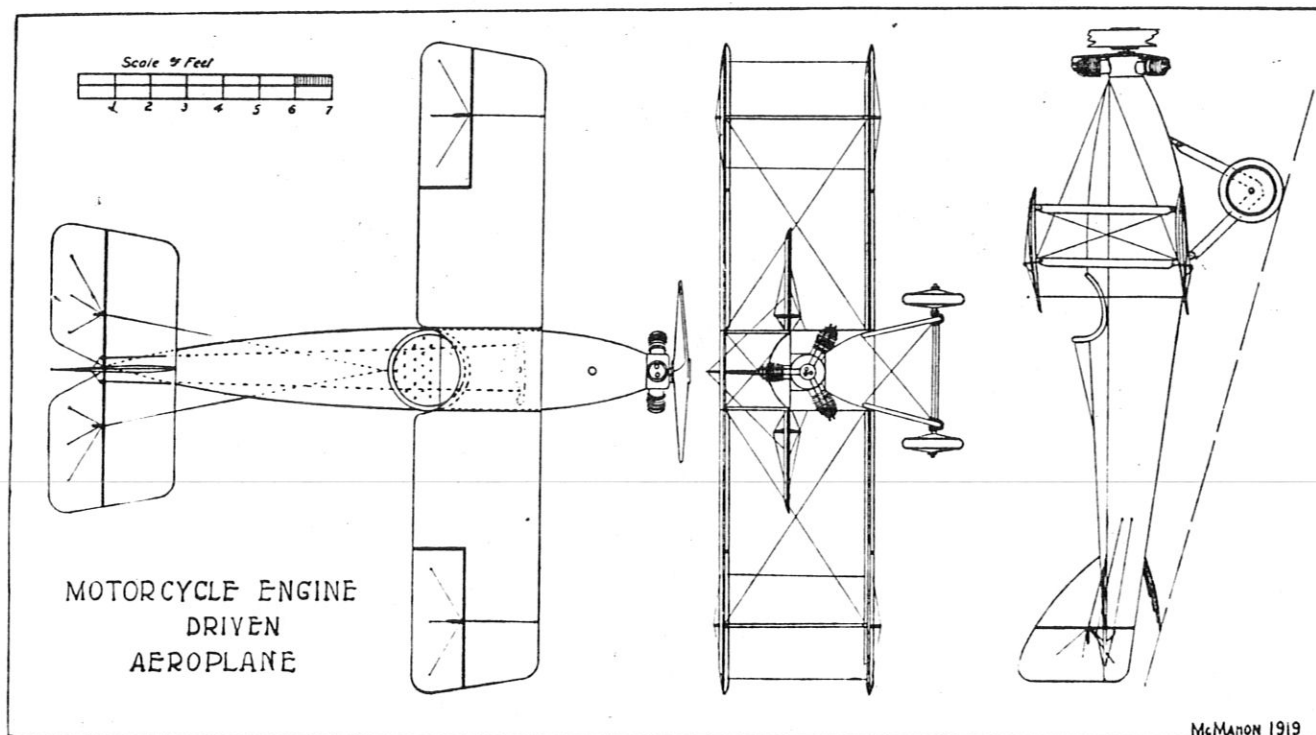
**PARTS AND ACCESSORIES**

FUELAGE METAL PARTS		OVER		
164 Rudder hinge clips (2)	.....	356 Rta. 1	upper outer IR-1L	1.60
169 Aluminum fire wall	.....	357 Rta. 1	upper inner IR-1L	.60
199 Tail Rnd axle clip (2)	.....	358 Rta. 1	lower outer IR-1L	1.80
233 Oil tank straps (2)	.....	359 Rta. 1	lower inner IR-1L	.60
235 Oil tank straps (2)	.....	360 Rta. 2	upper outer IR-1L	2.25
236 Oil tank straps (2)	.....	361 Rta. 2	upper inner IR-1L	2.25
238 Gas tank straps (2)	.....	362 Rta. 2	lower outer IR-1L	5.70
239 Gas tank straps (2)	.....	363 Rta. 2	lower inner IR-1L	.60
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Designed by J.H.DeMott. 22 ft. span.  
from Aerial Age, 2/2/1920.



MOTORCYCLE ENGINE  
MONOPLANE  
DESIGNED BY J.H. DEMOTT  
Hempstead, NY 1820



McMANON 1919

### Three Cylinder Motorcycle Engine

THE Three Cylinder Motorcycle Engine that was recently mentioned in connection with a small biplane which I described on this page is shown in the accompanying drawing.

The reader will note that I have used Harley Davidson cylinders, but a good aeronautical engine can be made up from almost any motorcycle cylinders.

Most motorcycle engines have what is known as left and right cylinders. I have used one kind only in this case, the right hand cylinder.

The exhaust pipe is short and bent back to allow free exhaust, and when the machine is traveling forward the air helps to suck the burnt gas out of the pipes.

The intake manifolds are long, and I would advise making them of aluminum tubing, connecting them to the exhaust parts at one end by the special unions used for motorcycle work, and having all three meeting at some point about the crankshaft center line, where they are attached to the carburetor.

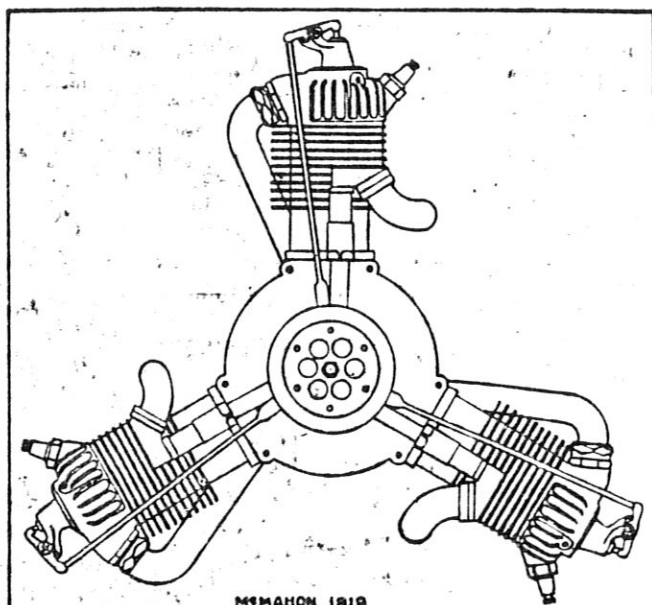
A three-cylinder magneto of a good make should be used. The order of firing is one, three, two, etc., starting with the vertical cylinder.

The crankshaft can be the same as is used in the ordinary motorcycle, but the crank pin will have to be longer to allow placing another connecting rod in place. This could be accomplished by making two of the rods thin and placing them inside of the forked rod, which could be made wider at the bottom to allow placing the other rods inside of it.

To accomplish all of this, the crankcase might have to be made a trifle wider than would be necessary. The above engine if made right would develop easily 27 or 30 H.P. at 2000 R.P.M.

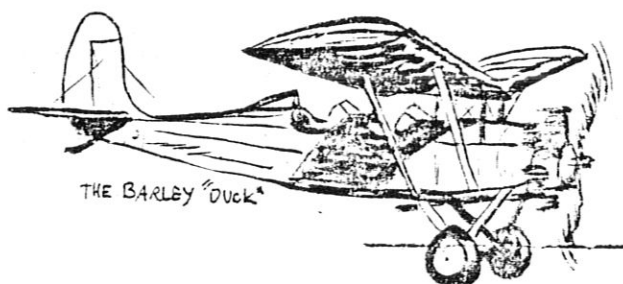
The propeller to use with this engine would be 5½ feet diameter by 3½ feet pitch.

This engine is described simply to give more advanced aeronautic enthusiasts an idea of what can be done with a little work, but for those who cannot build a motor of this kind I would refer to any of the small, air-cooled motor which are advertised in the columns of AERIAL AGE.



McMANON 1919

A three cylinder engine constructed from ordinary cylinders taken from a Harley-Davidson Engine, and a special three cylinder crankcase. See above description



THE BARLEY "DUCK"





I KNEW THOSE CHICKENS WOULDN'T SHOW!

Yep, wingsters, that is just what we call those thirteen ardent aeromodelers who turned the other cheek to HUNG's wrath, and showed up at Pinkham field, Durham on that raw Sunday in February. Oh well, it could have been worse, as no rain fell on the helmets of these intrepid birdmen.

And HUNG was present! He made His presence known by spiriting off one of Chuck Drews little crates built especially for that day. And there were crashes, too. HUNG's mighty breath ripped the wing off General Stott's Garami Duck as he was slog-ging his way thru the mud. Some of the FACs present did not even risk their sky-chariots to the elements, and who can say this was not the thing to do?

Captain Thompson, Lt. Novak, Colonel Stott (Rtd.), and General Stott put on a display of the FAC "Airmail" competition. This duel is strictly for the hail and hearty who have little regard for personal comfort, or the airplane they fly. Many years ago this style event was covered in an issue of the FAC News, and an article written for the now defunct Sig Airmodeler Magazine describing it in detail. Sig never had the opportunity to use it, so it has remained in seclusion for many eons. When space allows, we will once again fill our clubsters in on how it works. One thing we can say right now, is that it is a lot of riotous fun.

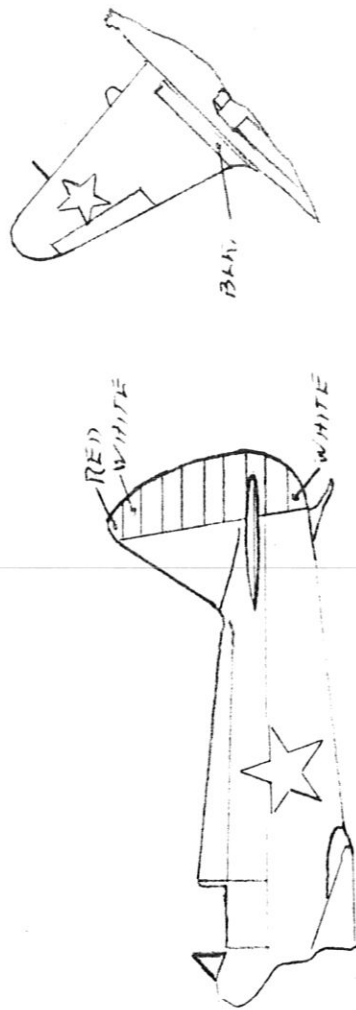
### RESULTS

Peanut:	Bob Thompson, Lacey	79
	Tony Faranda, Druine	33
	John Stott, Poulin JP-30	15
	Dave Stott, Cessna CR-3	12
R.O.G.:	Chuck Drew,	292 OOS
	Tony Faranda,	106
	Herb Shirley,	44
Sport:	Chuck Drew, M-Bryo Cab,	234
	Tony Faranda, Sunny Embryo	169
	Dave Stott, Garami Duck	48
	Ed Novak, Flying Aces Sportster S-2	31
No-Cal:	Chuck Drew, ?	184
	Bob Thompson, Boeing 95	83
	Ed Novak, Chambermaid	27
	John Stott, Chambermaid	crashed 0
Scale:	Dave Stott, Hawker Fury	115
	Bob Thompson, Udet Flamingo	106
	Ed Novak, Fuss Moth	23

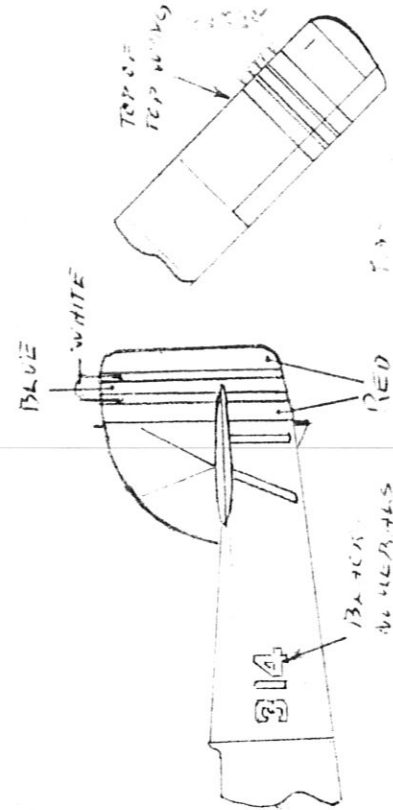
Many entries had only one, or two flights. Other clubsters did not bother to enter their times, figuring them to be insignificant. And a few did not risk their ships in the turbulent ozone at all.

# THREE VIEW SALOON.

Time for a belt of Vodka, tissue trimmers! Cast a bleary eye at this P-twenty sixish Yak UT-1, a special aerobatic trainer. Color views show this little mite to be all over earth brown, sporting red stars top and bottom of both wing halves, red and white alternating rudder stripes, and black wing walks on both right and left sides. Engine and spinner are black. A nifty crate, huh fellas?



Now we hop over to a Norwegian pub for a shot of the Høver MF-11 recee job. This bonus pointster was all over light grey, ala U.S. Navy crates, with a black engine, and silver prop.



Pg.16.

