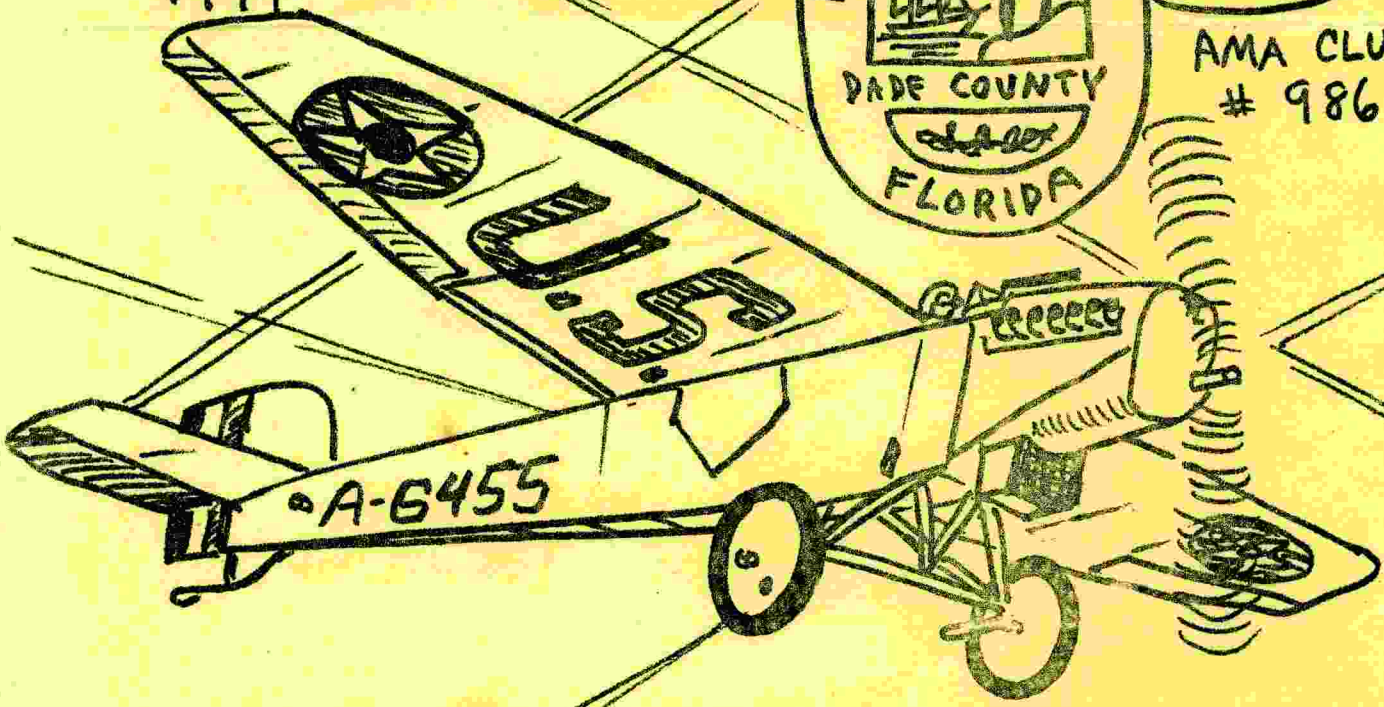
# THE HANGAR PILOT

ISSUE #14
MARCH 1974

MIAMI INDOOR AIRCRAFT ASSOCIATION
MIAMA
METROPOLITAN DADE COUNTY FLORIDA
AMA CLUB # 986



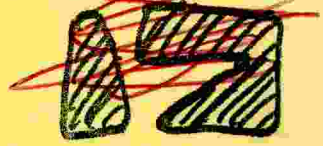

MARTIN MO-1 CONSTANT INDOOR SCALE + PENNY WINNER

## NEXT CONTEST: SUN MARCH NO! Sat. See Note

BLIMP HANGAR
OPA LOCKA AIRPORT
NORTHERN END OF NW 42 AVE

NOTE: 10:00 AM TO 6:00 PM (LATER!)



ISSUE NUMBER 14 MARCH 1974

Published by Metropolitan Dade County Park and Recreation Department for Miami Indoor Aircraft Model Association. President Dr. John Martin, 3227 Darwin St. Coconut Grove, Miami, Fla. Secy.-Treas. Gary Myers 7701 Camino Real. Apt.415, Miami 33143

## CONTEST #5 ON FEB 17 - BLIMP HANGAR

Flying times continue to improve in our new contest site, as Gary Myers broke the ten minute barrier with his vintage Easy B model built early last year, and seems to do better every month. This time it did 10:36 and won Gary a year's subscription to MODEL BUILDER donated by editor Bill Northrop. This was contest number FIVE, and we would like to remind all hangar pilots that there are only THREE CONTESTS REMAINING with the next one (Number6) this Sunday March 17. Old timer Dan Kilgore recorded his first official contest flights with a DH Tiger Moth in scale, and a beautiful Pietenpol Air Camper in Peanut. It seems that this Peck Polymer kit is the way to start in Peanut..either this or Peck's new kit a clipped wing Taylor Cub with lots of potential. Dr. John Martin's little yellow Luton Minor won Peanut Scale and Bill Hannan's scale drawings he donated to the winner of this event. The Penny Plane Plans donated by Dave Linstrum disappeared, so we hope to be seeing some new pennies.

NOTE THAT THE NEXT CONTEST STARTS AND ENDS ONE HOUR LATER, in order to take advantage of the better air conditions later in the day.

## THIS YEAR'S "EXTENDED" NATS - BEST EVER?

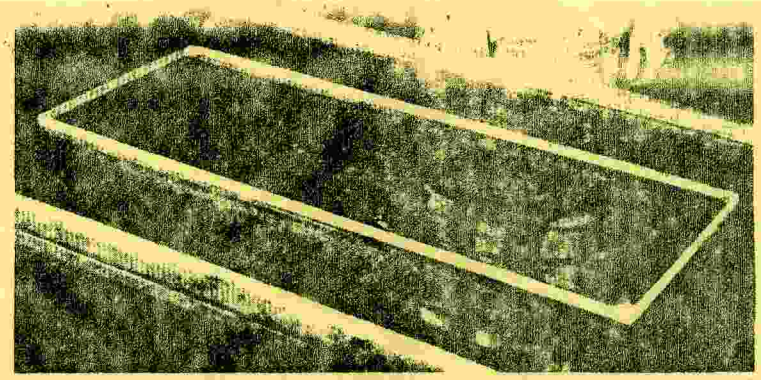
FOUR DAYS OF INDOOR!! Subject to final confirmation there will be two high ceiling days followed by two low ceiling days. High ceiling (About 100 ft.) in the Goodyear hangar at Spring, Texas about 30 miles north of Houston and about 135 miles west of Lake Charles; Sun. and Mon. Aug. 4 and 5. Low ceiling (About 55 Ft.) in the Lake Charles Civic Center Sports arena; Tue and Wed. Aug. 6 and 7. M.I.A.M.A. will again sponsor their unofficial event AMA Navy Scale. Events will include Stick, Cabin, Paper Stick, H L Glider, and Scale as in previous years. In addition there will be the unofficil events..Peanut scale, Penny Plane, and Navy Scale In addition to this FAI 1 gram stick models will be flown at both sites, and EASY B WILL BE FLOWN IN THE LOW CEILING ONLY.

## CALENDAR OF EVENTS

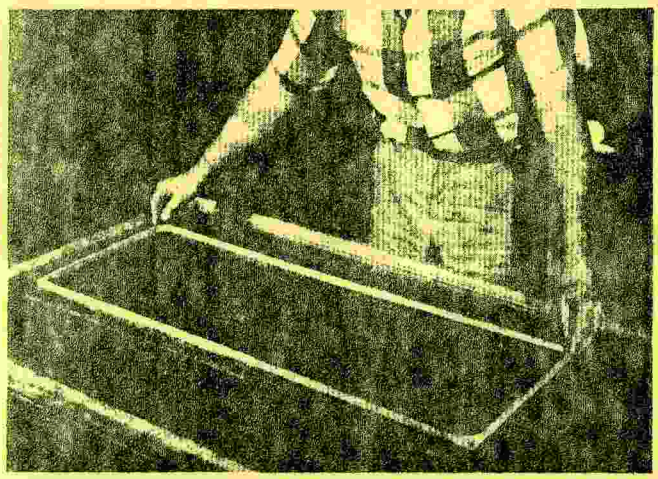
MARCH 17 - CONTEST #6 { 10:00 - 6:00 P.M. GOODYEAR HANGAR
APRIL 7 - FLY IN - JFK NORTH - 9:00 - 1:00
APRIL 21 CONTEST #7 GOODYEAR HANGAR
MAY 5 FLY-IN
MAY 26 LAST CONTEST - GOODYEAR HANGAR
JUNE 22 - ANNUAL AWARD BANQUET
JUNE 30 M.I.A.M.A. 1ST ANNUAL OUTDOOR SCALE MEET
JULY 4,5,6 - WORLD INDOOR CHAMPIONSHIP - LAKEHURST N.J.



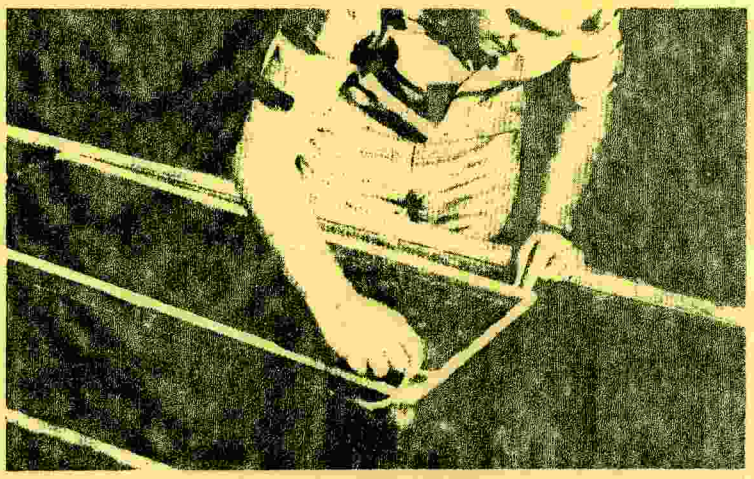
Use bottle cap or spoon to pour solution. Start at one end, pouring steady stream rapidly down middle. Thin film, less solution.



After the film has set a couple of minutes, place moistened balsa lifting hoop on top of film. Tank, hoop, drawing opposite page.



After brief wait, slide the hoop, with film, within two inches of each side of the tank so that film outside of hoop is bunched up.



To prepare hoop and film for lifting, then loop surplus film over edge of hoop. Clear automobile lacquer is good base for mixture.

***Despite little support from magazines, and none at all from the trade, indoor flying activity grows steadily.***

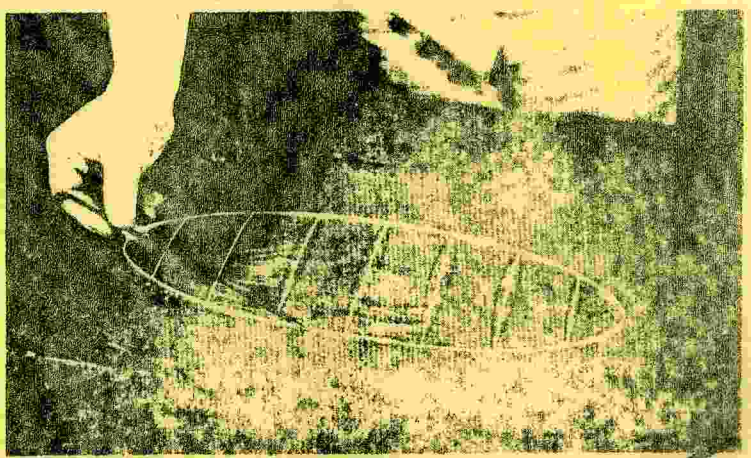
be built without the use of scales and still be in the weight class where excellent times can be recorded. In this and succeeding articles I hope to be able to explain enough about indoor building so that you will not have the same troubles that I encountered when I built my first indoor models. Through pictures and sketches it is hoped to give enough information so that you can build the contest-winning stick and cabin design that will be shown later in the series of articles.

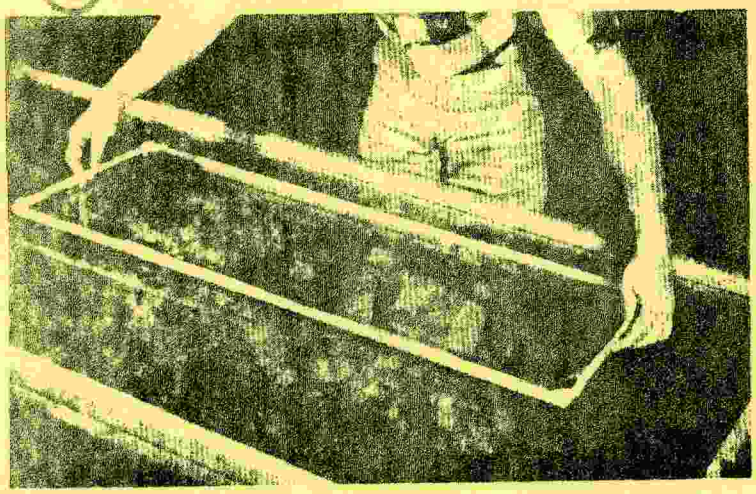
One of the most important factors in a good indoor model is the sheets of microfilm used for covering; what is best for the experienced builder is not necessarily the best for one with little or no experience. The beginner's main interest is in getting a good, usable sheet of microfilm off the water, while the experienced builder is interested in thin dry sheets of film that will not warp their super light frameworks (since this type of film is harder to lift off the water, this type will be explained later). For someone just starting out in the indoor field there is no sense in trying to use some complex (*Continued on next page*)

Third step: place hoop, film, over frame; blow microfilm against moistened surfaces. Spots that don't stick, press with finger.

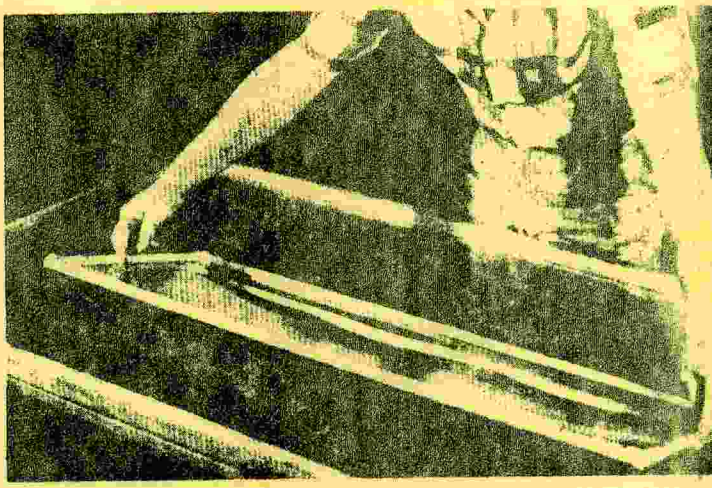


When film dry, trim excess with hot wire or pencil-type soldering iron. Good solution produces dry sheets that "deaden" easily.





To lift film off the water move the wood lifting hoop toward one side of the tank, then carefully lift one edge clear of the water.

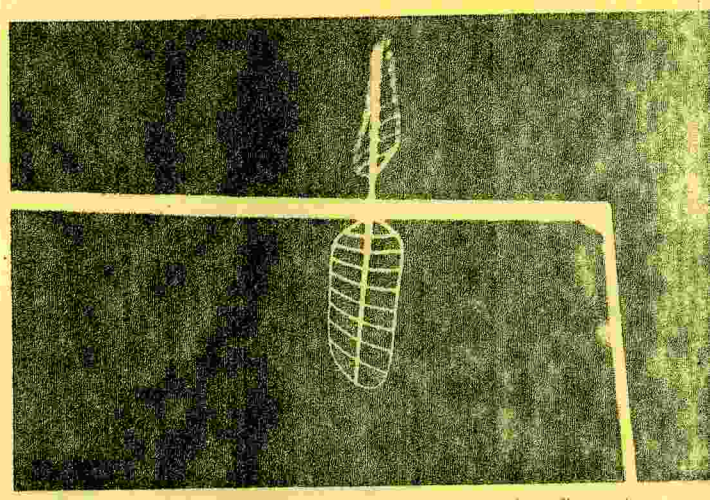


Having lifted one edge of hoop successfully, slide the hoop forward and lift free of the surface. Author demonstrates technique.

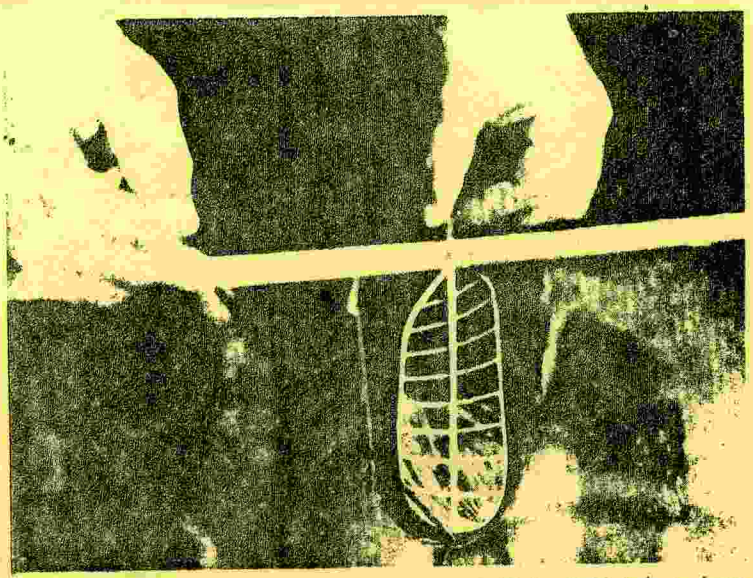
## INDOOR MODELS . . . continued

microfilm formula, for a good solution can be made by using a clear automobile metal lacquer as a base. Since most of these are plasticized they sometimes can be used straight out of the can with good results but, since most commercial products vary with different batches, it is possible that some plasticizer will have to be added. It is best, therefore, to start out by pouring some of the clear lacquer into 3 small bottles. To one of the bottles add about 4 drops of castor oil for each ounce of lacquer, to another add about 8 drops of castor oil for each ounce of lacquer, and the third can be left plain. The bottles that had the castor oil added should be well shaken and not used for several hours in order to give the castor oil time to blend in with the lacquer. The reason for the three different mixtures is that, while a well plasticized mixture is more flexible and can be lifted off the water easier, the sheets of film will never deaden or stop shrinking, which will cause a light framework to warp over a period of time; so it is best to use the solution with the least amount of plasticizer that you can successfully lift off the water as sheets of film.

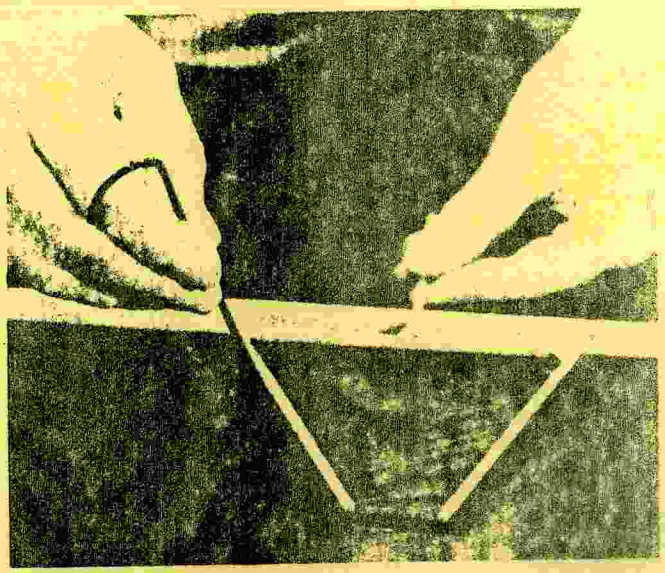
Although a bathtub can be used as a tank for small sheets of microfilm, it is best and easy to construct a tank more suitable for this purpose. All that is needed is four boards with a cross-section of approximately ¾" x 1½" cut to the length and width of the size tank that you want. Your tank should be large enough so that you have at least 9 inches on each side of your hoop and 12 inches on each end; so for a model with a 3-foot span the tank should be



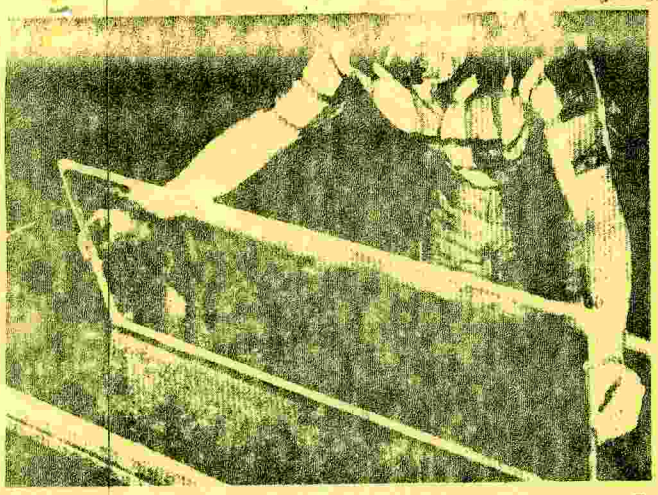
To cover prop, moisten outline frame and ribs with saliva, place on sheet of film, making sure that one edge adheres to the film.



Third: with hot wire cut loose covered blade. Hold hub to keep blade from touching sheet. Hot wire close to film removes wrinkles.

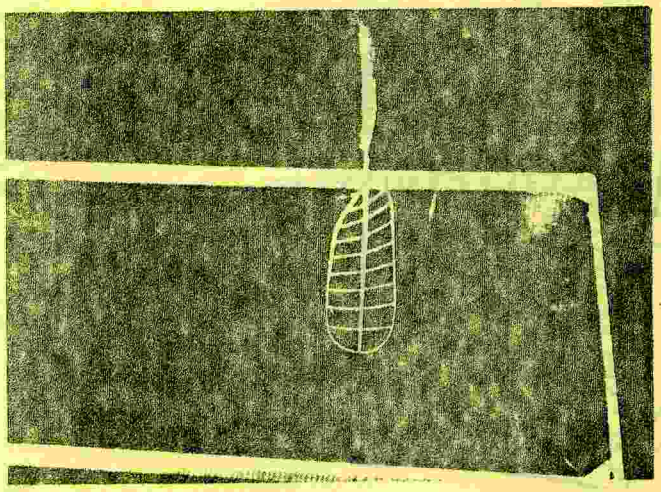


Fuselages covered by transferring film from sheet to open frame—this frame has a shape similar to that of the part to be covered.



Heap of film probably will be in this position when you get it off water. Let water drain off film before taking it away from tank.

at least 5 feet long and 2½ feet wide. It is possible to use a smaller tank but it only makes it more difficult to get good sheets. With these boards nailed together to form the tank outline, it can be (*Continued on page 54*)

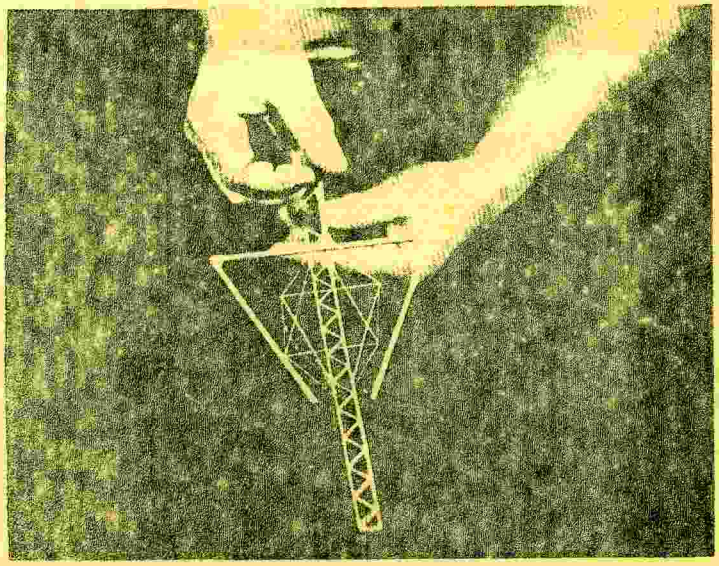


Second step in prop covering. Trim along fastened edge with hot wire, then roll the blade making sure that opposite edge adheres.

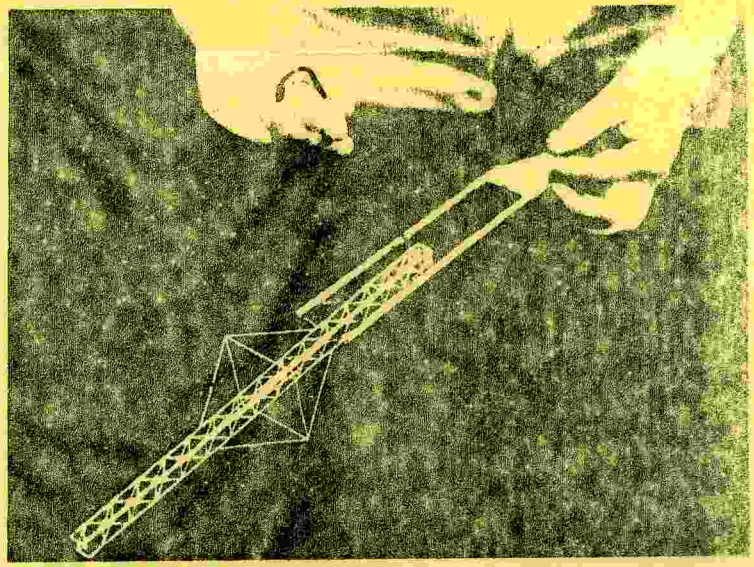


Kerosene heater used to deaden film before covering wings, tails. The heat stretches the film which remains slack when moved away.

***Popular during the twenties, sport was "killed" by need for super high ceilings. Now that outdoor flying sites disappear attention turns increasingly to "mike."***



A triangular shaped fork is used to cover the fuselage bulge. Additional sections of film transferred from sheet to fork as needed.



A straight-edged fork is used here by the author to cover the narrow end sections of the fuselage. He trims excess with a hot wire.

## Indoor Models

(Continued from page 21)

placed on top of a table or bench and covered with a piece of plastic to hold the water. If you do not have a suitable bench or table the basement or garage floor can be used as a bottom for your tank. With everything fairly level not more than a couple of buckets of water will be needed to fill the tank to a depth of about ½-inch. The water should be allowed to stand for at least one hour so that the water temperature will be even throughout; the tank parts, including the table or bench, usually are not the same temperature as the water, so it takes a little time for everything to equalize.

The balsa frames or hoops used for picking up the sheets of microfilm are made from ¼ x ½" balsa strip and the size of the frames can vary depending on the parts you wish to cover. A hoop to cover a wing should be twice the width of the chord, long as the span, plus at least one inch clearance at each end. The frames always should be moistened with water shortly before using them for picking up film from the water, so that the film will not slip off when lapped over the edges.

In microfilm for the superlight contest models the most important things to look for is a solution that will produce dry sheets that will deaden out easily, and that can be loosened if necessary after being placed on the model, so that warps can be eliminated. If the film solution that you are now using meets these requirements, then you need not look any farther for a better solution. Film that goes completely dead and becomes real floppy on your model is not desirable either for it will balloon out and double your airfoil thickness. For my contest solution I still use clear lacquer as a base but, since it is not dry enough—meaning that it usually has too much plasticizer, clear nitrate dope of the type used for full scale aircraft (which is not usually plasticized and can be purchased at any airport) is added to the lacquer for the opposite effect to that of the castor oil added to the solution earlier in the article. The formula that I use consists of 70 percent Fullers Nitrate Dope and 30 percent Duco Clear Lacquer with no plasticizer added. However, if you feel that one is necessary, then you should use Tri Cresyl Phosphate which makes the film less tacky than when using castor oil.

While heat will tighten film, it also can be used to deaden and loosen it, while the film is still on the hoop. Not only fast, it is the only way that I know by which you can tell whether or not your latest mixture will produce dead film almost immediately after pulling a sheet of film off the water, needing only to wait for most of the [illegible] either to drain or evaporate, before placing the film over the heat. For the heat source I use an old fashioned kerosene heater which is about 9 inches in diameter and about 24 inches high. It has a chimney which extends about 12 to 14 inches above the flame, which produces a draft of heat which will balloon a sheet of film when placed above it. If the microfilm solution does not have too much plasticizer, it should be very loose on the hoop when it is taken away from the heater. With this loose film real light frameworks can be covered easily without distorting the ribs or spars. Sears-Roebuck call these heaters "Bail-type Kerosene Circulators" while Montgomery Ward list them as "Portable Kerosene Circulators."

Since a lacquer base film most usually will slowly shrink over a period of time, or maybe in traveling to a contest through some hot weather you are liable to find that your model has warped through film that has tightened, all is not lost for the film can be still loosened, even though it is on your model. This can be done easily by brushing some Creosote inside your model box and closing it up for about an hour. The Creosote fumes will loosen the film and with loose film most of the warps also will disappear.

ABOVE IS REPRODUCED PART 1 OF THE HISTORIC INDOOR ARTICLES FROM MODEL AIRPLANE NEWS BY JOE BILGRI - SAVE THIS + PARTS 2 + 3 TO COME

RESULTS OF CONTEST 5 - FEB 17 1974 - BLIMP HANGAR

Class 1 Peanut scale

| | | |
|---|---|---|
| 1. John Martin 2 Points (Luton Minor 19.5) | 1 looks, 1 flight | 208.9 |
| 2. Gary Myers (Martin MO-1 18) 6 points | 3 looks, 3 flight | 192.2 sec. |
| 3. Dan Kilgore 7 points (Pietenpol 19.3) | 2 looks, 5 flight | 73.9 sec. |
| 4. Russ Dorsey 7 points (Sig Bleriot) | 5 looks, 2 flight | 199.2 sec. |
| 5. Jim Stewart 8 points ( Cub 17.5) | 4looks , 4 flight | 187.2 sec. |
| 6. Bill Hiscock DNS Did not start (Shoestring) | | |

Class II Scale

| | | |
|---|---|---|
| 1. John Martin 2 points (1928 Cessna 24) | 1 looks, 1 flight | 1:31.3 |
| 2. Gary Myers 5 points ( Martin MO-1 18) | 3 looks, 2 flight | 1:05.6 |
| 3. Russ Dorsey 6 points (Lane Bleriot 19.2) | 2 looks, 4 flight | 28.0 |
| 4. Jim Stewart 7 points (Cub 17.5) | 4 looks, 3 flight | 1:03.0 |
| 5. Dan Kilgore 10 points (DH Tiger Moth) | 5 looks, 5 flight | 23.6 |

Class III Easy B Junior- Rick Myers 5:45

1. Jim Stewart 9:45.0
2. Gary Myers 8:52.0
3. Roman Szymula 6:56

[28 OFFICIAL FLIGHTS]

Class IV Penny Plane Junior- Rick Myers 4:46.0

1. Gary Myers 5:32
2. Jim Stewart 4:47

Class V Endurance

| | | |
|---|---|---|
| 1. Gary Myers | ***** 10:36 | New record |
| 2. Jim Stewart | 9:28.4 | |
| 3. Roman Szymula | 8:05 | |

Class VI Glider --Junior Rick Myers (28.5)(32.0) 60.5

| | | |
|---|---|---|
| 1. Ric Choate | (48.0)(49.0) | 97.0 |
| 2. John Arthur | (46.6)(47.3) | 93.9 |
| 3. Gary Myers | (43.0)(47.0) | 90.0 |
| 4. Jim Stewart | (40.1)(40.4) | 80.5 |

Class VII Experimental- John Martin 1:53.6 Wing

Class VIII Junior Kit Stick. Billy Hiscock 48.0

ANNUAL POINT TOTALS

| | | |
|---|---|---|
| 1. GARY MYERS - 85 | 96 | |
| 2. JOHN MARTIN - 64 | 70 | |
| 3. JIM STEWART - 52 | 59 | |
| 4. BILL HISCOCK | 31 | |
| 5. RICK MYERS (JR.) | 29 | |
| 6 BILLY HISCOCK (JR.) | 18 | |
| 7 JOHN ARTHUR | 18 | |
| 8. RUSS DORSEY - | 9 | |
| 9. RIC CHOATE - | 8 | |
| 10. FULTON HOUGERFORD | 7 | |
| 11. ROMAN SZYMULA - | 6 | 9 |
| 12 BETH DAVIDOW - | 4 | |
| 13 DAN KILGORE | 5 | |
| 14+15 JOEL + JULIE D | 2 | |
| 16. DAVIS GANDEES | 2 | |
| 17 CHAS. SLATER | 2 | 5 |
| 18 BERT BENNETT | 2 | |
| 19. ART SCHAEFER | 2 | |
| 20. ALAN SZABO | 2 | |