# THE HANGAR PILOT

IRASCIBLE

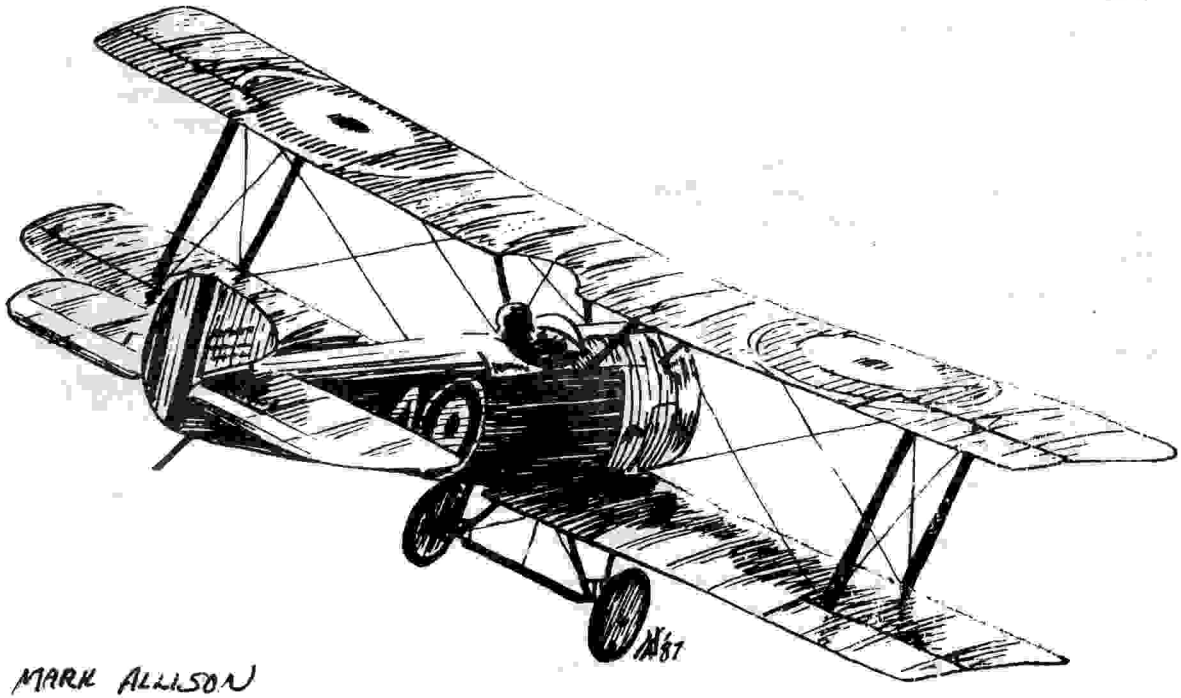
18TH YEAR OF PUBLICATION

# ISSUE 127

- MEET 4 RESULTS
- WORLD INTER-GNATS STORY
- DAYTON-WRIGHT NO CAL PLANS
- FLA. STATE CAT II RECORDS

— AND —

TORQUE ISSUE



MARK ALLISON

NEXT MEET: MAY 13,14 MAC DILL AFB
THE LAST HURRAH FOR THE 88-89 SEASON - MODERN AGE FAC MASS L.

# MIAMA COAST GUARD MEET #4



"LIKE A LETTER FROM HOME" WHELAN

# THE HANGAR PILOT

Is published 8 (or 9) times a season for a bunch of middle aged guys who refuse to grow up. MIAMA (Miami Indoor Aircraft Model Association, AMA Club 986, is one of two active all indoor free flight clubs in AMA. Our Motto: "It must be fun.", and "Indoor isn't for everyone." For $10.00 a year you will receive all copies. We solicit your contributions since we are always running out of material. Letters, plans, 3-views, articles, gripes, and Money to: Dr. John Martin Pres./Editor. 2180 Tigertail Ave. Miami, Fla. 33133 USA Phone: 305-858-6363 We want to hear from you!!! Send material!!!

Once again our annual Cat. II COAST GUARD MEET was a big success and many new State Records were recorded. The hangar has been beautifully renovated and the new translucent panels make it very bright inside. It's a great Cat. II site at 44ft. 6inches. The Commander and many guardsmen were present all week end and were very enthusiastic.

When Walt Schlesinger's Fokker DVII won the World War I Flying Aces mass launch he proved again that the race is not always to the swift. When the field was down to 3 finalists, George Lefflers's count down to launch was only heard by Walt and he launched on time. His Fokker flew well but not long. Meanwhile, Wells and Nunez, wound airplanes in hand, were discussing whether their planes would go left or right and missed the count down. So give Walt his first Kanone...congratulations Lieutenant. 15 more and you earn the Blue Max. And speaking of the Blue Max..Max medal winners George Leffler and Dean McGuinnes presented this medal to Doc Martin with proper military ceremony on Saturday. We now have 3 Blue Max medalists in Florida..all MIAMA members.

Tony Becker built his first scale-type model since his Comet Cub in Philly 49 years ago! His Bostonian did a 1:49 for second place. Almost the entire Fed ROG field exceeded last year's record in II.

Our site sleuths Bill Criss and Ellis Oglesby are at work again! Bless them. There may be some news from them soon about new places.

Those Coconut scale models are sooo realistic. Linstrum set the current record with his new Dornier Komet. See the event results for the new State records. About a dozen hangar pilots remained after the end of the meet on Sunday and organized an impromptu dinner gathering at the 94th Aero Squadron..very appropriate atmosphere for the Blue Max.

NEXT MEET IS THE LAST MIAMA MEET OF THIS SEASON. Never have so many had a chance to win the state championship. With our rule of counting only 4 of the five meets I figure there are at least FIVE PILOTS with a chance to be top gun.. to say nothing of the many who can win event awards. SEE YOU AT MACDILL on MAY 13 and 14 for the big shoot out!!

# MIAMA MEET 4 RESULTS - TONY BECKER CD
## USCG HANGAR ST PETE/CLEARWATER AIRPORT 44'6"

CAT. II (2)

Peanut Scale....Plane/Static/ 2 best flight/ Total

| | | | | | |
|---|---|---|---|---|---|
| 1. | John Martin | Astra | 93.2 | 1:23.5, 1:11.8 | 170.8 |
| 2. | George Nunez | Sop. Tripe | 107.1 | 57.2 ,57.8 | 164.6 |
| 3. | Rich McEntee | Drsewiecki | 87.5 | 1:12.1, 1:12.9 | 161.0 |
| 4. | Walt Everson | Waco E | 79.2 | 1:17, 1:17 | 156.2 |
| 5. | Wayne Trivin | Cougar | 76.2 | 1:25.6 1:16.7 | 152.4 Max |
| 6. | Millard Wells | Waco | 77.0 | 59 1:02 | 137.5 |
| 7. | John Tudor | Voisin Hydro | 105.2 | 34.5 one flight | 122.2 |
| X. | Millard Wells | Buffalo | 75.4 | 42 40 | 116.4 |
| X | " " " | Vanguard | 72.4 | 25 33 | 101.4 |
| 8. | Dave Linstrum | Found | 70.0 | 33.8 one flight | 87 |

FAC Scale Plane /Static/ Best fly/Total

| | | | | | |
|---|---|---|---|---|---|
| 1. | John Martin | Astra | 66.5 | 1:13,6 (66.7) | 133.2 |
| 2. | John Tudor | C.Robin | 52.0 | 1:19 (69.5) | 121.5 |
| 3. | Rich McEntee | Cougar | 59.5 | 1:03.2 (61.6) | 121.1 |
| 4. | Millard Wells | Huntington H-12 | | 1:04 (62) | 111.0 |
| 5. | Dick Obarski | C.Robin | 32 | :52 | 84.0 |
| 6. | Walt Schlesinger | Fokker D-7 | 50.1 | 18.0 | 68.1 |

★ = NEW FLORIDA RECORDS IN CAT II

COCONUT SCALE Rank Flight Total

| | | | | |
|---|---|---|---|---|
| 1. | Dave Linstrum | Dornier | (2) | 50(1) 3 ★ New Record |
| 2. | Millard Wells | Ford | (1) | 32(3) 4 |
| 3. | John Tudor | Bellanca | (2) | 37 (2) 4 |
| 4. | Linstrum | Sperry | (4) | 53(1) 5 |

PISTACHIO SCALE

1. Wayne Trivin, Cougar, 69
2. J.Martin, Rex, 25

LO CAL SCALE New Record ★

1. J.Martin, Dayton, 2:01
2. W.Everson, Boing 727, :55

EMBRYO ENDURANCE

1. Dave Linstrum 329.5 ★
2. George Leffler 204
3. Walt Schlesinger 96

BOSTONIAN EVENT

| | | | | |
|---|---|---|---|---|
| 1. | Millard Wells | 237.4 | (1.12) | Wee Bee |
| 2. | Tony Becker | 235.4 | (1.09) | |
| 3. | Wayne Trivin | 226.6 | (1.10) | |
| 4. | Rich McEntee | 200.1 | (1.15) | Sun Ray |
| 5. | Dave Linstrum | 14414 | (1.10) | Observer |
| 6. | John Martin | (1.14) | 134.5 | Bosto Veloz |
| 7. | Bill Stoutenburg | 84 | (1.09) | Pup |
| 8. | Walt Everson | 58 | (1.10) | FOUND |
| 9. | Walt Schlesinger | 47 | (1.09) | |

FEDERATION FROG: ★

| | | |
|---|---|---|
| 1. | Dick Obarski | 4:47 |
| 2. | George Leffler | 4:19 |
| 3. | Tony Becker | 4:18.66 |
| 4. | Wayne Trivin | 3:46,8 |
| 5. | Rich McEntee | 3:27 |
| 6. | John Martin | 3:28,5 |
| 7. | Walt Everson | 2:32 |
| 8. | Dave Linstrum | 1:01 |

★ New Fla. Record.. Was 2:48

EASY B

| | | |
|---|---|---|
| 1. | Tony Becker | 11 ;16.5 |
| 2. | Dick Obarski | 10:10 |
| 3. | Wayne Trivin | 8:41.3 |
| 4. | George Leffler | 4:55 |

RESULTS CONT. ON PAGE 13

# Repeated Winding of Rubber

FROM JAN '89 NFFS DIGEST

## by Jim O'Reilly, Contributing Editor

Recently I went back to the simple full windup test method for rubber using full motors for Wakefield. The decision came about through an evolution. The main points were that I didn't have a test which evaluated individual motors and the task of breaking in each motor, in addition to the testing, was simply too much.

The test method is as follows: A full motor is made up and wound to a torque that is a function of the length of the motor. The relationship between motor length and torque used is as follows:

| Length, inches | Torque, oz-in. |
|---|---|
| 18 | 120 |
| 18.5 | 115 |
| 19 | 111 |
| 19.5 | 106 |
| 20 | 102 |
| 20.5 | 99 |

At full windup, a tape recorder is started and the data is called into the recorder. The number of winder cranks to reach full torque and the torque to which the motors sags while starting the recorder is the initial point. The motor is unwound to the next lower multiple of five cranks and the second torque read. Readings are continued in increments of five cranks. When the motor is unwound and all data is recorded, the tape recorder is played back while the data is entered into a small computer program that computes the area under the curve. The computer is not essential. The area under the curve is computed by the trapezoidal method and can be done with a calculator quite easily. A glance at the curves will show some discontinuities in the plots. This is typical of full motor tests and is caused by knots unwinding unevenly.

On my initial test of a batch of Champion rubber for which I had high hopes, the results were disappointing. It showed an energy return figure of only 3369 ft. lb. per lb. Having nothing to lose, I determined to answer the old question about whether rubber gets better on succeeding windings and, if so, by how much. In all cases, succeeding windings were kept separated by 18 hours or more. The results were astonishing! Champion rubber gave back 17 per cent more energy on the second run down. Later, when I was describing the results to one of my closed-minded friends, he retorted that, "That's only a single test and doesn't prove a thing!" Okay, so I threw in a similar test based on a recent batch of FAI and got similar results to within less than one per cent difference.

Remembering that both Champion and FAI came from the same source and had similar formulations, it does not necessarily follow that Pirelli, Panda and the new tan-colored rubbers from FAI and Champion would duplicate these results as closely. I would speculate that they would show similar characteristics but with quantitive differences.

In my current routine, I use the first windup as the break-in and also as an indication of the energy available from the second windup. Any motors which survive the first two windups without an excessive number of nicks gets used again.

From the results of the test the following conclusions can be reached:

First, the use of a torque meter far surpasses the turns-count method in terms of results in energy return from a motor. Notice the cross-hatched area in Fig. 1 under the second winding curve. This is the shape of the curve you get on the second winding using the turns-count method. The energy return is only 74 per cent of what you get if you keep winding to the same torque used on the first winding. Of course, this assumes that you get lucky and guess correctly the number of turns you should be using. This rather dramatic difference explains the old myth that a motor should be used once and then discarded for serious contest work. This is true if you're counting turns but the motor hasn't seen its best flight at that point.

Second, the motor gets better with succeeding uses. From successive windings on the original motor, the energy return figures are 3369, 3948 and 4096 ft.lb. per lb. On either FAI or Champion rubber, it is probable that at least one strand will be broken by the fourth full-power windup, so you can make the statement, The energy return gets better each time until the motor drops a strand.

CONT. ON P. 11 — CHARTS ON P. 12

# TORQUE

Bud Tenny's 12 year old article bears repeating for all you new Pilots and for those old timers who never knew how to wind on a Torque Meter. (4)

**Torque Makes The World Go 'Round:** And props too! More and more, indoor fliers are using torque meters for rubber testing and while winding motors for flight. The "why" of this is simple—the energy output of an indoor model's rubber motor is translated directly into torque, or twisting force, to drive the propeller. A good understanding of the torque output of a rubber motor can be very helpful in understanding why indoor models fly better with precisely the right motor for the model, ceiling height and conditions.

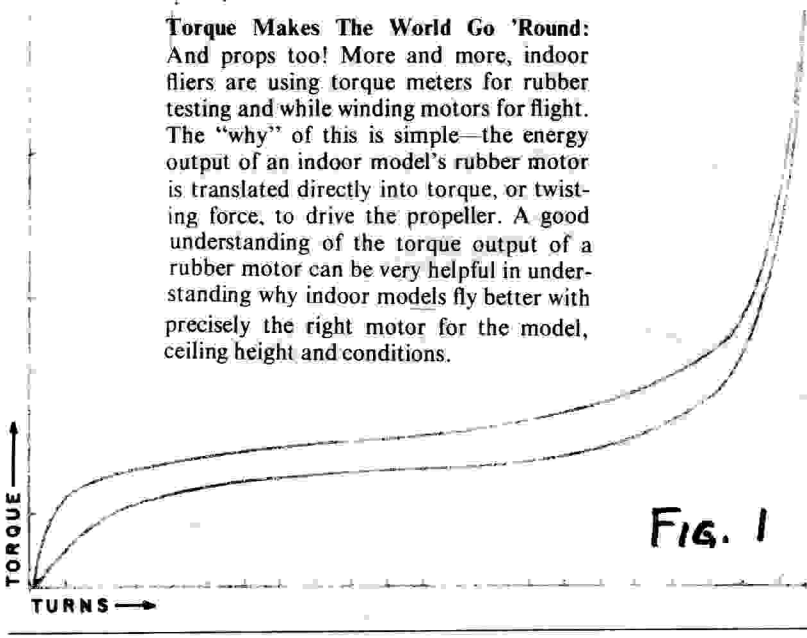


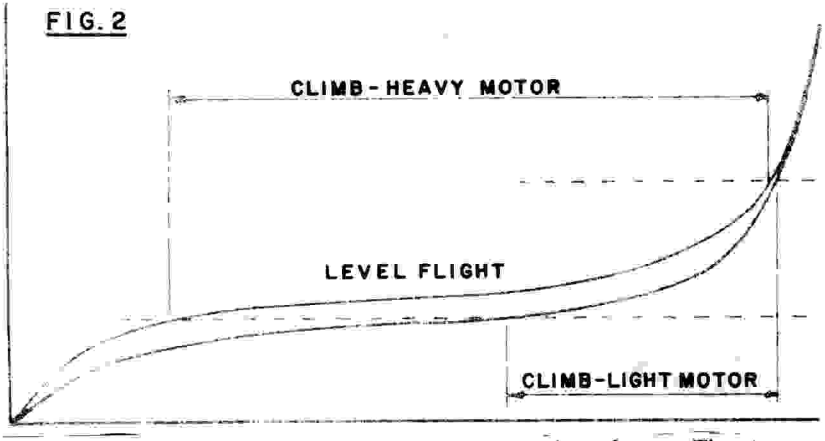

FIG. 1

**The Torque Curve:** Fig. 1 shows a typical torque curve of a rubber motor, with torque recorded during both winding and unwinding. The higher curve shows the torque buildup during winding and the lower curve is the unwinding curve. It is important to remember two things about the winding curve: the steep peak near maximum turns, and how much lower the unwinding curve torque values are for the same number of turns. The steep part of the curve signals that the rubber is close to breaking, and a flier with a lot of winding experience (or one using a torque meter) can sense the rising torque and stop winding before the motor breaks. It is important to remember the drop in torque from the upper curve to the lower one so the torque level is high enough for launch.

**Important Torque Levels:** For any particular prop/motor combination, the value of torque at launch determines how high the model will climb. This is very important in low and medium ceiling flying, and makes a very accurate way to avoid hitting the ceiling. Besides *launch torque*, it is also important to know the value of *level flight torque* and *changeover torque*. Level-flight torque is the torque required to fly the model level, while changeover torque is the minimum torque which will make the propeller continue to pull the model. If the model is still airborne when the motor unwinds to changeover torque, the model immediately starts to come down faster. What happens is that the prop continues to turn, but the model is now *pushing* the prop instead of being pulled by the prop.

**What Does All That Mean?** Fig. 2 shows the unwinding curves for a thick, heavy motor (upper curve) and for a thinner motor. Launch torque and level flight torque are marked with two horizontal lines, to show the effect of two very different motors on the flight of the model. For two flights on the same model, each motor will be released with the same launch torque, and the level flight torque is assumed to be the same for both flights. With the heavy motor, note how much longer it takes (turns or flight time) for the motor to unwind to level flight torque. This means that the model will climb that much longer with the thicker motor, but look what happens from then on! The total unwinding time of the heavy motor is over half gone, so that the model will probably run out of turns before touchdown.

FIG. 2

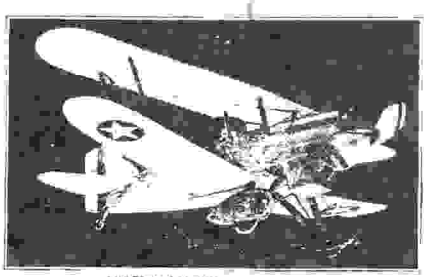



On the other curve, the climb time is shorter than the time left to unwinding,

CONT. ON PAGE 11

# *Build these* Famous B P A Models

## *The* MODELS YOU WANT *at the* PRICE YOU WANT TO PAY!

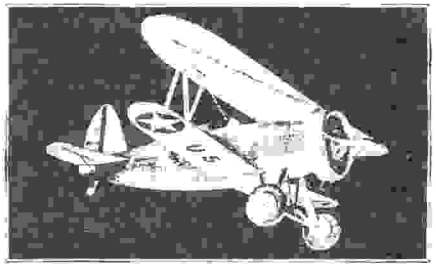


CURTISS FALCON

Big 18" wingspan model ..... 50c post paid

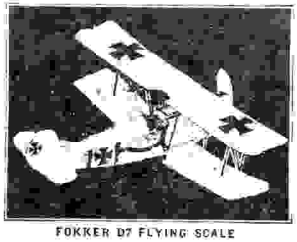
35¢ EACH POSTPAID 3 for $1

(MOST MODELS)



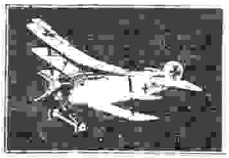
BOEING P-12-E FLYING SCALE

18½" wing span ..... 50c post paid



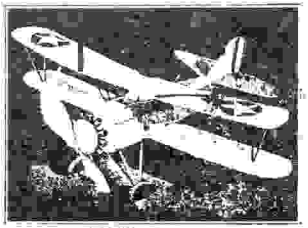
FOKKER D7 FLYING SCALE

Famous war fighter ..... 35c post paid



FOKKER TRIPLANE

Unique war plane ... 35c post paid



CURTISS HELL-DIVER

Used by Army effort ..... 35c post paid

MAKE your choice from the marvelous line of kits shown on this page—each is a de luxe BPA Flying Scale Model Kit—12" wing span unless otherwise noted—the kind that the best model builders prefer! BPA stands for the highest quality of kits and supplies at the fairest, lowest prices. You get quick shipping service, and money back or exchange privileges if you are not satisfied!

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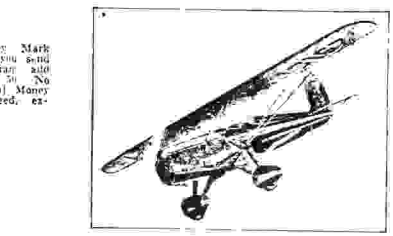
Send [illegible] for which please send me the following kits:

[illegible]

NAME [illegible]

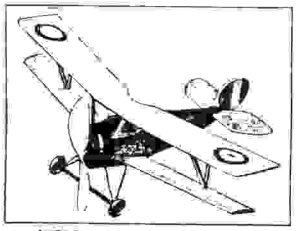
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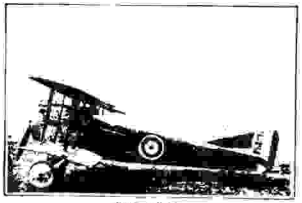
MONOCOUPE FLYING SCALE

A pilots' sport plane ..... 35c post paid



NIEUPORT SCOUT FLYING SCALE

A war-time balloon plane ..... 35c post paid



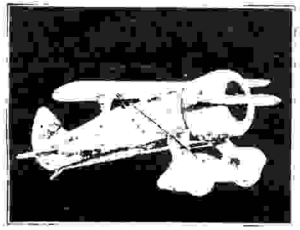
THE SPAD

Popular war time fighter ..... 35c post paid



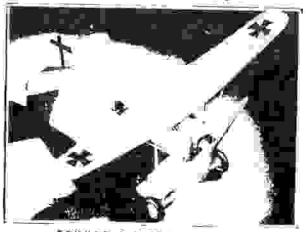
FAIRCHILD 22

Sport plane ..... 35c post paid



LAIRD SUPER-SOLUTION

3' 6" wing plane ..... 50c post paid



FOKKER D-8 FLYING SCALE

Famous war fighter ..... 35c post paid

Balsa Products Co. of America, subsidiary of Comet Model Airplane & Supply Co.

STAB 1/20" SQUARE

# A MIAMA ORIGINAL!

L.E.

PROP:

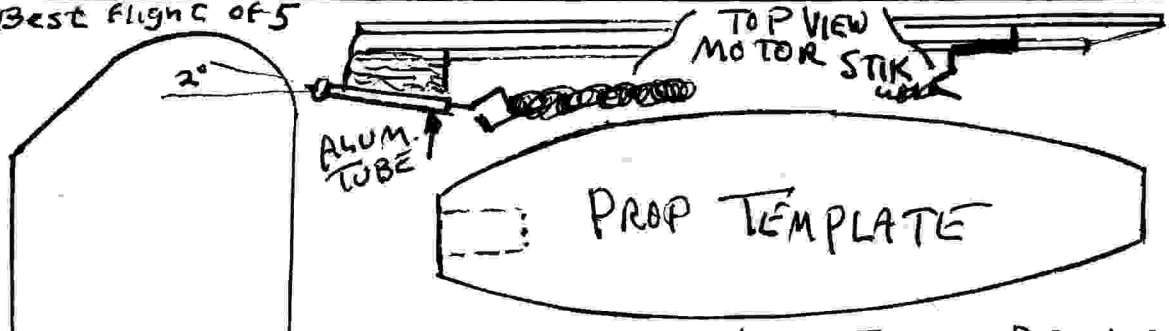
DRINKING CUP IS THICK

SO

SAND L.E. & T.E. TO AIRFOIL SECTION

A Johnson City Indoor 6.2 gm Min.
No Cal Scale - 16" Span.
- Jap tissue covering -
- All color & markings of original
- 2 wheel landing gear -
- All flights hand launch.

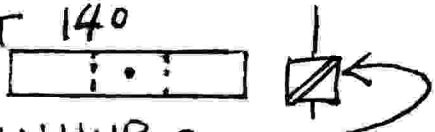
- Best flight of 5







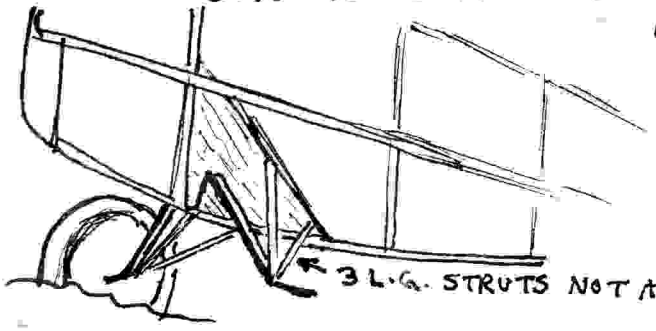
CUT FROM 16OZ. FOAM DRINKING CUP AT 140



CUT SLOT IN HUB

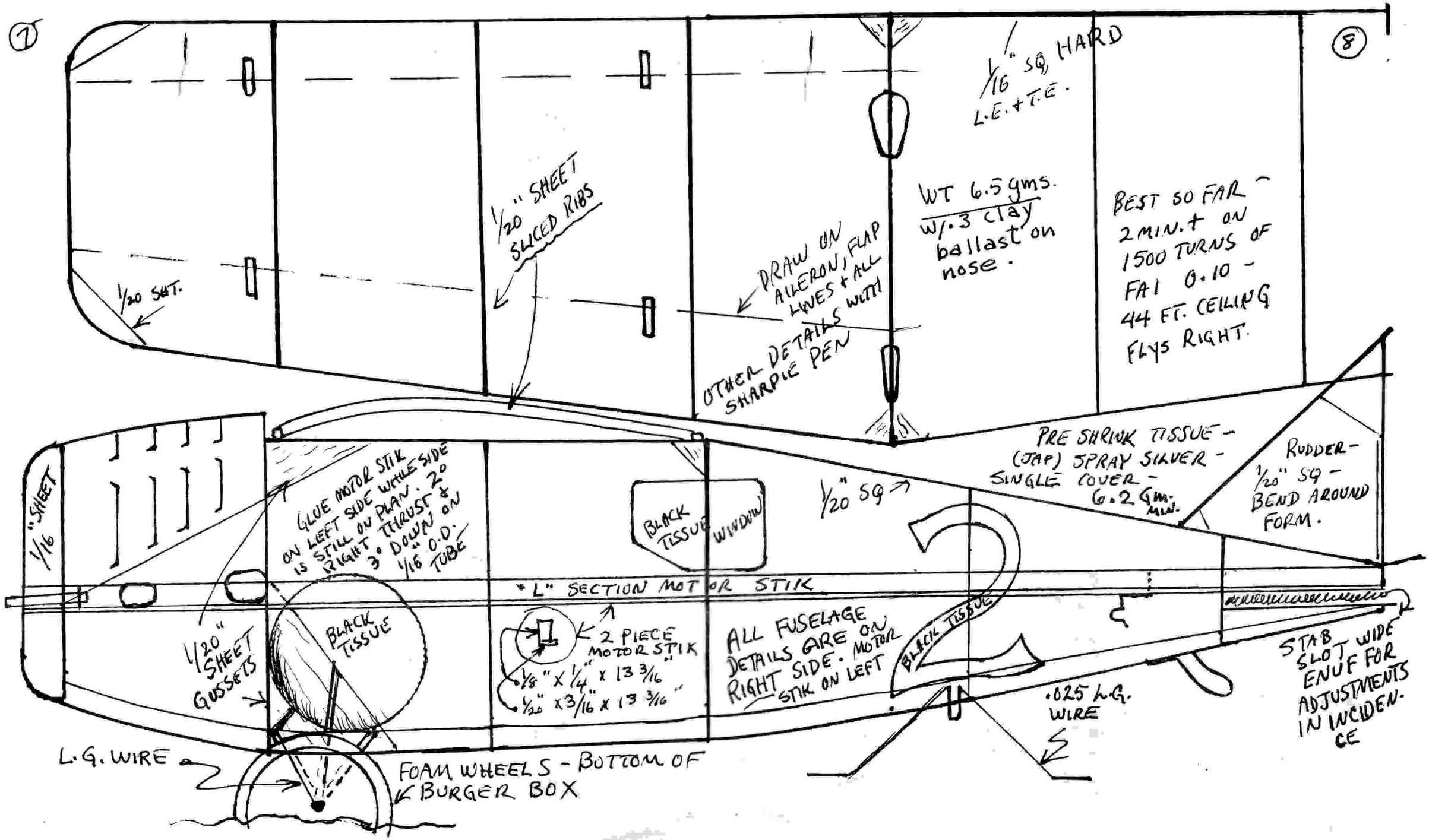
USE WHITE GLUE ON BLADES

POWER - 0.10 TO 0.12 RUBBER




FULL SIZE

DAYTON-WRIGHT RB-1 1920 RACER FAC
NO-CAL SCALE
BY Doc Martin


7
8
1/16" SQ, HARD L.E. + T.E.
1/20 SHT.
1/20" SHEET SLICED RIBS
DRAW ON AILERON, FLAP LINES + ALL OTHER DETAILS WITH SHARPIE PEN
WT 6.5 gms. w/.3 clay ballast on nose.
BEST SO FAR - 2 MIN.+ ON 1500 TURNS OF FAI 0.10 - 44 FT. CEILING FLYS RIGHT.
PRE SHRINK TISSUE - (JAP) SPRAY SILVER - SINGLE COVER - 6.2 Gm. MIN.
RUDDER - 1/20" SQ - BEND AROUND FORM.
1/16" SHEET
GLUE MOTOR STIK ON LEFT SIDE WHILE SIDE IS STILL ON PLAN. 2° RIGHT THRUST & 3° DOWN ON 1/16 O.D. TUBE
BLACK TISSUE WINDOW
1/20 SQ
"L" SECTION MOTOR STIK
1/20" SHEET GUSSETS
BLACK TISSUE
2 PIECE MOTOR STIK
1/8" X 1/4" X 13 3/16"
1/20" X 3/16 X 13 3/16"
ALL FUSELAGE DETAILS ARE ON RIGHT SIDE. MOTOR STIK ON LEFT
BLACK TISSUE
.025 L.G. WIRE
STAB SLOT WIDE ENUF FOR ADJUSTMENTS IN INCIDENCE
L.G. WIRE
FOAM WHEELS - BOTTOM OF BURGER BOX

(9) 7TH WORLD INTER-GNATS APRIL 22/23.

| Results, Cat.I (Less than 2 grams) | Static | Flight | | Pts. | Total/Proxy |
|---|---|---|---|---|---|
| 1A1 Genther Switzerland, Piper cub | 1 | 29.2 | 27.8 | 2 | 3 Hedley |
| 2. Millard Wells USA Huntington H-12 | 2 | 58.0 | 57,0 | 1 | 3 |
| **CAT. II (2 to 3 grams)** | | | | | |
| 1. Millard Wells, USA, Andreason | 1 | 17 | 23 | 3 | 4 |
| 2. Ferd. VanHauwert, Belgium, Wee Bee | 3 | 37.6 | 40.5 | 2 | 5 Martin |
| 3. Nick Peppiatt England, Beer Cat | 4 | 36.2 | 45.3 | 1 | 5 Arak |
| 4. Dave Linstrum USA Contestar | 2 | 14.5 | 18.8 | 4 | 6 Hedley |
| **CAT. III (Over 3 grams)** | | | | | |
| 1. Mark Allison, USA, Davis DA-5A | 5 | 56.1 | 56.0 | 1 | 6 Arak/Everson |
| 2. Dave Robelen, USA, PT-19 | 4 | 40.5 | 39.7 | 3 | 7 Wells |
| 3. George Nunez Jr., USA, Sopwith Tripe | 1 | 26.5 | 26.6 | 7 | 8 |
| 4. Jiro Sugimoto, Japan, Folkerts SK-3 | 2 | 33.0 | 23.0 | 6 | 8 Wells |
| 5. George Nunez Jr. Bristol Scout | 3 | 25 | 24 | 8 | 11 |
| 6. Millard Wells, USA, Fokker Tripe | 9 | 46.8 | 35.9 | 2 | 11 |
| 7. Butch Hadland, England, Hosler Fury | 7 | 35.1 | 36.2 | 5 | 12 Martin |
| 8. Dave Linstrum USA, Hosler Fury | 11 | 37.6 | 40.0 | 4 | 15 Hedley |
| 9. John Martin Rex Scout | 6 | 13.0 | 21.9 | 10 | 16 |
| 10. George Nunez Fokker DVIII | 8 | 21.6 | 24.6 | 9 | 17 |
| 11. " " " Caudron racer | 10 | 14.7 | 13.2 | 11 | 21 |

JUNIOR:

| | | | |
|---|---|---|---|
| Marco Fernandez | Beetle | 16.5 | 14.8 |
| | DH-6 | 12.5 | 11.0 |

MODEL OF A MODEL:

| | | | | | |
|---|---|---|---|---|---|
| 1. George Nunez Sr. | Streamliner | 1 | 31.0 | 29.0 | 2 3 |
| 2. Millard Wells | Riversider | 2 | 1:38 | L:53 | 1 3 |

NO RIDOTTO MODEL DID 30 SECONDS QUALIFLYER.

MAY 13-14

LAST MIAMA MEET OF SEASON

SAT 5PM- FAC MASS LAUNCH - MODERN MODELS



# THE 7TH WORLD PROXY INTER-GNATS (10)

It has been said about our Republican form of government..That it has not failed,but it has been tried...found difficult....and abandoned. The same can be said for Pistachio Scale..those frustrating little gnats. Even I admit it is a relief to return to the "big" peanuts after two days of proxy INTER-Gnats Not only is indoor not for everyone,but pistachio is not for every indoor scaler. Still, the more difficult the trimming, the more satisfying the good flight when you get one – if ever.

GOOD FLIGHTS: Our cover artist,Mark Allison,along with his skillful proxy pilot Mike Arak,is making quite a name for himself in pistachio. After previous years wins with a Pilatus Porter, Flying Flea,Bleriot Canard he scored again in CatIII with his Davis DA-5A.A vee tail and race-plane long fuselage make this an ideal rubber scale model in any size. Mike was able to get almost a minute from this 3.2 gm. model. The prop- which is definitely the secret to pistachio (If there is a "secret") was carefully laminated from some paper thin ply. See Bill Hannan's latest Peanuts and Pistachios book (#4) for his article on props. Bill donated several of his P&P #4 books for awards this meet. We can't say enough for the support Bill gives us!

Millard Wells got a couple of fine 40 second flights from Dave Robelen's Army PT-19 trainer. This all balsa beauty was hollowed from solid balsa blocks. The hugh prop (43/8 x 3/8 x 5/8 block) dwarfed the otherwise all scale model. Very realistic details and the 1940's army color scheme got this model into 2nd place in Cat.III.

George Nunez,Sr. entered the"Model of a model"with his STREAMLINER. He built this from memory of Scientific Model Co.s kit of a Maxwell Basset gas model when he was a kid. Doc Martin found the original ad in the Dec. issue of Model Airplane News, and confirmed George's memory to be almost 100% correct ! DECEMBER 1937 issue of MAN! Son George Nunez's Sopwith triplane won 3rd in Cat.III with the top static scoring model. His air brush technique is flawless.

In addition to his proxy flying, Arak made an outstanding Video record of themeet that will be suitable for general audiences. He did interviews and went intomany aspects of pistachio proxy meets...packing, instructing, trimming,flying, winding,etc. He even mentions sources of plans and books and supplies. When this tape is available some of you pilots may want to vicariously join us at the 7th World INTER-GNATS.

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# PISTACHIO AT NFFS JOHNSON CITY

Last year there were only 16 entries in the MIAMA Pistachio Grand Prix. At Johnson City on Friday June 2 we will again fly this event along with peanut scale and Federation ROG from 8AM to 2 PM. No entry forms or fee, just bring your pistachio models. We're looking foreward to seeing you there!

Sic Semper Pistachio !

(N) TENNY CONT.

and level-flight torque occurs at the start of the linear part of the curve. This choice of motor will result in a longer flight, since the model will come down slowly all during the time between level-flight torque and changeover torque.

**Winding Technique Is Important:** The unwinding curves shown in Fig. 1 and Fig. 2 are typical of what happens on the flying field, but the winding curve in Fig. 1 is more idealized in shape than how it happens in real life. Actually, the Fig. 1 winding curve is traced from a machine-wound test, unstretched and wound nearly to the break point. An experienced flier winds with some variations on this scheme; the motor is stretched out to between four and six times it normal length, and turns are added fairly slowly. The torque meter reading is watched carefully—not for absolute values but for trend. When the torque begins to rise rapidly with addition of only a few turns, the amount of stretch is reduced. The reduced tension allows some motor knots to double up, and the indicated torque drops some.

At this point, many fliers allow the motor to rest a little, while they massage the knots and work out local "lumps" in the wound motor. Winding then continues, followed by further reduction in the stretch and more massage. When the motor is fully wound, torque level should be high and steady.

**Launch Torque:** Now that the motor is fully wound, the torque is probably higher than the desired launch torque. Since it is usually necessary to let out a few turns to allow the motor to slip off the winder, hook the motor to the prop and re-check the torque. If the torque meter has an unwinding feature, it is easy to let off enough more turns to reach the desired launch torque. Otherwise, it is necessary to hook the motor on the model and let the prop run until the torque "feels" right.

**Wind It Less?** If there is such a problem in getting from fully wound to the desired launch torque, why not wind the motor only enough to get the right torque? I'm glad you asked! Winding the motor "all the way" has certain benefits. First, with the winding technique mentioned above, the motor is consistently wound each time, so it is more likely to react as in previous flights. Second, by winding all the way and then unwinding to the desired torque, the motor will have up to 15% more turns than if it was simply wound to launch torque and then launched. Many fliers have problems making consistent flights, and proper winding technique can overcome many of these problems. And, since the torque rather than the number of turns (in any given motor) determines how high the model climbs, it is safer to use torque instead of turns.

CHAMPION RUBBER: From George Schroedter, headperson down at the Champion Rubberworks, as of Jan 18: Panda Rubber, received last June, had great energy storage, but broke easily. Many Indoor flyers were quite pleased with it, but almost no one has been able to use it in Outdoor models. With that caveat, he is selling the remaining stuff off at $12 for 500 grams, in widths of 2, 4, and 6 mm. Doubtful if he'll ever recover his

Champion Model Products
880 Carmen Ct.
La Verne, CA
91750

NFFS- From these two conclusions you can put together a third: Using the turns count method, there is no way you can get the outstanding performance available from a motor on that second winding.

There has been a lot published lately about the beneficial effect of resting a motor between successive windings. And my own experience with test-flight situations bears this out: When putting up many test flights in rapid succession, even at less than full power, the motor usually blows on the fifth or sixth winding at something like 30-40 per cent of full torque. This suggests an area for further testing. A minimum of two motors should be wound to full torque. Then, each motor should be given a second and third windup with, perhaps, a one hour interval on one and a 24 hour interval on the other.

Incidentally, the computer program used is an Appleworks spreadsheet. Anyone interested in the method can have it for a SASE. Anyone with an Apple computer and Appleworks is welcome to a sample file if he will send a blank 5-1/4 floppy and return postage.

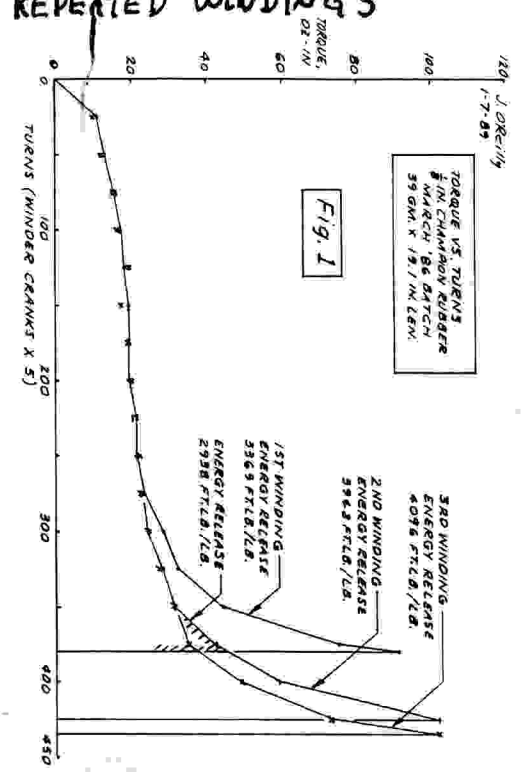
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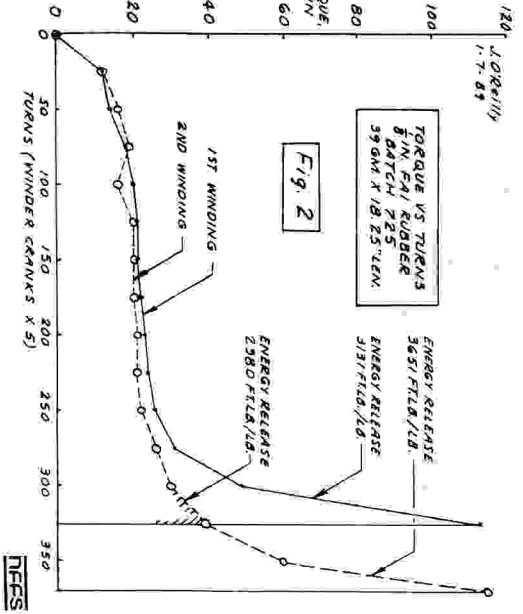
F.A.C.

TERRY RIMERT
367 ORANGE AV.
BALDWIN, FL
32234

SEND A. S.A.S.E. TO TERRY FOR YOUR COPY OF ALL THE FLYING ACES RULES

REPEATED WINDINGS




**Lead Story**

• Mario Morby, twelve, a cancer patient in remission in Streetly, England, who had amassed a *Guinness Book* record of two million get-well post cards from around the world, was found suffocated in December after a pile of approximately 500,000 cards fell over on him.

**Government in Action**

• The government of Hungary authorized the sale of a sex instruction videocassette in October. According to a newspaper review, it "shows everything" and sells for $40.

• The U.S. Attorney in Miami declined to prosecute a drug-smuggling case in which the Customs Service had confiscated a half ton of marijuana because the office is overworked and won't touch cases under the two and a half ton minimum.

• December figures from the International Monetary Fund reveal that the U.S. government's subsidy to the dairy industry in 1986 worked out to $1139 for every cow in the country. (That is greater than the average annual income for half the world's population.)

• According to figures submitted by the East German government to the World Health Organization, no one in the entire country died last year from "accidents and adverse effects," "suicide," or "homicide."

• The National Parks Service discovered in December that a small parcel of land adjacent to Fort McNair military installation in Washington, D.C., which the park had purchased in 1986 for $230,000, had been owned by the U.S. government since 1914.

• In September, the Internal Revenue Service lost its right to appeal a case in which it stood to recover $102 million (and which a federal appeals court said it should win) because it missed a filing deadline.

• China's Xinhua news agency reports that in the past two years, over 5000 violent attacks against tax collectors have been reported, including an unspecified number of murders. In one province, ten percent of all tax collectors have been beaten up at one time or another, and in another province, bands of businessmen attacked the tax office with iron bars.

CATAPULT GLIDER:

| | |
|---|---|
| 1.Dick Obarski | 82.8 |
| 2.Wayne Trivin | 80.5 |
| 3.Tony Becker | 77.1 |
| 4,Rich McEntee | 68.9 |
| 5 John Martin | 67.0 |

New record..none previous

NOVICE PENNY:

| | |
|---|---|
| 1.George Leffler | 8:32.1 |
| 2.Tony Becker | 7:58.5 |
| 3.Dick Obarski | 7:38.8 |
| 4.Wayne Trivin | 6:35.2 |
| 5.Rich McEntee | 6:16.4 |

New record, Was 8:25 (Ed Burton)

EXISTING FLORIDA STATE RECORDS NOT BROKEN AT THIS MEET: CATAGORY II:

| | | | |
|---|---|---|---|
| Penny Plane | 8:29 | Tony Becker | 2/22/86 |
| H.L.Stick | 14:35 | Roman Szymula | 10/13/74 |
| H.L. Glider | 82.4 | Dom Bal | 2/27/83 |
| Pistachio | 1:23.6 | R. McEntee | 1985 |
| Manhattan | 5:03 | Millard Wells | 2/22/86 |
| Ornithopter | 6:45 | Frank Kieser | 2/14/87 |
| ROG Stick | 8:10 | Dick Obarski | 10/17/87 |
| Easy B | 13:09 | Dick Obarski | 2/14/87 |
| Bostonian | 268.4 | Millard Wells | 10/17/87 |

Peanut Scale Jim Miller 180.0
Voisin Hydro
FAC Scale Jim Miller 157.7
14 Bis
Embryo Endurance:
Dave Linstrum 329.5 1989
Junior records in issue 114
Few juniors in past 3 years.

Catagory II is any room higher than 26'3" and lower than 49'2½".

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# KIBBIE DOME BOSTONIAN

## AN "INSIDERS" UNOFF. EVENT @ AMA NATS!

WHERE: SCALE FLYING AIRSPACE, AMA NATS, MOSCOW, IDAHO.
WHEN: 8 am - 1 pm FRIDAY JULY 21. JUDGING SAME TIME.
SPONSORS: DAVE "VTO" LINSTRUM + "MODEL BUILDER" MAG.
TWO CLASSES (NO "MAX") ENTRY FEE $5 PAY ON SITE

- 7g INDOOR BOSTON
- 14g BOSTON WEST

ED WHITTEN FORMULA, 7g MIN
AMA RULES PROPS DO NOT APPLY

WALT MOONEY OUTDOOR RULES
14g MIN FLOWN INDOORS!

AMA LICENSE REQ. CHARISMA JUDGE: DAVE LINSTRUM
PROXY ENTRY ACCEPTED BUT YOU MUST ARRANGE YOUR OWN
HAVE PROXY BRING MODEL TO SITE - DO NOT SEND TO CD OR MB

"I DRINK - THEREFORE I AM" - W.C. FIELDS




**PEPSI COLA BLIMP DESTROYED BY HIGH WINDS....**Los Angeles, Jan. 12, 1989..Winds gusting to 100 mph destroyed the Airships Inc. blimp used by the Pepsi Cola Co. moored at the Ontario International Airport, 40 miles east of L.A., reducing it to tatters and leaving little more than its nose cone attached to an anchor pole. Its gondola lay on its side about 30 yards away and the surrounding tarmac was littered with debris.

The 14,617 pound airship was the nation's largest. Its last appearance was at the Jan. 2nd Rose Bowl in Pasadena.

Information taken from the Associated Press.

**NEWSPAPER CANCELS AD....**The Chaunute Tribune cancelled the following want ad after it ran only one day: **Situations Wanted: Male, 28, will mow yards in return for sexual favors. Phone 431 2997 after 5 p.m.** The writer, said he had calls all day and all night, some at 3 to 4 a.m. "Some of the callers were serious but most were people who were either infuriated or kidding." The paper was forced to cancel the ad, scheduled to run 3 days, after it received several nasty calls. Taken from TARPA TOPICS, Journal of the Active Retired Pilots Assoc. of TWA, Feb. 1989.

• Jackson Evans, eight, died while joy-riding on the hood of his family car with his father and five-year-old sister while the mother drove. The girl had just turned to the mother and said, "Mommy, burn rubber," after which all three riders were thrown from the car. The other two were unhurt, but the boy was thrown in front of the car and run over. After the mother stopped the car and got out, she accidentally bumped the gearshift, causing the car to back over the boy.

• Brian Corson sifts through debris from sewer systems around Pittsburgh for a living, limiting his interests to gold jewelry and old coins. He says he likes the job because it is "never boring. A different town every day, and no boss breathing down your back."

• A North Carolina teacher has invented "Innards," a series of models for teaching biology. One model, Ribbit, a cloth frog whose internal organs are stuffed, covered with cloth, and tucked inside, is used for emotionless dissecting.

• Los Angeles police reported over the summer that they had discovered forms used by some gangs in the area to select prospective members. Among the items on some forms: "Have you ever done this type of work before?" "What hours will you be available to work?" "Do you have a past record?" "Do you use drugs?" The forms appeared to be for retail sales positions at local crack houses.

• Graham Putnam, president of Chicago's Fun Inc. novelty firm, attributes the success of his number-one seller — fake vomit (40,000 pieces a year) — to his unwillingness to compromise authenticity. (He uses latex and not the vinyl used in "cheap Asian imports.") "We were the people who would dare to make something that sticks in your nose and makes it look like your nose is running," he said of the firm's maverick reputation. "I read in the paper the other day that some guy's making candy that looks like boogers. You can't help but be jealous to a certain extent."

**Oops!**

• Calvin Knight was hospitalized in New Rochelle, New York in September when he was accidentally pulled into the dough-kneading machine he operates in a ravioli factory. Knight had disappeared completely into the six-foot-high machine and suffered a paralyzed right arm.

• In September, Robert Beckley left his Labrador-Doberman dog inside his car while he went to play golf in Durango, New Mexico. The dog knocked the car out of gear, sending it off a cliff and totaling it. The dog escaped and was last seen running down a road.

• One author of *The Dictionary of Cultural Literacy* ("What Every American Needs to Know") blamed a collaborator, University of Virginia professor Joseph Kett, for erroneously listing the capital of Florida as Jacksonville.

SIMON RUSHTI IS NOT INTIMIDATED HIS SEQUEL IS TITLED "BUDDHA- YOU BIG FAT SLOB"

ESCHEW OBFUSCATION

# WHAT'S ON IN FREE FLIGHT ?

MAY 13 & 14 TAMPA FLA. FINAL MIAMA INDOOR MEET CONFIRM 305 858-6363

MAY 27 & 28 Jacksonville REBEL RALLY AAA for FF & CL Terry Rimert page 11 inside

JUNE 1-4 US INDOOR FF CHAMPS JOHNSON CITY TN,Tony Italiano 1655 Revere Dr. Brookfield,WI 53005

JUNE 11,12 PENSACOLA,FL AAA Fiesta of Five Flags FF meet
Bob Junk 984 Williams Ditch Rd Cantonment,FL 32533

JULY 1,2 MELBOURNE,FL Fla. State FF Champs

JULY 21,22,23 MOSCOW IDAHO. AMA Indoor Nats Kibbie Dome 144 Ft. high.

AUG. 6 MELBOURNE,FL 50th anniversary of Dick Korda,s Wakefield victory
CD Dave Platt 6940 NW 55St. Plantation,FL 33313

AUG. 12 & 13 GREAT FLORIDA KEYS ROW OUTDOOR FF MEET ISLAMORADA,FL DETAILS LATER

**THE HANGAR PILOT**
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