12. Robin Pharis with an Ohlsson .60-powered Shereshaw Cumulus at NCFFC Meet.

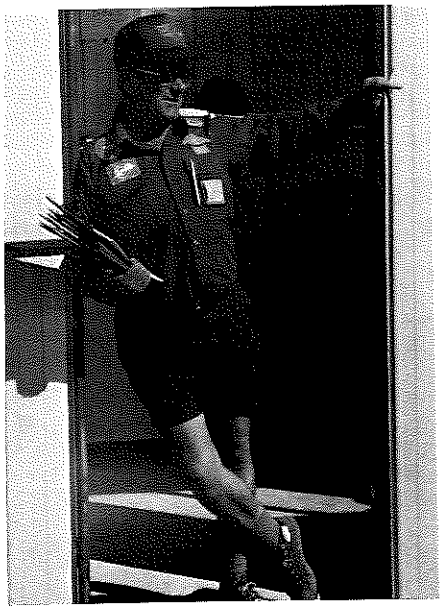
blueprints of the Baby Cyclone and Super Cyclone along with the original proofs of the ads for these engines. (Major Mosely comments on sides.)

The piece de resistance is the record-setting boat and engine Anderson used in 1936. The engine employed a con-rod machined from a Chevrolet drive shaft (good steel was at a premium in those days). Three ball bearing were employed as were auto-type points. Also used was front and rear down draft rotor carburetors (Atwood used this system in his Atwood Blue Crown). The coil was hand wound from a Model T coil while the spark plug came from a Packard.

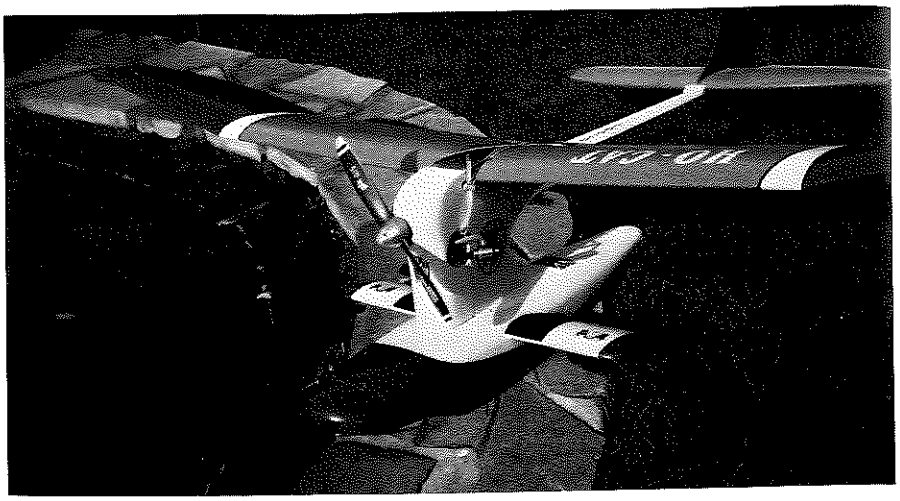
To get maximum power, Anderson ran the engine on straight gas. Lubrication was provided by a pressurized balloon which forced the castor oil into the case. This proved to be too much power in tether (circle) racing at the start (boat would cavitate and flip over backwards). Mel circumvented this by using only the rear carburetor to get the boat up to speed. After two laps, the Kodak timer would open up the front carburetor with some amazing acceleration. The boat never lost a contest.

In Bill Simpson's prize collection are two

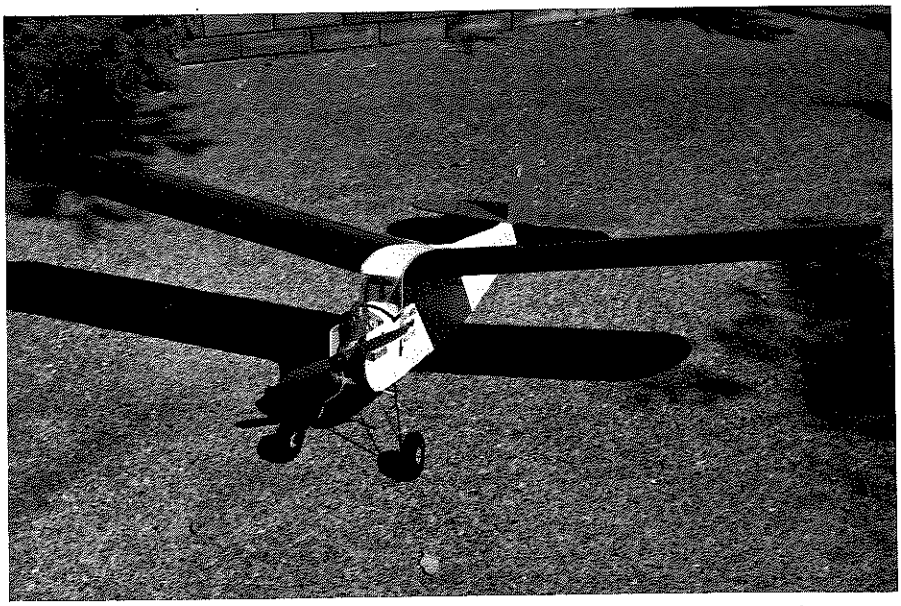
Continued on page 85



15. Old Timer spark plug, Monty Tyrrell, was the C.D. for the successful NOTAM contest in Victoria over Easter weekend.



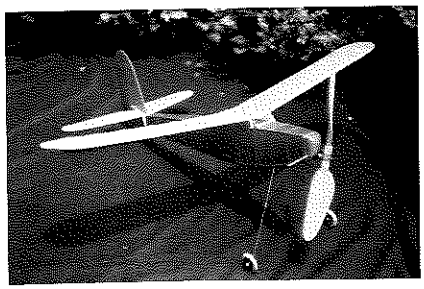
13. Good-looking Struck Ho-Cat built by Sid Sutherland, of England.



14. Hot flying combo of Saito 53 and Trenton Terror is a winner for Colin Borthwick.

Old Timer of the Month

Flying Aces Commercial



Designed by: Herbert Spatz
Text by: Bill Northrop
Re-drawn by: John Blair

• You don't often hear the word "commercial" these days when referring to a model airplane, unless the conversation includes at least one genuine old time modeler, and the discussion is about rubber models.

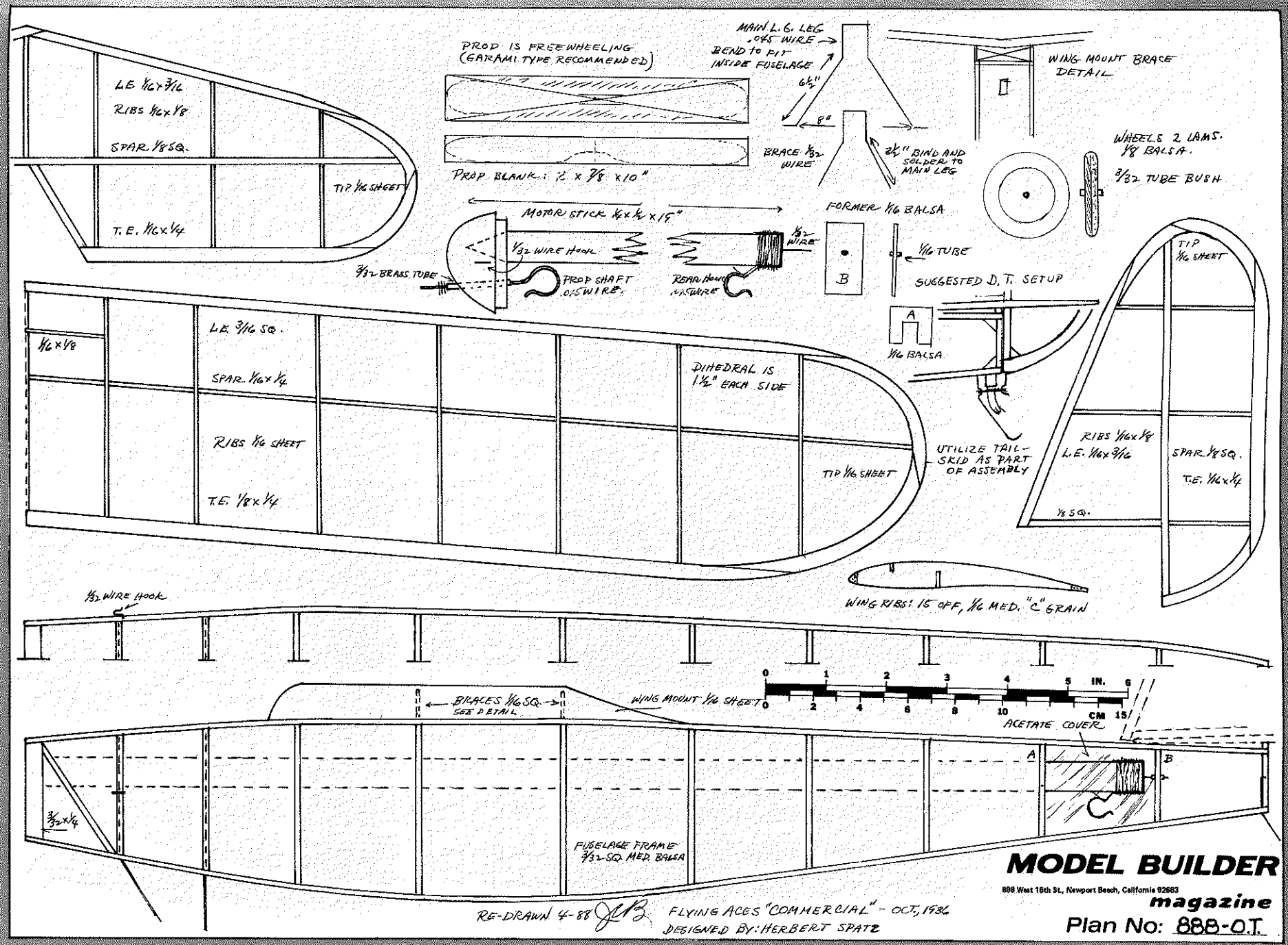
John Blair, of Warne, North Carolina, a frequent O.T. plan contributor, sent us the following note with this month's subject:

For those who may feel that the Pacific Ace has had things its own way for too long, here is an alternative: the Flying Aces Commercial. This is one of those long-legged, ungainly crates that is so ugly it's cute. However, in the words of the construction article in the October 1936 Flying Aces, the plane is a "dandy flyer." The original model is said to have disappeared into the clouds after six minutes.

The plan is presented here much as originally drawn; no gussets, braces, etc. A suggested DT setup is included, otherwise any beefing up of the structure is left to the individual builder, which is the way we like it anyhow.

The reference to a particular model as a "commercial" or a "job" first crossed my ears in the mid-thirties, coming from the late Steve Kowalik, to whom I have many times credited my start in building model

Continued on page 82



RE-DRAWN 4-88 JLB

FLYING ACES "COMMERCIAL" - OCT, 1936
DESIGNED BY: HERBERT SPATZ

MODEL BUILDER
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magazine
Plan No: 888-O.T.

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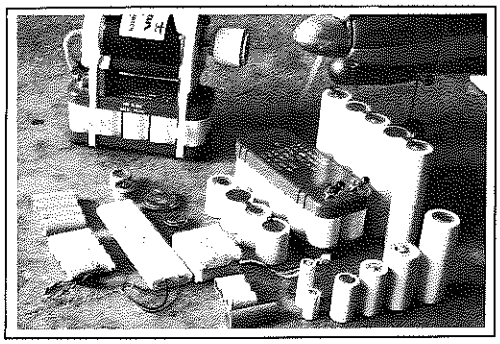

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shown in its nine-volt version. This type of ESV makes use of one of the characteristics of the Zener diode, which is that when it is connected in series with the voltage source, it will not conduct until the applied voltage reaches and exceeds its rated voltage. In the circuit shown, current will not flow through the Zener and into the rest of the circuit until the applied voltage reaches at least 6.8 volts. At that point, the majority of the current flow is through R2, it being the lower resistance. R1 is chosen to control the amount of current through the meter.

Though considerably simpler, this circuit would require more complex switching in a multi-function instrument, and does not operate with a constant load current throughout its entire range. The reason for that is that as the battery voltage drops, so will the current through the R2, R1 plus meter, parallel path. A more sophisticated ESV such as the Voltmaster uses more extensive circuitry to provide a constant load at all voltages, and is preferred for more accurate measurements.

Thanks for the travelogue, Grahame. I hope we helped to make things safer for those whirlybirds!

COINCIDENCE NUMBER 4876

At least! This has happened before. I get a request for information from one reader and I receiver the answer from someone else at about the same time. Last month, the subject was constant current chargers. The issue is not yet out as I write this, so William Mitch, of Hebron, Indiana, could not know that, but look at what he sent us:

"Here's a little circuit someone may be interested in. Use your twelve-volt wet cell charger with it. I built mine on a small piece of perf board and mounted the resistor on the regulator. This way, they are both at the same temperature. This little unit is good for flight packs or transmitter."

I HAVE TO GO PACK NOW!

No, I'm not off to New Guinea just yet, maybe next time. But I am about to leave for another beautiful tropical spot, Costa Rica, for the Sixth Annual Fun-Fly there. You'll be reading about it soon after my return. In thinking about this year's event, I did have an interesting thought. Last year we had the pleasure of meeting and flying there with two nice young men, Habib Rehman and Ibrahim Akram, who had come all the way from Pakistan. Check *that* on your globe; that has got to be a record for travel to a Fun-Fly, which is more impressive when you consider that they also brought along a third-scale Saab MFI-17. Don't tell *me* we don't have fun!

Adios, they are calling my flight. . . . •

Old Timer. . . *Continued from page 34*

airplanes. Well, "job" was simply his single-word reference to most any model, but "commercial" seemed more or less to imply a sport rubber model, sorta scale-like, but smaller than competition models.

I dropped a note to John, asking his opinion on this, as well as to whether he used the motor stick as shown on the plans. We'll finish this article with his response:

Got and enjoyed your note. However, you may have done the wrong thing by asking me questions. I have been accused of delivering a lecture on clock-making when someone only asked for the time!

Be that as it may, "commercial" models. My reading in my old time model mags tells me that this term describes a class of small (20- to 30-inch) models (of which the Pacific Ace is probably the classic example) which were intended to be realistic in appearance and resemble the full-scale commercial planes of the period (Curtiss Robins, Stinsons, Travelairs, etc.), which were just about all single-engine, cabin monoplanes. These models were intended for "fun" rather than for contest flying; a valid concept, as witness the fun we are still having with them.

As for motor sticks, if there is any advantage in using one, I haven't found it. The primary argument (for strength vs. weight) won't wash. A decently designed fuselage will carry a given motor for considerably less structural weight than will a stick plus minimum framework. I just don't think that some of the old timers were aware of the tremendous strength of balsa under compression. The motor stick was just plain overkill. The other claimed advantage, protection against blow motors (on account of winding outside the fuselage), can easily be overcome by using a winder extension and blast tube. In short, if motor sticks were so great, we would still be using them.

Even so, I built the Commercial with a stick, just because it was part of the design of this particular model. Yes, the "pointy" joint is plenty strong. Double-gluing with Ambroid works just fine. I think the stick would break in the middle first.

I don't really like the stick, though, for one main reason. It strictly limits the length of the motor. Any more than minimum slack is asking for trouble from the rubber wrapping around the stick and locking up. Since one of my standard trimming procedures is to vary motor length, this is a definite "minus" to me. However, for fun flying in a restricted space, this may not matter. •

Technical . . . *Continued from page 27*

amount of decalage we need depends on the type of airplane. If we are talking about a rubber-powered or gas free-flight model, the decalage is quite important because it, combined with the CG location, determines whether the model climbs, flies level, or dives.

If our airplane has a controllable elevator, decalage is of less concern, because we can make the plane do what we want it to do, in spite of moderately inappropriate decalage angle. Further, most full-scale planes have adjustable stabilizers (adjustable decalage) to permit optimization of the angle in flight, to reduce pilot stick force required.

On aerobatic ships with symmetrical air-