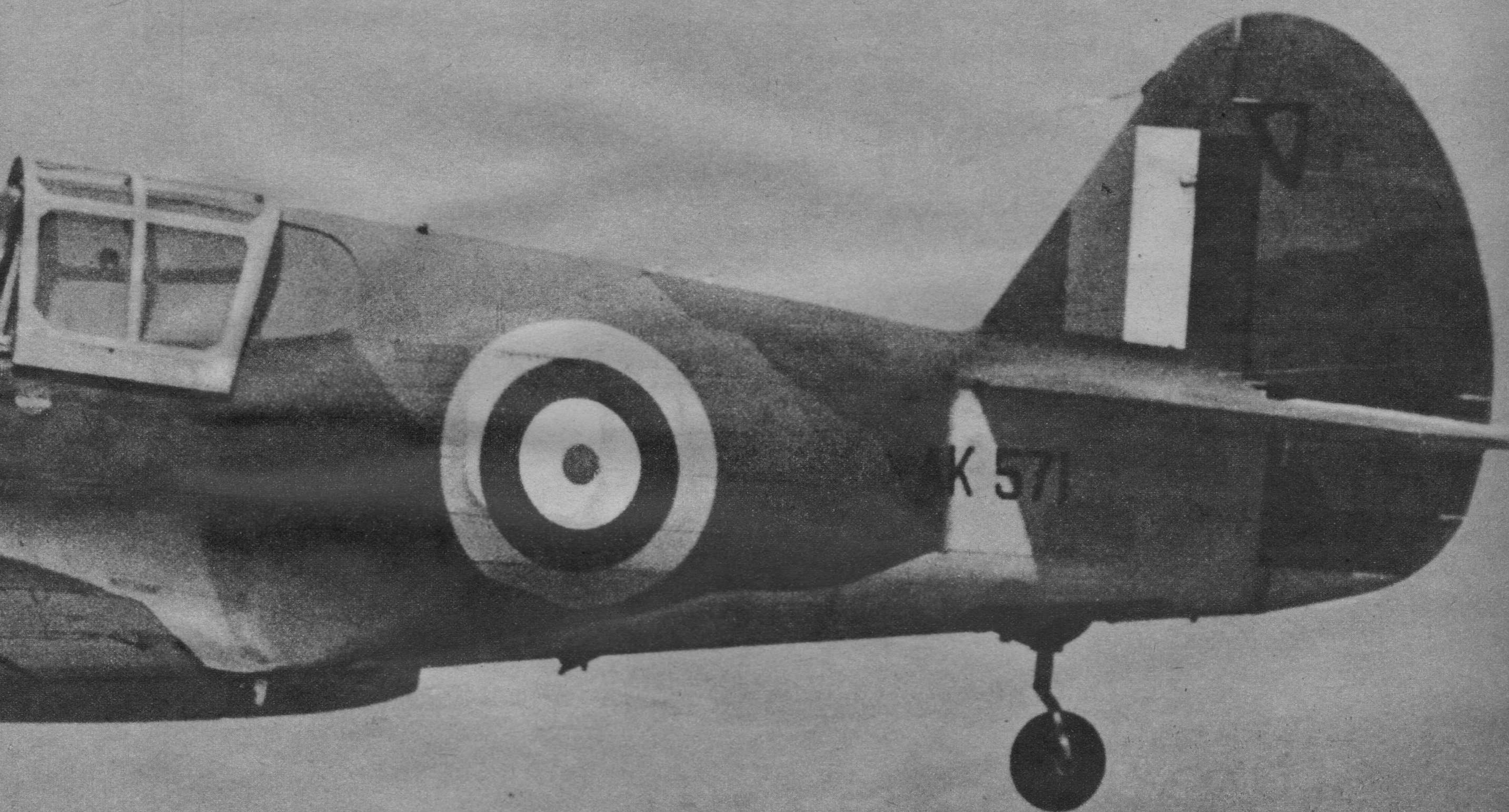


KITTYHAWK

British version of the Curtiss P-40D is faster, more powerful than the bat-
y in mass production, it features an increase of 25% in fire power. Liquid-cooled, suped-up Allison engine.



STRATO-STREAK

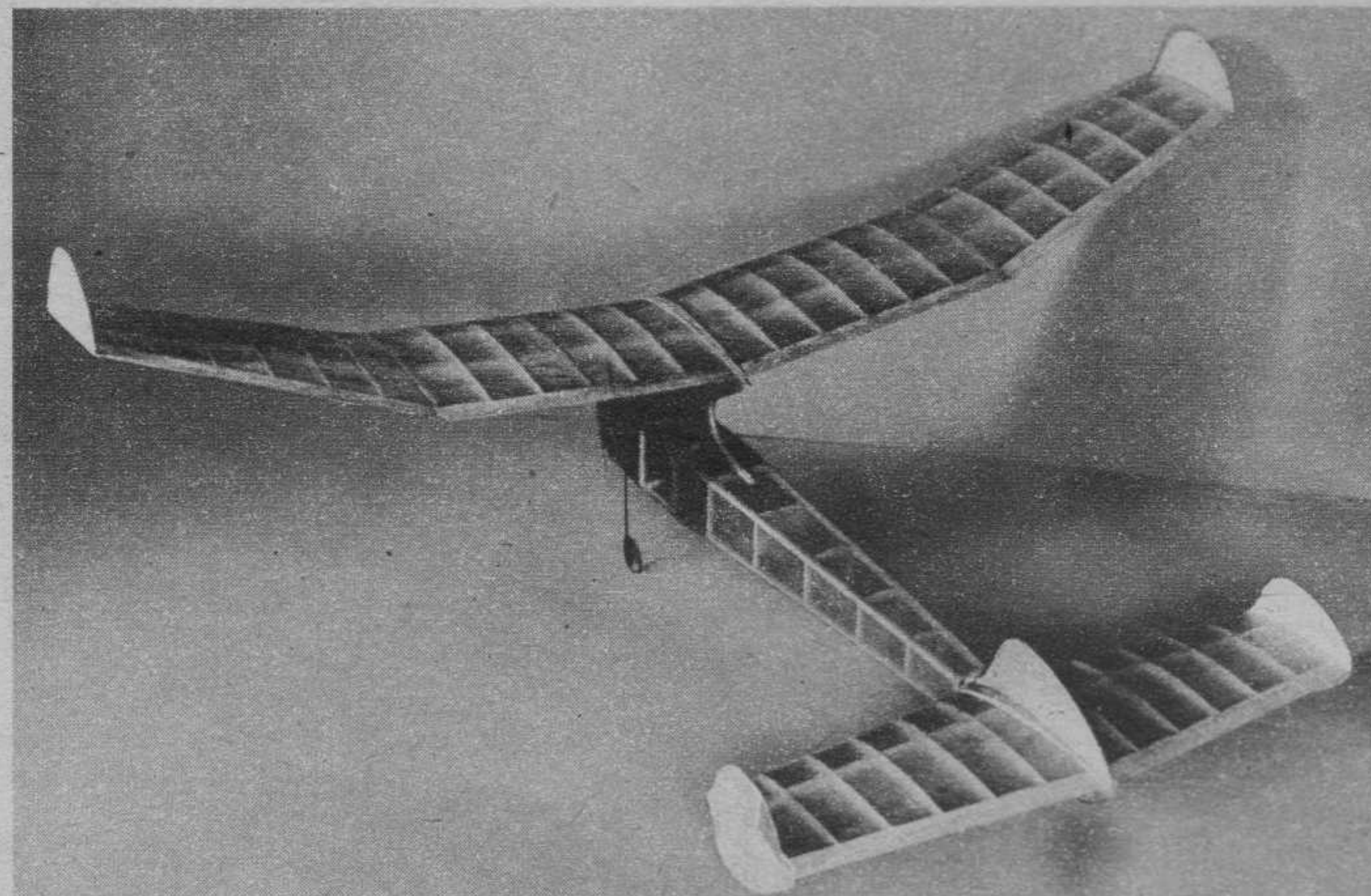
BY LOUIS GARAMI



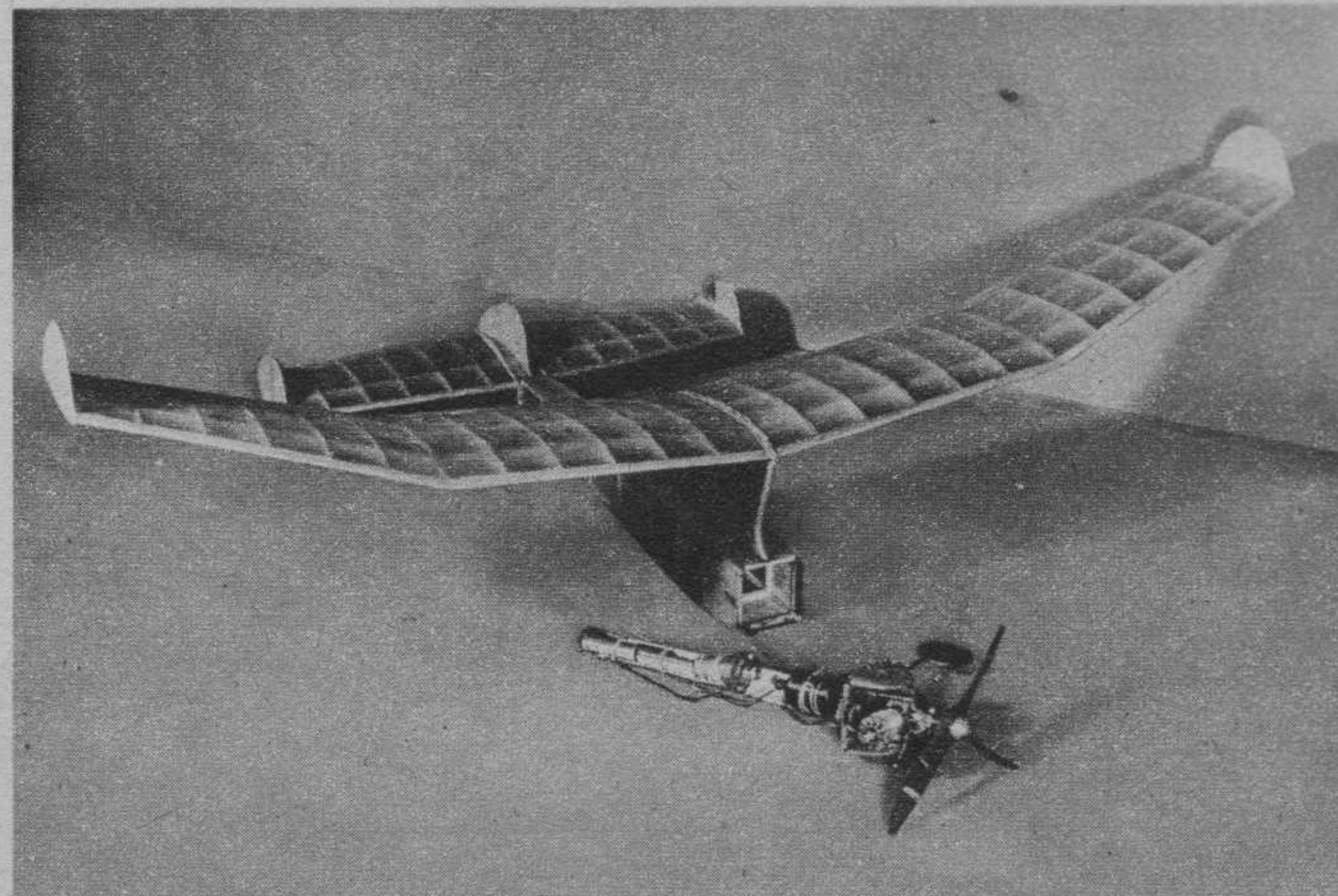
You don't know climb until you've built one of these flying bullets. Good soarer, too.



You'll smile, too, when you see how your Strato-Streak can climb.



Why rules need changing. Nothing can touch a job like this one.



Wing fins prevent spiral dives. Motor unit detaches. Atom motor.

THE Strato-Streak was created to prove beyond all doubt that the vest-pocket gas model can compete almost on an equal basis with larger-sized contest gas models. In creating the design, full consideration was given to all existing proven features of successful gas models. The acceptable features were embodied in addition to a number of new ideas.

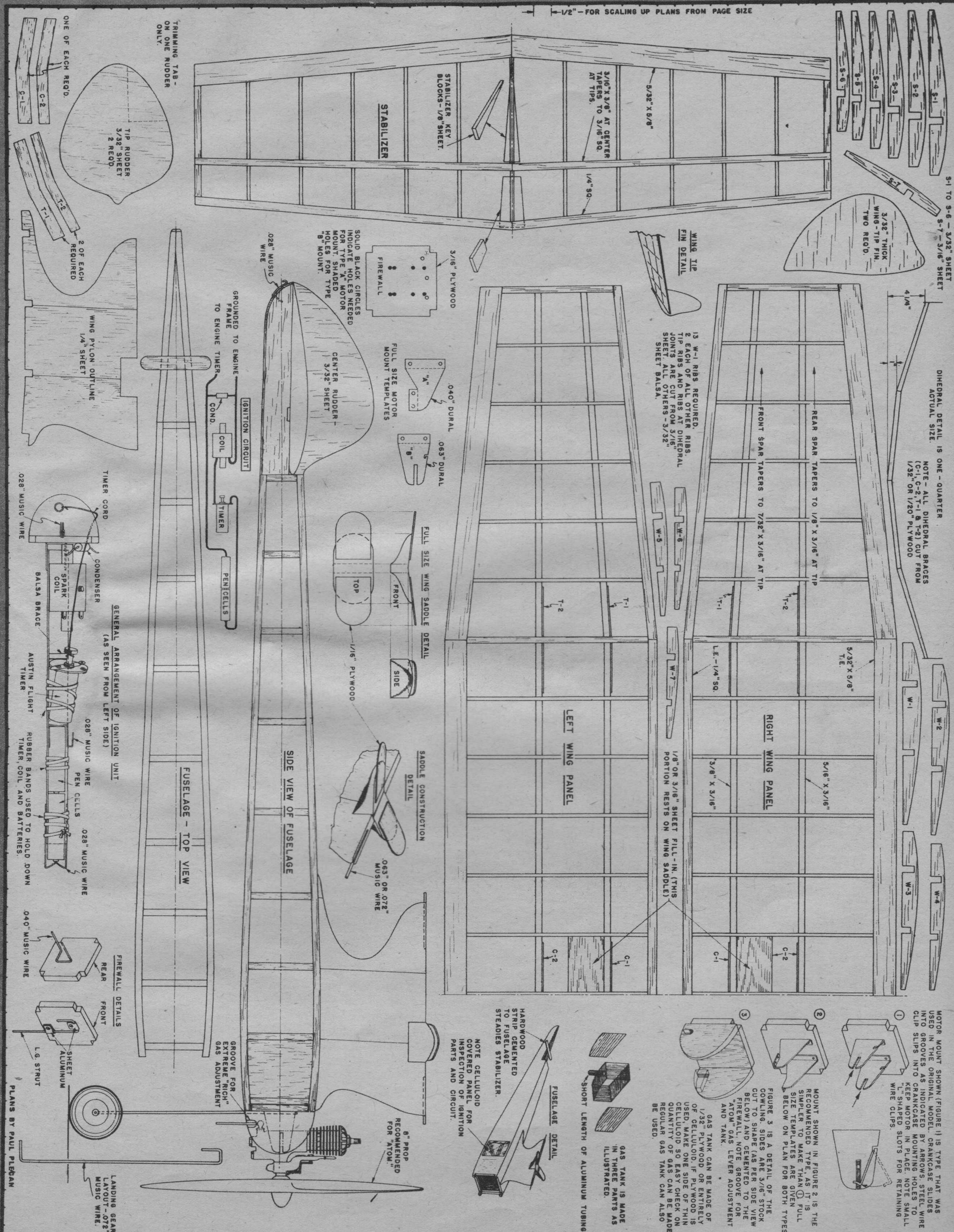
This ship was designed for performance without any particular stress on appearance. Only the features vital to high-grade performance were incorporated. The gas-model competition rules being what they are, a fast climb is of primary importance. The model was made directionally stable so that it could point its nose to the sky and keep climbing on its tail until the motor cut. It was streamlined to the nth degree, all resistance being cut down to a minimum, so that a fast climb would be possible. To assist in this, a thin airfoil was used. When the motor cuts, the proportionately large wingspan, coupled with a short moment arm, permits tight gliding circles which are vital for taking advantage of rising currents.

Construction is simplicity itself. The fuselage, composed of four longerons, is square. The wings have a straight taper, eliminating the possibility of warp. The tail is the same. The wing fins and rudder are sheet balsa, which makes for the easiest construction. The ignition unit, the source of greatest trouble with small models, is so simply arranged, that it presents no problems, even for beginners.

The simplicity of this high-performance model proves conclusively the practicability of vest-pocket gas models, which can be rapidly constructed and which will give performance equal to, if not better than, models of twice or three times its size—and the larger ships require many days of tedious labor and are costly to repair when damaged. This entire model can be built for less than a dollar. If it is properly constructed without warp, we urge extreme caution in flying it with motor runs over ten seconds. The model will consistently fly out of sight when a full twenty-second motor run is allowed.

CONSTRUCTION

Make the two fuselage sides one on top of the other. Note that the longerons go past the first cross brace to act as allocating stubs for the firewall. Assemble the square body. Fill in the two sides and bottom between the first and second cross brace with $\frac{3}{32}$ " sheet balsa and cover the next side station with celluloid on which-ever side is more practical for you. Through this (Turn to page 52)



DON'T CHANGE THE RULES!

BY CARL GOLDBERG

THE old question of rules is back with us again. So, of course, here I go sounding off again, although I am, as usual, on the opposite side of the steam roller. For years the rule committees have been changing gas model rules hither and yon, and each year the model builders grumble their very evident dissatisfaction. The instability of the rules was always a very sore spot with everyone until the Academy voted that all rules should be allowed to last at least one year. Finally, two years ago, the rules were stabilized to the point where there were fewer grumblers and the whole situation simmered down to everyone improving his design. As per usual, the model game has continued to progress, until today everyone is more or less alarmed over the ease with which any well-adjusted modern model flies away. Practically all leaders see the great danger to the game in this ease.

As you may know, I have fought wing loadings and power loadings until the cows came home because I'm against such rules as a matter of principle; that is, from the scientific angle. The freedom allowed indoor designers is my idea of a good set of rules. There you only have one restriction, the wing area. Everything else is left up to the individual and, consequently, the model designs quite naturally progress to the most efficient possible. However, it has become increasingly clear to me that something must be done to keep so many ships from flying away and becoming lost. My personal alarm grew so great that, at the Academy meeting the day after the Nationals, I went against my own personal feeling as stated above regarding wing loading, power loading, et cetera, and said that I thought it would be a wise move for the Academy to double both the wing and power loading for Classes B and C and raise them about 50 percent for Class A, and that furthermore it should be compulsory for every model entered in a contest to be equipped with an automatic spoiler or drag flap of some kind to go into operation after a length of time to be determined by the individual builder. The idea was that such stringent requirements would lend a certain amount of stability to the rules so that there would be no major changes required for at least two years. However, about a month ago, I had a chance to watch Dick Korda's demonstration of a dethermalizer at the Junior Aviators' Nationals in Cleveland, and, boy, it was plenty convincing. I'm certain now that it is not necessary to do anything about wing and power loading, but rather stress the drag-flap or spoiler idea because this is absolutely the only thing that will keep models from flying away. It alone will do far more than wing and power

loadings combined. Korda's gadget simply hinges on the side of the rudder and operates after a period of six minutes, eight minutes, ten minutes, et cetera, all depending on how long Dick feels the timer will be able to see the model before it goes out of sight. Upon the occasion on which I saw this gadget work, I was helping to judge the original design contest and so Dick adjusted for operation to take place within our sight. Exactly on the second which Dick's helper told us that the dethermalizer would go into operation, the model started to bank and this became steeper and steeper and the model dove into the ground in a thermal-defying spiral. Of course, this model is a rubber-powered job and I don't know that a spiral dive is a very safe thing to do with a gas model. However, it is certainly better than losing a ship and I do think there are ways of employing this idea without taking such a severe risk of damage. In fact, I know that this principle can be employed without any risk of damage at all. At any rate, to cut the story a little shorter, I've had a number of discussions with various model builders and the upshot of each one has been that if all models were equipped with dethermalizers or drag-flaps of some kind, it would be unnecessary to make any change in the rules to stop models from flying away. In other words, we are all quite well satisfied with the rules except for the fact that our models are continually getting lost.

Regarding the compulsion of using a spoiler or drag-flap on all models, if this is objectionable, then perhaps we should have a tremendous educational campaign in all the model magazines showing different styles and methods of producing the desired dethermalizing qualities.

One of the arguments that has been brought up is that the fellows would start gambling their planes by setting the timer for the dethermalizer longer if the contest got close. However, a model that gets lost in a thermal can usually be seen by the fellow chasing it anywhere from five minutes to half an hour longer than the timer at the field. Consequently, there really would be no gambling. You simply figure out about how long the timer could see it and then add on an extra five minutes and set your dethermalizer timer accordingly. Just think of the value this would have to the great majority of those fellows who don't want to trade a fifty-dollar plane and motor for the chance that they might win a seventy-five-cent medal or a two-dollar cup.

As far as the wing and power loading increases are concerned, they wouldn't be so bad for the experts and all the big shots who have "hot" motors, but how about the average builder, the bulk of model builders,

who can scarcely be expected to get really good flights if they're handicapped any more than they are now? As the rules are now, these fellows get along. All you really need is something to keep planes from being lost.

The whole history of model aviation has shown every single time without fail that the model designs and the model builders themselves progress far faster toward the goal of efficiency than the rules tend to keep models from flying away. Year after year after year in any popular class of model you care to name, there have been more and more and more models flying away to be lost for good. No amount of rule changes has ever halted this trend and the reason is very simple. It is because no one was ever able to figure out something which would leave a model airplane efficient enough to fly and yet not efficient enough to fly away; and that is exactly where the dethermalizer comes in.

Remember the time Gordon Light won the Wakefield contest by proxy over in England? It was with a 7-minute out-of-sight flight. As I remember, the rules at that time were for the ship to weigh at least four ounces. The British prided themselves on the Wakefield contest being a scientific event and thought they could prevent any future out-of-sight flight in that contest by going to the extreme of doubling the weight rule; and that is what they did. Well, at the Wakefield contest held two years later, the winner made an out-of-sight flight of 11 minutes. Then Jimmy Cahill won with a 33-minute out-of-sight flight and finally Korda made his 43-minute riser flight.

Getting back to gas modeling, let's say that the 10-ounce wing loading and 100-ounce power loading are adopted in the hope of reducing the number of lost models, or even a 12-ounce wing loading and a 120-ounce power loading. Will either of these changes actually accomplish that purpose, and if so, how long will it be before a further increase is necessary? At the present rate of model progress, with folding props coming in, more and more retractable gears and generally cleaner ships using some form of cowling and otherwise cutting down the skin friction, to say nothing of more powerful motors and more efficient propellers and the present study being given everywhere to more efficient wing sections—it is safe to say that by next summer the number of lost models would at least equal if not actually surpass the number of models that were lost this year. Considering all these improvements, anyone can see that the only thing that would hold down the number of losses in Classes B and C next year would be at least a 16-ounce wing loading and 160-ounce power loading, and then by the following year, the

number of losses would again jump to its present level. Then again, you keep running into the difficulty of the average fellow just getting into the game who cannot afford to buy a real contest motor and yet who would like to be able to compete in the events. For him, the greatly increased loading would make it almost impossible to get any kind of a flight at all. As long as you leave the rules lenient enough so that the ordinary fellow can get his models to fly a little bit, the expert and the advanced builder will continue to lose their models. This is simply because there is such a wide gap in ability at both building, selection of motor and accessories, and adjustment, between your average builder and your advanced and expert builder.

One of the greater satisfactions in gas model building and flying is listening to the motor roar as it pulls the plane ever higher and higher. Yet, because of our steadily increasing efficiencies, we have had to steadily decrease the amount of the motor run. In the real old days, Maxwell Bassett used to get a 14 or 15-minute motor run. Even as short a time ago as 1937 we were able to get 4, 5 and 6-minute motor runs and it was plenty thrilling. Then suddenly came the 30-second motor run which led to the development of our present fast-climbing jobs. This development came so rapidly that a 20-second motor run was quickly resorted to in order to keep models from flying away. Now it is proposed that we should use a 15-second motor run. All this is apparently leading to the not-so-distant time when models will go z-i-p way up into the sky in just a couple of seconds, then the motor will shut off and the model will begin to glide. Where will the fun be in such a flight? There's plenty of thrill, yes, in watching the ship go up like that, but where is that part of the thrill which comes from listening to your motor? I maintain that this has a lot to do with the enjoyment of gas modeling. We absolutely don't need to go to a motor run shorter than 20 seconds; in fact, we can lengthen it if the dethermalizer idea is adopted.

Now, one more point about increased loading. Contest directors have a plenty hard enough time as it is to get runways big enough for the ships of the present day to get off. With increased wing and power loading, it will be just about impossible for 30 percent of the contest directors to hold R. O. G. events.

In conclusion, I would like to point out that the dethermalizer is practically 100 percent insurance against losing a model by a thermal, whereas no practical increase in wing and power loading can ever hope to keep a normal portion of models from getting lost this way.

★ NATIONAL RECORDS ★

UP-TO-THE-MINUTE LISTING OF NEW FLIGHT RECORDS APPROVED BY THE ACADEMY OF MODEL AERONAUTICS

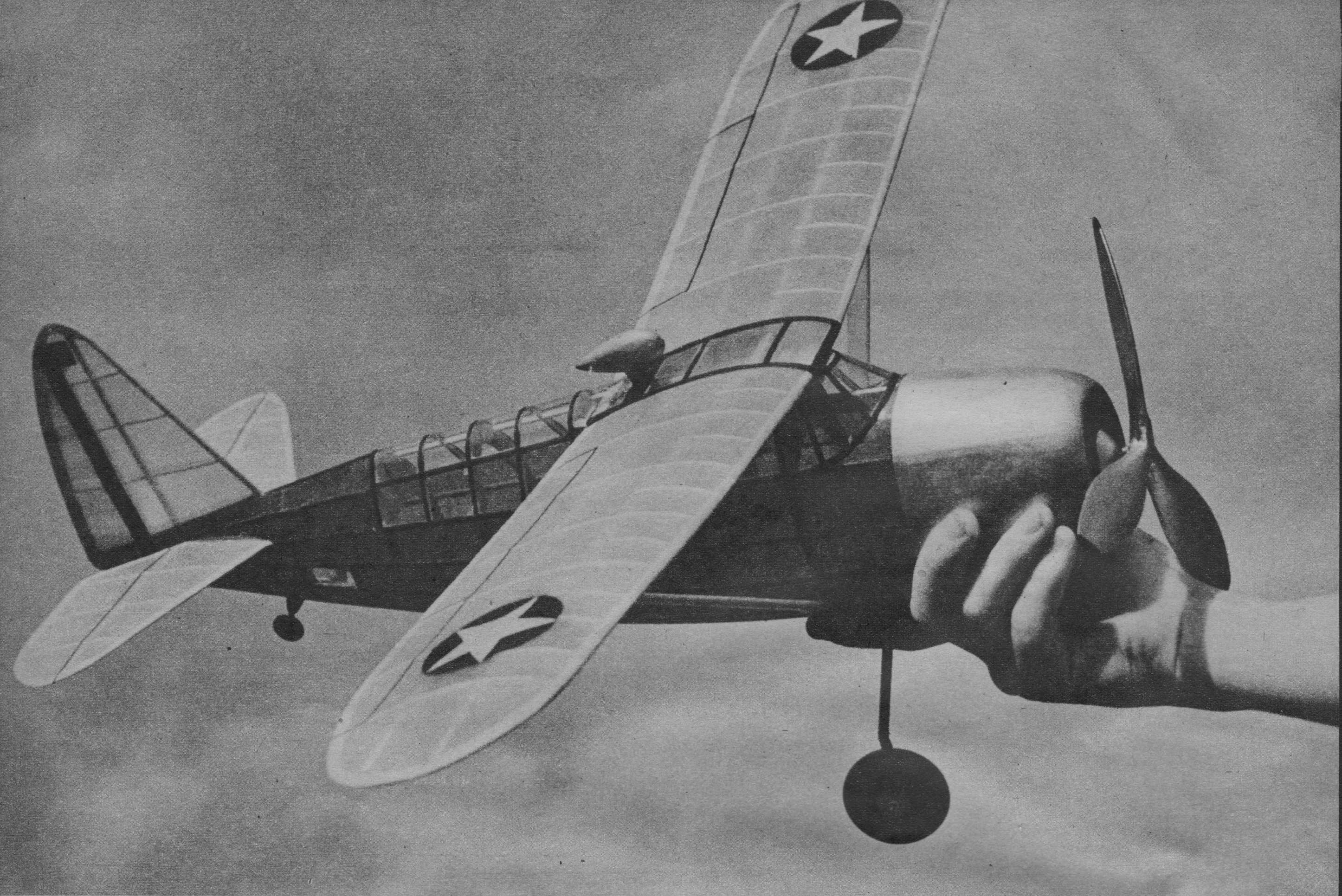
INDOORS (Longest Flight)

| TYPE | RECORD HOLDER | TIME | TYPE | RECORD HOLDER | TIME |
|------------------------------------|---|-------------------------------|---------------------------------|---|-------------------------------|
| Stick Model H. L. Class B | Junior: Martin Friedland, Philadelphia, Pa. Senior: Alvin Rohrbaugh, New Haven, Ind. Open: Merrick Andrews, Philadelphia, Pa. | 18:55.5 21:38.0 19:10.1 | Glider H. L. Class B | Junior: Otto Curth, Chicago, Ill. Senior: Armando Sinibaldi, Chicago, Ill. Open: Joseph P. Matulis, Chicago, Ill. | :44.7 :46.9 :39.7 |
| Stick Model H. L. Class C | Junior: R. Jagiello (deceased), Chicago, Ill. Senior: Milton Huguelet, Chicago, Ill. Open: Merrick Andrews, Philadelphia, Pa. | 19:17.3 23:49.0 26:39.0 | Fuselage R. O. G. Class B | Junior: H. Kaczynski, Detroit, Mich. Senior: David Call, Philadelphia, Pa. Open: Walter Erbach, Sheboygan, Wis. | 12:42.3 15:09.3 15:35.0 |
| Stick Model H. L. Class D | Junior: P. MacCready, Jr., N. Haven, Conn. Senior: None established Open: None established | 6:14.0 | Fuselage R. O. G. Class C | Junior: R. Jagiello (deceased), Chicago, Ill. Senior: Gordon Cain, Boston, Mass. Open: James Cahill, Connersville, Ind. | 11:32.3 15:53.0 17:21.9 |
| Stick Model R. O. G. Class A | Junior: Arthur Saltzman, Philadelphia, Pa. Senior: Milton Huguelet, Chicago, Ill. Open: Hyman Oslick, Philadelphia, Pa. | 10:09.0 12:23.5 15:32.0 | Fuselage R. O. W. Class B | Junior: None established Senior: William Hawkes, Philadelphia, Pa. Open: None established | 3:26.0 |
| Stick Model R. O. G. Class B | Junior: Martin Friedland, Philadelphia, Pa. Senior: Martin Friedland, Philadelphia, Pa. Open: Frank Haynes, New York City | 17:00.0 19:56.5 12:37.3 | Autogiro | Junior: P. MacCready, Jr., N. Haven, Conn. Senior: Ralph Brown, Boston, Mass. Open: Joseph P. Matulis, Chicago, Ill. | 1:51.5 2:51.2 1:03.0 |
| Stick Model R. O. W. Class A | Junior: P. MacCready, Jr., N. Haven, Conn. Senior: Ted Gonzoph, Philadelphia, Pa. Open: Merrick Andrews, Philadelphia, Pa. | 1:04.0 10:51.0 8:04.4 | Ornithopter | Junior: R. Quermann, Clarksburg, W. Va. Senior: Robert Gibbs, St. Louis, Mo. Open: Carl Goldberg, Chicago, Ill. | :17.3 3:07.9 4:05.4 |
| Stick Model R. O. W. Class B | Junior: Arthur Saltzman, Philadelphia, Pa. Senior: David Call, Philadelphia, Pa. Open: None established | 14:10.2 15:49.0 | Helicopter | Junior: R. Quermann, Clarksburg, W. Va. Senior: Harry Lerman, Boston, Mass. Open: Joseph P. Matulis, Jr., Chicago, Ill. | 3:54.6 5:13.8 2:12.4 |
| Glider H. L. Class A | Junior: Otto Curth, Chicago, Ill. Senior: Dushan Deshich, Chicago, Ill. Open: Leo Vartanian, Chicago, Ill. | :44.7 :46.2 :54.3 | | | |

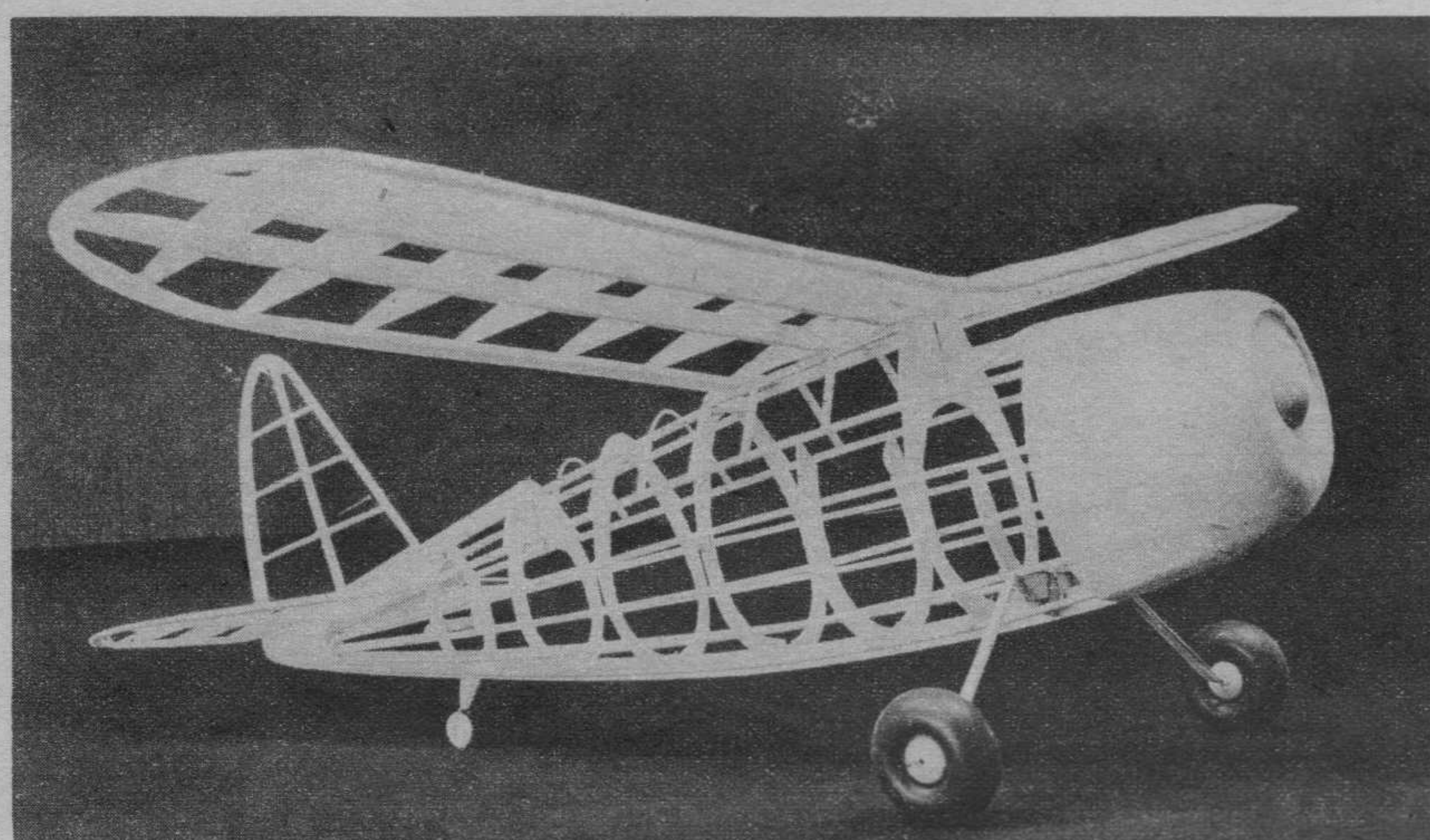
OUTDOORS (Three-Flight Average)

| | | | | | |
|------------------------------------|--|------------------------------|---------------------------------|--|-------------------------------|
| Stick Model H. L. Class C | Junior: Ed Vargo, Chicago, Ill. Senior: Roy Messinger, Linden, N. J. Open: Chester D. Lanzo, Cleveland, Ohio | 5:18.0 11:15.0 14:49.2 | Ornithopter | Junior: None established Senior: None established Open: None established | |
| Stick Model H. L. Class D | Junior: Paul Oskawski, Aliquippa, Pa. Senior: Robert Davis, Clarksburg, W. Va. Open: Toful Petraitus, Akron, Ohio | 7:23.0 8:04.3 7:02.6 | Fuselage R. O. G. Class C | Junior: Harry Robbins, Topeka, Kans. Senior: Walter Seegmiller, Lakeland, Fla. Open: Joseph Vermoch, Chicago, Ill. | 4:22.9 6:35.4 4:24.2 |
| Stick Model R. O. W. Class C | Junior: Bill Seegmiller, Lakeland, Fla. Senior: Gordon Peterson, Oakland, Calif. Open: John Schneider, Scotia, N. Y. | 1:04.0 :48.0 :22.3 | Fuselage R. O. G. Class D | Junior: Samuel Scuro, Pittsburgh, Pa. Senior: Justus Merkel, Monaco, Pa. Open: Robert Korn, Wheeling, W. Va. | 5:36.2 7:36.3 13:41.9 |
| Stick Model R. O. W. Class D | Junior: Bill Seegmiller, Lakeland, Fla. Senior: None established Open: John Schneider, Scotia, N. Y. | 1:22.2 :42.4 | Fuselage R. O. G. Class E | Junior: None established Senior: James Ryan, Cleveland, Ohio Open: Chester D. Lanzo, Cleveland, Ohio | 2:16.0 3:07.2 |
| Gliders H. L. Class B | Junior: Austin Rinaldi, Jersey City, N. J. Senior: Chas. Richbourg, St. Augustine, Fla. Open: Howard Beitchman, Hampton, Va. | 2:05.0 2:49.5 5:41.0 | Fuselage R. O. W. Class C | Junior: None established Senior: Manuel Andrade, Oakland, Calif. Open: John Schneider, Scotia, N. Y. | 1:22.2 :48.6 |
| Gliders H. L. Class C | Junior: Bob Codde, Oakland, Calif. Senior: Stewart Bennett, Oakland, Calif. Open: John Schneider, Scotia, N. Y. | :26.3 1:07.0 1:12.1 | Fuselage R. O. W. Class D | Junior: Robert J. Bates, Clarksburg, W. Va. Senior: Robert Davis, Clarksburg, W. Va. Open: James E. Long, Clarksburg, W. Va. | 2:33.0 3:11.0 2:30.0 |
| Gliders H. L. Class D | Junior: Bob Codde, Oakland, Calif. Senior: Clifford Doyle, Jacksonville, Fla. Open: Henry Thomas, Akron, Ohio | :21.3 :34.6 :46.4 | Gas R. O. G. Class A | Junior: William Repenning, Oak Park, Ill. Senior: Joseph Beshar, Paterson, N. J. Open: W. A. Gibson, Hamilton, Ohio | 4:33.0 16:39.0 15:50.7 |
| Gliders T. L. Class C | Junior: Robert Hine, Gloversville, N. Y. Senior: Ray Frodey, Pittsburgh, Pa. Open: Mike Morel, Cleveland, Ohio | :53.8 1:34.4 1:24.0 | Gas R. O. G. Class B | Junior: Bobby Davis, Atlanta, Ga. Senior: B. Redeker, Cincinnati, Ohio Open: Don Lampson, Lakeport, Calif. | 21:33.8 9:20.3 14:13.6 |
| Gliders T. L. Class D | Junior: Austin Rinaldi, Jersey City, N. J. Senior: Owen Niehaus, Rochester, Pa. Open: Richard Korda, Cleveland, Ohio | 2:51.0 5:42.0 3:30.4 | Gas R. O. G. Class C | Junior: R. Pittenger, San Francisco, Calif. Senior: Robert Sweger, St. Paul, Minn. Open: Donald K. Foote, Sacramento, Calif. | 10:10.6 15:44.0 24:37.8 |
| Gliders T. L. Class E | Junior: Austin Rinaldi, Jersey City, N. J. Senior: Harold Geres, Flushing, N. Y. Open: George Brown, Jersey City, N. J. | :51.5 5:52.0 1:47.7 | Gas R. O. W. Class A | Junior: None established Senior: Coley Doane, Batavia, N. Y. Open: Peter Bowers, Alameda, Calif. | :58.6 :38.0 |
| Autogiro | Junior: P. MacCready, Jr., N. Haven, Conn. Senior: Bob Meuser, Oakland, Calif. Open: None established | :12.8 :11.3 | Gas R. O. W. Class B | Junior: Glen Cady, Auburn, N. Y. Senior: Fred Gross, Cranford, N. J. Open: Frank Young, Buffalo, N. Y. | :20.3 :36.5 1:05.3 |
| Helicopter | Junior: Bill Yahnke, Cleveland, Ohio Senior: James Ryan, Cleveland, Ohio Open: Elmer Shapiro, Cleveland, Ohio | :20.0 :42.0 :25.0 | Gas R. O. W. Class C | Junior: None established Senior: Gordon Peterson, Oakland, Calif. Open: Donald K. Foote, Oakland, Calif. | 1:54.8 2:48.4 |

Abbreviation Key: H. L.—hand launched. R. O. G.—rise off ground. R. O. W.—rise off water. T. L.—tow line.



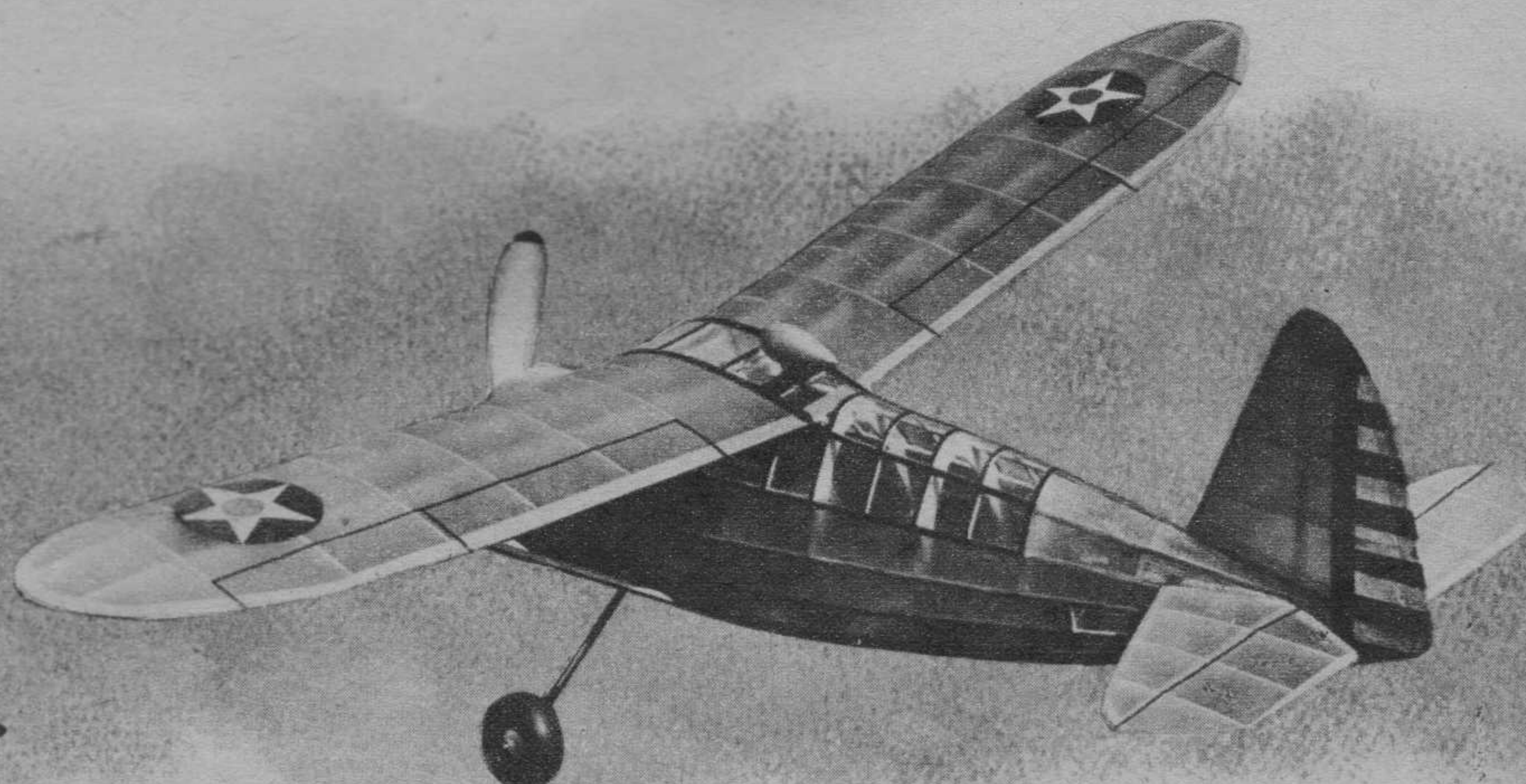
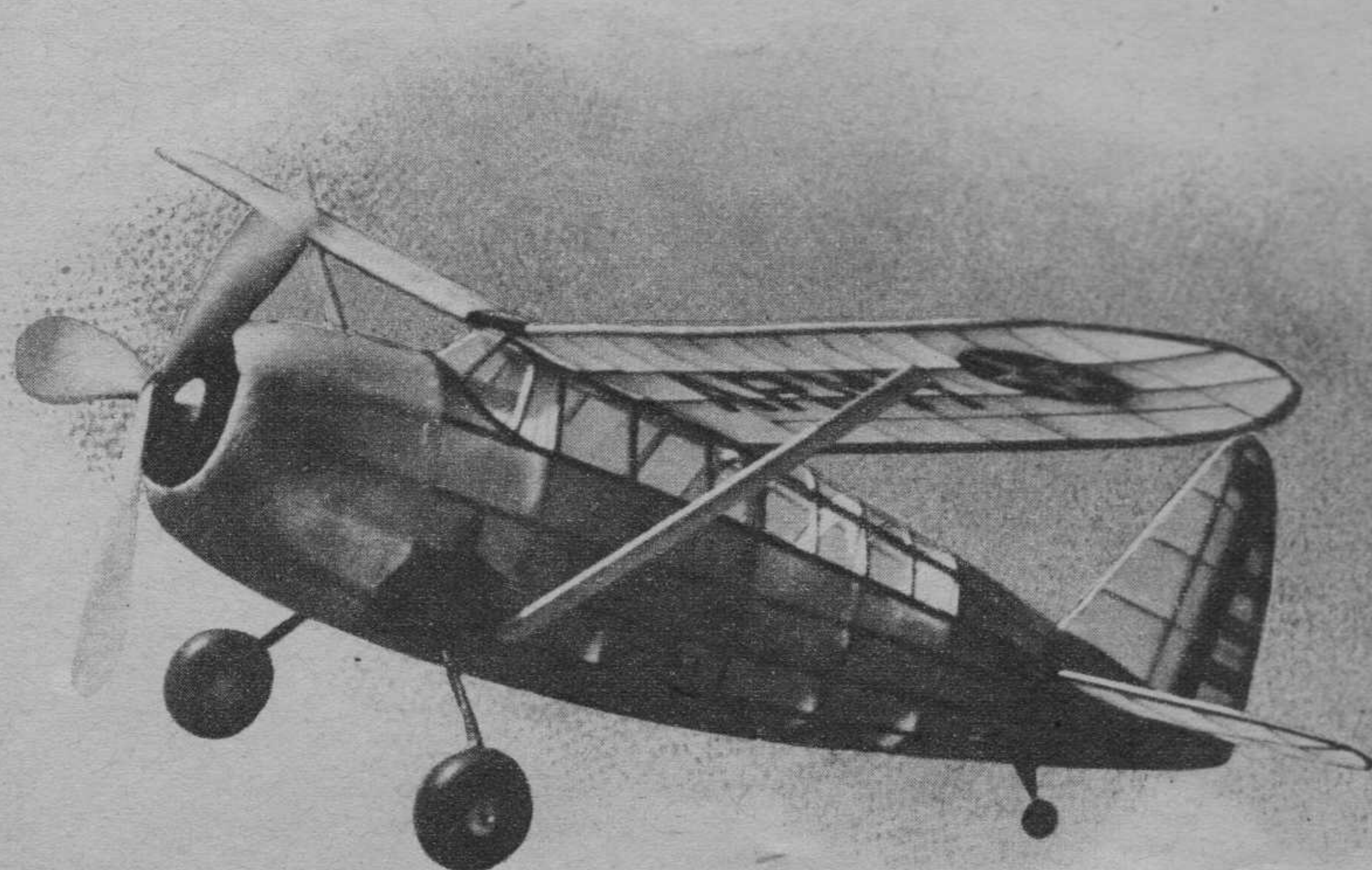
Tops in adaptability for a flying model is this neat army observation plane. Good proportions make it sensational flier. Good design simplifies construction.



Framework is just about as simple and rugged as a veteran designer could make it.

SCALE THE CURTISS 0-52

Realism and high performance are combined to an amazing degree in this stable air corps flying model.



ONE of the latest and most talked-about U. S. army war birds is the new Curtiss Observation—the O-52. Designed especially for “peeking” duty, the O-52 is one of the most efficient in its class. And although few realize it, aircraft of the observation type are just as important, if not more so, than those 400-m.p.h. fighters!

This O-52 will make as beautiful and consistent a flying model as the real ship is efficient—and that’s something! Having a wing area of 129 square inches and a total flying weight of 4 ounces, our O-52 is just up to weight rule—a characteristic of extreme importance in flying-scale competitions.

The construction is rather simple and no difficulty should be encountered if the directions are carefully and accurately carried out. As with most flying scale models, the fuselage is by far the most difficult unit to construct—so, before that enthusiasm is lost and you start to cool, let’s get on with the construction.

CONSTRUCTION

With the assumption that you have already enlarged the plans to read full size or else eliminated “model builder’s torture” by sending your thin dime to Air Trails for the full-size drawings, start the construction by cutting out the bulkhead halves from $\frac{1}{16}$ ” stiff medium sheet balsa. After the bulkhead halves are carefully sandpapered and labeled, cut from $\frac{3}{32}$ ” medium sheet balsa the fuselage “keel” and pin directly over the drawings. Then cement each bulkhead half in place, care being taken to make certain that all are perpendicular to the plan surface. After the cement has sufficiently dried to permit handling without the fear of bending the bulkheads from their perpendicular position, the $\frac{3}{32}$ ” square “line-up” stringer should be cemented in place. You will note that when cementing stringers in place, all are cut down from Bulkhead B to C to make way for the $\frac{1}{16}$ ” sheet nose balsa covering which is later cemented into place. After a check-up to make certain the line-up stringer did not pull the bulkheads out of position, the fuselage half may be removed from the plan and the other bulkhead halves cemented into position. The right-side line-up stringer should then be added and the entire structure allowed to dry.

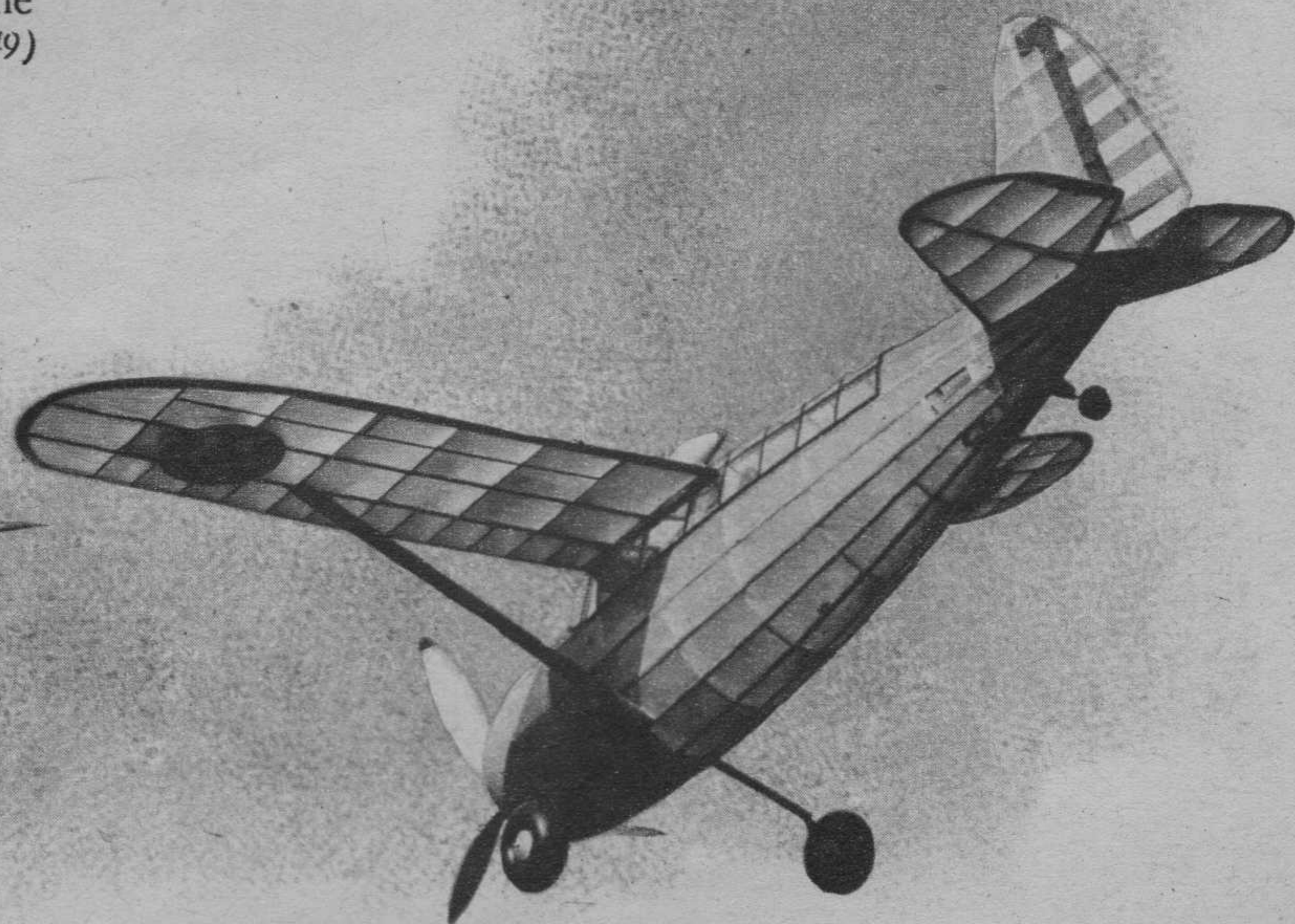
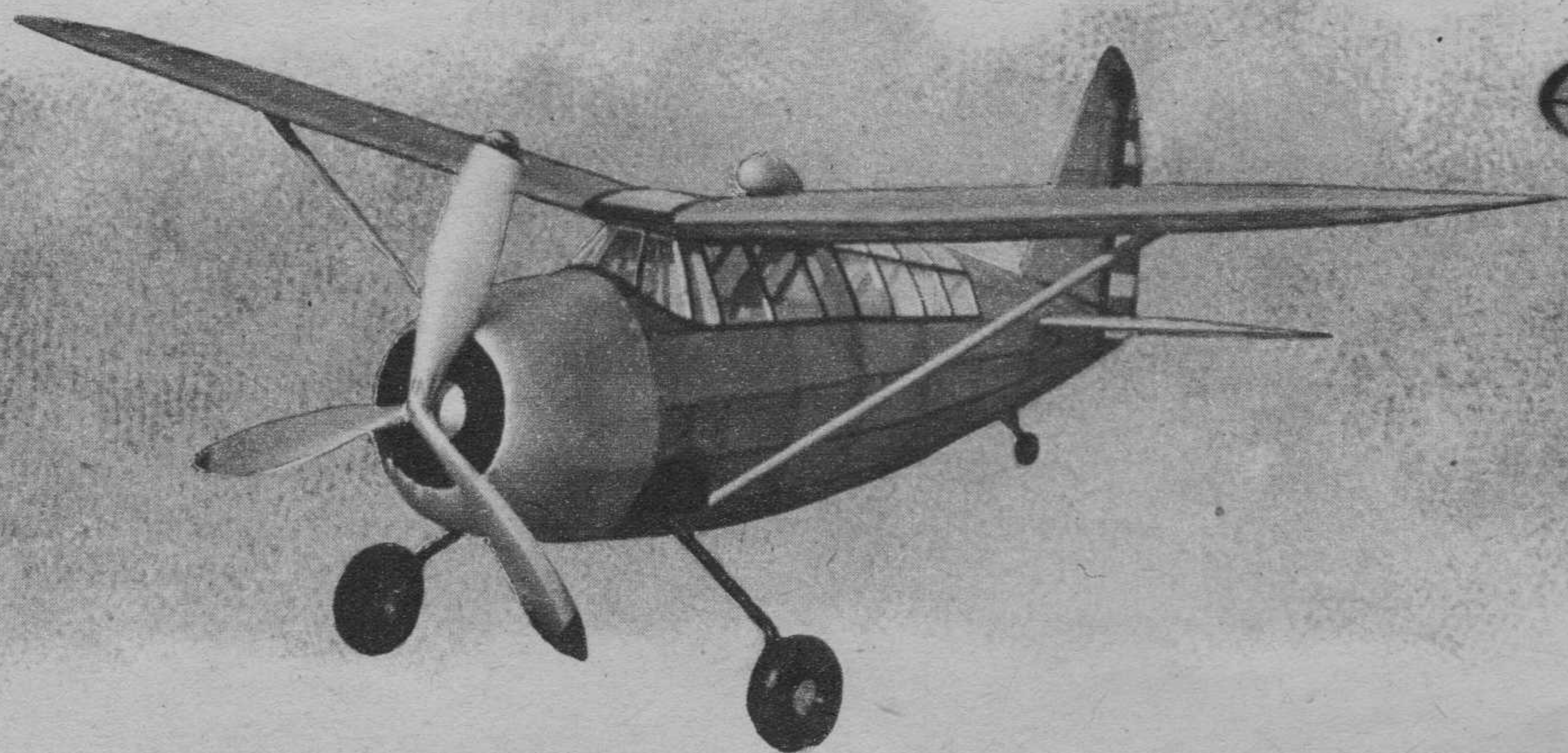
After the cement is dry, cement the $\frac{3}{32}$ ” square stringers in position, adding one to one side and then one to the other to insure a true fuselage.

Next we plank the nose with flexible $\frac{1}{16}$ ” sheet balsa. You will note that because the stringers were shaved between Bulkheads B and C, the sheet covering is flush with the stringers—all of which makes way for a smooth covering job. After the planking is completed the solid nose section should be made. First cut two “rings” from soft $\frac{1}{2}$ ” sheet balsa. Cut out the center of each ring so a $\frac{1}{4}$ ” wall remains, and then cement both rings in place.

Next add the front $\frac{3}{8}$ ” thick solid section of sheet balsa, and proceed to carve the nose until it fits in with the fuselage contour. Cut $\frac{1}{8}$ ” into the front layer to give the effect of a cowl, and drill a $\frac{3}{8}$ ” diameter hole for the hardwood nose block. Apply a few coats of clear dope to the balsa surface to fill the pores, and then proceed with the cementing of the landing gear in place.

The landing gear is bent from .035 steel wire to the shape indicated, and cemented in place to the face of Bulkhead C¹-C¹. Cut the $\frac{3}{16}$ ” diameter fairing struts from flexible balsa and (Turn to page 49)

BY RONNIE ALBERT



PLAN ON NEXT PAGE





Louis at the Nationals with one of his all-balsa-fuselage gas models. The sheet wood is bent to shape by the simple trick of doping it on one side.

MODEL CAREER MEN

LOUIS GARAMI BUILT HIS FIRST MODEL WELL OVER THIRTY YEARS AGO IN BUDAPEST.

WHEN in 1908 Louis Garami flew his first model airplane in Budapest, Hungary, his school chums thought him crazy. In those days even the real planes rarely flew. In Budapest you could always go out to the airport where fragile wood-and-linen flying machines skipped around, cutting grass.

It was on one of these airport pilgrimages that Louis was bitten with the proverbial model bug. Actually, though, it was Big Brother Joe who was the model builder and who dragged Louis along to see the airplanes. Joe built just one model. When it didn't fly, he gave up. "His career was finished," says Louis, "so I took over." And for thirty-three years Louis has been grinding them out.

Today Louis Garami is noted for his varied small gas-model designs. His yen for simple fittings and fixtures has earned him the reputation of "Gadgeteer." Louis has a trick for everything, as the analytical builder will discover on looking over any Garami design—the Strato-Streak, for instance.

Garami specialized in custom-built models, perhaps half a dozen gas jobs a year. There was the time he and Henry Struck banded together for a mass-production blitz of all-balsa fuselage models. These were sold to Macy's in New York City and other department stores. Finally the boys became so adept that Struck alone manufactured seventy-five fuselages in one day. But when Ideal brought out their molded fuselage construction, the jig was up for Struck and Garami.

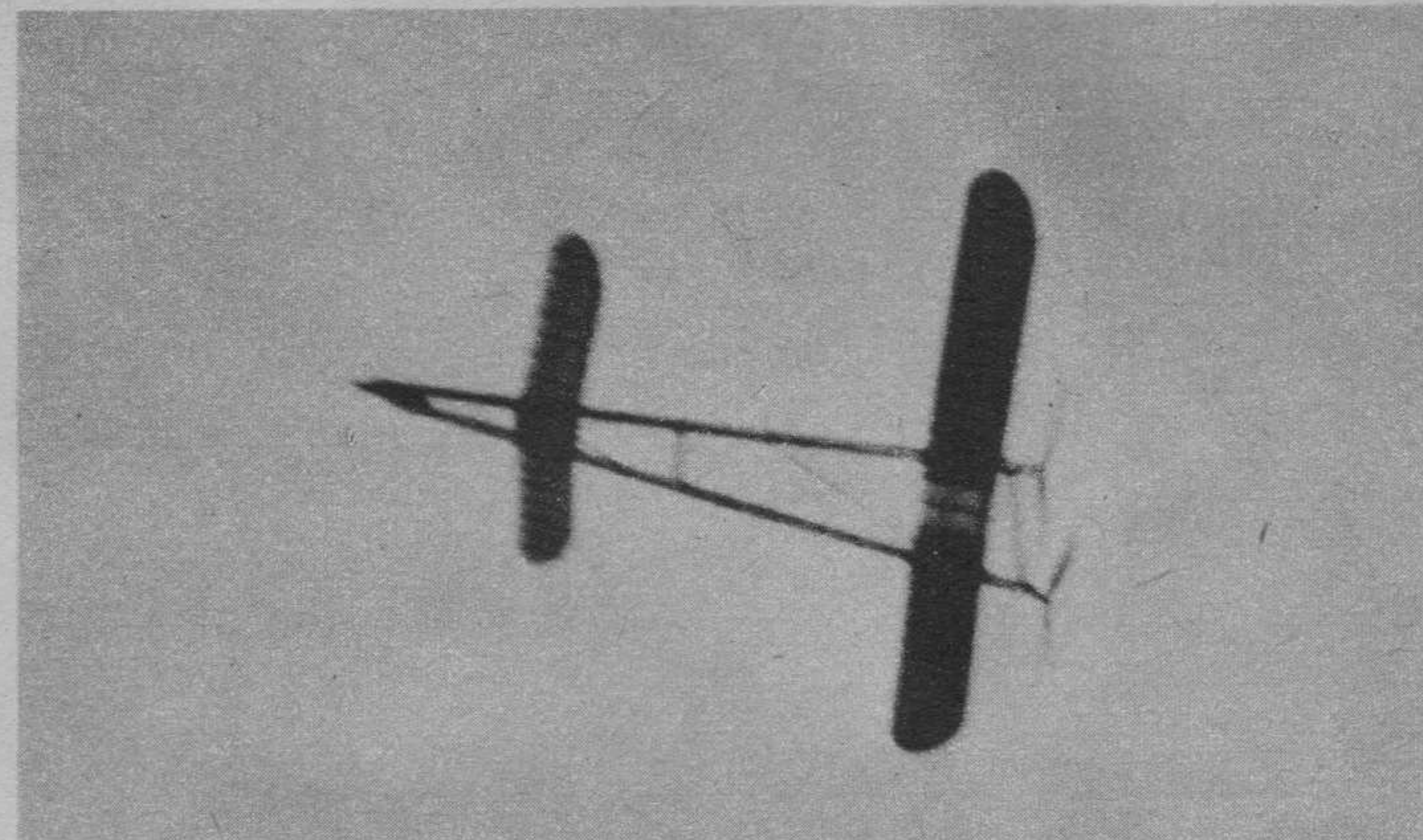
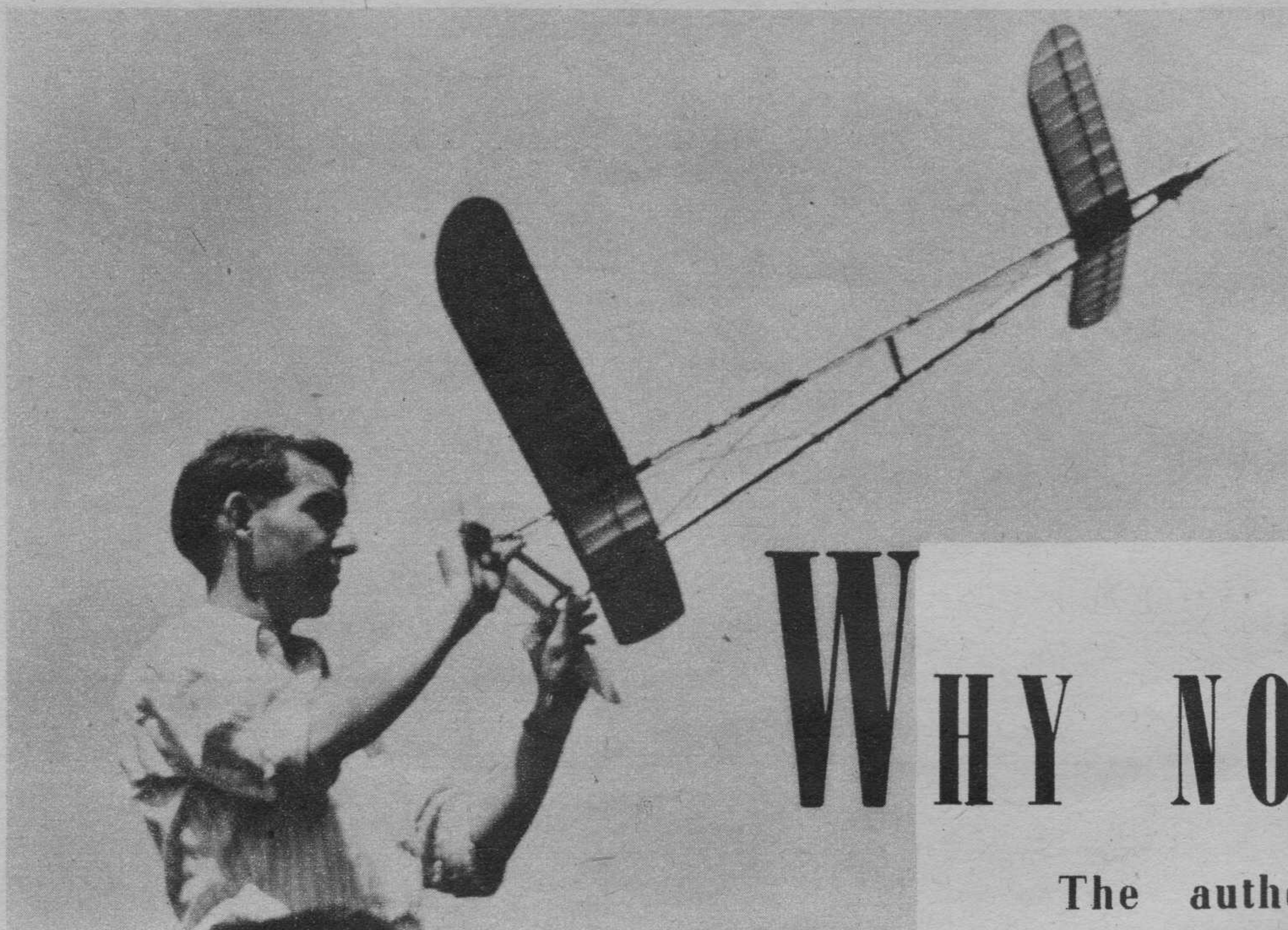
Louis has made over a thousand models—not counting commercial production. Old-timers will bend your ear at the drop of a hat about their early endeavors with kite sticks, glue, paper napkins, shellac and sliced old inner tubes for motive power. Garami really can crow. Long before most of us were even

born, he was nailing and gluing fuselage side frames together on the family window sill in Budapest. His props were made out of T-square heads (he doesn't say where he got them from); the models were copies of Bleriot's and other dashing "flying machines" of the era. And they all flew.

We should thank Big Brother Joe for having Louis with us today. Prior to the last war, Joe came to America and soon had a flourishing radio-repair business. In 1923 Louis decided to join Joe in this country—he had probably heard of our gigantic thermals—and worked for him about eight years. But once a model builder, always a model builder; Louis was up to his old tricks by 1931. "I had to start all over again," he claims. Actually, he had at least twenty years' head start.

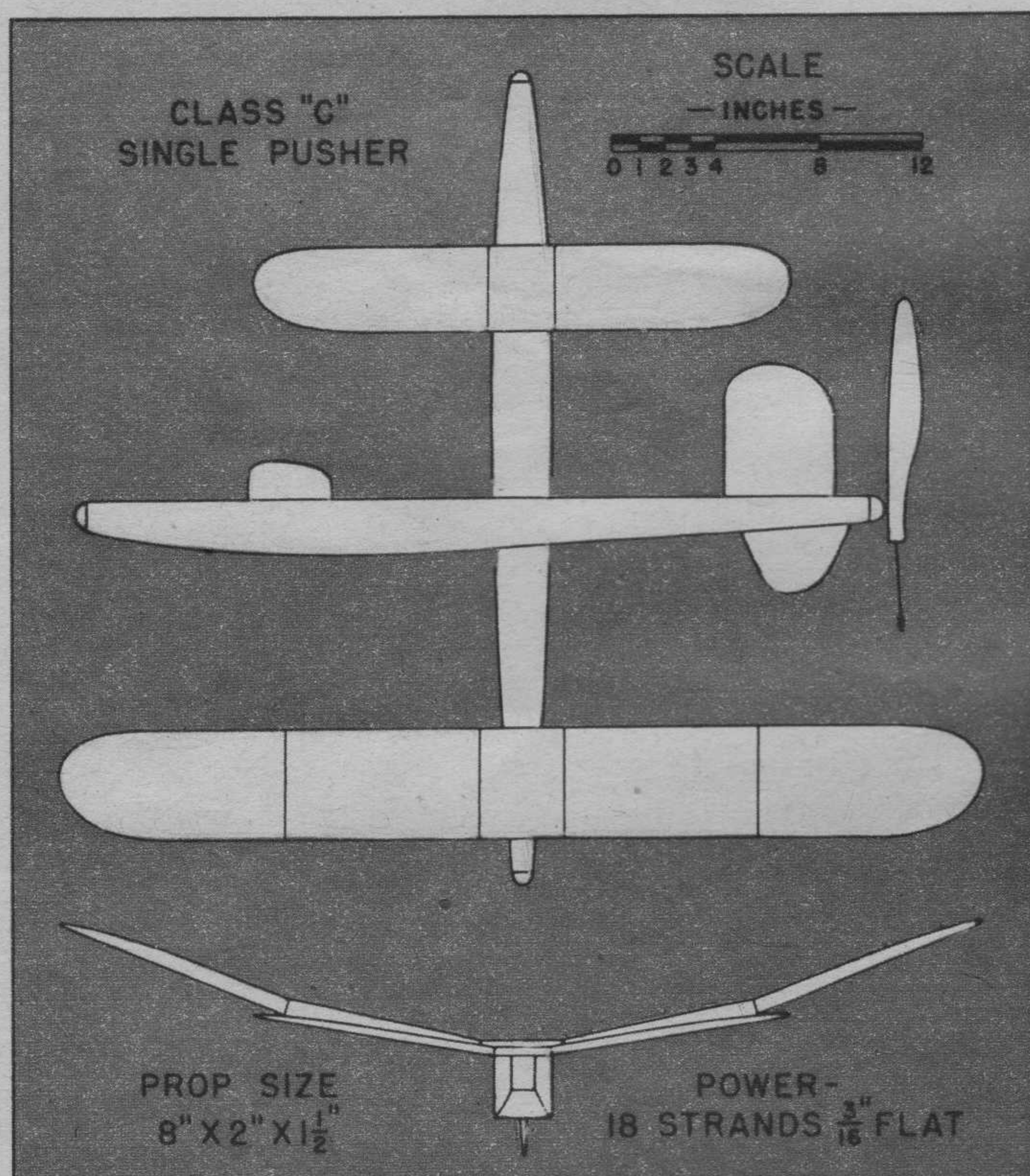
What Louis thinks about contests would fill a book. Winning contests is ninety percent luck, according to him. (No one but a contest winner would seriously disagree.) Some contests are just about as square as a wrestling match, in his opinion. He points out that a couple of high-pressure henchmen who know the tricks can talk a watery-eyed timer into seeing an out-of-sight flight for gosh knows how many more minutes. The classic example in Garami's book is the time a scaled-up Strato-Streak made high time for the day but was nosed out by an enterprising gent who entered two models, theoretically for two people, but flew both himself. He was able to glean three flights out of the total six to win out by a minute. What the officials were doing in the meanwhile, Louis doesn't know. By the time the protest was aired, the said villain had gone home with the bacon. So Louis flies for the fun of it. Two ounces of dope for a prize isn't sufficient inducement for losing a model. Louis says he loses 'em anyway.

(Turn to page 57)



WHY NOT PUSHERS?

How a twin-pusher is launched. Forte is great longitudinal stability.



The author and his latest successful pusher. It won four out of eight contests, placing high in two others. Longest flight was 11:40.2.



The author's consistent contest victories prove that pushers have plenty on the ball.

BY GEORGE DE LA MATER

"I, he launched it backward!"
 "Boy, what a head wind! Oh—it's a pusher."
 "One of *those* things. Didn't you know that pushers are obsolete?"

And so it goes. Anyone who builds pushers nowadays is regarded as a die-hard, a throwback or just a plain nut. Is all this ridicule deserved, or should we give the pusher another chance?

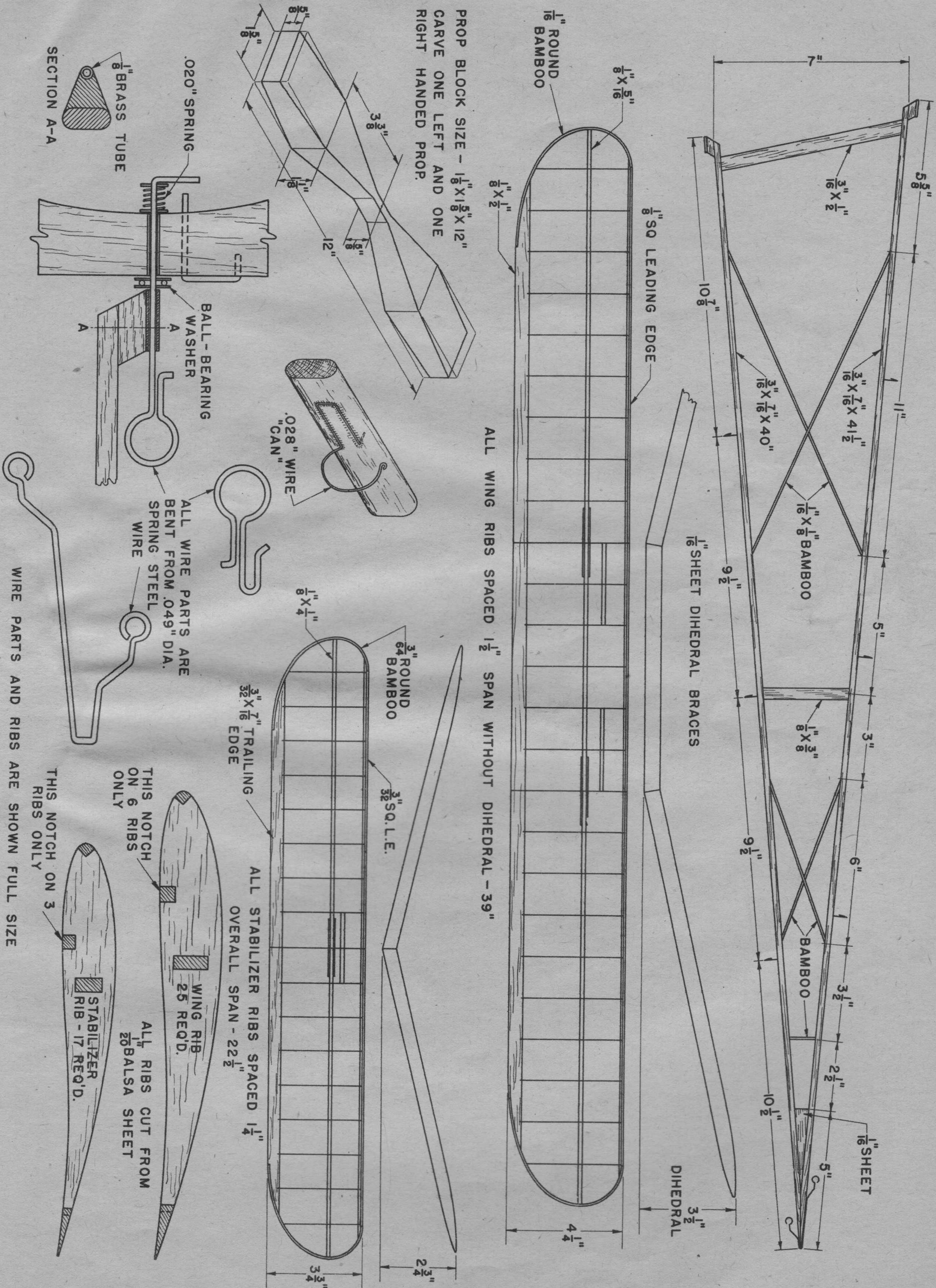
Prior to 1933 the only type of outdoor stick model seriously considered as being capable of winning contests was the twin-pusher. Tractors were unstable and too hard to adjust. Then in 1933 through the use of larger stabilizers and the discovery of the principle of the offset thrust line, a tractor won first place in the Nationals. Immediately modelers began to build tractors, arguing that here was a ship that was easier to build, was lighter, glided better, and finally, looked more like a real airplane. By 1936 the pusher had practically vanished.

The author, realizing that the pusher has good qualities not found in tractors, has been experimenting with such models for the last few years. Presented here are the results of his experiments, in the hope that other builders will find them helpful and will renew the competition between the pusher and the tractor.

Longitudinal Stability. Perhaps the most outstanding characteristic of the pusher is its great longitudinal stability. In a tractor we obtain longitudinal stability by using a large lifting stabilizer, the idea being that as the angle of attack of the model begins to increase, the tail lifts the rear end of the ship, keeping the nose down and preventing a stall. In the pusher we have the same set-up except that what was formerly the tail is now the main supporting surface, and can exert a much greater stabilizing force.

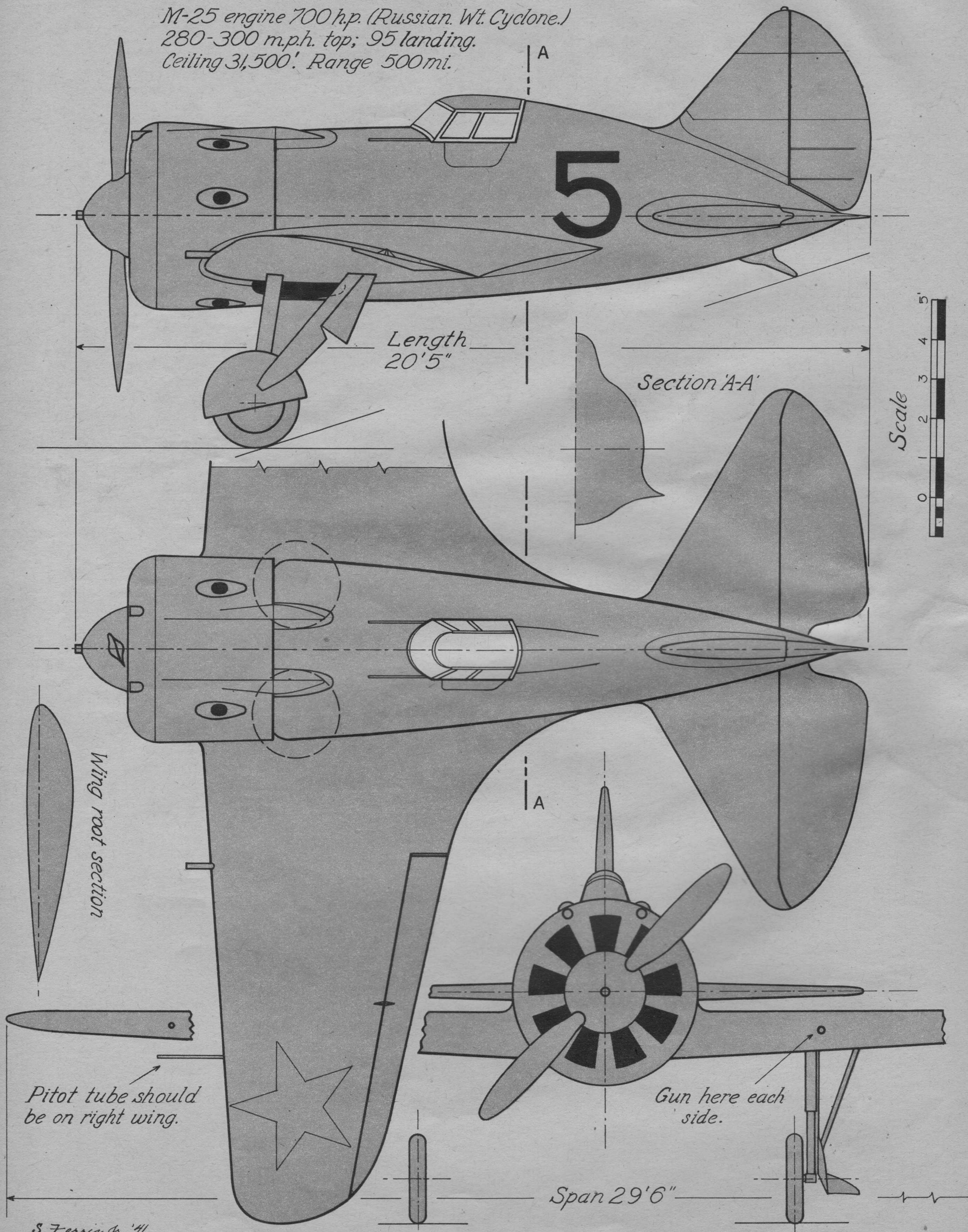
It may be noted that having the larger surface at the rear produces another very interesting effect whenever the model is stalled by a gust of wind. A properly adjusted model, either pusher or tractor, always has its front surface stall first, thereby causing the nose to drop and the model to dive in order to regain flying speed. The forward surface of a tractor represents about 75 percent of the total lifting surface, and when this ceases to function the model drops rapidly until speed is regained. The forward surface of a pusher, on the other hand, is only 33 percent of the total lifting surface, and the loss of this part of the lift for a second or so will not greatly increase the sinking speed of the model. This explains why a poorly adjusted pusher is often seen to soar out of sight.

(Turn to page 55)



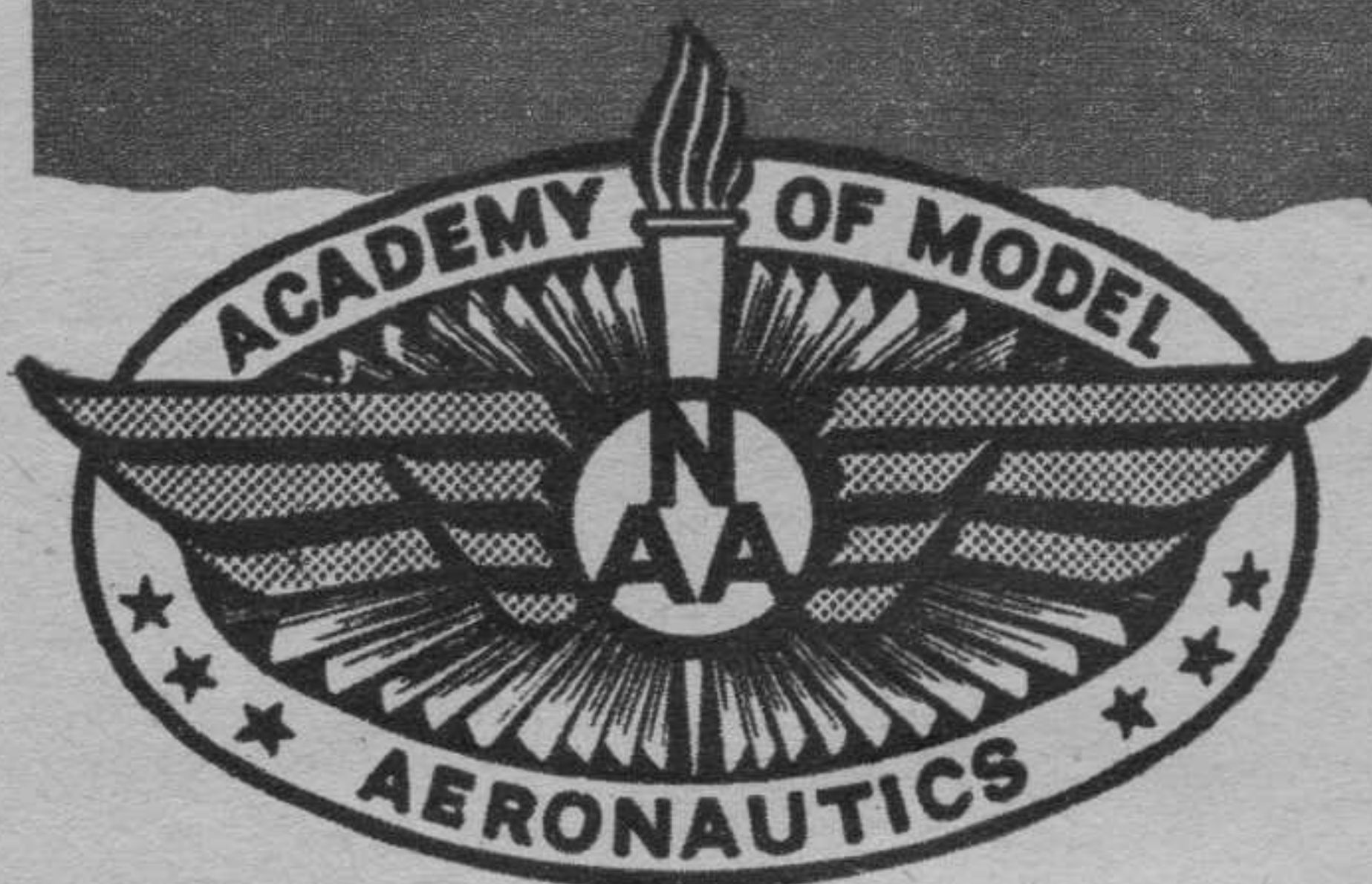
MOSCA-Russian 1-16 fighter BY STOCKTON FERRIS

*M-25 engine 700 h.p. (Russian. Wt. Cyclone.)
280-300 m.p.h. top; 95 landing.
Ceiling 31,500'. Range 500 mi.*



S. Ferris Jr. '41

DOWN THE RUNWAY



Official news compiled by the Academy of Model Aeronautics, governing body of model aviation in America.

CONDUCTED BY AL LEWIS • EXECUTIVE DIRECTOR

WE love to get fan mail—it's all doggone interesting. You'll see as we go through our mail bag this month. But we certainly have a time with those fellows who insist on addressing their envelopes simply "A. M. A., Washington, D. C." After such letters go the rounds of the American Municipal Association, the American Medical Association, et al, we manage to receive them. As a matter of fact, any letter that reads, "Here's a buck, send me a gas-model license," is forwarded now to A. M. A. headquarters by all government agencies. At long last—recognition for the modeler and his Academy.

The mail we receive these days carries plenty of comment on the rules. Everybody wants to lose fewer models. Yet the main idea of a model plane is to build in plenty of *flyability*. How to get the two together is the Academy's—and the modeler's—problem. Some suggestions run to ten ounces per square foot of wing area, 100 ounces per cubic inch of piston displacement (both minimums), and a fifteen-second engine run. Quite

a few groups favor that sort of regulation. Others are for simplifying contest procedures and the processing of models by abolishing the cross-sectional fuselage requirement for gas models (remember that "L" squared over 100?), and in all events giving everybody five attempts—with each duration recorded as official and no delayed flights. Sounds good to us. What's your idea, and, more importantly, what are the suggestions of your club on 1942 regulations?

From England comes regular news of the Society of Model Aeronautical Engineers. The "S. M. A. E. Journal" is nobly carrying on under some difficulties, and from it we learned that last year's S. M. A. E. budget was about \$2,500, as compared with the A. M. A.'s \$11,000. This was because war conditions have resulted in the curtailment of many S. M. A. E. activities which, in ordinary times, would raise the financial figures of the society. Headquarters hears also from Eire (or Ireland, if you will). From the honorable secretary of the Model Aeronautics Council of Eire, Chris F. Bruton of (*Turn to page 54*)



CANINE CHASER

MEET RICKY, DOG FOR PUNISHMENT.



"Come on, pal, flip it over." Ricky, the only gas-job retriever in captivity, chases his master's (Phil Abrams) models.



"That's the stuff." The chase is on. Trouble with Ricky is that he chases all models.



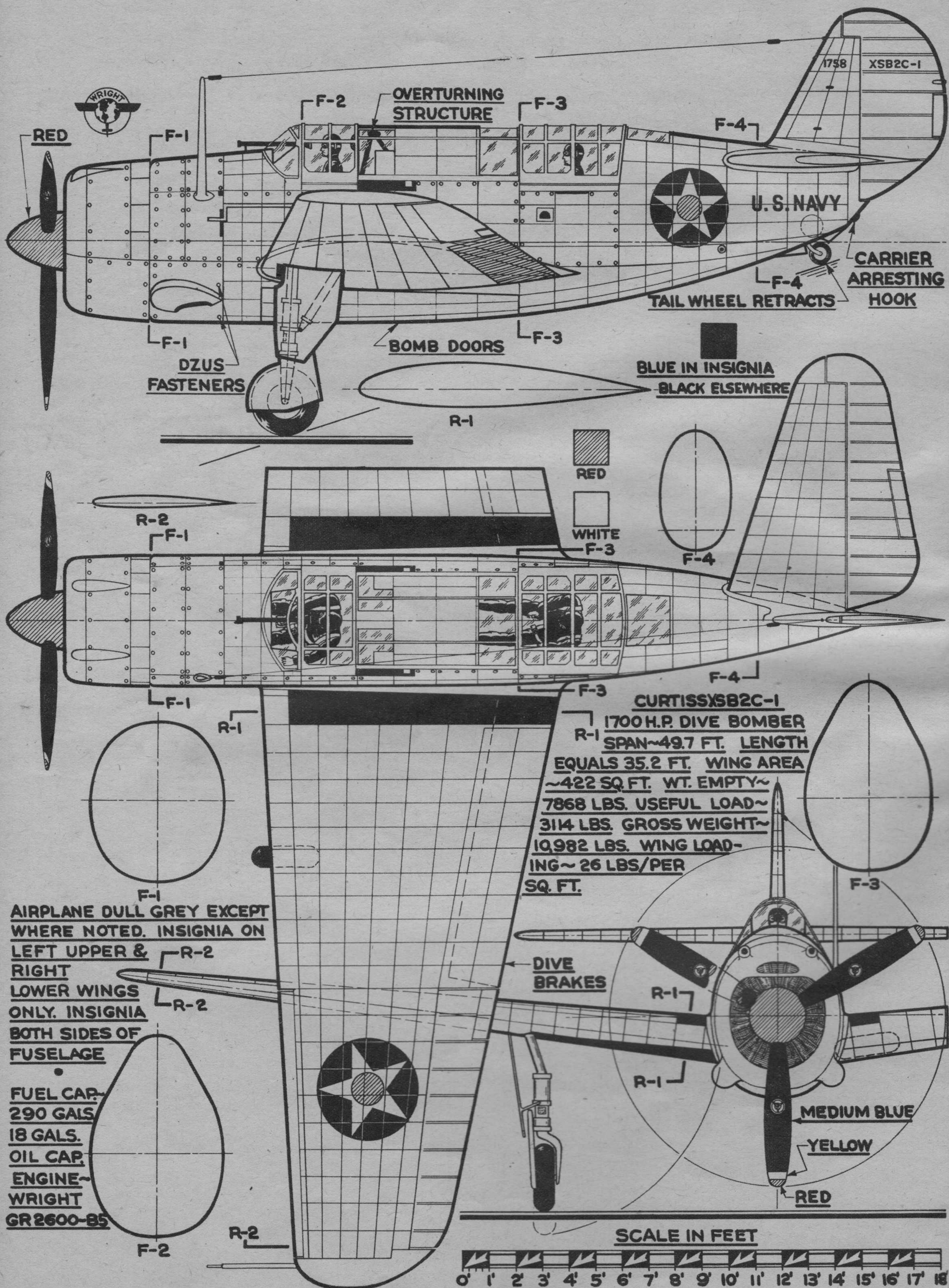
"How's zat?" Ricky suggests solution to problem of gents in the "green coupe" who pick up models and race away.



"Ho-hum. Oops, there's another guy over there ready to fly. Wait a second, buddy!"

DIVE BOMBER-Curtiss SB2C-1

BY ROBERT LLOYD BROWN



(Continued from page 41)

cement in place. To obtain a neat job, it is best to groove the fairing to fit the wire and then cover the entire strut with tissue paper. Next cement the rear hook and tail wheel in place; add the cockpit braces along with the wing rest bulkhead, and then sandpaper the entire structure with No. 0 sandpaper to make certain no nicks and bumps result.

In making the stabilizer, first cut from $\frac{1}{16}$ " medium sheet balsa the ribs, and cement in place along the $\frac{1}{8}$ " square spar. Add the leading and trailing edges, and then sandpaper the structure with No. $\frac{1}{2}$ sandpaper. Because each stabilizer half is symmetrical it is not necessary to make one right and one left, and consequently the stabilizer is made in two identical halves and then joined individually to the fuselage.

The construction of the rudder is our next task and, since this is very similar to the stabilizer construction, little need be said. A word of warning, however. When making the rudder, be certain that the ribs bevel to fit the trailing edge, else small wrinkles will result at the point where the rib and trailing edge meet.

Now that we have the framework of our tail surfaces completed, our next job is making the wing. Because of the fact that the wing is of the nontapered type, wing construction is very simple. Cut the ribs from stiff $\frac{1}{16}$ " sheet balsa and ce-

ment in place along the spars. Both front and rear spar are cut from a sheet of $\frac{3}{32}$ " stiff sheet; the front or main spar measures $\frac{7}{16} \times \frac{3}{32}$ ", while the rear spar is $\frac{3}{8}$ " deep. Add the $\frac{1}{8} \times \frac{3}{8}$ " trailing edge and then cement the $\frac{1}{4} \times \frac{1}{8}$ " leading edge in place. Trim off both leading and trailing edges to work in with the contour of the airfoil and then sandpaper the joints carefully.

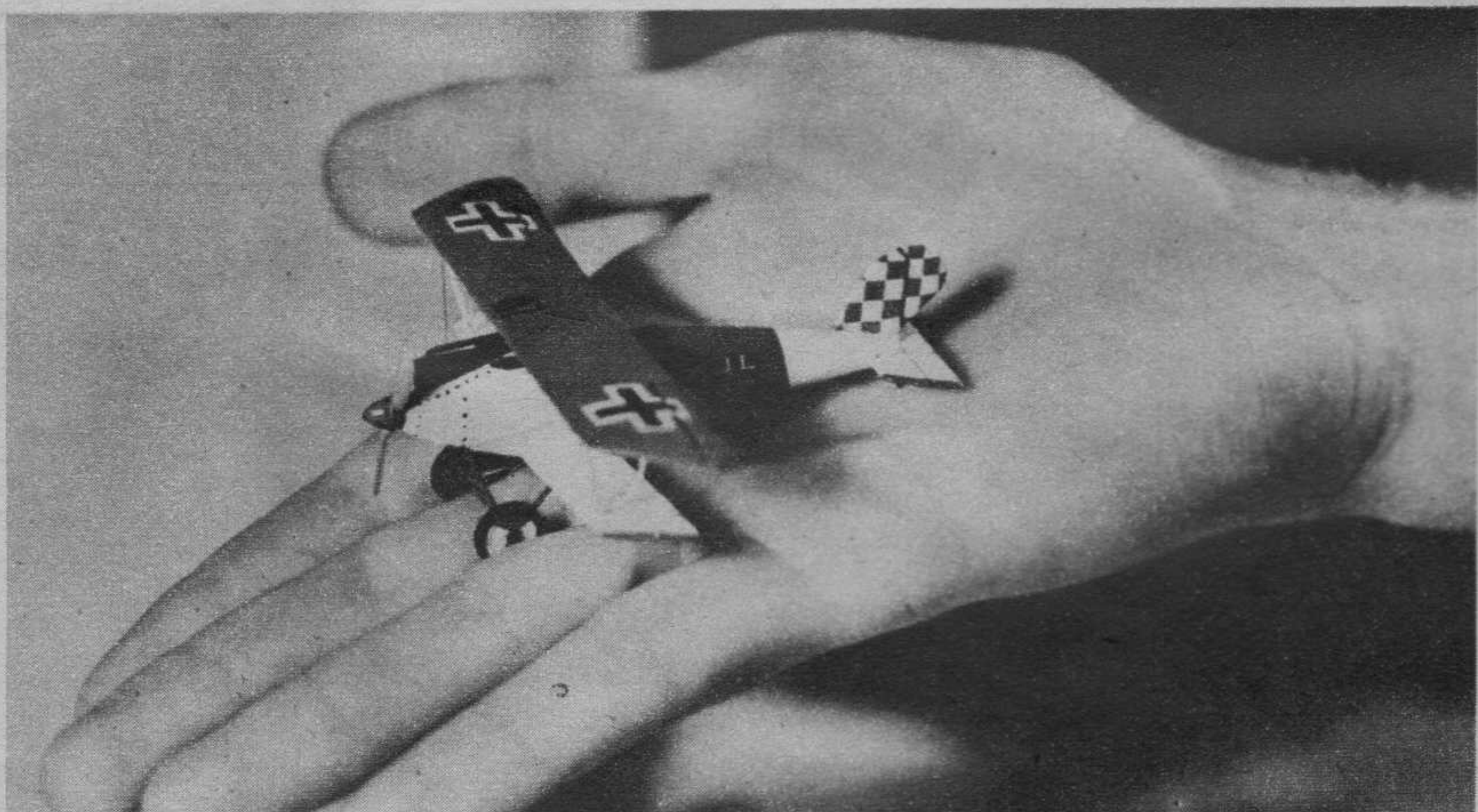
You will note that the wing is made in two sections—one left and one right. $1\frac{5}{8}$ " dihedral in each tip is cemented in place when the wing panels are joined together. Reinforce the joint by cementing $\frac{1}{16}$ " sheet to the rear of each spar at the point where they join at the center.

Although many of the current flying-scale models use the conventional two-bladed propeller, we are inclined to believe that the three-blader is a bit more effective, and consequently equipped our O-52 with such an airscrew. (Anyway, the real ship has a three-blader.)

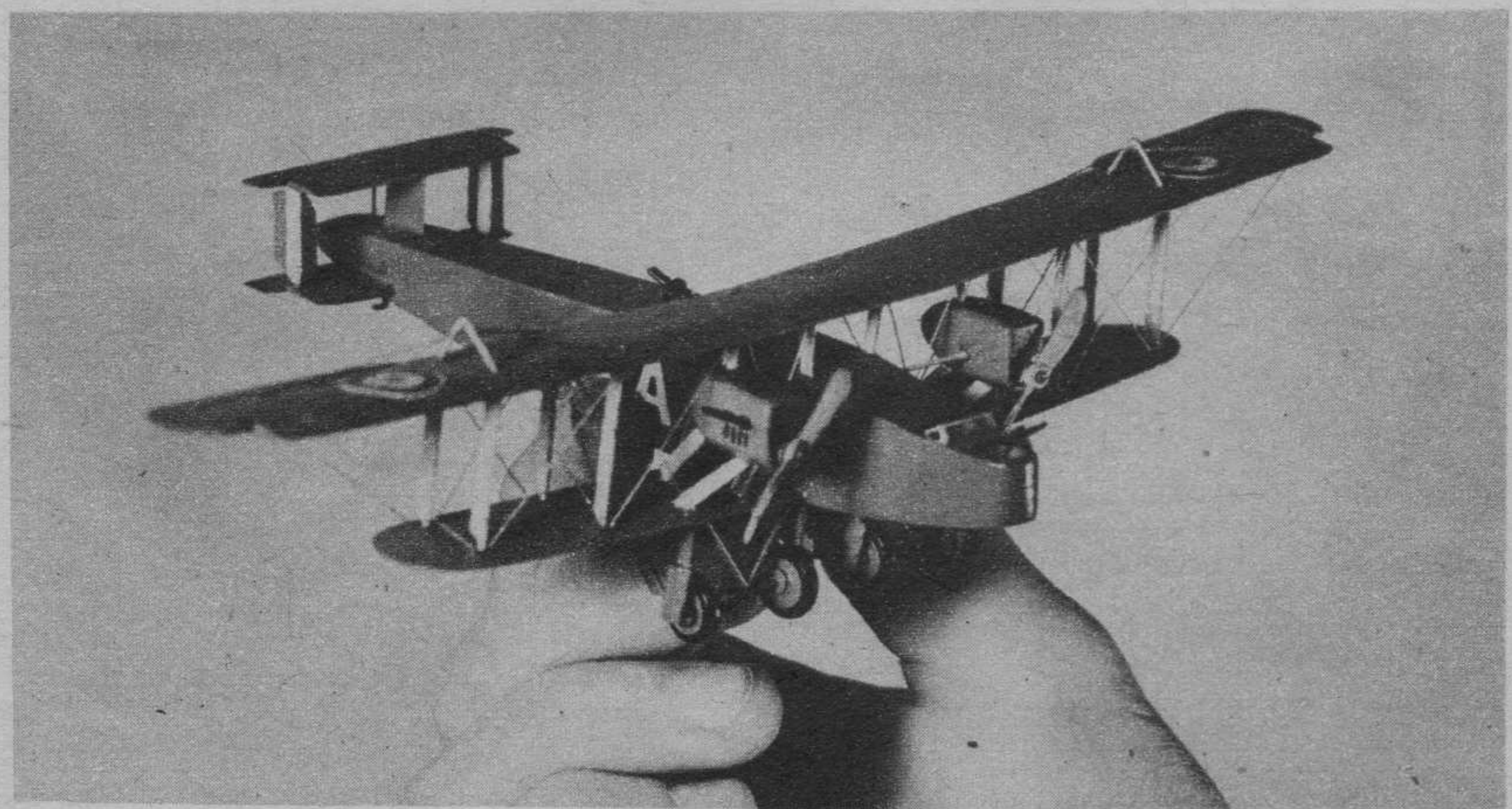
A three-bladed propeller may seem rather difficult to build up, but actually it isn't. In fact, it will be much simpler to make than a two-bladed prop of equal diameter. You will note that the drawings contain two prop block outlines. For those of you who worry about appearance a bit more than flying ability, we suggest you use the outline as indicated by the dotted line. As for you other

(Turn to page 51)

Small Fry

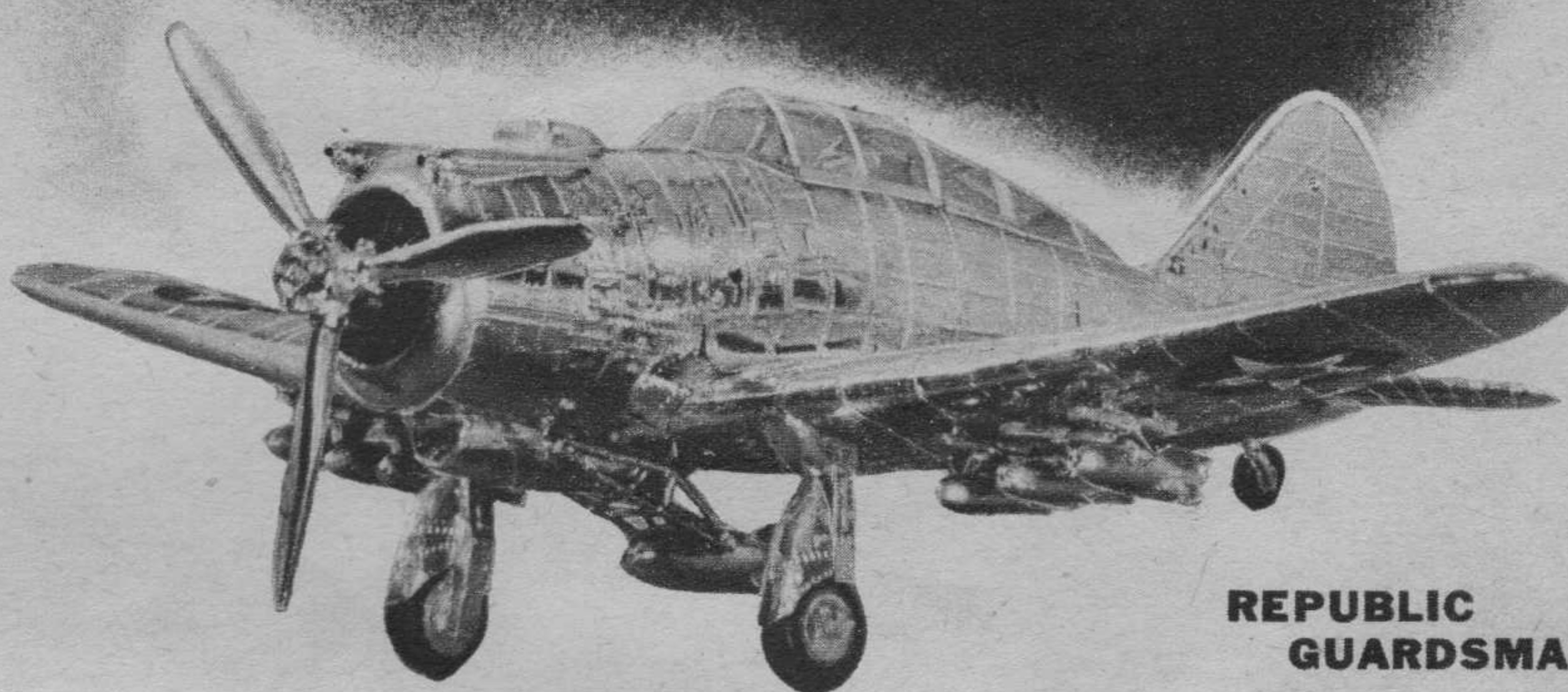


World War No. 1 is past history for most people, but to Allan F. Kritchell, Jr., of New York, the story of its fighting planes lives on in miniatures like this Pfalz.



And typical of dozens of beautifully wrought gnat-size warplanes of another day is this Handley-Page bomber. Coloring is authentic, insignia properly located.

**Startlingly Real
METAL COVERED
Models ...**
**... NOW WITH
MOULDED FUSELAGES**
MORE FUN ... EASIER TO BUILD ... MORE ACCURATE



REPUBLIC
GUARDSMAN

**here, YOU SCALE BUILDERS
LOOK AT THIS ...**

Again C-Z scoops the field ... 1st—metal covered models ... 2nd—MOULDED FUSELAGES. It's startling ... it's new ... and it's way ahead of anything in accuracy, fidelity and appearance. ... C-Z metal covered scale models with moulded fuselages!

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Don't struggle for realism with kits that haven't got what it takes—Get C-Z and get a new thrill out of scale modelling ... not even a photograph can do these beautiful models justice. You must see them to appreciate them. Look over the list below and if your dealer cannot supply you, write us direct.

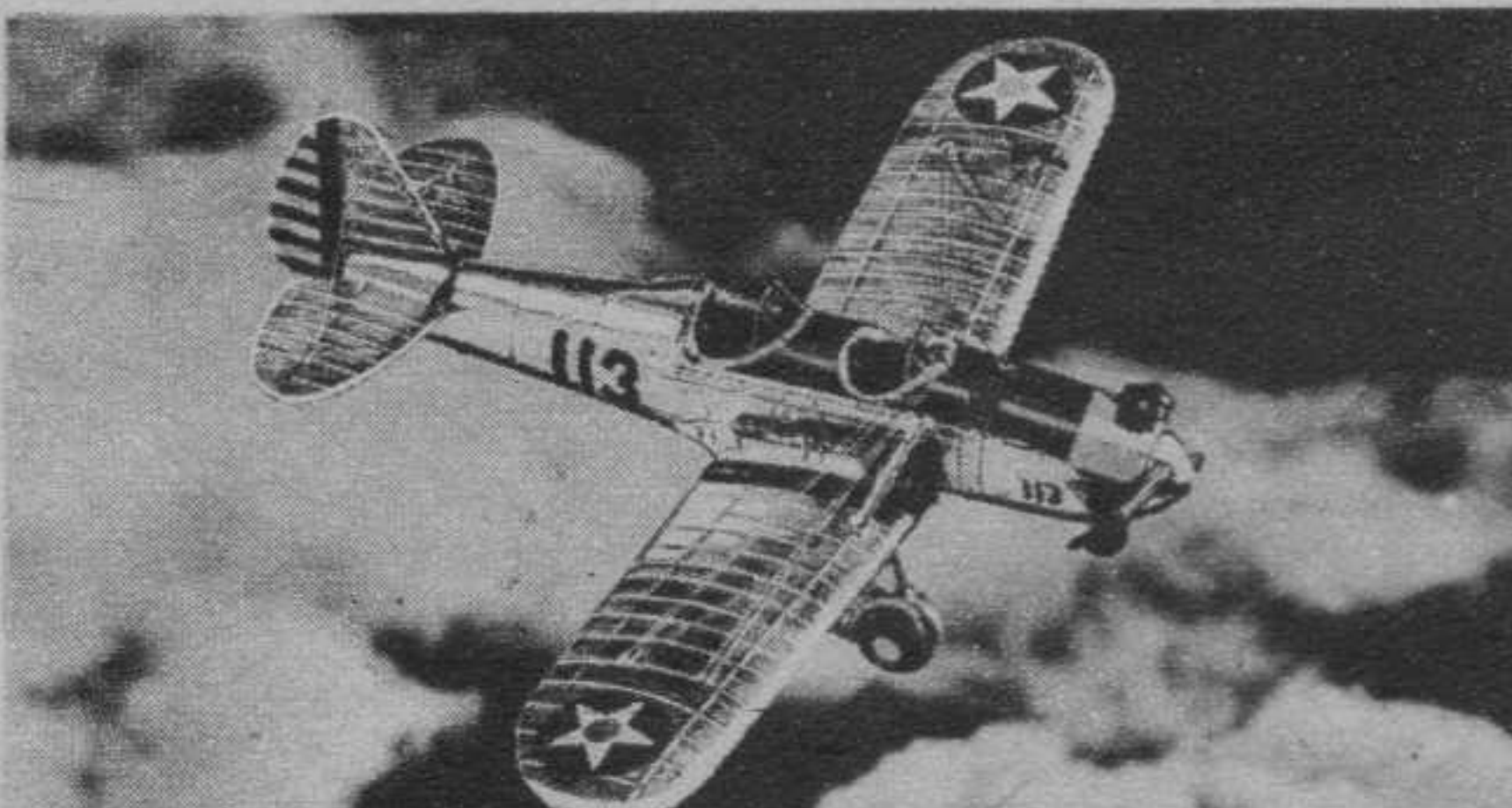
13 REALISTIC NEW MODELS!



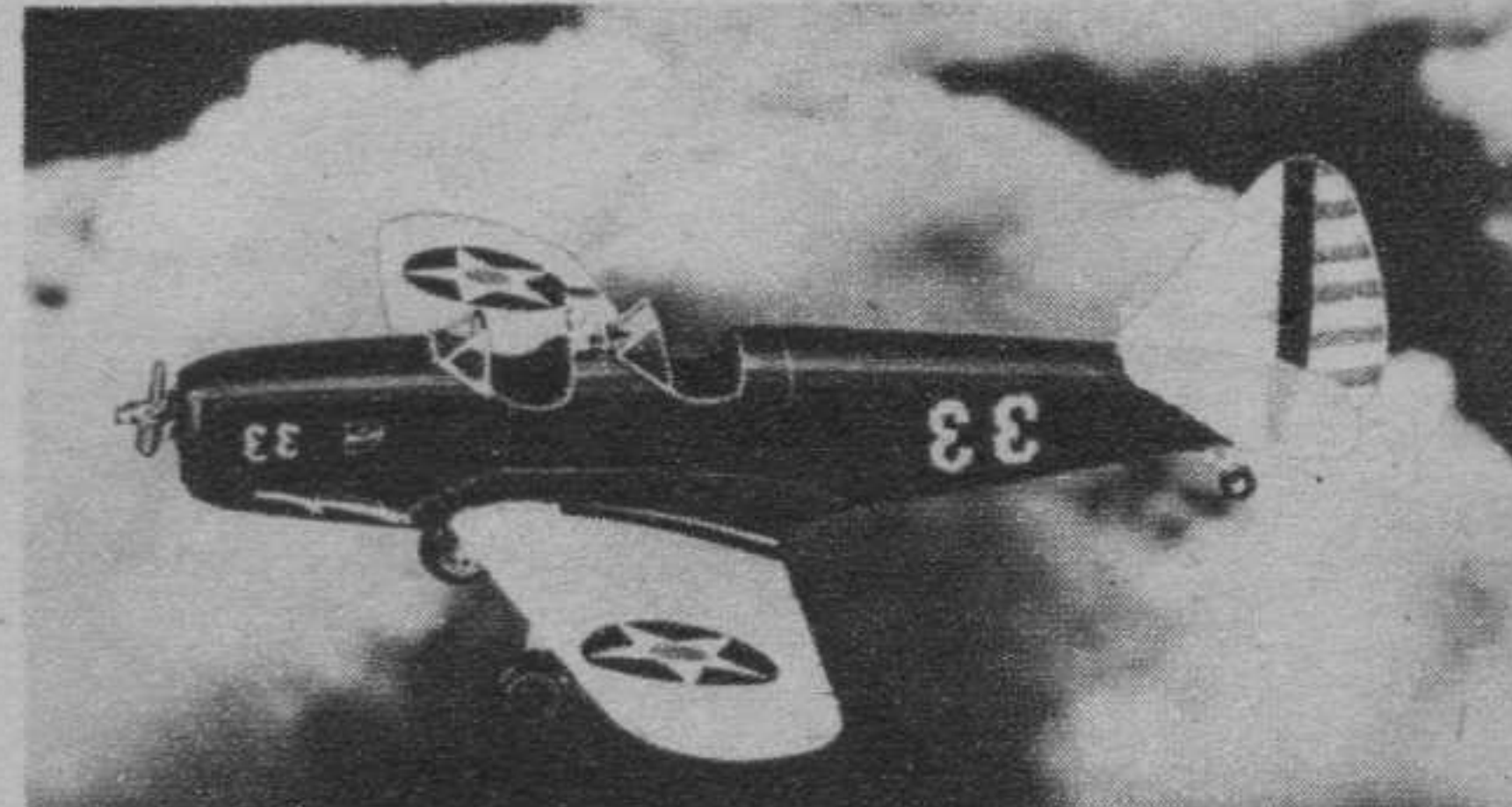
LUSCOMBE SILVAIRE



SPARTAN EXECUTIVE



RYAN ST 3



FAIRCHILD M 62

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|--|-----------------------------------|--------|
| 21" Boeing Stratoliner.....\$4.00 P.P. | 9 1/2" Grumman F4F-3 | \$.75 |
| 13 1/4" Republic Guardsman..... 2.50 | 10" Bell P39 Pursuit..... | .75 |
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| 13 1/4" Curtiss Hawk 75A..... 2.00 | 7 1/2" Luscombe Silvaire | .50 |
| 12" Lockheed P-38..... 2.00 | 9" Fairchild M 62 | .50 |
| 12 1/8" Spartan Executive..... 1.50 | 7 1/2" Ryan S. T. No. 3..... | .50 |
| 12" Consolidated PB2A..... 1.00 | Special Metal Covering cement.... | .10 |

Ordering Instructions: Include 15 cents postage with \$1.00 and up kits, and 10 cents with other kits. No C.O.D.'s, no stamps. Cash at your own risk. Prices subject to change without notice.

C-Z MODEL AIRPLANE Co.,

Dept. A.T. 3641-43 W. 55th St., Chicago, Ill.

SEND 3c FOR DESCRIPTIVE ILLUSTRATED FOLDER

**Priced from
50c to \$4.00**

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THE DEMAND IS
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OUT ON THIS
POPULAR LINE.
For price WRITE
ON YOUR
LETTERHEAD.
WRITE
TODAY

AGAINST MORE THAN 1000 COMPETITORS
In over 2000 TEST FLIGHTS

The cream of the nation's Modelers—at the recently concluded 1941 CHICAGO NATIONALS.

This craft demonstrated its
FOOLPROOF-BUGPROOF
 Winning Ability

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sensational achievement in PRIZE-WINNING Class 'C' design, which swept to a new record!

Pacer
 The Design Which Won **FIRST**
 AT 1941 NATIONALS

The Original B plane

\$3.95
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The basic superiority of PACER is demonstrated by its consistency—dramatic performance in the heat of competition or leisurely, pleasure flying! CONSISTENT 3 MINUTES FLITES on 7 second motor runs! Sleek, sturdy, compact—PACER 'B' is ideally suited for any B motor or small 'C'. 2000 test flights proved it foolproof, bugproof! 53" wingspan; 37½" length; 432 sq. in. area. Full size plans makes it easy to build.

Complete KIT Contains
FULL SIZE PLANS
STREAMLITE WHEELS

Silkspan for wings, printed sheets, formed landing gear, clear and color dopes.

PLUS plenty of extras!

PACER "C" The CHAMPION itself! Wingspan 60"; wgt. (with engine) 32 ozs.; Length 45"; Area 4 sq. ft. Complete **\$4.95**

OTHER NATIONALLY FAMOUS BAY RIDGE WINNERS!

GORDON MURRAY'S TOPPER

Murray's achievements swept the '39 Nationals ('B'). This accurately revised version for Class 'A' flying in a super-deluxe kit with many extras. For engines from .15 to .199 displacement. Climbs like a rocket; Skyscraper wings for flat, contest-winning glide. **\$3.50** Post Paid

ORIGINAL 50" TOPPER

Achieved world fame for its performance since winning the Nationals! 54" wingspan, will take any Class 'B' motor and give you new flight thrills. Super-deluxe kit—contains everything needed, nothing else to buy! **\$4.95** Post Paid

MIKE THE FIRST SMALL GAS MODEL SHIP IN HISTORY!

AT A NEW LOW PRICE

Originally introduced (at a higher price) for Class 'B'—the first small ship in gas model aviation. Now a sensationally consistent Class 'A' performer. 48" wingspan, plenty of thermability. Easy to construct. A swell model for the gas beginner and contest use. With exception of wheels, the kit is complete, only \$1.49 postpaid. **\$1.49** Post Paid

Illustrated circular of BAY RIDGE CHAMPION plane kits sent for stamp.

DEALERS: Consistent performance, consistent advertising, genuine value makes these 'fast-moving'... write for attractive proposition.

BUILD and FLY A BAY RIDGE Champ
 for thrills—for winners!

if no BAY RIDGE dealer is conveniently located for you, send cash, check or money order direct to factory, for plane kit of your choice. For C.O.D. Service, send \$1, pay balance (plus delivery charges, etc.) when plane reaches you.

BAY RIDGE
 MODEL AIRPLANE & SUPPLY CO.
 4419 3rd Avenue
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"DON'T QUOTE ME!"

Talk of the trade as overheard in factory, field, store.

BY THE TRAVELING SALESMAN

Of utmost importance was the joint Academy of Model Aeronautics and Model Industry Association meeting held in Pittsburgh September 27th and 28th. It is hoped that as a result of this "forum" due recognition will be given model aviation as an educational activity. While European nations subsidize model aircraft building and flying, and Canada forms the Air Cadets to air-condition their youth, our government has not as yet even given proper recognition to our activity. This, it is hoped, will be remedied as a result of the Pittsburgh get-together. Modelers and leaders can do their part by pointing out the importance of model aviation as a basis for a career in aeronautics to their political, government and military friends.

For more than a year, quiet discussions have been going on between Air Youth of America and the Academy of Model Aeronautics with a view toward a closer affiliation between the two. It looks now as though something bordering on a merger may come about in the near future. This will be a boon for all model aviation, and may hasten government recognition and perhaps financial aid for model aeronautic activity.

While Air Youth, the Academy of Model Aeronautics and other model groups are planning long-range promotional activities, the model industry is getting farther and farther behind the eight ball due to serious shortages of raw materials. There is no point in developing a program when there will be no "tools" (model materials). By getting recognition for the activity, priorities and preference ratings may be possible.

Burkard Engineering Co. is in the process of moving to larger quarters in keeping with the rapid expansion of its half-inch scale model line. . . . Though up to the neck in defense work, Herkimer Tool & Die, manufacturers of O. K. engines, are planning a long-range program which should make gasoleers happy when things loosen up a bit. Their increased advertising campaign will do much to make O. K. a byword. . . . Both Comet and Megow are consolidating their lines, eliminating the less popular numbers and concentrating their production on the fast sellers. Many dealers thought some of the lines were becoming a little too unwieldy and cluttered up with old numbers. A little weeding here and there will streamline the lines and make handling models easier for the merchants.

Silkspan will be available only in white both in GM and OO, reason

being that coloring is the bottleneck, which it is hoped will be eliminated around the first of the year. As it is, shipments of Silkspan will go to old customers only, and in quantities that will make hoarding impossible. Production of Silkspan is limited, due largely to the fact that the machinery used in its processing is also engaged in the production of papers essential to national defense.

Bill (Berkeley) Effinger, Jr.'s, observation that the flying of midget gas buggies encourages a thirst for beer has come to the attention of a big advertising agency, which will use Bill and "A" American Ace in a forthcoming billboard campaign. Such is fame (hic)!

Proof of distress in the model industry is one manufacturer's announcement of a line of fifty-cent kits which was promptly recalled after only a smattering of small initial shipments. . . . We hear that these same models will hit the market at ninety-five cents. Is it distress or profiteering? Model builders are smart judges of values, perhaps because their budgets are limited. Let us hope that some manufacturers, in taking advantage of the present situation, don't kill the goose that laid the golden egg. Ten, fifteen and even twenty-five percent increases are not too unreasonable—but 100% is too much!

Priorities are the mother of invention—perhaps they will hasten new developments in the model field. Note Joe Ott's paper bulkheads, et cetera, which have been acclaimed by builders.

We think this is one of the prize stories of the year. When we asked Jack Marlin, of Capitol Aircraft Supply Co., why his company is changing its name, he really let down his hair. It seems the aviation industry somehow has the idea that Capitol is a bona fide manufacturer of large-scale equipment. It's a rare day when someone doesn't call up asking for a conversion of a Liberty engine or, perhaps, a slightly used Stinson tail wheel. The killer-diller came the day the Wichita Aeronautical Chamber of Commerce invited poor Jack to locate his plant in that city, citing the government's recommendations to move vital industries inland. So now it's to be Capitol Model Aircraft Supply Co.

We noticed that Mercury Model Airplane Co.'s ad in the November issue featured the Ohlsson 60 Special. Mercury said they'd pay the postage special delivery, (Turn to page 62)



See

Megow's Big New

FLYING MODELS

95¢

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BRIGHT Red BOXES

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The most thrilling planes in all the world today . . . Spitfire, Blackburn "Skua", Vought-Sikorsky XF4U-1, Republic Guardsman, Douglas 8A5, Lockheed Interceptor, Grumman Martlet, Grumman Skyrocket, Westland Lysander, Focke-Wulf FW-198, Henschel HS-126 and Fairchild Trainer! All widely different in principles, design and purpose. Complete kits of the finest materials, actual size plans, easy to build. 30-inch wingspan. Wonderful fliers.

See also the new Megow Flying Models in the Giant 50-inch wingspan size at \$1.50.

If your dealer cannot supply you, order by mail, adding 15c to the price for postage and packing.

Send 15c postage today for big, new 1942 Megow Catalog of Model Airplanes, Ships and Railroads.

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PHILADELPHIA PENNSYLVANIA

WORLD'S LARGEST

MANUFACTURER AND DISTRIBUTOR
OF MODEL AIRPLANES
SHIPS AND RAILROADS

Scale The Curtiss 0-52

(Continued from page 49)

modelers, you know what to do, so we won't bother putting it on paper.

First obtain three individual blocks—all equal in size and weight—and then cut the outline with a coping saw. After the outline is completed, proceed with the actual carving on one blade, starting with the underside. After the underside is completed to the degree where about $\frac{3}{32}$ " undercamber exists, the upper side should be carefully carved. Each blade tapers from about $\frac{3}{16}$ " at the extreme hub to $\frac{1}{16}$ " at the tip. Round off the tips so they are of an elliptical outline and then bevel the hub so when all three blades are joined together 120° exist between the center lines of each blade. Use the same process in making the remaining two blades, and then, after all three are carefully sandpapered and matched, join together. To reinforce the propeller hub, a section of $\frac{1}{16}$ " plywood is cemented to the front of the prop. A $\frac{1}{8}$ " hard balsa hub reinforcement is anchored securely to the rear. As an extra reinforcement measure, three .035 wire braces bent to the shape shown on the plan are cemented between the propeller hubs. The propeller is then fitted for freewheeling and doped three times with thick clear dope. After this is done, cover the entire surface with tissue paper and paint silver.

The prop shaft should be bent from .048 steel wire and the loop covered with rubber tubing to prevent the rubber motor from being cut. As for power, power your model with eight to twelve strands of $\frac{1}{8}$ " flat brown rubber having about 4"-6" slack.

COVERING AND ASSEMBLY

Before covering the fuselage with blue Silkspan tissue, the cockpit should be covered with a light-grade celluloid; that is, celluloid that bends easily. Do not cover the portion near the wing trailing edge with celluloid until after the wing is attached to the fuselage. After the celluloid is in place, the fuselage may be covered and then sprayed with a light coat of water. When the covering is dry and taut, dope the surface a few times with thin clear dope. Next cover the stabilizer and rudder with yellow paper—the covering material in all cases being Silkspan tissue—and cement the stab and rudder accurately in place.

The wing is next covered with yellow tissue and given the same water and dope treatment as the fuselage and tail surfaces. The wing is cemented in place and, after the cement is dry, the $\frac{1}{8} \times \frac{1}{2}$ " streamlined wing struts are added. The celluloid center section is then carefully installed and the direction loop finder, which is carved from soft balsa, cemented where shown.

To bring out that American touch, the Stars and Stripes are added to both wing and rudder, respectively, and the 2"-high U. S. army letters cemented to the underside of the wing. The aileron elevator hinges



A-J FIREBALL with U-CONTROL



SPEED RACING Stock models of the A-J Fireball have taken speed honors in all controlled flight meets this year, including Lakewood Meet at Long Beach, Calif.; Quaker City Model Meet at Philadelphia, Pa.; California State Fair at Sacramento, Calif. Official championship won by Bud Warren flying an A-J Fireball at 70.58 MPH.

AEROBATICS Top honors were taken by the A-J Fireball at California State Fair; Lakewood Meet at Long Beach, Calif.; Silver Springs Meet at Washington, D. C. Official championship won by Dean McMillian at Long Beach, Calif., flying an A-J Fireball.

★ At "controlled flight" meets everywhere, the A-J Fireball is proving its superiority over other models of all types. Here's why. The A-J Fireball was specifically designed for controlled flying. Years of experimental work preceded this prize-winning design by Jim Walker. Experienced model builders have recognized this by choosing stock models of the A-J Fireball as their contest plane. Discover the thrills of U-Control flying with an A-J Fireball, the choice of the champions.

USES CLASS "B" OR "C" MOTORS

Each A-J Fireball assembly set contains complete instructions for mounting either class "B" or "C" motors.

PARTS SEMI-FINISHED FOR QUICK CONSTRUCTION

Assembly set contains completely carved fuselage, all balsa wing and tail unit parts cut to shape, wire parts ready formed, battery box, two wheels, pyralin windshield, hardwood motor mounts, construction diagrams and perspective drawings, flying instructions, complete U-Control mechanism with 50-foot control lines and A-J Speed Finder for computing MPH in speed races. No liquids.

\$7.95

LESS MOTOR

If your hobby shop, model airplane shop, department or sporting goods store does not have the A-J Fireball, use coupon below.

A-J Fireball Makes a Hit with Army Pilot

American Junior Aircraft Co. Gentlemen:

"I have constructed one of your A-J Fireballs and have obtained wonderful success from the model. I received more of a thrill soloing it than I did when I soloed for the Air Corps. The officers of our training detachment have gone in for the hobby in a big way."

Very truly yours,
Velpeau C. Denton, Jr.
2nd Lieutenant, Air Corps

JIM WALKER
American Junior Aircraft Company
1166 N.E. 31st Ave., Portland, Ore.
Enclosed is \$7.95 (check or M.O.) for A-J Fireball kit, postpaid.

Name.....
Address.....

**AMERICAN JUNIOR
AIRCRAFT COMPANY**
Portland, Oregon

GIANT deluxe SOLIDS OF REAL War PLANES

BURKARD

New BRITISH DIVE Bomber

BREWSTER-BERMUDA
Sleek, modern sky-terror.
Adaptation of U. S. Navy's Brewster-340.

Super GIFT
Choice for any
MODELLER

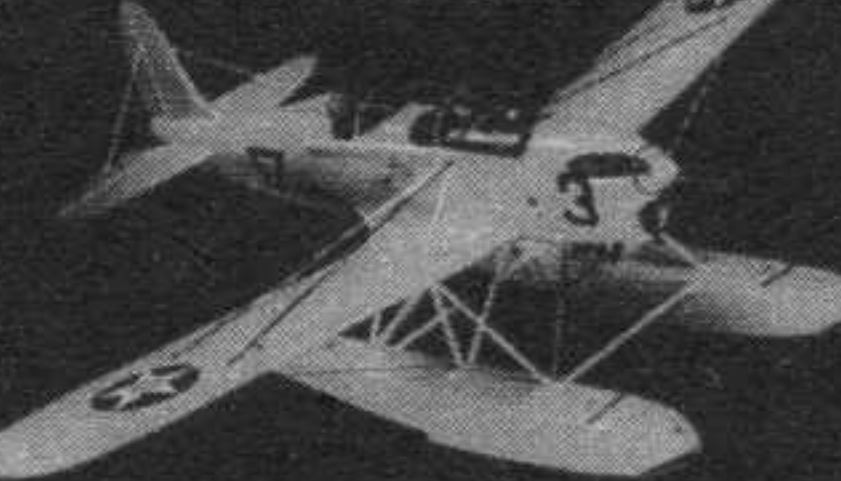
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FULL SIZE
Blue Print
Plans

KIT
COMPLETE

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Super Detailed

New! RYAN STM-2



BURKARD Models

| | |
|---------------------|---------|
| BREWSTER-BERMUDA | 17" |
| RYAN STM-2 (Above) | 18" |
| STUKA Dive Bomber | 23" |
| SPITFIRE | 18" |
| BELL AIRACOBRA XP39 | 18 1/2" |
| GLOSTER GAUNTLET | 16 1/2" |
| CURTIS HAWK | 17 1/2" |
| CURTIS P-40 | 20" |
| MESSERSCHMITT BF109 | 16 1/2" |
| GRUMMAN Navy F3F2 | 15 1/2" |
| HAWKER HURRICANE | 18 1/2" |
| BOULTON DEFANT | 20" |
| NORTH AMERICAN | 20" |

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and flaps are indicated by strips of 1/16" wide black tissue, applied with fairly thin dope. To give the appearance of the space where the retracted wheel fits in, the portion indicated on the plan is painted black, as is the landing-gear strut and the entire nose plate.

FLYING

Knowing model builders, we realize these flying directions will only be glanced at—because everyone has his pet way of testing a job. At any rate, for your model's sake choose a

nice calm day for that "first," with the surrounding area consisting of high grass—the higher the better. Balance your O-52 at a point between both wing spars and glide the model to notice the turning tendencies. Warp the rudder so the gliding tendency is toward the left, and put a 1/32" sliver of bamboo in the nose block to slant the thrust line to the right. Thus your model will climb to the right and glide to the left. And when that winder is put into play the climb will be right and the glide—gee, that'll be right too!

Strato-Streak

(Continued from page 36)

window you can watch the timer and thereby vary the motor run to your liking. Cut the plywood bulkhead carefully so that the four longeron stubs fit snugly. Give it a coat of glue. Screw on the motor mounts temporarily and then locate the landing-gear wire. If you use the built-in gas tank, put it on the side which is handier for you. Make the V-shaped ignition channel and glue it in the back of the firewall. In its correct position it is lying on one side on the bottom of the body. Wire up the ignition unit and try it. Open the ports of the engine and press the breaker points together for a split second. If the ignition is healthy, a loud click is heard in the cylinder. In case this click is heard only once in a while, the cause may be worn or dirty points, weak batteries, or fouled plugs, providing the wiring is O. K. and the coil and condenser are in good shape. Do not proceed with the rest of the plane unless your motor is running smoothly. Decide just this once that the ignition is not the last thing in the model—but the first.

Make the wing in four sections. Cover with light Silkspan. On the tip sections, cover with the grain running parallel to the ribs. This reduces the possibility of warp and makes a smoother airfoil. The elevator is made the same way. Cover all the rudders with Silkspan.

FLYING

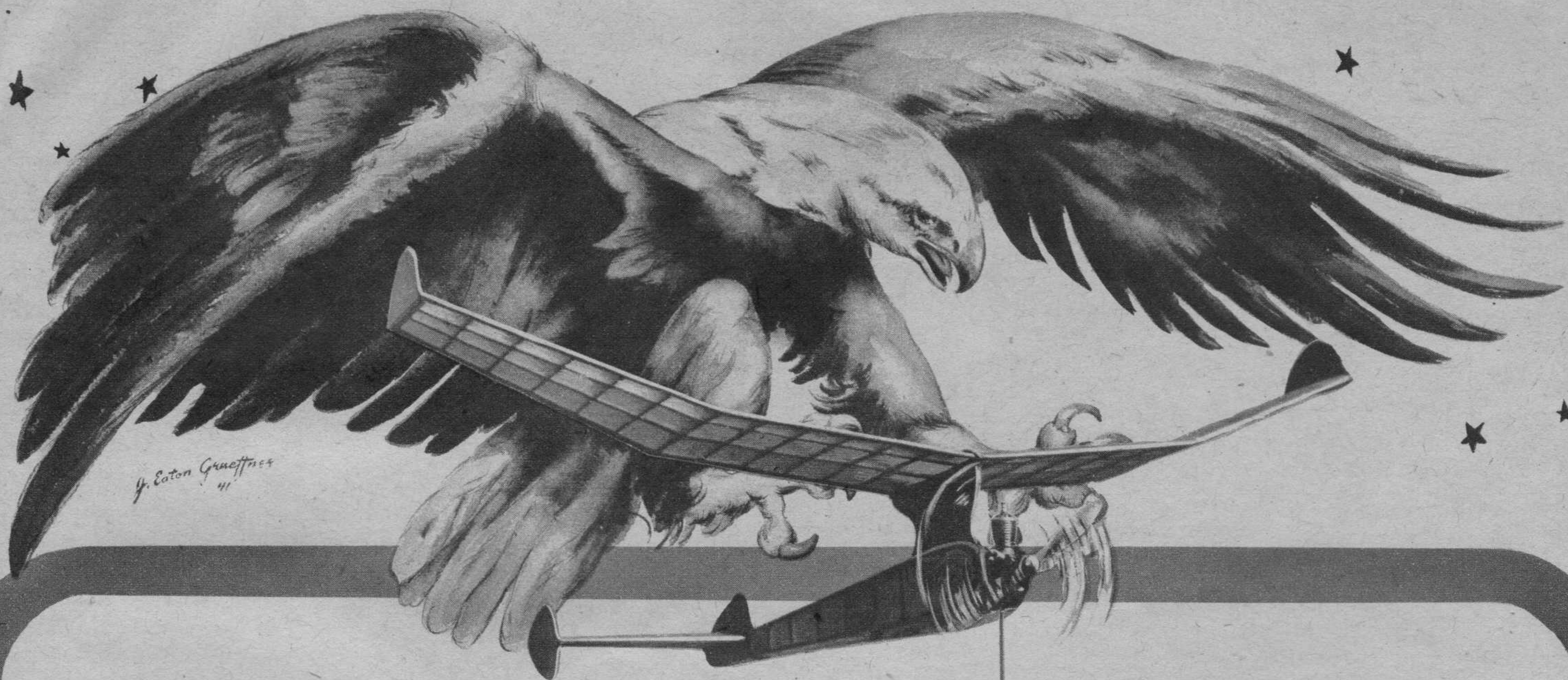
If the wing is not warped, the model should hand-glide beautifully. Correct the incidence on the elevator in case it is necessary. Use a six-second motor run on the first flight, with the spark advanced halfway. (About ten-o'clock position on the Atom.) The model should go to the right under power and glide to the left. The final adjustment on my models boils down to 1/16" right thrust under the firewall and 1/4" left on the tip of the rudder tab. Adjusted properly and with a hot motor, the Strato-Streak will reach an unbelievable altitude in twenty seconds and will glide with the best of them.

Keep 'em streaking!

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- 6 36 x 3/16" sq. hard
- 4 sheets 3/32 x 3 x 36" soft quarter-grained
- 1 sheet 5/32 x 2 x 36" medium
- 1 sheet 3/16 x 2 x 36" medium
- 1 sheet 1/4 x 2 x 18" medium
- 1 block 2 1/2 x 3/4 x 1 1/4"
- 2 36 x 1/4 x 1/4" hard
- 1 3/16 plywood 2 1/4 x 2 1/4"
- 1 1/32 plywood 2 x 9"
- 1 piano wire .072 10" long, also a length of .040 and .028 wire, wheel, bolts, nuts, hook-up wire, et cetera.





MIGHTY HIGH FLYERS

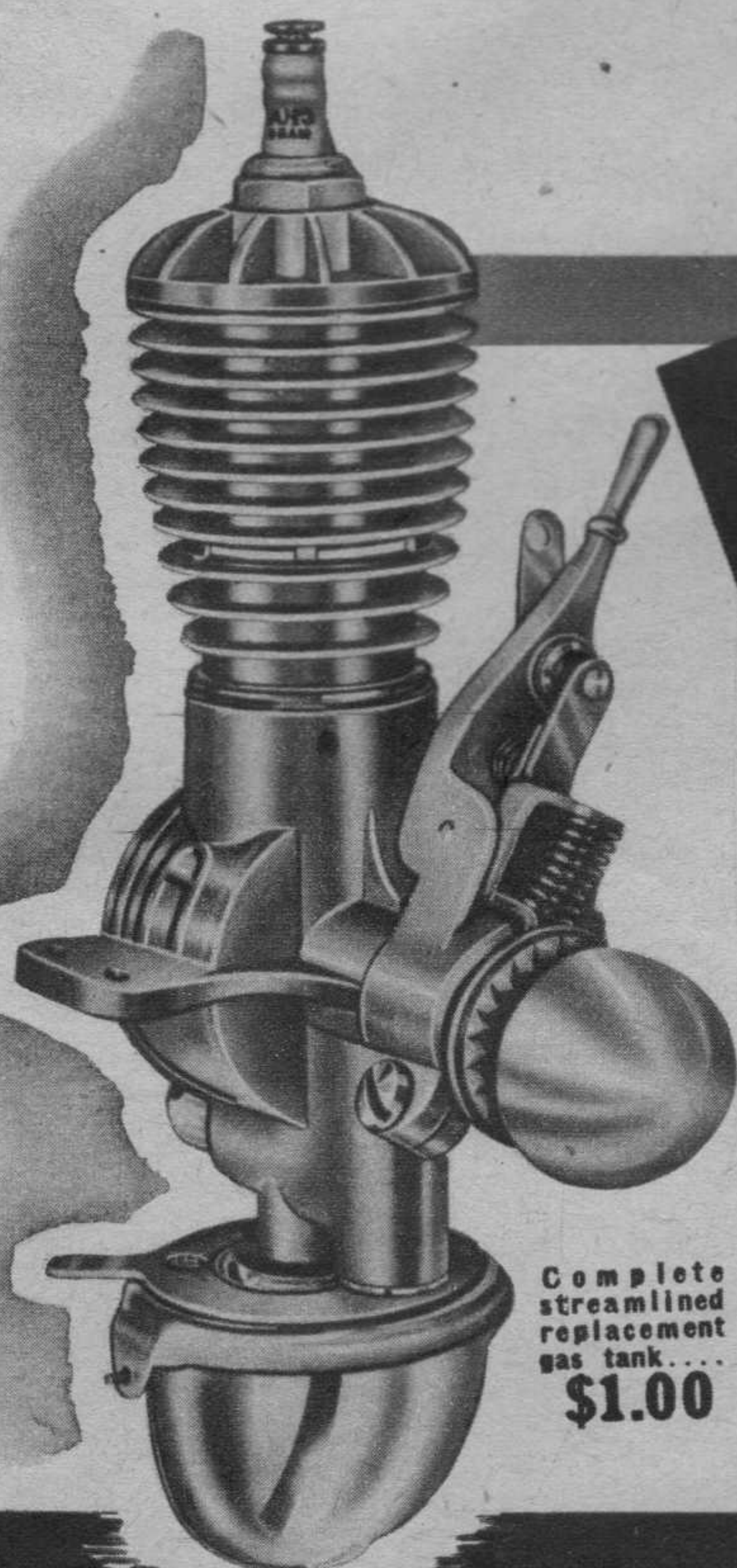
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Wght. 2 ozs.
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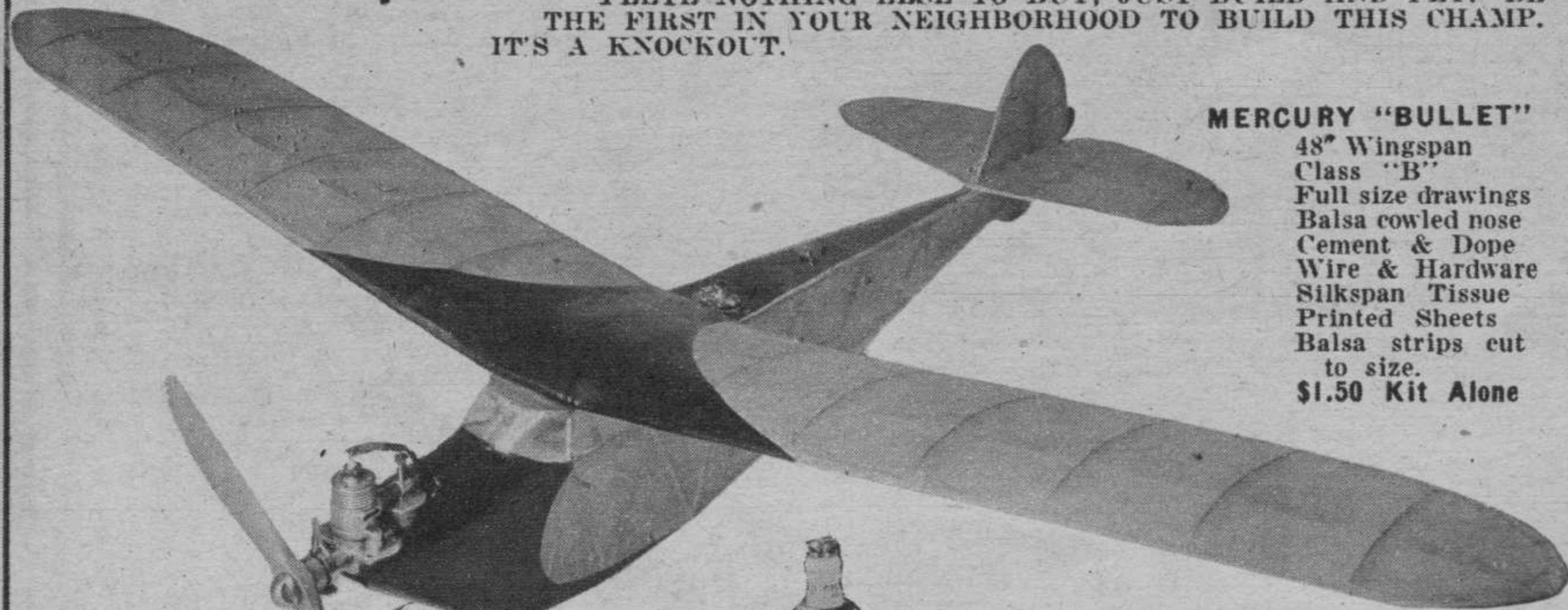
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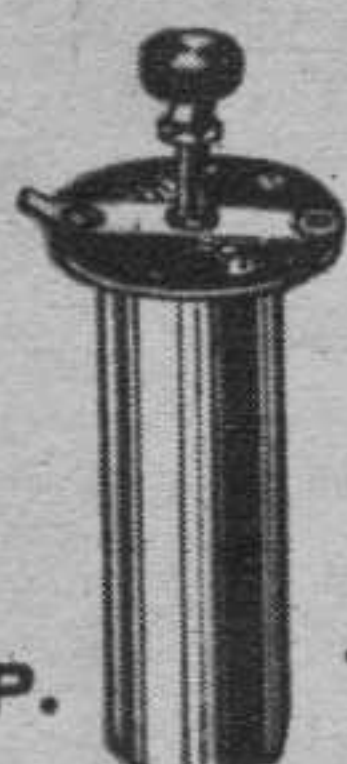


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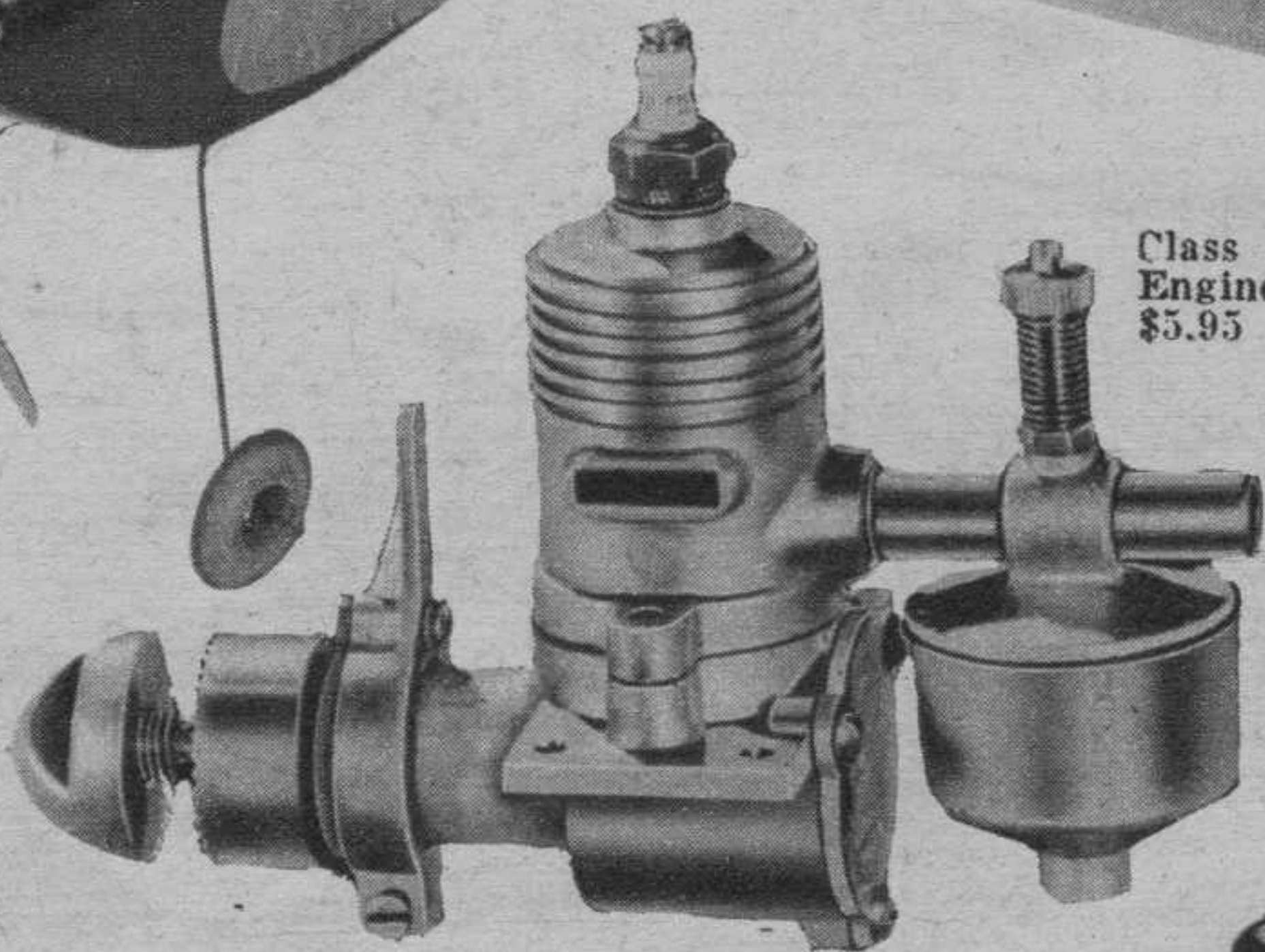
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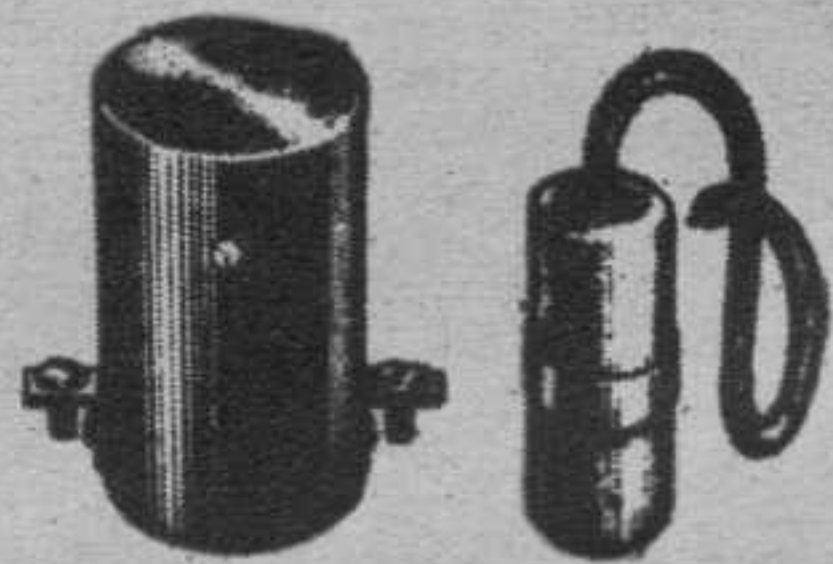
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Down The Runway

(Continued from page 47)

Dublin, it is learned that the M. A. C. E. is the "controlling body for model aeronautics" in that country now.

The Eire group is soon to celebrate its third anniversary and was ready to affiliate with the Federation Aëronautique Internationale just before the outbreak of hostilities, but because of the war has been unable so far to secure international recognition, like the Academy and the S. M. A. E. A rather delicate issue was brought up when the Eire representatives first approached the F. A. I. leaders. The Paris officials of the federation thought the Irish lads should work under the English franchise (S. M. A. E.) but the boys of Britain understood better the feelings of their island neighbors and aided in their preparing a strong case for separate recognition, which appeared "in the bag" when war popped out of the bag.

Another international communication arrives from Vernon B. (Moffett marvel) Gray of Auckland, New Zealand, who reports plenty of model activity "Down Under," but quotes Class C engines as selling from \$35 to \$40. Ouch! Many of the better-known builders, especially those who have sent Moffett entries which were flown by proxy in American national meets, are serving with the R. A. F., and at the time of writing, Bill Mackley, to cite an example, had made more than thirty bombing flights into Germany.

Clinton B. DeSoto of the American Radio Relay League, and a member of the A. M. A. radio-control committee, had us all pepped up when he revealed that the A. R. R. L. was

pushing for simpler regulations for a "ham" radio operator's license. Looked for a while as though even the Academy headquarters' office boys could get a license and operate a radio-control gas model. Alas and alack—national-defense activity resulted in thumbs down when several Federal agencies decided that too many new operators might give a spy or two an opportunity to get in some dirty work. Consequently, it's as difficult as ever to secure a license, and your Washington representatives are still confined to paper gliders.

In the brand-new listing of national model aircraft duration records released by the Academy's contest board, the great Commonwealth of Pennsylvania leads all the other States with more than seventeen percent of the high times. Illinois is runner-up with fifteen percent, and Ohio and California tie for show money with twelve records apiece, representing eleven percent of the total 103 official records accepted. Only a few categories now remain without official marks, and every indication points to those being filled in as more record trials are scheduled during the coming months among the Southern A. M. A. chapters.

High time for indoor flying is held by Merrick S. (Pete) Andrews of Philadelphia, who flew a Class C hand-launched stick model for 26 minutes 39.0 seconds, thus besting a 25-minute mark which indoor fliers have tried for years to do. The three-flight outdoor average top time (as we toddle off to press) is held by Don Foote of Oakland, Calif., whose Class C gas model established a record time of 24 minutes 37.8 seconds.

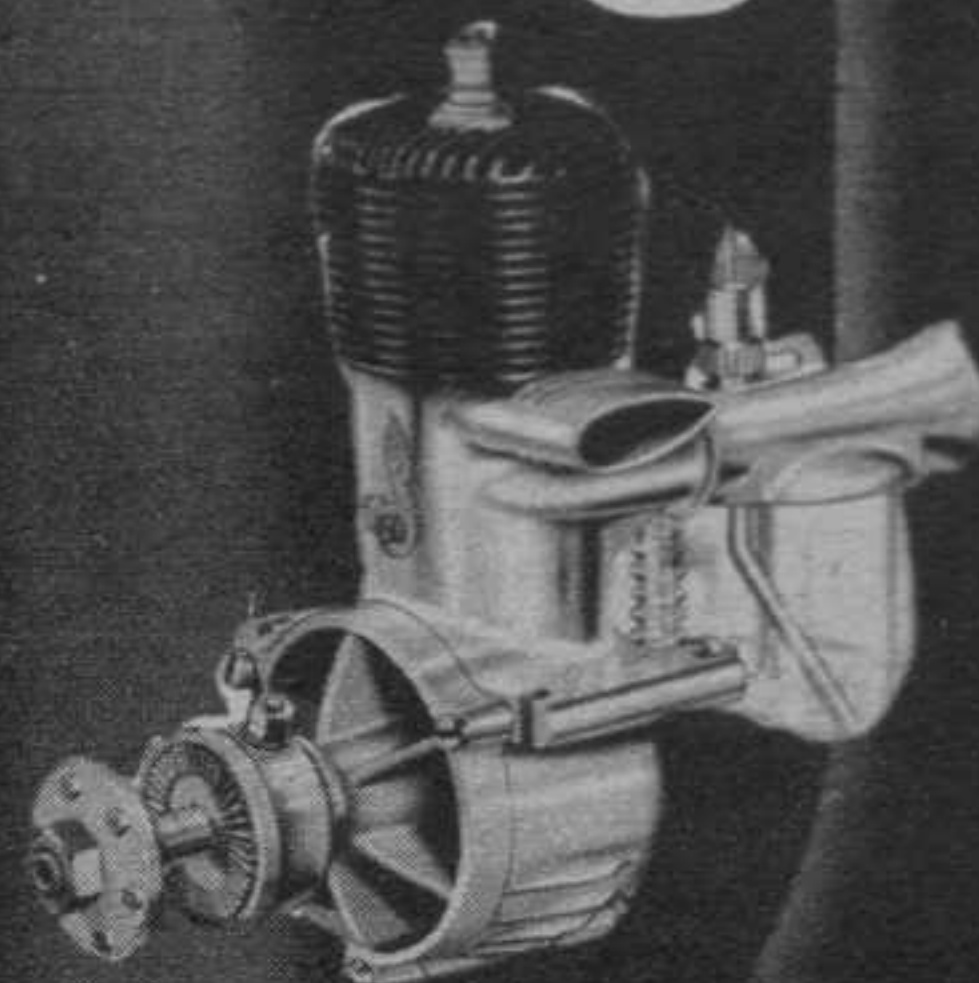


What's Cooking?

"Hottest motor ever to come off the Ohlsson & Rice test rack" is what modelers are reporting about the new 60 Special not only from one section, but from all parts of the country. Yet instead of being UP in price, this newest motor is offered at a valuable saving to modelers, which we cannot guarantee indefinitely—so get yours TODAY while they last at this price!

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Illustrated above is the ultra-modern heat-treating process used by Ohlsson & Rice to produce glass-hard, smoother-operating longer-wearing surfaces on vital motor parts. This is not only the latest method of steel-treating—but also an extra step in producing quality motors which ordinary motors do not receive.



SPECIFICATIONS

Bore and stroke.....15/16" x 7/8"
Displacement.....60 cubic inches
Rating.....7500 R.P.M.
Static thrust.....4 1/4 lbs.
Bare engine weight.....9 oz.

OHLSSON & RICE Manufacturing Company

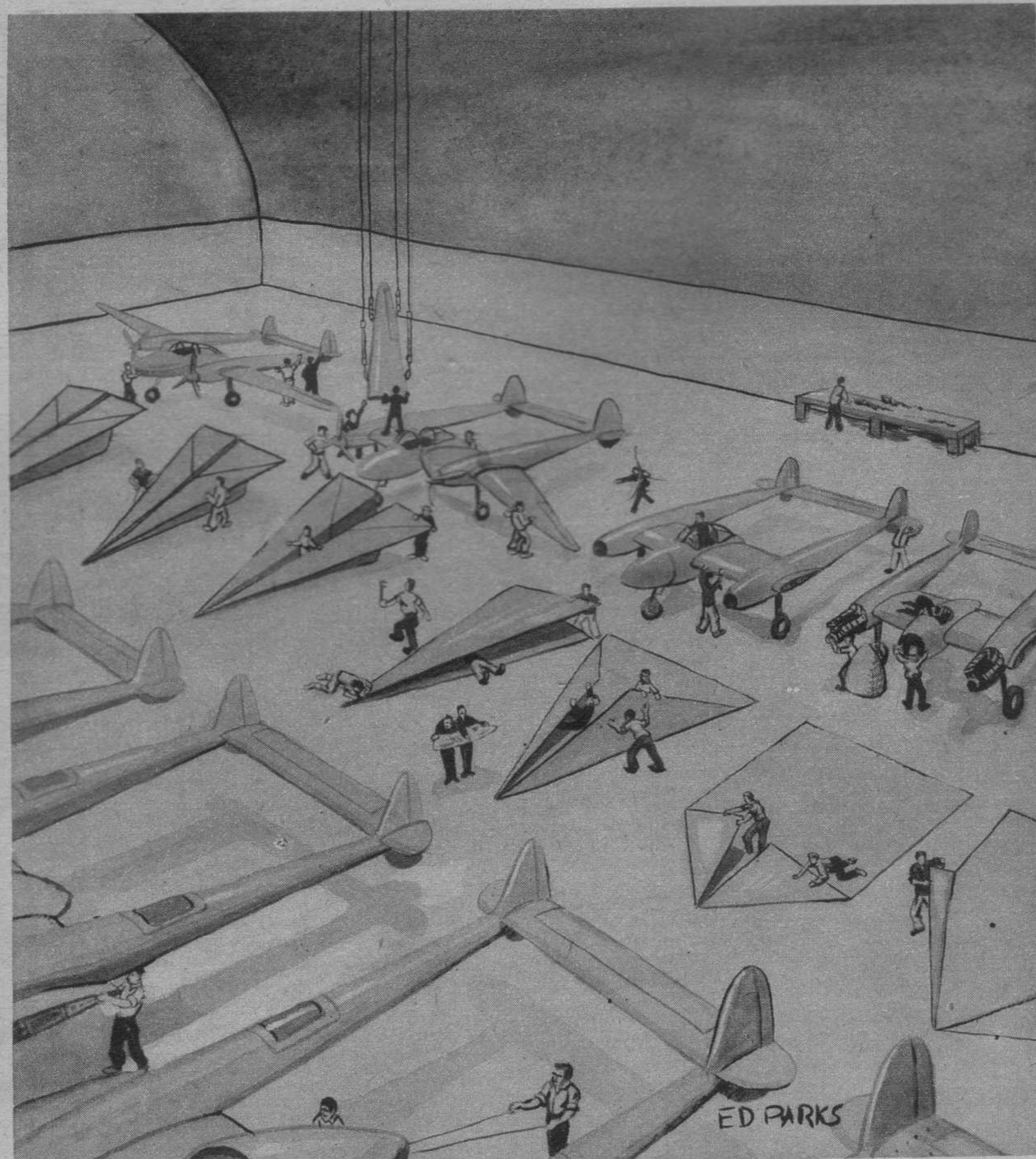
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The entrance of California into the national record picture is of special interest inasmuch as up to about two years ago the Californians gave the Academy and its work mighty slim recognition, except in a few notable cases. Plenty of hard work by A. M. A. contest directors on the West coast has succeeded in putting over the A. M. A. and its policies.

Ring the gongs and beat the tomtoms! Here's another boost for our hobby sport. During a broadcast over Station WRNL at the National Exchange Club convention model meet held in Richmond, Va., Edward Sharp, construction administrator for the National Advisory Committee for Aeronautics quoth: "We have about two hundred of... model makers at Langley Field. These young fellows, who have never been employed before, who have come directly out of school—usually out of high school—come to work down there as skilled men. That's because of the experience they have already gotten in the pursuit of this hobby. They take civil service examinations. We have been fortunate enough to get the civil service commission to recognize their skill and their special aptitude for this work, and we have put them on at Langley Field over the past two or three years, and we are doing marvelous work down there with them. In this day of shortage of skilled mechanics—trained, experienced, old mechanics—and especially in these days of national defense when mechanics are needed and when there's a great shortage of them, it has been very fortunate for us that we can call on this group of model makers."

Now you can see why Mr. Sharp was elected an honorary fellow of the Academy!

Why Not Pushers?

(Continued from page 44)

Spiral Stability. Pushers are just as stable spirally as are tractors. The method of obtaining spiral stability is the same in either case, namely, to locate the center of lateral area a little to the rear of the center of gravity. If a newly designed pusher flies with the rear end swinging from side to side, the C. L. A. is ahead of the C. G. The cure for this is to decrease the dihedral of the elevator or increase that of the wing. A model which tends to dive spirally into the ground probably has the C. L. A. too far to the rear, although insufficient angular difference between the wing and elevator may be the cause.

Since the twin-pusher has two propellers rotating in opposite directions, the torque effect is entirely eliminated. A properly aligned twin-pusher will show no spiral problems, even when fully wound.

Propellers, Motors. Each propeller of a twin-pusher should have a diameter of about 70 percent of that of a single-propellered model of the same size. This gives considerably more blade area than a single-propellered model of the same size would have, resulting in a longer motor run and yet a rapid climb. Each motor should have about half as many

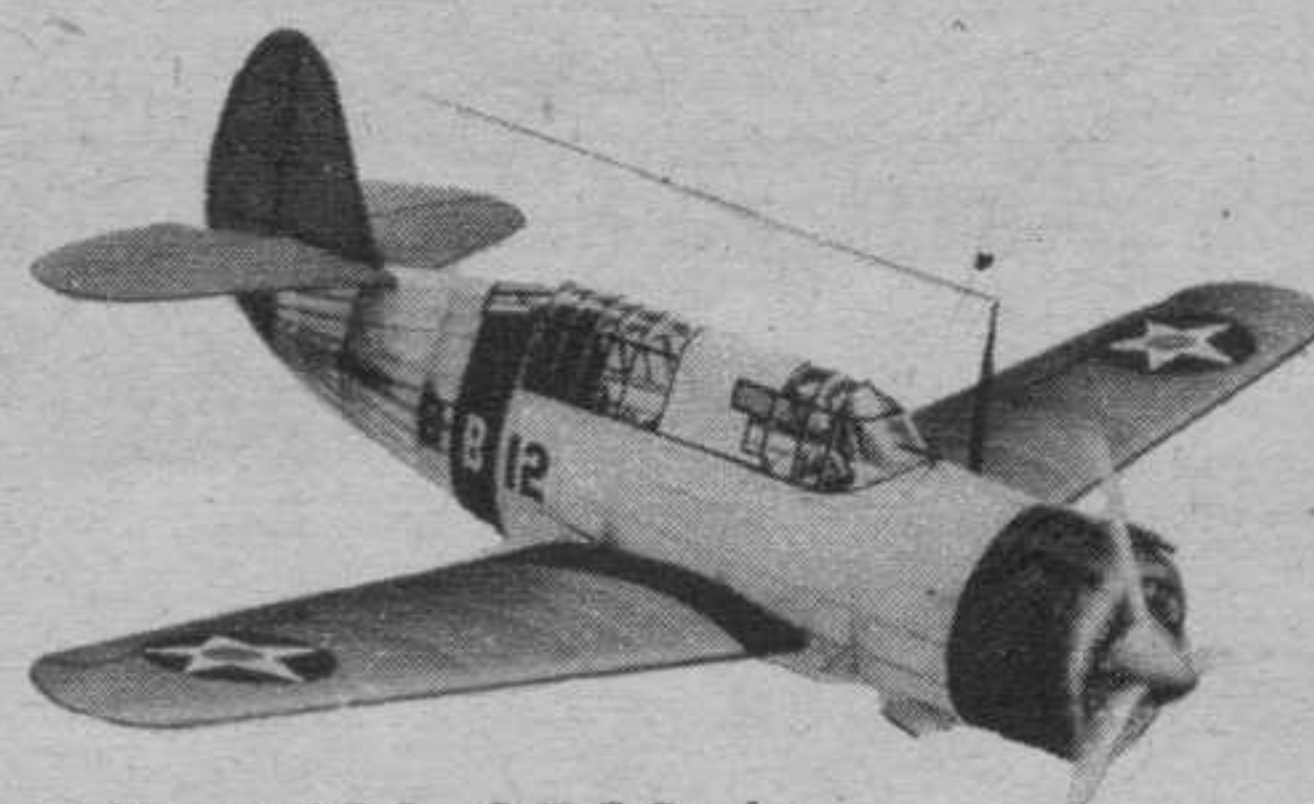
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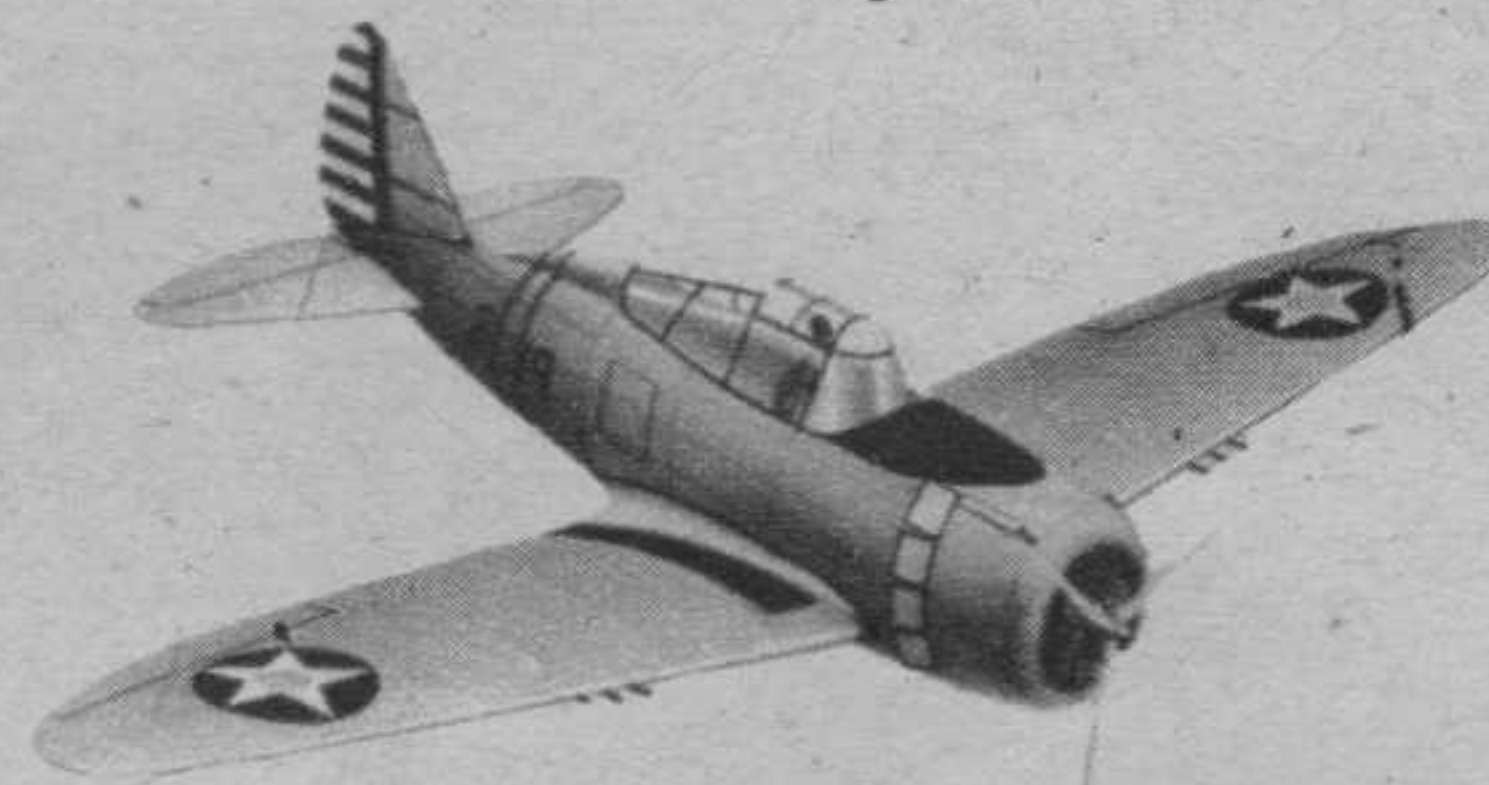
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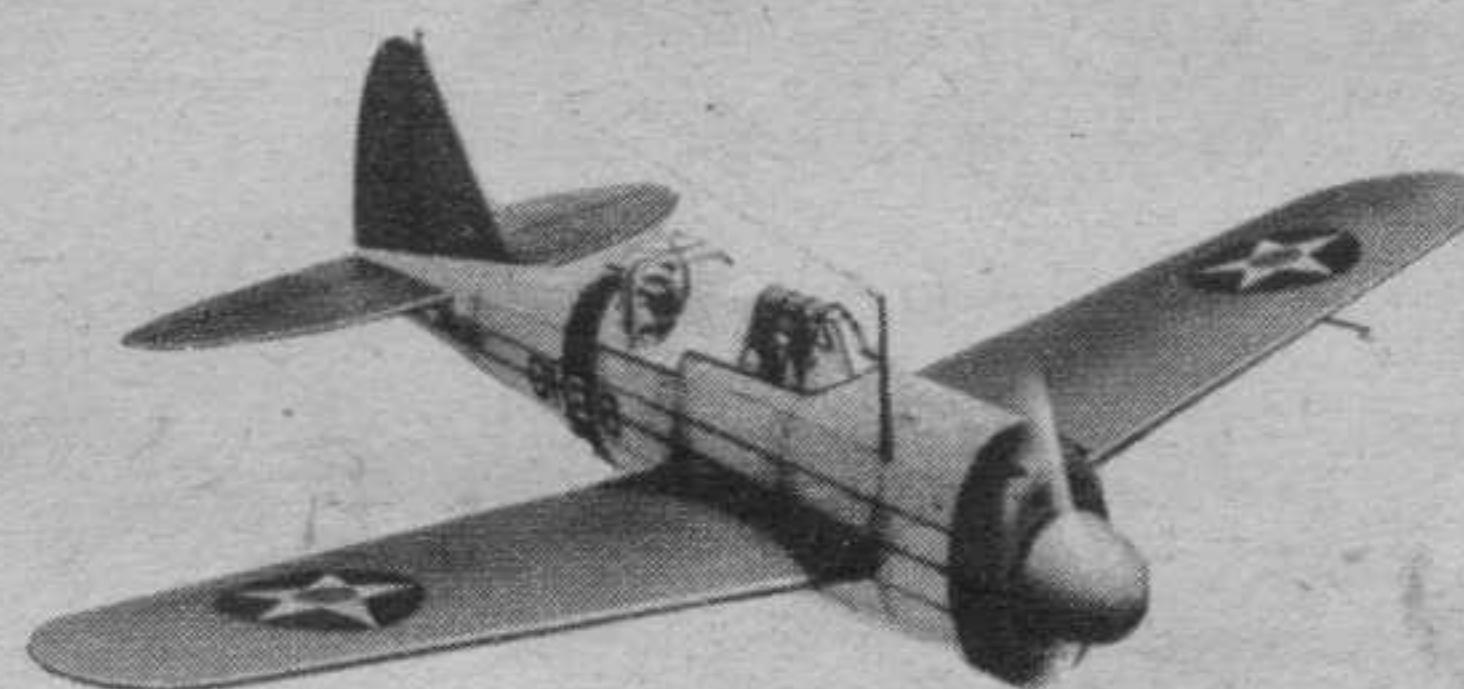
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U. S. Navy Dive Bomber



REPUBLIC P-47
U. S. Army "Thunderbolt" Pursuit



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U. S. Army Pursuit Plane



BREWSTER 340
U. S. Navy Bomber-Fighter



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A.M.A. Rules

Wingspan 33 1/4"
Length 21 1/2"

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It's A GLIDER and A FLYER!

Complete, easy to build kit includes everything necessary to build both the Glider and the Flyer. Only..... **50c**

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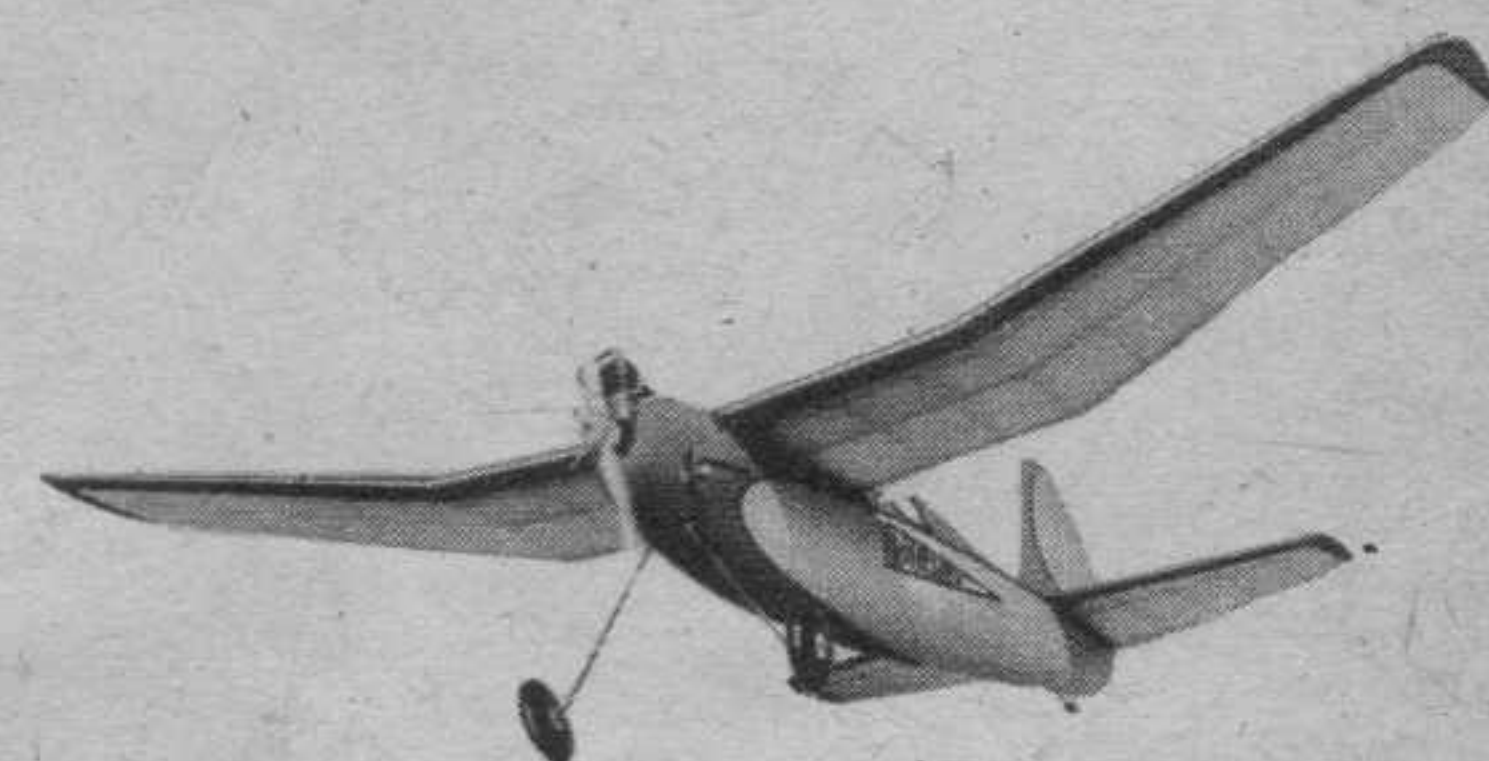
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Making and breaking records
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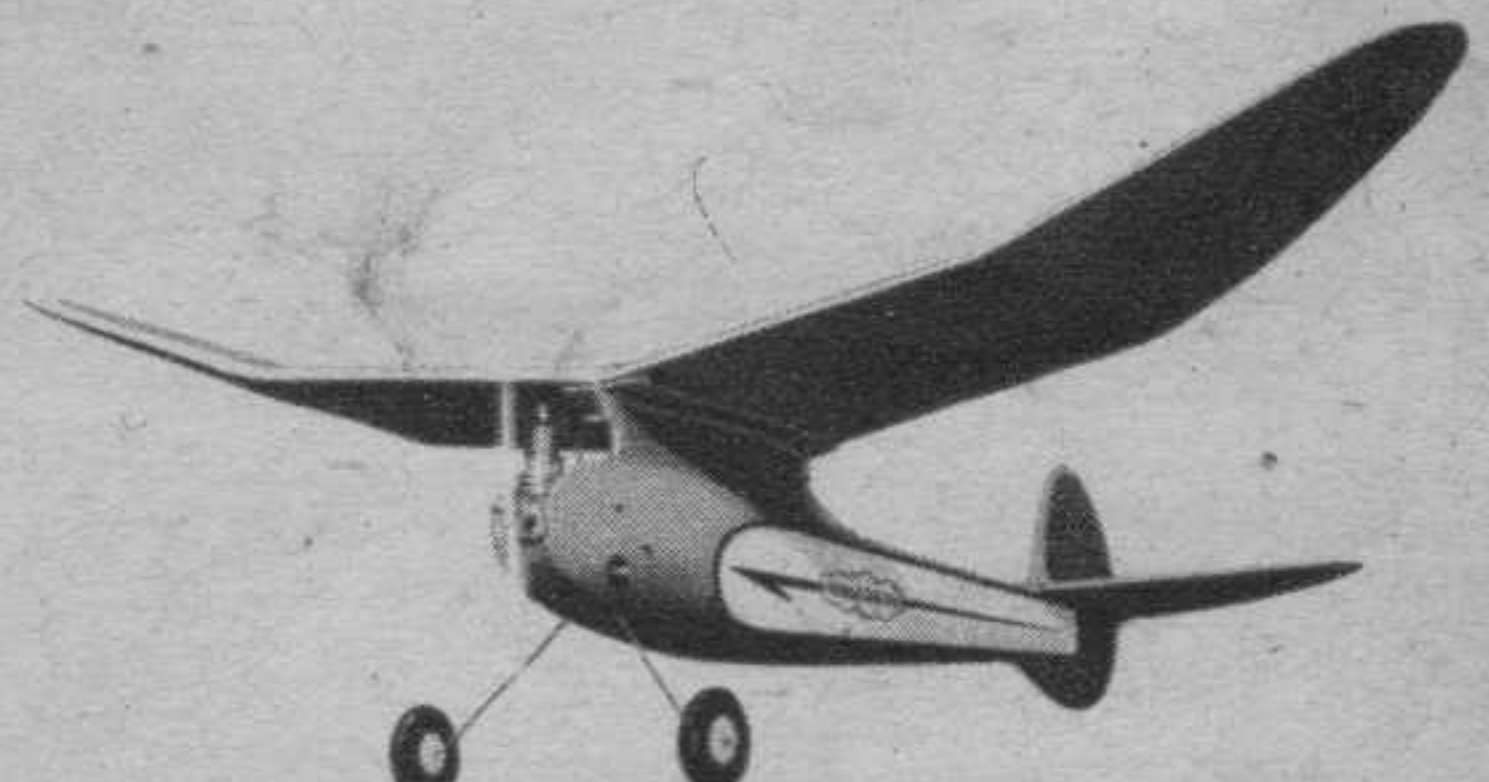
CORONET—Class "A" or "B"

● Wingspan—46 1/4" **\$2.50**
● Wing Area—300 Sq. In.
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VARSITY—Class "B"

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● Wing Area—370 Sq. In.
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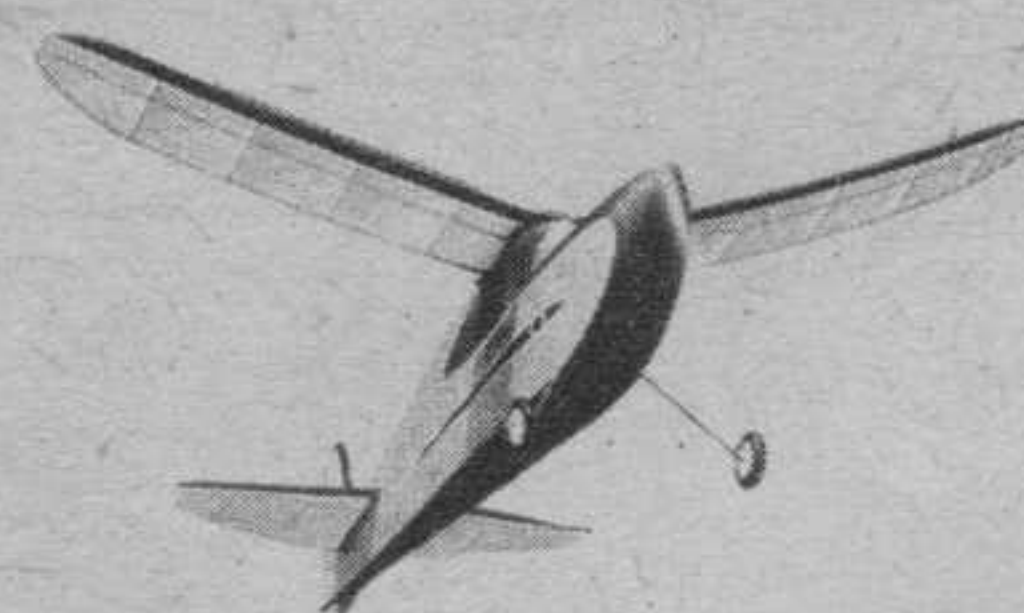
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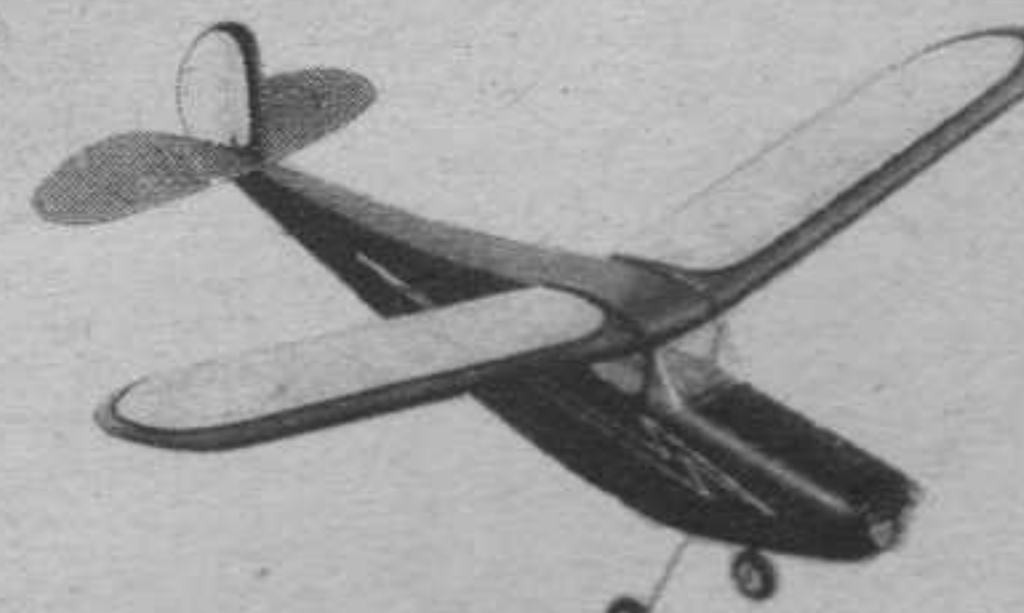
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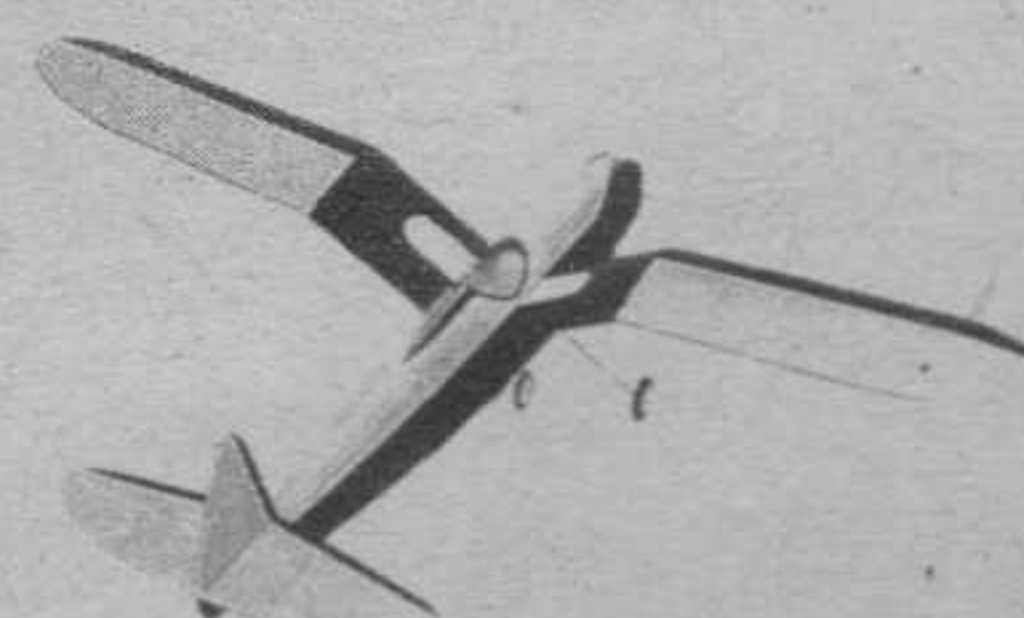
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SKIPPER



BLUE PHANTOM



AIR RAIDER



WIZARD

SCIENTIFIC MODEL AIRPLANE CO.

"Gas Model Headquarters"

218-220 AT-12 Market Street, Newark, N. J.

A black and white illustration of a man in a suit and tie, smiling and pointing his right hand towards a sign that reads "Soap-type leak". He is carrying a briefcase in his left hand. The sign is partially visible at the bottom of the page.



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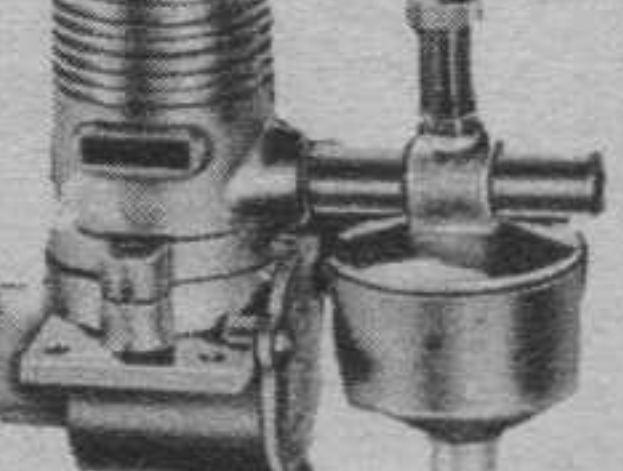
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| 18" BALSAs 1/16x1/16 100, 5c 1/16x $\frac{1}{8}$.40, 5c 1/16x3/16 18, 5c 1/16x $\frac{1}{2}$.15, 5c 3/32x3/32 35, 5c $\frac{1}{8}$ x $\frac{1}{8}$.32, 5c $\frac{1}{8}$ x $\frac{1}{4}$.10, 5c 3/16x3/16 .8, 5c $\frac{1}{2}$ x $\frac{1}{4}$.6, 5c $\frac{1}{2}$ x $\frac{1}{2}$.2, 5c 1/64x2 .6, 10c 1/32x2 .9, 10c 1/16x2 .8, 10c 3/32x2 .7, 10c $\frac{1}{8}$ x2 .6, 10c $\frac{1}{4}$ x2 .3, 10c 3" or 36" double above prices; 5 foot, double 36" prices. Add 10c pkge. for 36" 20c for 5-foot. | SHEETS 12"x2" 1/16or1/32 11, 10c $\frac{1}{8}$8, 10c $\frac{1}{4}$3, 7c 18" PLANKS 1x1 5c; $\frac{1}{2}$ x2 6c 1x1 $\frac{1}{2}$ 9c; 1x2 10c 1x3 15c; 2x2 18c WIRE 6-8-10-12-14 2 ft.1c 1/16 dia. 5 ft. 12c .0503 ft. 5c 3/32 dia. 5 ft. 15c $\frac{1}{2}$ dia.5 ft. 25c PROP SHAFTS REAR HOOKS 12 for8c PROP HINGES, 10c BRUSHES Small 3c; Lge. 5c Extra large. .8c Flat, large. .10c TISSUE, AA All col., doz. 18c Silverea. 5c Superfine, wh. 5c | PROP BLOCKS $\frac{1}{2}$ x $\frac{1}{2}$ x66, 5c $\frac{1}{2}$ x1x83, 5c $\frac{3}{4}$ x $\frac{1}{2}$ x10. .3c ea. $\frac{3}{4}$ x $\frac{1}{2}$ x12. .3c ea. 1x1 $\frac{1}{2}$ x12. .4c ea. 1x1 $\frac{1}{2}$ x15. .7c ea. RUBBER LUBE Bot. or Can 10c SPONGE RUBBER WHEELS 1" pair15c 1 $\frac{1}{4}$ " pair18c RUBBER .04525 ft. 5c 1/16 sq. 20 ft. 5c $\frac{1}{4}$ flat 15 ft. 5c Skeln70c 3/1610 ft. 5c $\frac{1}{2}$ Tubing ft. 5c Alu. Spinners 20c Austin Jacks 35c FreeWheeling 10c Silkyd. 45c Austin Timer 1.25 Clock Timer 1.75 Smith Clock 2.50 Model Knife 10c 3 extra blades 10c Spark Plugs 50c Fly wheels 1.00 Tog. Switch 15c Alligator clips 5c Plugs and Jacks Set20c Condensers .10c | PIONEER BROWN ENGINE KIT OUTSTANDING PERFORMANCE IN CLASS "B" EASILY ASSEMBLED IN A FEW MINUTES. SOLE STROKE 13/16" 9/16" DISPLACEMENT .292" WEIGHT 4$\frac{1}{2}$ OZ. COMPLETE WITH SPARK PLUG BUT NO COIL OR CONDENSER. | PRICE \$4.95 |  |
| M&M WHEELS 1 $\frac{1}{2}$ to 1 $\frac{1}{2}$.50c 1 $\frac{3}{4}$ to 2 $\frac{1}{2}$.90c 2 $\frac{1}{2}$ Gas90c 3" Gas1.00 CELLULOID 6x85c BAMBOO PAPER White, red or yellow5c | THURST BEARINGS, dz. Sm. 10c; lge. 15c PLASTICBALSAs Large can15c MODEL PINS $\frac{1}{2}$ " or 1" pkge. 5c | ALUM. TUBING 1/16, 3/32, $\frac{1}{2}$, ft. 6c 3/16, $\frac{1}{2}$, ft. .10c 5/16, ft. .15c SHEET ALUM. .0004 4"x36" .3c .0005 in. 6x6. .5c .00 in. 6x6. .6c 1/326x6. 15c 1/166x6. 30c ENGINE OR COWL CEL. 1 $\frac{1}{2}$ " d.15c 2" d. 20c; 3" d. 25c 15" BAMBOO 1/16x $\frac{1}{2}$ 6 for 5c Shredded 36 for 5c INSIGNIA 24 and stripes 5c WaterSprayer 10c Sandpaper 12, 5c List. | WHEELS per Pr. Breh Balsa Celu $\frac{1}{2}$.01 .03 $\frac{3}{4}$.02 .04 .05 1 .03 .05 .07 1 $\frac{1}{2}$.04 .08 .10 1 $\frac{3}{4}$.07 .10 .16 3 .15 .15 .30 CEMENT AND COL. OR CLEAR DOPE 1 oz.5c Large bot.8c $\frac{1}{2}$ pt.35c CLEAR DOPE $\frac{1}{2}$ pt.30c NOSE BLOCKS 1x2x11c 2x2x12c 3x3x15c 3x3x28c 3x3x310c | U. S. Coil 1.00 PROPELLERS Balsa Paulo Gas Wina Mod. 5" 4c-7c Pol. 6" 5c-9c 8" 25c 7" 6c-12c 9" 25c 8" 7c-15c 10" 25c 9" 8c-19c 11" 25c 10" 9c-23c 12" 25c 12" 10c-28c 13" 25c 14" 12c-35c 14" 25c | IGN. WIRE (HI tens) ft. 5c Hookup ft. 2c WASHERS 1 doz. $\frac{1}{2}$ or $\frac{1}{4}$ 1c Ball Bearing 10c Bushings 4 for 1c NOSE PLUGS $\frac{1}{2}$ "6 for 3c |

The twin-pusher described in the drawing is a time-tested contest design. Out of eight contests entered, it has won four firsts, one second, one third and two fourths. The longest flight to date with this model is 11:40.2, out of sight. The wing area is 160 sq. in., and that of the elevator is fifty percent that of the wing or 80 sq. in. The required weight is 4.80 oz. Be sure to use firm balsa for the fuselage and to coat all joints several times with cement. If the fuselage is properly built the propellers will clear each other and the fuselage with room to spare. The rest of the model is of conventional construction.

Single-pusher. The design of a single-pusher presents much the same case as the twin-pusher, except that here we have torque problems. The model will glide somewhat better than the twin, but the motor run and climb are cut down to those of a tractor. The model in the drawing presents no difficulties. It flew best in left circles, both in the climb and glide. The adjusting procedure is the same as that for the twin, except that a little side thrust may be necessary in order to control the torque.

Further Improvements. A twin-pusher with inclosed motors should be quite easy to construct. Folding propellers were not used on these models as they would act as rudders extending behind the model and steer it into the ground. A successful pusher folder should fold forward against the fuselage. This would necessitate some sort of a spring to pull the blade forward.

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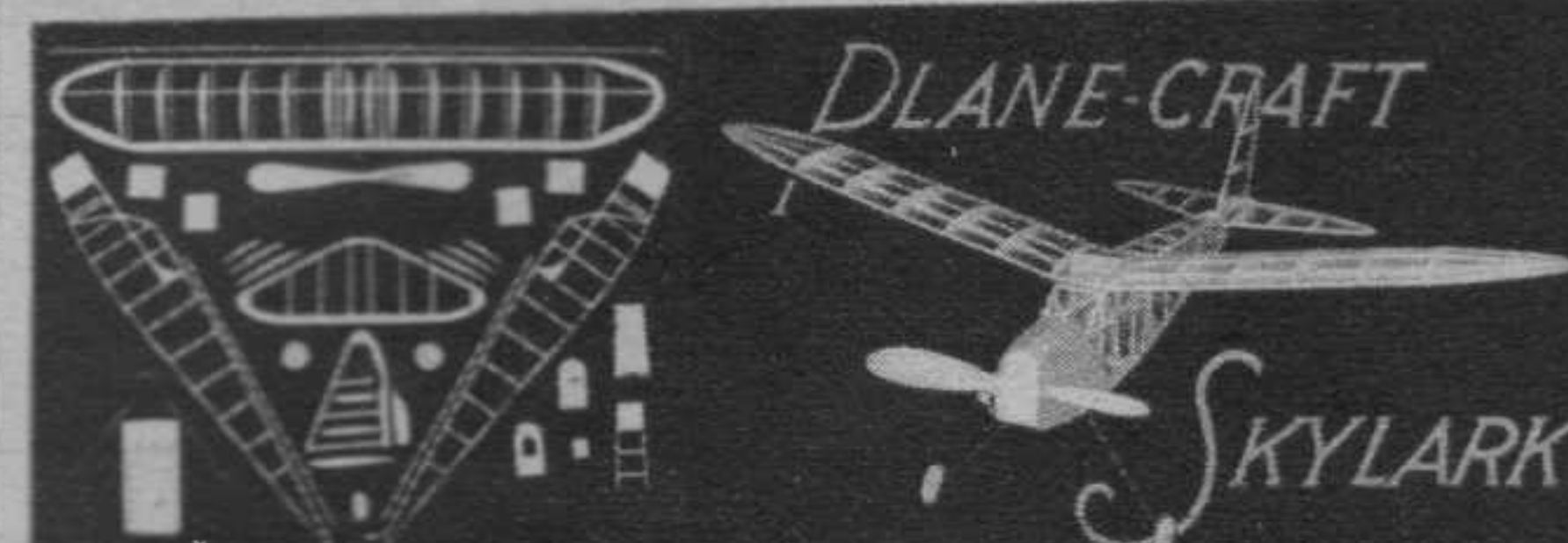
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Model Career Men

(Continued from page 43)

Between nine and five on any weekday you can find Louis at Polk's Modelcraft Hobbies in New York City, where he does everything from designing kits to overhauling old engines. Louis likes it. It's a job in his own line, model building. What hobbyist would not like to be paid for making models? On the side, Garami boosts his income by selling construction features and model designs to the magazines. You've seen many of them in Air Trails. On Sundays he can't stay away from the contests. Fortunately, Mrs. Garami is a loyal contest follower.

Louis dumfounded the Nationals one year in Detroit. Detroit was in the throes of a heat spell, the second hottest city in the nation during the contest week. Out from New York in an air-conditioned train came Garami. After one hour on the field he disappeared, and by the time the boys checked up he was back on the train bound for New York. That was the time he made his famous remark that tickled Nationals followers: "This isn't a model contest, it's a contest of physical endurance."

Maybe that's why they say the only place Louis likes hot air is near the clouds.

Model Matters

(Continued from page 31)

of Little Rock diverged from model talk long enough to tell us his brother catches huge "alligator gars" in the White River in eastern Arkansas. The largest was 185 pounds and over seven and a half feet long. H. A. says it's a sight to see him drag in a beast of that size. Right smart-sized bait fish! But back to models, H. A. reports the fourth annual club contest last August was a success in spite of two inches of rain that fell in forty-five minutes during early afternoon. The cloudburst was accompanied by a gale that blew down and tore up concession tents, washed away sandwiches, demolished many models, and thoroughly drenched contestants and spectators.

The *Beam*—a mimeographed model monthly—has the platform of "Guiding Alabama to Better Modeling." Jacques Houser, a student at Auburn University, is the editor. He asks for help in giving the *Beam* a State-wide coverage. If you have nothing to offer, at least send your name and address to him for a free copy. Address is BK House, Auburn, Alabama.

Rumbling and grumbling about rules comes from all parts of the country. In the November issue, Leon (9-G) Shulman, chairman of the AMA Gas Model Committee, suggested raising the wing loading to 11, 10 and 9 ounces per square foot for Classes C, B and A, and power loading to 100 ounces per cubic inch displacement. The O. O. S. menace must be licked. Flying them out of sight is aerodynamically exhilarating but financially depressing.

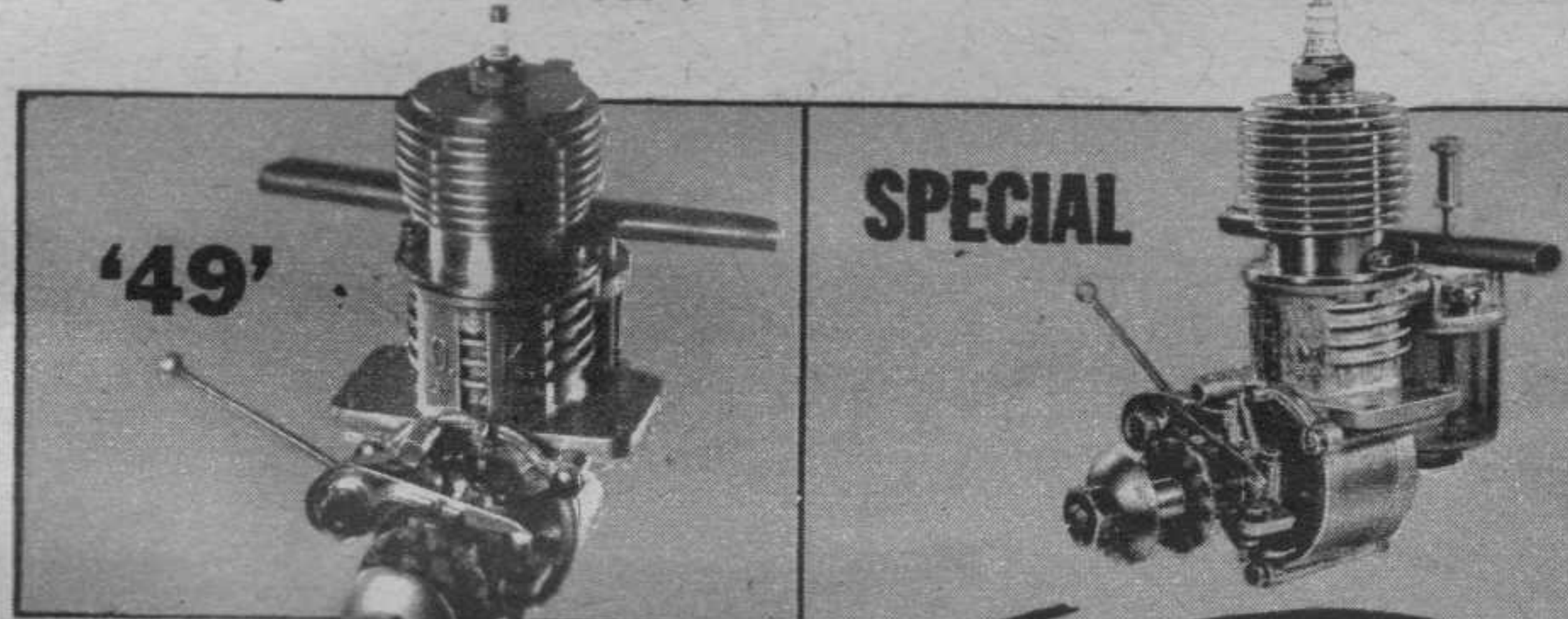
Our objection is that the model



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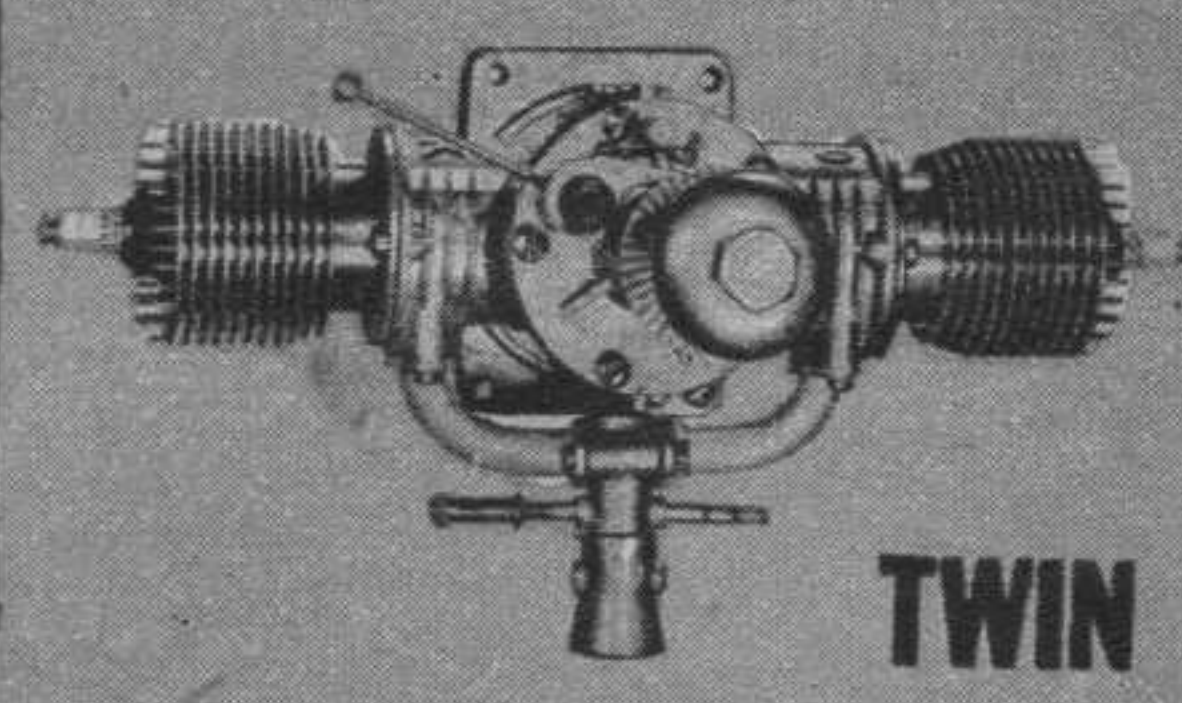
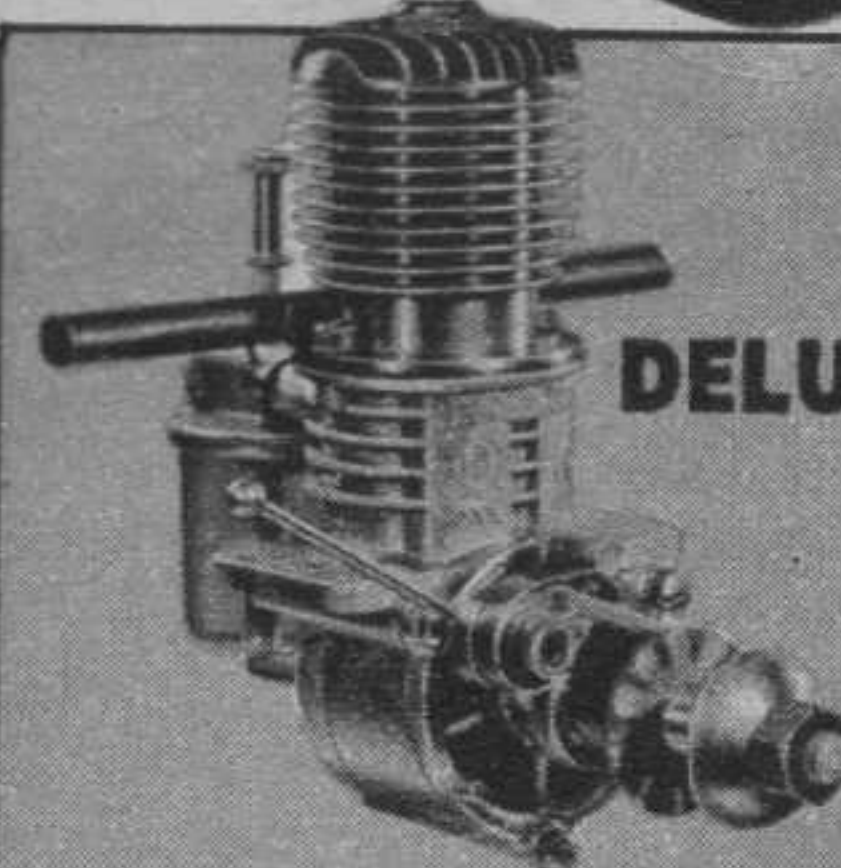
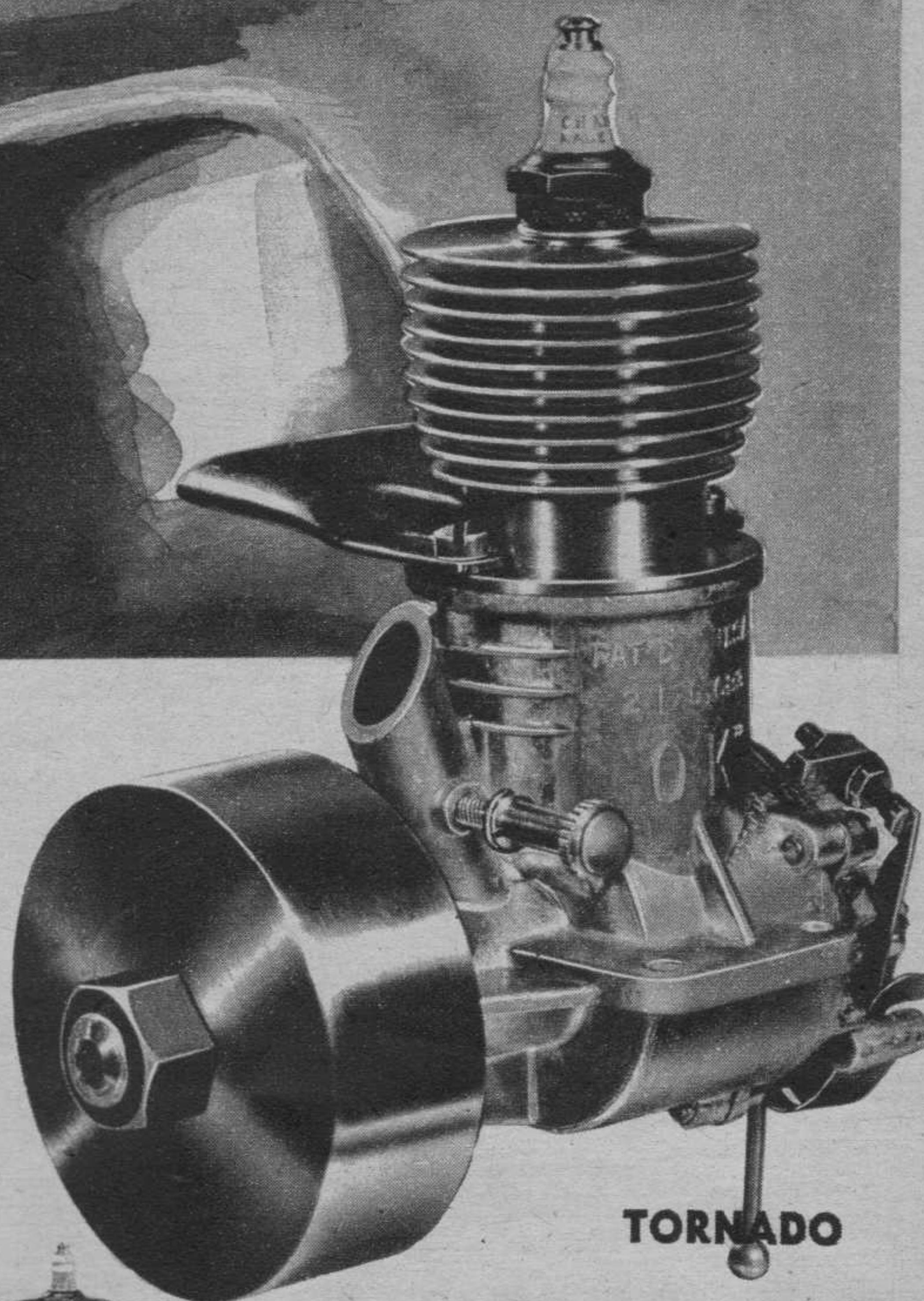
Test the compression; observe how easily it starts. Each cylinder is machined from a solid billet with head and ports integral—no gaskets to form a heat dam! Piston machined (NOT STAMPED!) from steel, hardened and ground to micro finish and lapped to cylinder—special dome-type head giving high turbulence! After careful evaluation—the gas modeller must inevitably choose an 'OK'!



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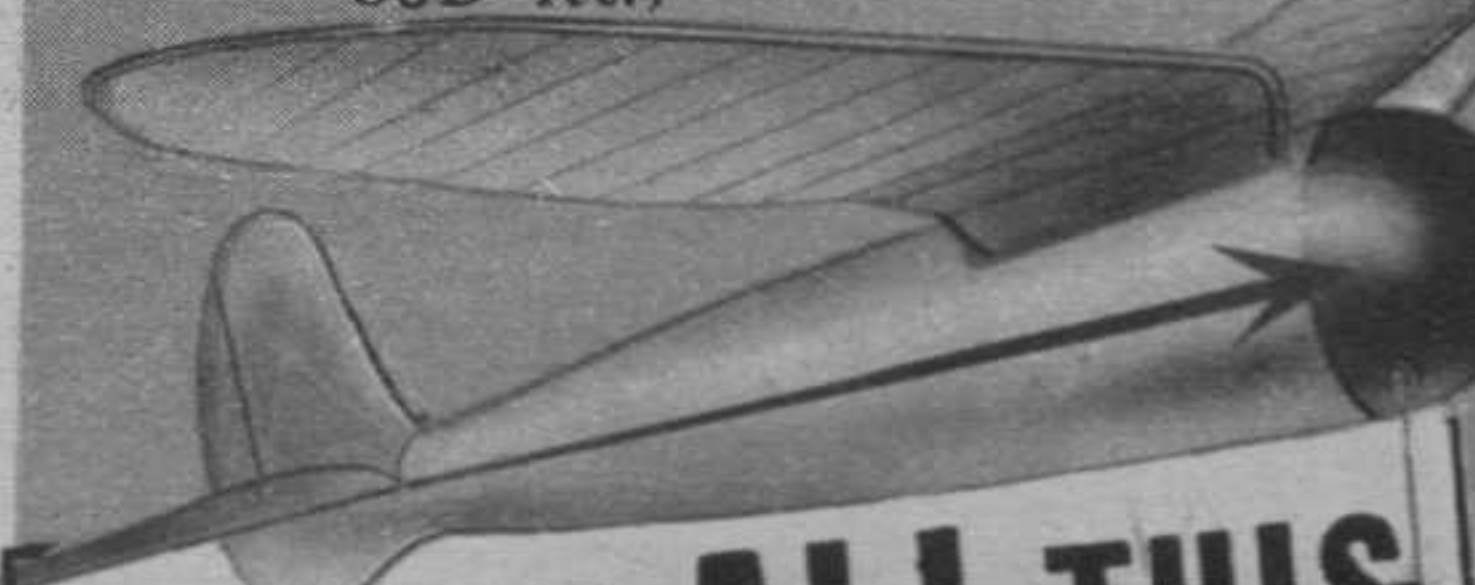
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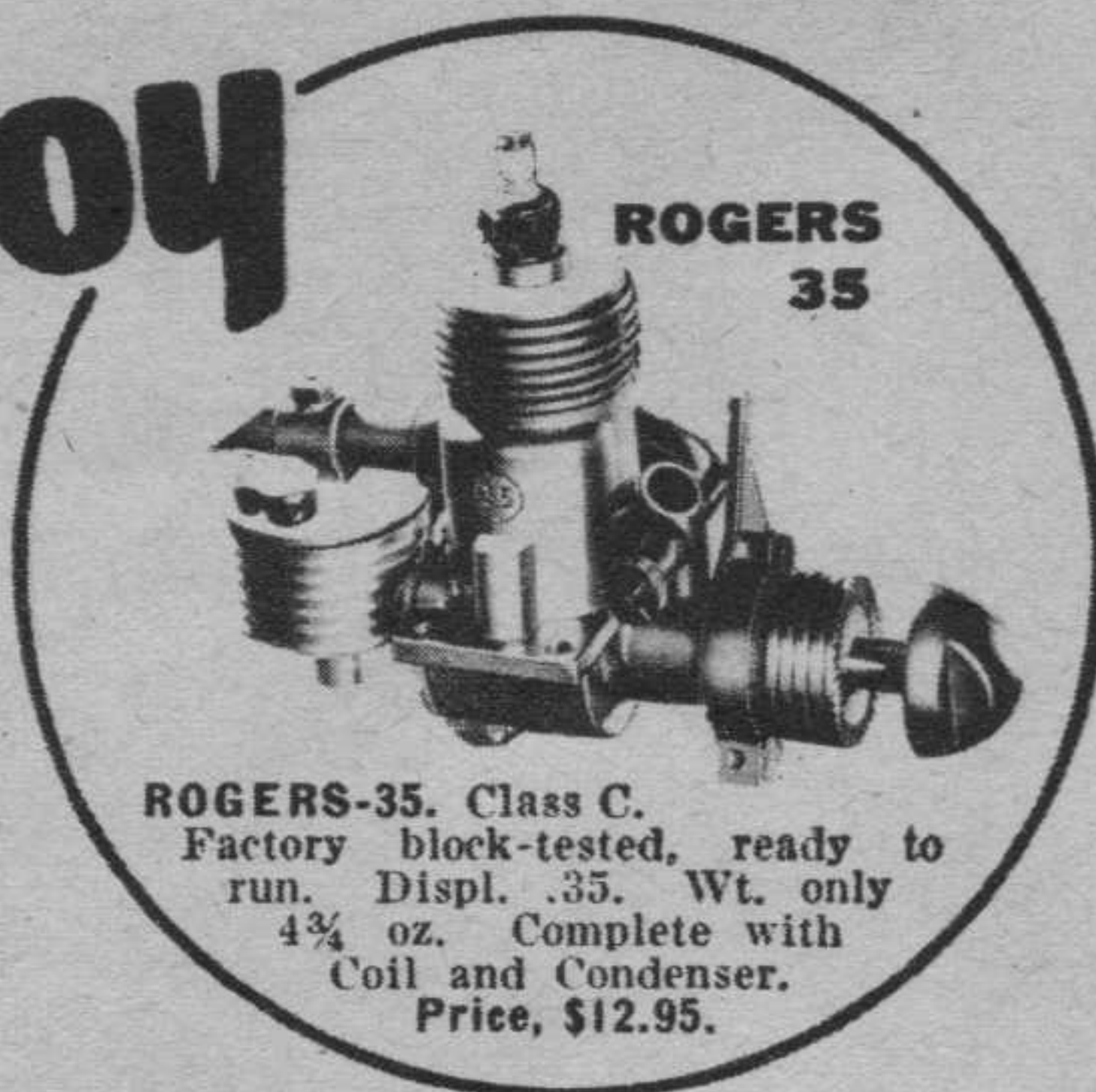
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spends too much time as a speck in the sky and not enough time at close range where the flight can be appreciated. The take-off is a roar and swish, and in a few seconds it's visible only to the farsighted. Compare this to the unassisted take-off of a heavy gas model. Barely moves at first, then slowly the tail comes up, and there are a few bounces before it's really in the air. The climb and flying speed are slow. This kind of flying with a semiscale job complete with fancy-pants trimmings and gadgets is the real thing. The bulk of the gas modelers like ships that resemble large airplanes. It's high time the rules paid off on craftsmanship and all-around flying qualities.

It's time events other than pure duration were added. Weight carrying, for example. A couple of pounds of dead weight will sober up any model. Landing gears would have to be designed instead of merely adding them as a necessary formality to comply with the rules.

Bill Gibson of Hamilton, Ohio, wants rules made up early in fall as soon as the results of the summer contests are digested. This would give modelers and manufacturers three extra months to work on new designs. At present, rules are announced the beginning of the year.

When you buy material advertised in Air Trails, would you please mention it to the dealer? It'll be a boost for us.

H. M. Volentine is a hotel night clerk in Clarksville, Arkansas. Model building accounts for many of his spare hours off duty. Photos he sent us indicate he does a particularly good job with flying scales. This phase of modeling seems popular in Clarksville. At a recent contest for boys aged twelve to seventeen, there were fifty-five models entered. The photo of the first five place winners indicated high-class workmanship.

Pittsburg (Kansas) has a club of three modelers who hold regular contests as enthusiastically as any large club. They've turned in some excellent flights with Wakefield types. Don Gray, Jr., did 21:50 with a Naudzius-designed Moffett Trophy Winner. Builders in southwestern

Kansas are asked to contact Gray at 706 West Euclid.

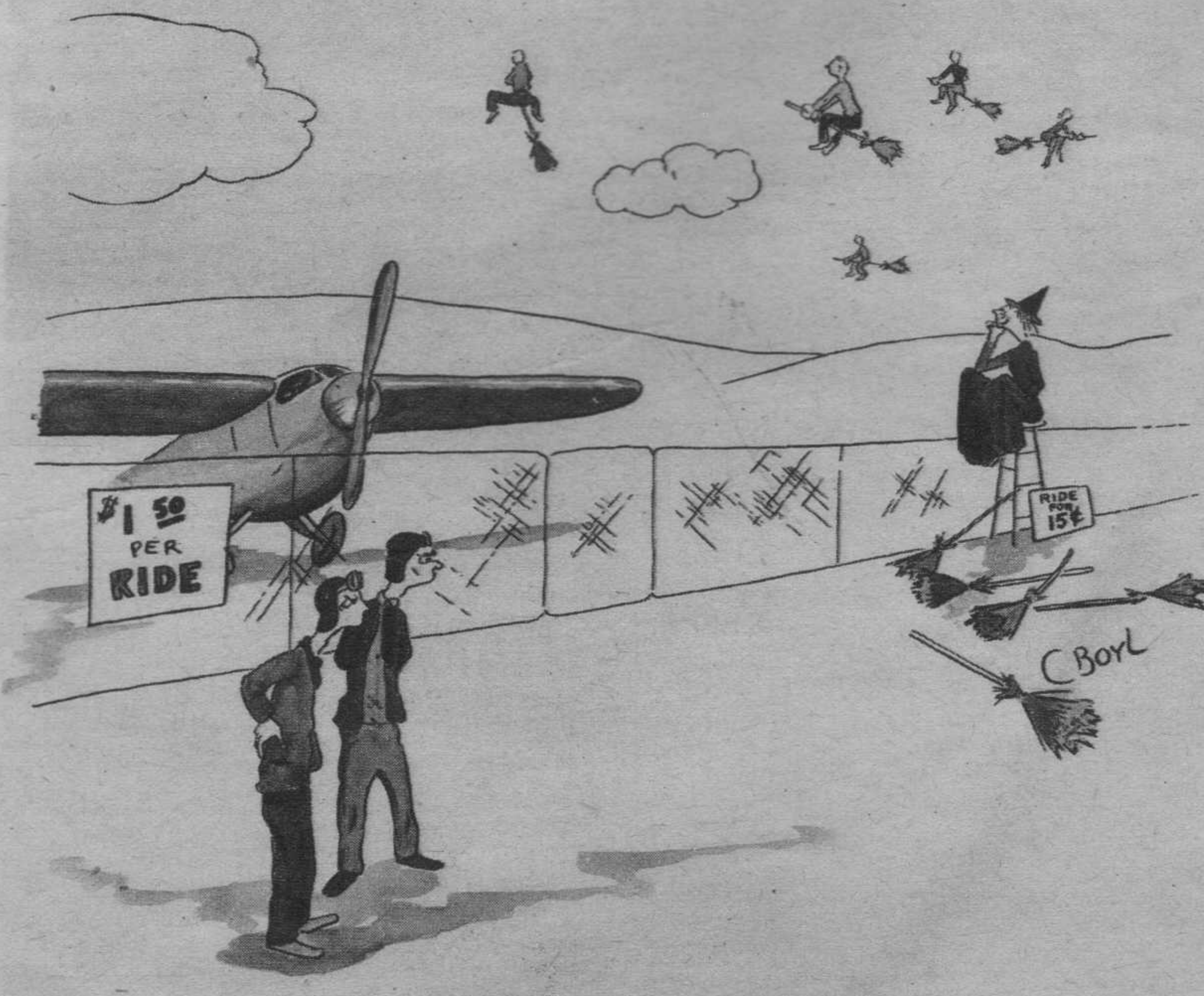
Bridgeport (Conn.) Aeronauts have two perpetual club trophies—one for gas and one rubber. Each trophy is contested for twice a year. Contests are staggered so that every three months there is a major contest to keep the 'Nuts on their toes. Ed Whitten says the club-sponsored First Annual Connecticut Yankee Championships last August were a success and will be a high spot in the club's contest program in '42.

Gas models were hand-launched at the meet of the Ypsilanti (Mich.) Hornet Gas Model Club last August. And that is what robbed Gerald Holly of a new national record in Class C senior (which was 15:44 average as of August 30th) when he racked up 64 minutes total for three flights. His longest was 47 minutes. His model is an original design made especially for a Bunch Tiger. He's been building three years, graduated from Ypsilanti Central High School last June, intends to study at the University of Michigan. Donald Gridley, sponsor of the Y. H. G. M. C., is happy about Gerald's work and we're grateful to him for supplying this information.

There is a shortage of balsa wood in England. The supply released to the model industry after the government is supplied goes into scale-model kits of military airplanes for use in aircraft identification work. Wakefield-type modelers will have to use hardwoods. It will be interesting to see how a spruce or bass Wakefield job will compare in weight and performance.

Crating airplanes for shipment to England is much the same, whether it's a model for the Wakefield contest or a bomber. Size of cases is somewhat different, but the packing technique calls for the same precautions against breaking and moisture. Space is at a premium. And in both instances, size of packing cases determines the location of splices in the wing and fuselage that will give a breakdown to fit the limiting dimensions of the crate.

Chicago and Philadelphia each has thirteen national records, based



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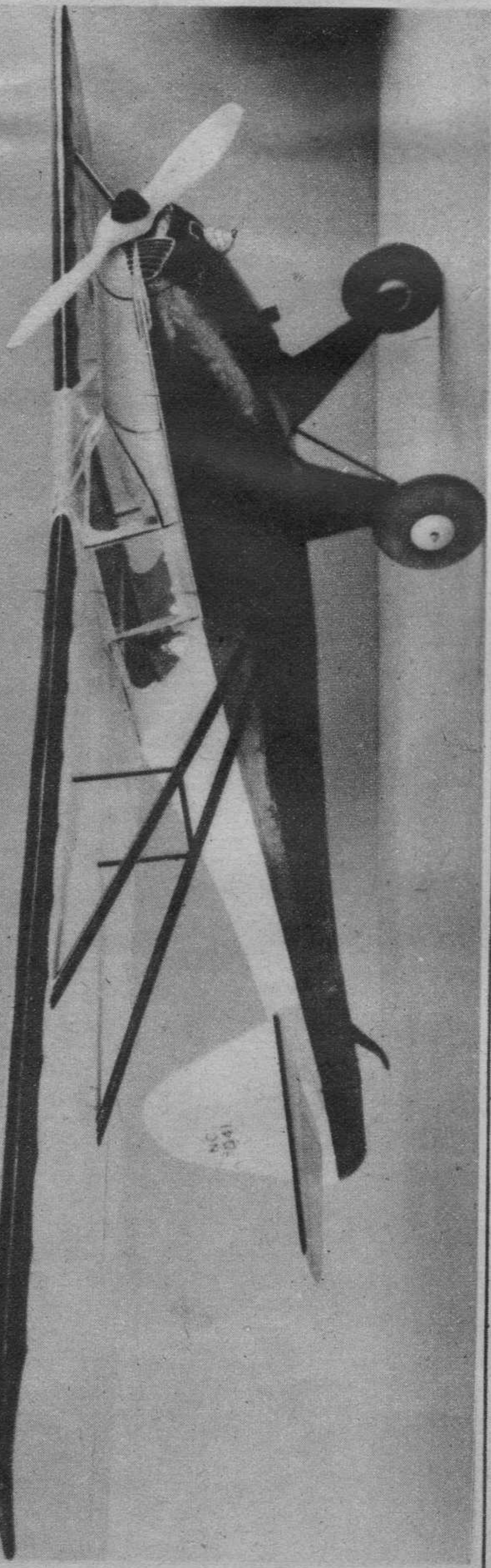
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on the list released by the AMA August 30th. Cleveland has eight. New York City takes a single, solitary first. As the biggest city in the country, New Yorkers' ears should be long and fuzzy. But this poor showing can be blamed to some extent on the lack of suitable flying areas within reasonable distance of the city.

Ross Houck of Ocean Beach won the Southwestern Championships at San Diego this spring. His model is a Sailplane powered with a Super-Cyclone. He's won five of the monthly contests held by the San Diego Aeroneers with this model. . . . Jim Cahill has been promoting the idea of holding AMA-sanctioned indoor record trials at the St. Louis Arena this fall and winter. . . . Ed Lidgard has written an article on model building in the army, which will appear in these columns at a future date. Ed has just finished his mechanic's course in the air corps and expects a transfer to Texas from Chanute Field in Illinois. . . . Winter has come to New England, and the Junior Aviation League has started its thirteenth indoor season. Boston is one of indoor flying's last strongholds. The technique the Boston boys developed went a long way to build up points and give them the club championship at Chicago. . . . Model clubs on the West coast seem perfectly willing to stick by the AMA if the rules are changed to reduce fly-away flights and if the AMA gives the boys a little more attention. They're somewhat touchy on this point.

Editors and manufacturers alike would have less gray hair if there was some way to determine what models the scale builders are making. They're never quite sure what models will click. There's little use in asking for a list of favorites unless the models have actually been built. There are too many interesting airplanes that aren't particularly good scale models. Your letters about the models you build, your success with them, and your tastes in all phases of the hobby are carefully compiled and used as an index when selecting articles. Keep writing. We want to hear from you.

ON THE FIELD. (By Carroll Moon.) Boy, what names these modelers conjure. Our latest find is the Steel City Model Manglers of Birmingham, Ala. Anyway, these guys held their second annual Miniature Air Carnival on August 24th in Birmingham. Officiating at the contest were Sid VanScheck, AMA State contest director, Robert M. Morgan, John Morgan, G. T. Walden and Lewis Watson. Best flight of the meet was turned in by Art Grey, who flew a Zipper powered by a Torpedo, taking first in Class A-B gas. Art turned in 9:37 for his average time. Winners were as follows: In Class C gas, Billy Roden, original design, Ohlsson 60, took first. In Class A-B gas, first was Art Grey with his Torpedo-powered Zipper. Ed Wright won the Class D rubber event with a Flying Cloud. In Class C rubber, R. Lavender was first with a Baby Duration. D. McClusky captured the flying-

(Turn to page 61)

TWO GREAT U.S. NAVY FIGHTERS




WINGSPAN—42"

AIR TRAILS

Above model of the famous Grumman Skyrocket was featured in double-page spread in the SEPTEMBER, 1941 issue of AIR TRAILS.

Grumman SKYROCKET

450 M.P.H. NAVAL TERROR—A twin-motor ship that attains a top speed of 450 m.p.h. . . . climbs 6,000 ft. per minute . . . the most heavily armed fighter in the world. That's the plane Sid Struhl followed in designing the exact flying scale model with a 42" wingspan. Its twin-props give it terrific climb, tremendous stability and no torque. **RUBBER-POWERED KIT WITH COMPLETE INSTRUCTIONS TO BUILD AMERICA'S NO. 1 PLANE**

\$1.50

VOUGHT - SIKORSKY

450 M.P.H. TERROR—One of America's fastest fighter planes now being used from naval carriers. Its inverted gull-wings, ultra wing-to-fuselage streamlining are designed for carrier deck landings. Features 3-bladed prop. Model built to 1/4" scale. **RUBBER-POWERED KIT WITH COMPLETE INSTRUCTIONS TO BUILD THIS TERROR OF THE SKIES**

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|  | ROCKETEER "A" | <p>GAS—Sensational contest winner. Wingspan—40". Class A or B. For Bantam, Ohlsson 19 or 23. KIT: Full-size plans, Stream-lite wheels, Silkspan, Printed sheets, Formed landing gear. Finished prop.</p> | \$2.95 |
|  | JIFFY | <p>GAS—36" Class "A" ship. For Atom, Perky, etc., Full-size plans. \$1.00 Standard KIT: Silkspan, Balsa wheels, Formed landing gear, \$1.50 DeLuxe KIT: Silkspan, Fin. prop, Stream-lites, Cement & Dopes.</p> | \$1.00 \$1.50 |
|  | BEE | <p>GAS—Contest winner that has developed into 1941's biggest seller. COMPLETE KIT: Full-size plans. Formed landing gear, Silkspan, Printed wooden parts, Stream-lite wheels, Cement & Dopes.</p> | \$1.95 |
|  | STREAM-LITE WHEELS | <p>Ultra-streamlined sponge rubber wheels centered with hardwood hubs, fits all ships, blow-out proof.</p> <p>2-Inch Size.....40c PAIR 2 1/2-Inch Size.....40c PAIR 3 1/2-Inch Size.....50c PAIR</p> | 40c PAIR 50c PAIR |
|  | 50-INCH MODELS | <p>RUBBER—Modern 50-inch flyers. KIT: Alum. cowl or spinner as needed, Full size plans, printed sh., land. gear, contest rubber, Balsa prop, Tissues, etc. STINSON "105", MR. MULLIGAN, RYAN ST—\$1.00 EACH</p> | \$1. |

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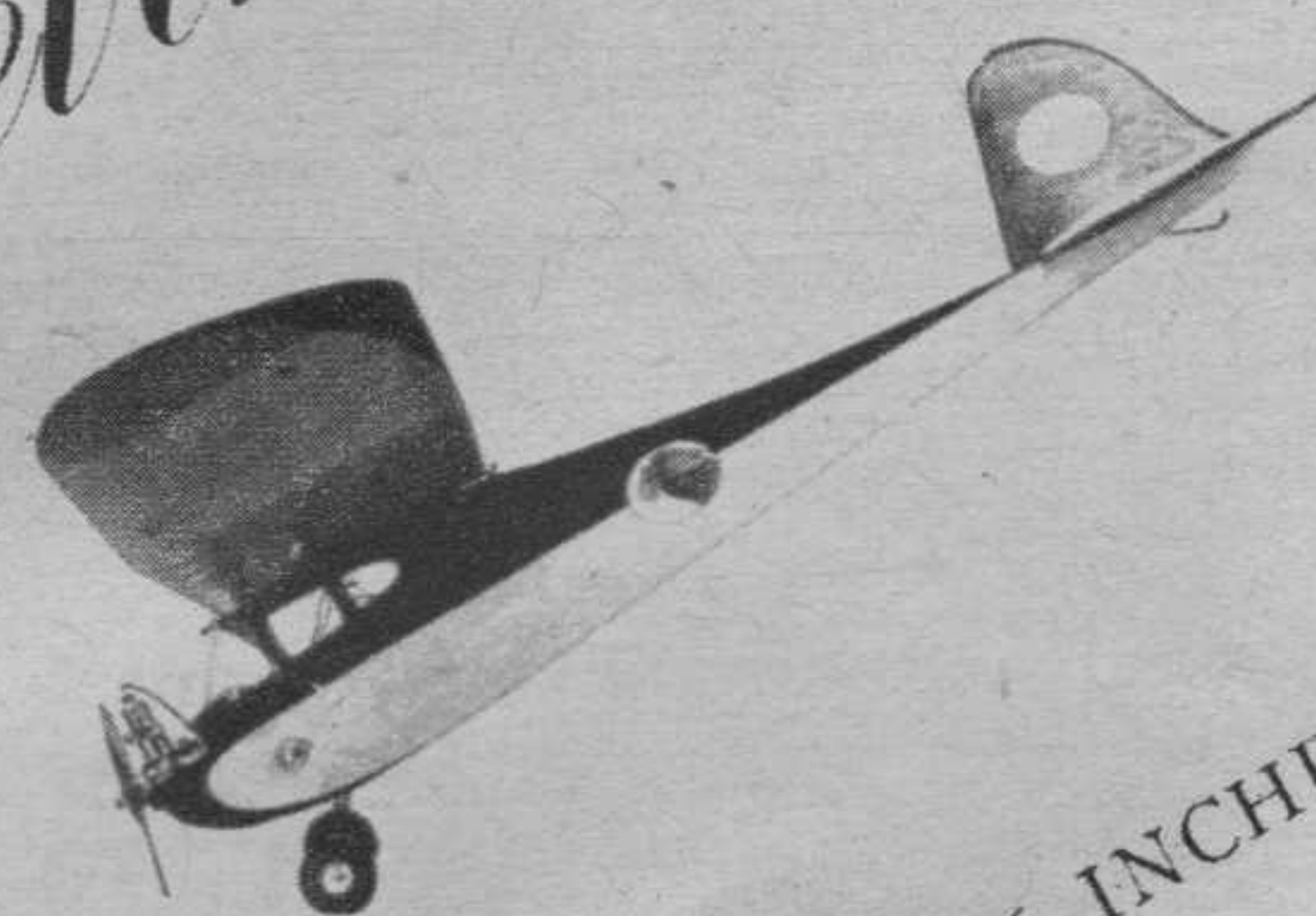
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never before offered*



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CHORD—6 INCHES
LENGTH—25½ INCHES
WING AREA—216 SQUARE INCHES
WEIGHT—12 OUNCES

CONFORMS WITH ALL A. M. A.
CONTEST REQUIREMENTS.

Kit will come complete, less wheels, as
we believe that 99% of the modelers who
build this model will want air wheels.

THE Buzzard Bombshell is known all over America as one of the greatest Class C gas-model planes in the world. It holds so many records that it's impossible to list them all—but just to give you an idea—it set a Class C national record with a flight of 49 minutes and 40 seconds!

This is the great model noted for its simplicity in building—its easy sheet-balsa fuselage construction—its wonderful stability in flight. It has a spectacular climb and a soaring glide. **IT HAS NEVER BEFORE BEEN OFFERED AS A PREMIUM.**

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Model Matters

(Continued from page 59)

scale event with a remarkably well done Stinson O-49. McClusky also won the sailplane event. In the U-Control event, McClusky again scored, with an A. J. Fireball powered by a Brown. Lew Watson was field reporter and Bob Morgan was press reporter.

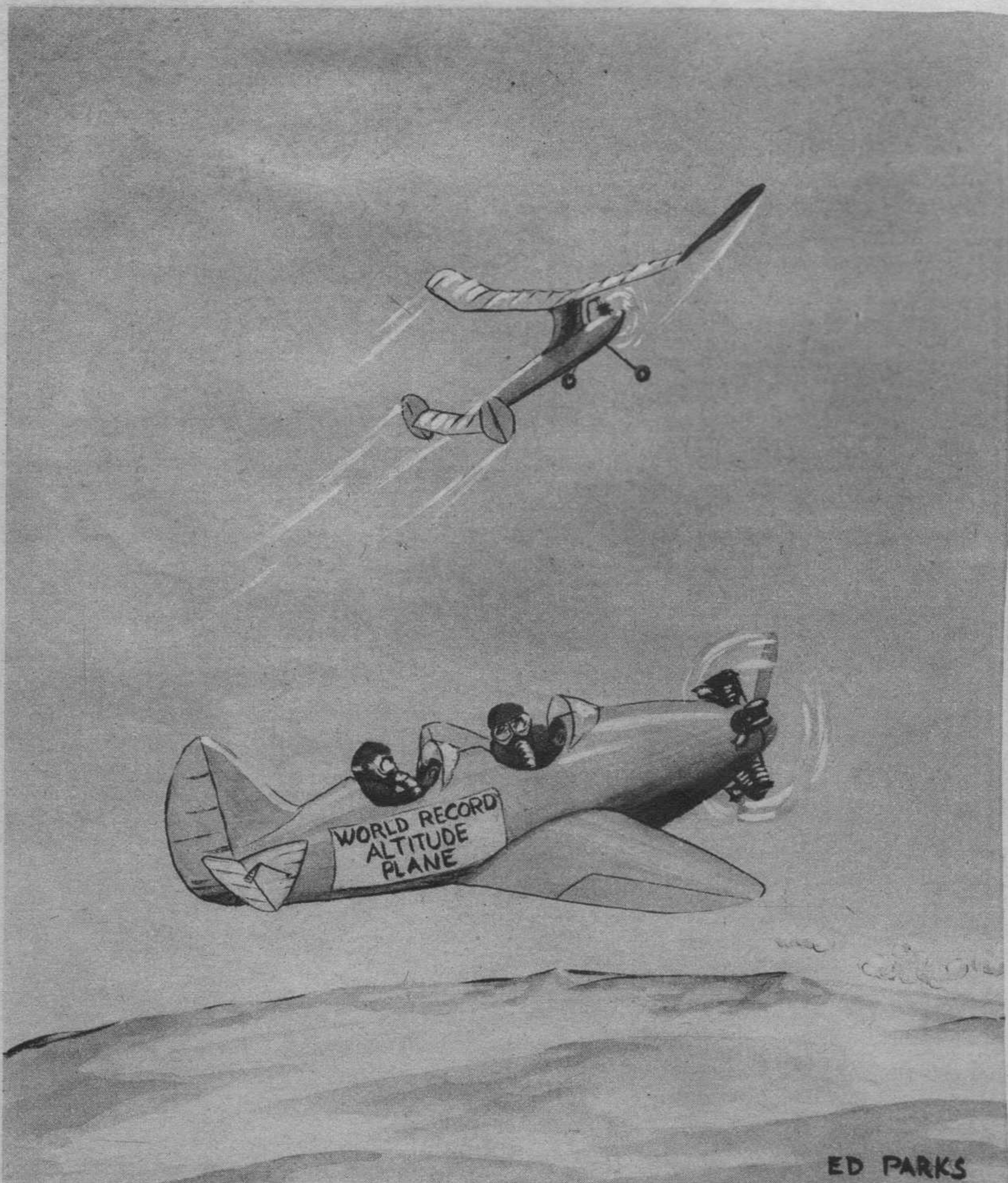
On August 25th the AMA chapter of Nebraska held its annual Nebraska Model Airplane Contest at Muny Airport, and officials reported that it was an outstanding success. High winner among the many entrants was H. O. Parmenter of Lincoln, while his son, Bill Parmenter, also cleaned up. Oscar Olson of Omaha took Class A gas; Bob Hart, Class B gas, and Bill Ruzika, Class C. Entries from Omaha, Fremont, Hastings, Auburn, Fairbury, Wilber, Unadilla, Columbus and Hamburg were reported. Seventy contestants competed. Longest flight of the day was recorded by Max Coover, whose rubber-powered ship turned in a 9:18 flight.

Philadelphia always turns out some swell contests, and the Gas Model meet held September 7th was no exception. Leon Shulman was the high-point winner, and we personally never expect to hear the end of it. Despite a high wind, Leon had plenty of competition, and won out despite his Zombie designs. He captured the Megow trophy for high points, also winning a sizable bale of cash and much hardware. Walt Eggert, Sr., was director of the meet.

Harry Vogler manages to keep a real red-hot interest among fliers in the Pittsburgh, Pa., area, and we hear that his locale will be the site

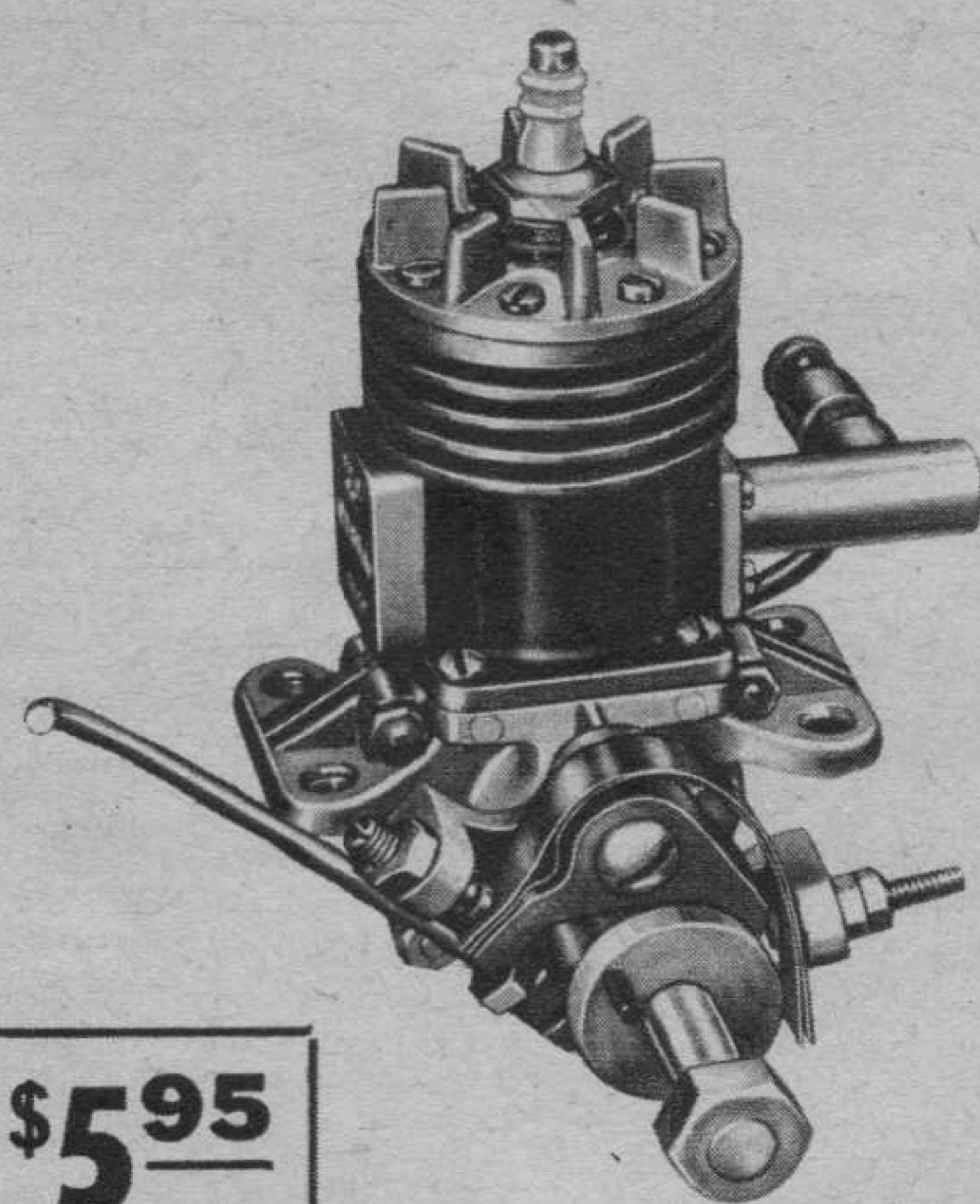
of the Scripps-Howard Junior Nationals in 1942. On September 14th the clubs of Vogler's area held a big-time meet at the Pittsburgh-Butler Airport. Five events punctuated the meet schedule with gas, of course, one of the main attractions. Aaron Latkin took the Class A-B event with a total of 644.2 seconds. Ken DeLannie was first in Class C gas with 635 seconds. Justus Merkel took the rubber fuselage event with 263. Emerich was first in the stick event with a 416.7 total. Norbert Van Tuil won the glider (tow-line event) with 154.5.

They had a big crowd (8,000) at the Ninth Annual Mississippi Valley Model Airplane Meet, held at Parks Auxiliary Airport at Bellevue, Ill., August 17th, and many of the top performers in the country participated in the numerous events. Jim Cahill won the indoor cabin event with 17:21.9. Milt Hugulet was tops in the indoor stick event with 23:49, and Carl Goldberg won the indoor ornithopter event with 3:36.6. Outdoors, R. E. Podolsky (Doc to youse guys) was first in Class A with 15:34.7. Alf Latta took the Class B senior gas event with 8:02.5, while K. G. Pfeiffer won the Class B open gas with 9:32. Bob Wright was tops in Class C open with 15:01, while E. S. Beckman took the open Class C with 15:01. Buddy Cope won the outdoor cabin open with 10:36.1. Joe Limosani won the outdoor stick (senior) event with 10:36, while Joe Vermach was tops (what, again?) in the open stick class with 10:36. George Lambroe won the towline glider event.



"This is as high as I can push her—what've those kids got that we ain't got?"

A REAL GASOLINE ENGINE \$5.95



\$5.95

The only nationally advertised \$5.95 kit that includes a coil, condenser and wires.

Identical Engine Less Coil and Condenser \$4.95

Here is your opportunity to buy a kit of the famous G.H.Q. Gasoline Motor. **ABSOLUTELY COMPLETE — ALL MACHINING DONE — READY TO ASSEMBLE.** All you need is a screwdriver. No mechanical knowledge required.

Everything is in the kit including Champion spark plug, COIL, CONDENSER, tank and cap, ignition wire, cylinder, piston, connecting rod, timer, crankshaft, all screws, nuts, bolts, simple illustrated instructions, etc. Every part is fully machined and finished. **A SCREWDRIVER IS THE ONLY TOOL YOU NEED.** EXACTLY THE SAME PARTS THAT GO INTO THE G.H.Q. ASSEMBLED ENGINE.

AN ENGINEERING TRIUMPH . . .

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Indeed an engineering triumph—accomplished by outstanding G.H.Q. designers and engineers, who have constructed into the G.H.Q. motor everything that years of exhaustive scientific aerodynamic research could produce—geared to the highest possible degree of perfection. But more than that, the acid test . . . an overwhelming response. Thousands of users in all parts of the country are praising, recommending, and endorsing this scientific achievement. It seems as if everyone in America wants one. The most hair-raising thrill you've ever experienced will be yours with the G.H.Q. motor—actually one of the most powerful motors ever constructed. Has broken records for amazing performance.

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4 Port 2 Stroke Cycle— $\frac{3}{4}$ " Stroke—15/16" Bore—300-7,000 R.P.M.—Bearing Surface, 1 $\frac{1}{4}$ " Long—Crankshaft, 5/16" Diam.—Invertible—Rotation, Either Direction—Height, 4 $\frac{1}{2}$ "—Width, 2 $\frac{1}{2}$ "—H.P. Approx. 1/5th. Class "C" under N.A.A. Rules.

Over 50,000 G.H.Q. Engines in Use Today Is Your Guarantee of a Good Investment!!



EVERY PART FINISHED

30 MINUTES TO ASSEMBLE • ALL PARTS WARRANTED

Imagine operating your own G.H.Q. 1/5 Horse Power gasoline engine—small enough to fit in the palm of your hand—yet turning up over 7,000 revolutions per minute and powerful enough to fly model airplanes of from 4 to 10 foot wingspan, and propel model boats from one to six feet in length and midget cars that travel over fifty miles an hour! There are also hundreds of other ways you can enjoy using this miniature yet powerful power plant—for small pumps, generators, compressors, blowers, fans, grinders and countless other experimental purposes.

Your G.H.Q. gasoline engine will be far more than just a toy for your spare moments. It is a scientifically constructed mechanical marvel that will thrill you with thousands of hours of pleasure. You will get a real kick out of controlling with your finger tip the surge of power your engine develops.

This engine has been tested and proven over the last eight years. Over fifty thousand of these powerful little G.H.Q. engines are now in actual daily use. Why not join the ranks of these hobbyists?

ENGINE IS COMPLETE AND READY TO ASSEMBLE!

Your engine comes to you with every part completely finished. Our factory-trained skilled mechanics, using the latest automatic precision machinery, have finished each and every part to the last detail. You merely assemble the parts in accordance with the few simple instructions given, using only an ordinary screw driver, and inside of thirty minutes, your engine is ready to operate.

Not only will you and your friends have the thrill of seeing an engine ASSEMBLED BY YOURSELF operating, but you will gain a knowledge of gasoline engine theory and practice that will be of real practical value to you.

FACTORY ASSEMBLED **READY TO RUN** **\$6.95**
— complete with coil and condenser —

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J. B., Providence, R. I.—"A few weeks ago I received the G.H.Q. motor kit and it is running perfectly. I hope to write you soon and tell you about some excellent flights."

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W. W. M., Russellville, Ark.—"I received my G.H.Q. Motor Kit and am very well pleased."

W. L., Claysburg, Penn.—"A wonderful motor that thrills any air-minded person. Strong and neat looking. As good as motors costing twice as much."

A. K., Hillside, N. J.—"I still can't understand

how you can put such a dependable and rugged engine on the market at such a low price."

E. T., Sayville, N. Y.—"Received my G.H.Q. Kit okay and am more than delighted with same. You've got 'em all beat for price and performance."

R. P., Hamburg, N. Y.—"I want to extend my personal thanks to G.H.Q. for their prompt service. The motor I ordered was received within 24 hours. Such service cannot be surpassed. I also want to say that I have the motor running perfectly. I shall do all I can to help promote the success of G.H.Q."

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Send only \$1.00 We ship same day, Collect C.O.D. for balance

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PLANE TALK SKYWAY UTILITY KNIFE

SAVINGS ON ALL SUPPLIES (the answer to a modeler's prayer)

18" BALSA STRIPS

Select, Hard Stock

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|-----------|-----------|
| 1/16 sq. | 60, 5c |
| 1/16x3/16 | 30 for 5c |
| 1/16x1/2 | 18, 5c |
| 1/16x3/4 | 15 for 5c |
| 3/32 sq. | 25, 5c |
| 1/8 sq. | 20 for 5c |
| 3/16x1/2 | 12 for 5c |
| 1/2x1/2 | 10 for 5c |
| 3/16 sq. | 8, 5c |
| 1/4 sq. | 5 for 5c |
| 1/2x1/2 | 3 for 5c |

18" Balsa Sheets

| | |
|--------|-----------|
| 1/64x2 | 5 for 10c |
| 1/32x2 | 8 for 10c |
| 1/16x2 | 7 for 10c |
| 3/32x2 | 6 for 10c |
| 1/8x2 | 5 for 10c |
| 3/16x2 | 3 for 9c |
| 1/4x2 | 3 for 11c |
| 3/8x2 | 2 for 13c |
| 1/2x2 | 2 for 15c |

3" & 3 1/2" cost twice
18"; 3x36, 4 times.

NOSE BLOCKS

| | |
|-----------|-----|
| 1x2x1 | 1c |
| 2x2x1 | 2c |
| 2x2x1 1/2 | 3c |
| 3x3x1 | 4c |
| 3x3x2 | 7c |
| 3x3x3 | 9c |
| 5x5x2 | 17c |

RUBBER-POWERED ACCESS.

Model Pins 1/2 or 1".....100 for 5c
Sheet Celluloid 5x7 3c, 14x17 15c
Ball Bearing Washer 10c val, 5c
Sandpaper, 12 sheets 5x5.....5c
Lollipop Lights—Dress up display model, 3 lamps, wired, Instruc. sheet, Per set.....60c
Insignia 36—American, French, English, Germ., Squadron, in colors, gummed, per sheet.....5c
Washers, pinhole, 1/8, 1/4, 2 dz. 5c
Prop Shafts, doz. sm. 6c, lge. 10c
Nose Plugs for 5c: 1/2"—8, 3/4"—6, 1"—4.

MACHINE GUNS

| | |
|--------|---------------|
| 3/4" | 2c, 1 1/4"—4c |
| 1 1/4" | Lewis...5c |
| 1 1/2" | Lewis...6c |
| 1 3/4" | Ring Mt. 10c |
| 1 7/8" | Ring Mt. 15c |

BOMBS

| | |
|--------|---------------|
| 3/4" | 2 for 5c |
| 1 1/4" | 2 for 11c |
| 3" | Torpedo...10c |

Thrust bearings

| | |
|----------------|----|
| 1/2 doz., Sm. | 5c |
| 1/2 doz., Lge. | 9c |

Plastic Balsa

| | |
|----------------------|--|
| 4 oz. 23c, 1 oz. 10c | |
|----------------------|--|

PROP. BLOCKS

| | |
|------------|--------|
| 1/4x1/4x5 | 7-5c |
| 1/4x1/4x6 | 8-5c |
| 1/4x1/4x8 | 3-5c |
| 1/4x1/4x10 | 2-5c |
| 1/4x1/4x12 | 3c ea. |
| 1/4x1/4x15 | 5c ea. |

Plywood—1/16"

| | |
|----------------|---------|
| 1/4, 3/16, 1/2 | 40c ft. |
|----------------|---------|

Wing-Tail Light

(3 in a set)
5/16 8c, 9/16 10c
11/16 12c per set

ALUM. LEAF

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| 3 sheets | 5c |
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Razor Sharp—Double Edge Blade! Can't Slip—Refills in a Jiffy. Jobbers—Dealers: 2 for 10c Write for Prices. Post Paid 15c

5 FOOT BALSA

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| Minimum—50c | |
| 1/4x3/4 | 8 25c |
| 3/8x3/4 | 8 25c |
| 1/2x3/4 | 8 25c |
| 3/16 sq. | 6 25c |
| 1/4 sq. | 3 25c |
| 3/8 sq. | 2 25c |
| 1/2 sq. | 2 25c |

SKYWAY GAS MOTORS

No premiums or packing charge on motors. P.P. 15c

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| Ohlsson "19" | 14.50 |
| Ohlsson "23" | 16.50 |
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| Synco B30 | 7.95 |
| Sky Chief | 7.95 |
| Perky "A" | 12.95 |
| Rogers "29" \$12.00 "35" | 12.95 |

BIG ALLOWANCE FOR OLD MOTORS

CEMENT CLEAR DOPE THINNER

Banana Oil
1 oz. 5c, 1/2 pt. 30c
2 oz. 9c, pint 50c
Colored Dope
1 oz. 6c, 2 oz. 11c
1/2 pt. 35c pt. 60c

MICROFILM RUBBER LUBE WOOD FILLER

Liquid Celluloid
1 oz. 9c, 2 oz. 15c

AA TISSUE

All col., doz. 25c
Silver...ea. 5c
Supersilk, wh. 5c

GM SILKSPAN

White, Red, Yellow, Orange, Blue
3 for 25c
"00" .5c a sheet

Bamboo Paper

White or Pervel
5c ea.—6 for 25c
Colors...2 for 15c

FIRST TIME ANYWHERE!

Rogers "KD29"

MOTOR KIT COMPLETE!

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with all purchases over \$1.00 your choice of: (1) Model Builder's Knife. (2) Model Water Sprayer. (3) Choice of 3-20" Model Plans—Curtiss, Heahe, Boeing, Driggs, Bellanca. (4) Masking Tape. (5) Sandpaper, 12 sheets.

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AVIATION PIN 25¢

PILOTS, STUDENTS, MECHANICS, HOBBYISTS—IDENTIFY YOURSELF WITH AVIATION, BY WEARING THIS HANDSOME GOLD PLATED, WINGS, MOTOR AND PROP PIN...WORTH 45c

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Basswood construction kit with working plans and all necessary hardware. Barrel and cylinder are machined.

\$1.45

COLT 45 Cal. "FRONTIER" model kit, 5 1/2" barrel...\$1.55
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All kits make beautiful full scale models. Postpaid in U. S. A.
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Delivering top performance in Class "B" the Pioneer Brown PB-292-K brings you a high quality engine in economical kit form.

Bore 13/16" Stroke 9/16"
Displacement .292" Weight 4 3/4 oz.
Complete with spark plug but no coil or condenser. Special Coil \$1.50, Condenser 20c.

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Price \$4.95

KIT ASSEMBLED
Anyone following simple instructions can assemble, start and operate this engine as all the moving and rotating parts are machined and carefully match fitted at the factory. DESIGN, MATERIAL AND WORKMANSHIP GUARANTEED.

A Product of WILLIAM L. BROWN, 3rd 6636 No. TENTH ST. PHILADELPHIA, PA.

"Don't Quote Me!"

(Continued from page 50)

but they didn't say what the price was! Well, Mercury, how much are those Ohlssons? \$18.50, you say? Right! Incidentally, Mercury is going to concentrate on its plane line and wishes to dispose of the line of boat kits. Going, going—

Dale G. Kilburn of Casper, Wyoming, thinks manufacturers should supply dealers with better booklets illustrating the company's line of models. According to Kilburn, descriptive sheets supplied by Comet, Megow, et cetera, do not fill the bill. His argument is that a good booklet would speed up sales, save the clerk's time, and keep the customers satisfied. Sounds logical.

There's a rumor floating around that Barney Snyder (Modelcraft) is going to dump on the market some hardwood rubber-model propellers to take the place of the Japanese variety, now no longer available. Price will be approximately the same. Barney knows his merchandising. He is also introducing a scale B-19 (1/11" = 1') packed in a beautiful two-color box with a picture of the real ship on the cover. Dealers, that means

turn-over! Despite such standout features as roughly shaped wings and fuselage, and die-cast propellers, price will be only one buck. The North American Mustang will gallop soon from Barney's plant in the form of two twenty-five-cent kits, one a flying version, the other a solid.

Jackson's Models & Supplies is entering the gas-model field in the near future with a new Class A and B gas model. This model has been extensively tested and has very fine flight characteristics.

This year for the first time Philip J. Corr, of Corr's Sport Supply, 812 Ninth St., N. W., Washington, D. C., offered a very fine trophy in the 14th National Model Airplane Meet, which was then put up for competition in the outdoor rubber-powered events. However, following the competition, the various listings of winners which appeared gave credit to Mr. Corr with several pseudonyms—such as "Gorr," "Gort," "Cort," et cetera. Mr. Corr wishes to announce that the family name, which has been associated with the model and cycle business of Washington for forty years or more, is still spelled C-O-R-R.

Boat in a Bag

Daily R. A. F. planes fly over the Channel, the North Sea, the Mediterranean. This Blenheim crew practices forced water landing. Bag contains inflatable dinghy.

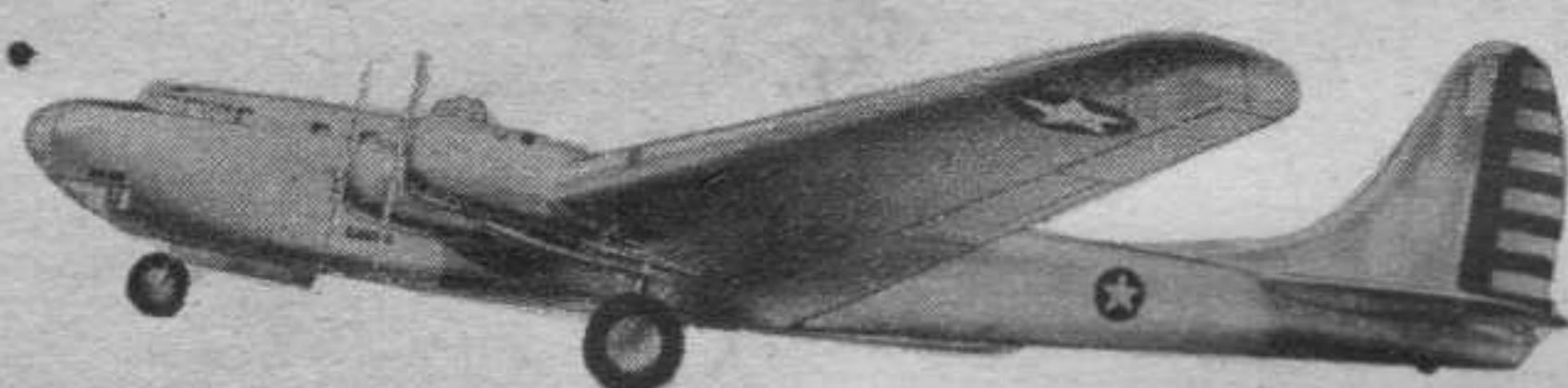
Four men in a boat. Man on left is holding a signal flare. High-pressure flask, containing carbon dioxide, inflates raft in matter of seconds. Food rations are carried.

MODEL CRAFT

FIRST *again* With the WORLD'S No. 1 AIRPLANE *Douglas* B - 19



EXACT SOLID SCALE
REPLICA OF THE "LONGEST-
RANGE" BOMBER—19"
WING SPREAD—FULL
STRUCTURAL DETAILS



HOT from Modelcraft's designing board comes a perfect 1/11" to the ft. scale replica of the new Douglas B-19! This super bomber-transport has a range of 12,000 miles and a wing span of 210 feet. The tail alone is the height of an ordinary 3-story building! Kit is super-complete with four propellers, authentic color scheme, and all details and accessories of this miracle plane. Original plans for the model were drawn by one of the experts who worked on the ship at the Douglas plant here in Santa Monica. Get to your dealer's now and see the actual model—or rush your order **AIR MAIL** to Modelcraft, adding 15c postage.

\$1.00 add 15c postage

Write for Modelcraft's new catalog—it's **FREE**

MODEL CRAFT
7308 South Vermont Avenue
Los Angeles, California

R. A. F. Slanguage

EVERY event, industry or activity the world has ever known has put new words into the dictionary. The last great war gave us such classics as *Big Bertha*, *Archie*, *Jenny* and other expressions which have, in time, become part of the language.

The glib-tongued laddies in the R. A. F. have created a flock of new phrases and expressions, some of which are destined to become part of the language, some of which have already begun to perish.

From English publications, from conversations with R. A. F. men here on duty for convoy, ferry and instruction and from Americans who have heard the expressions and brought them home, this small list of terms has been gathered.

Ack-ack. Originally the rapid-firing light antiaircraft guns; now applied to antiaircraft of all calibers.

Angle upward. Zoom; climb at an exaggerated angle. Also *angel upward*.

Ash can. Retractable or ejectable gun position. Also *dust bin*.

Balbo. An enemy squadron leader.

Bandits. Germans. The term *Jerry*, left over from the last war, is still widely used, particularly by the older officers.

Beat it up. Dive-bomb the antiaircraft. Also "make whoopee" in town.

Black. A glaring error.

Blotto. Gone berserk, savage, usually from excitement of "overtankage."

Boobed it. Missed it, muddled it.

Bomphlets. Dropping propaganda onto enemy or occupied territory.

Bomphleteer. The fellow who drops propaganda.

Brassed off. Bored with inactivity.

Browned off. Depressed; fed up, bored.

Bumps. Landings.

Chatterbox. A machine gun.

Chit. A message or dispatch. Also order.

Confetti. Ammunition for the machine guns.

(Turn to page 64)

Photo Credit List

The following list shows the sources from which credited photos were obtained. Abbreviations: bot., bottom; T., top; U.L., upper left; U.R., upper right; L.C., left center; R.C., right center; L.L., lower left; L.R., lower right; Cen., center; T.C., top center; B.C., bottom center.

Page 6—All by Pvt. K. Sponholz from P. P. C.

Pages 10-11-12-13—All by Douglas.

Page 14—Top L., Wide World; Bot., A. V. Swaabe.

Page 15—Top to Bot., Boeing photo; British-Combine; International; International.

Page 16—Top, International; Bot., Press Assoc.

Page 17—All by British-Combine.

Page 18—Top, American Airlines photo; Cen., Official photo U. S. air corps, Randolph Field; Bot., Braniff Airways photo.

Pages 32-33—All by Harold Kulick.

Pages 34-35—Curtiss-Wright photo.

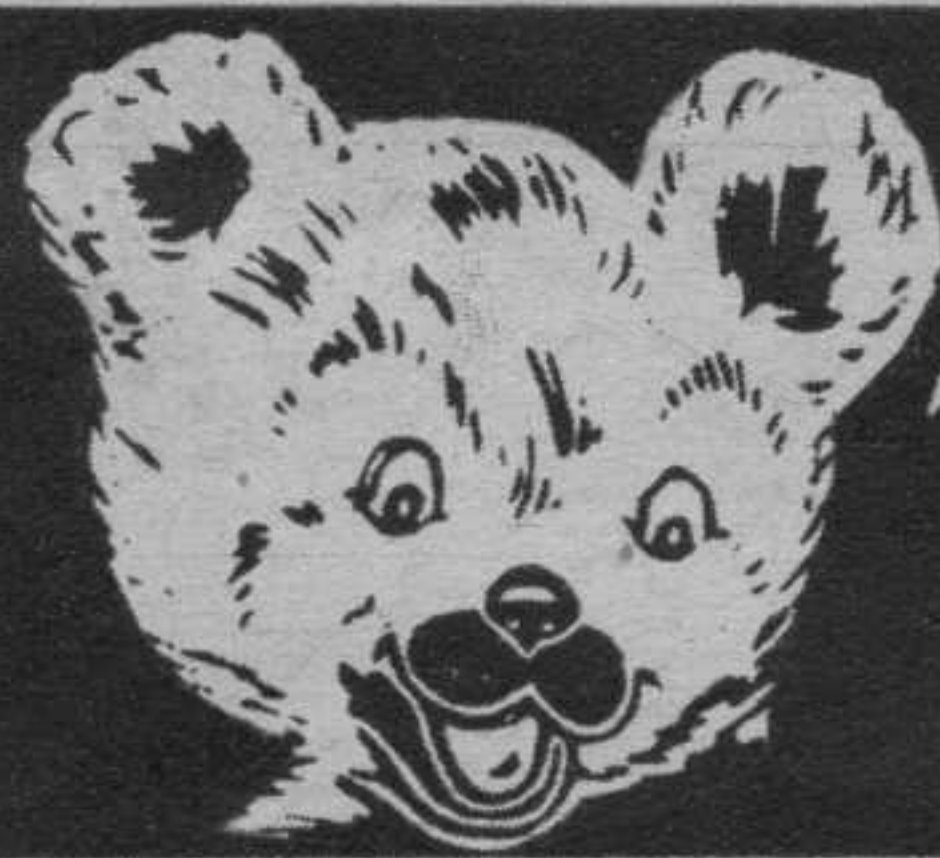
Page 43—Al Daraghy.

Page 47—Harold Kulick.

Page 49—Rudy Arnold.

Page 62—British-Combine.

Page 64—Three Lions.



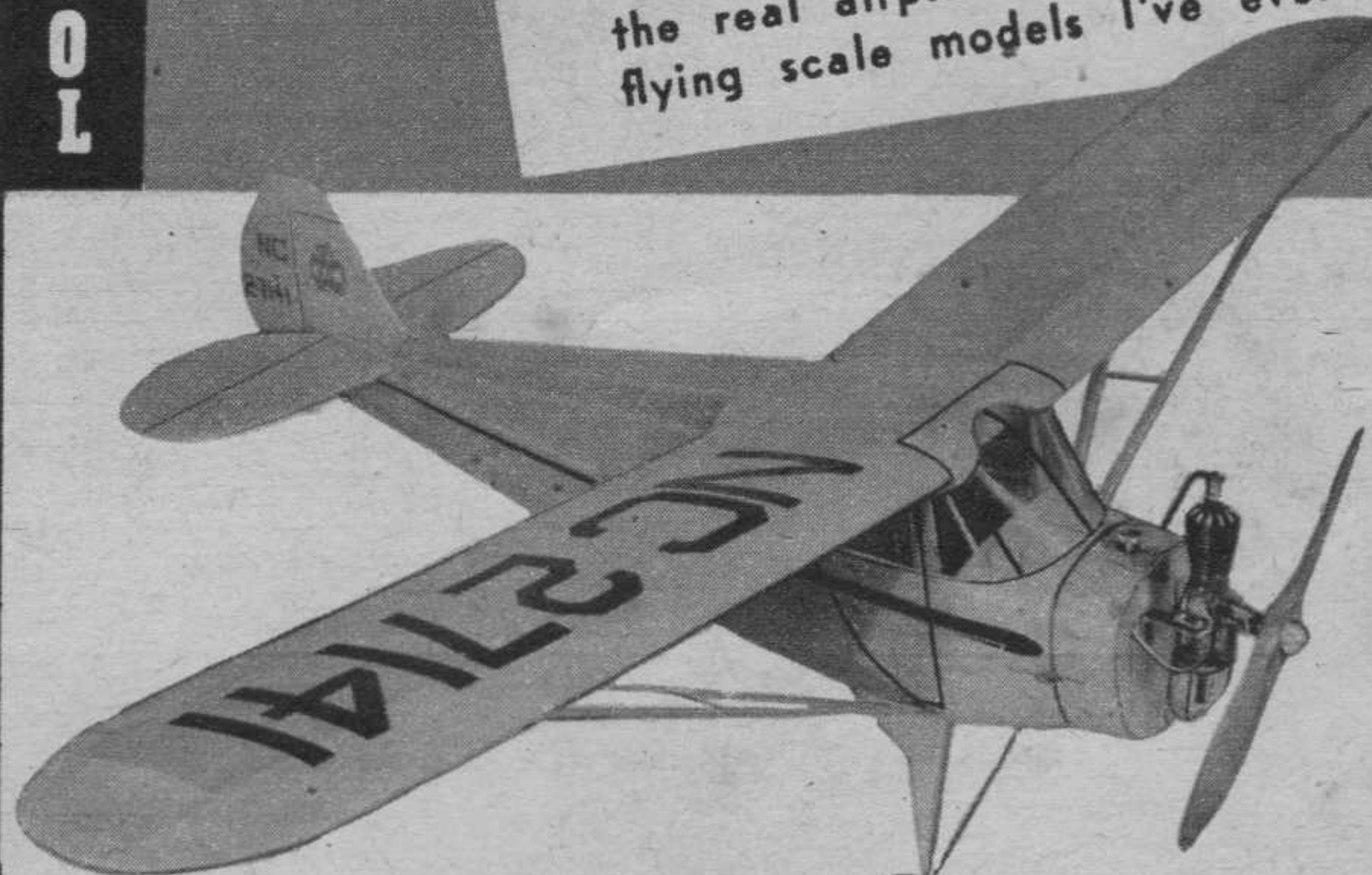
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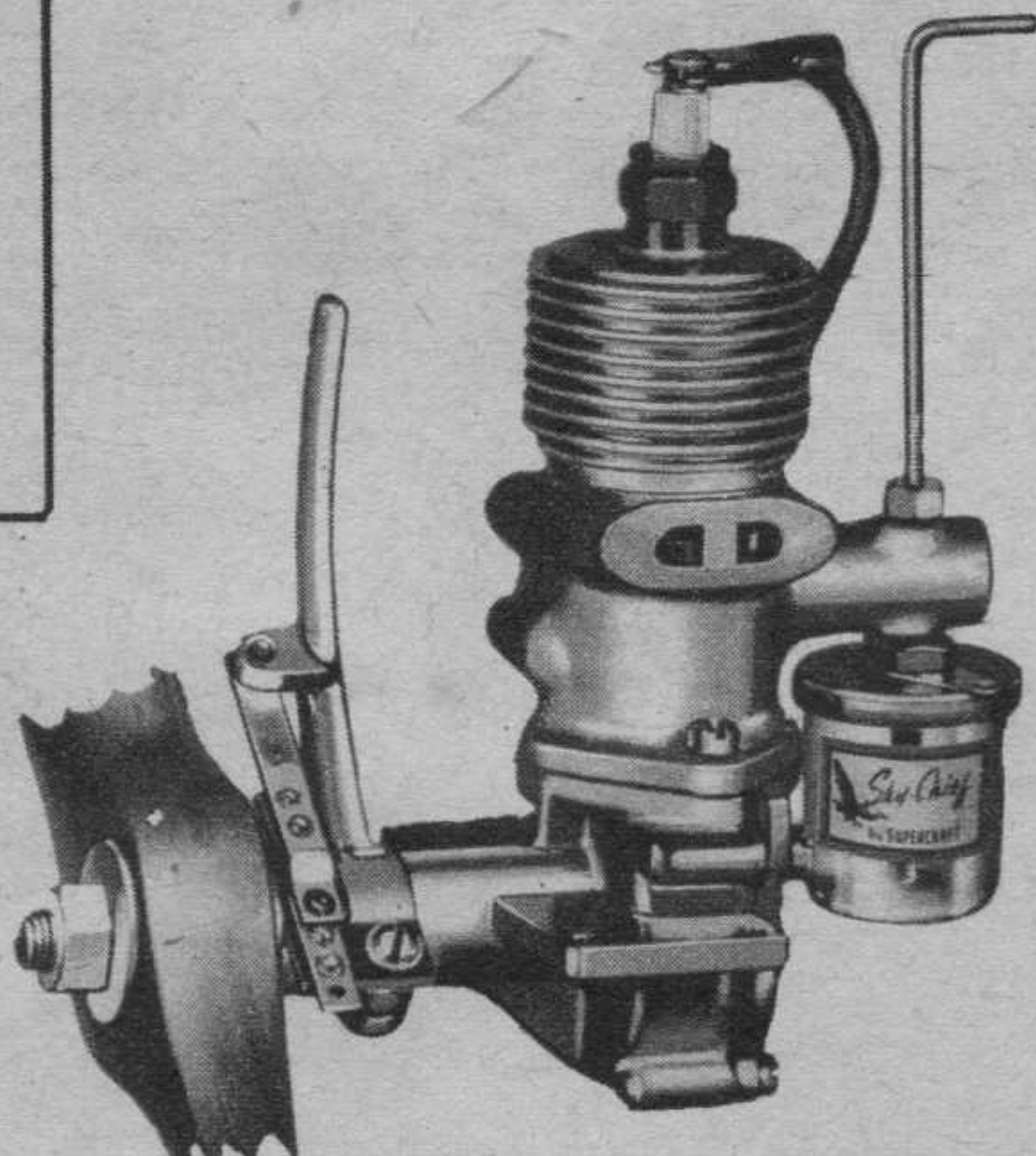
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Deck. The concrete base for a balloon platform.

Doing a Wilkie. Making too hasty a check-up.

Flak. Antiaircraft bursts; from the German: *Flieger Avwekn Ka-none.*

Flap. Making a fuss, usually about something trivial. Also an air fight.

Flat spin. Harassed.

Flip. A short trial flight.

George. The automatic pilot.

Get cracking. Get going.

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Greenhouse. The cover, glass or plastic, for the pilot's cockpit.

Hangars. Sausage or barrage balloons.

Ham fist. A clumsy pilot or mechanic.

Hip flask. A service revolver.

Jinks. Make a quick bank.

Jump out the window. Bail out.

Kites. Airplanes. (A mechanic's term.)

Mae West. A breast life preserver.

Met blokes. Meteorologists.

Mouse traps. Submarines.

Mud. Flak spraying on the plane.

Nobes. Nobody's business.

Ops. Operations.

Picking a pinpoint. Locating an airplane on the ground.

Pulpit. The transparent nose or rotatable tail turret on a bomber.

Roller skate. A tank.

Rumf. Red tape; forms to be filled out.

Salvo. Dropping a number of bombs at the same time.

Scramble. Take-off.

Scrambled eggs. The gold oak leaves on an air commodore's hat.

Shoot a line. Brag.

Stick. Bombs released at intervals.

Tail-end Charlie. The rear gunner. Also the last airplane in a formation, assigned to shift position constantly in order to ward off unexpected rear attacks.

Tally-ho. "We are in contact with the enemy."

Target. An enemy airplane.

Taped. Solved a problem.

Tiffy. Engine-room worker.

Tore a strip off me. Received a reprimand.

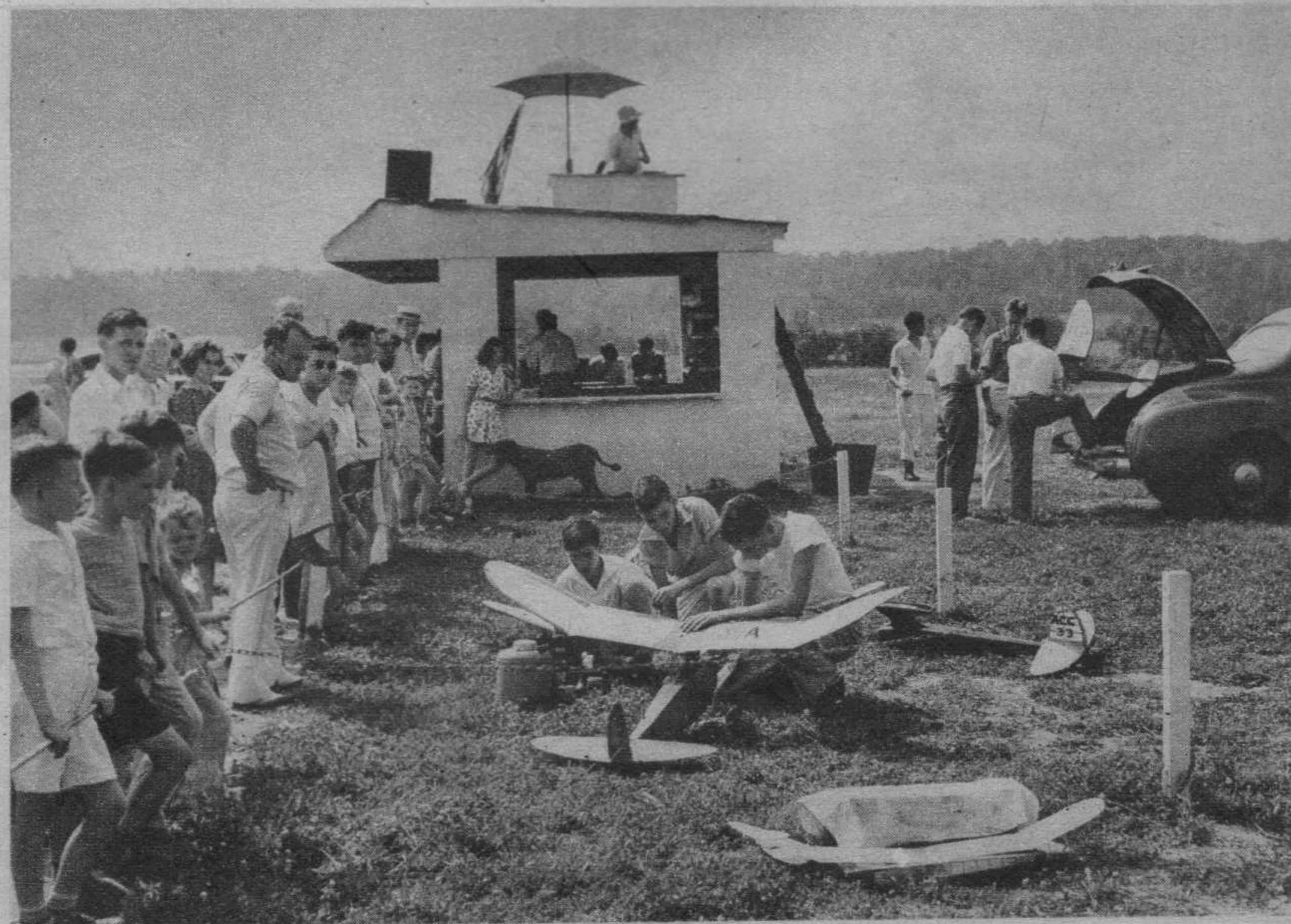
Wailing Winnie. Air-raid siren.

Written off. Killed or crashed in action.

Modelers Have Private Airport

Baltimore Aero-Craftsmen have Modelhaven Airport, complete to anemometer, sleeve, vane.

Modelhaven has its control tower, too. Traffic controlled by loudspeaker instead of radio.



Air Trails Advertisers December 1941

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While every precaution is taken to insure accuracy, we cannot guarantee against the possibility of an occasional change or omission in the preparation of this index.

What's Your Question?

(Continued from page 8)

Question: In your May, 1941, issue of Air Trails, in the article "Water Preferred," by Howard Hasbrook, it stated that a seaplane can land on land with safety. I would like to know how it is done. L. D. R., Jr., Royersford, Pa.

Answer: The keel of a seaplane float is built very strong, so it can stand impact with the ground without damaging the pontoon. The seaplane is landed on the ground very much the same way as a landplane, the only difference being that it is not dropped but rather flown in for a landing.

Question: What type of planes were used in the movie "Flight Command"? How many Lockheed P-38s are there in service at present? R. B., Lenoir City, Tenn.

Answer: The airplanes used in the movie "Flight Command" were Grumman F3F-2 fighters. Sorry, we do not know how many Lockheed P-38s are in service at the present time.

Question: Could you tell me where I could obtain "Book of Modern Airplanes" and "All American Aircraft"? W. W., New York City.

Answer: "Book of Modern Airplanes" can be obtained from the Garden City Publishing Co., 14 West 49th St., New York City; "All American Aircraft" from Thomas Y. Crowell Co., 432 Fourth Ave., New York City.

Question: Can you please tell me the name and address of the Culver Aircraft Corp., makers of the Culver Cadet? G. T., Buffalo, N. Y.

Answer: The Culver Aircraft Corp. is located at 600 East 35th St., Wichita, Kans.

Question: In your September issue your answer to a question contained the expression "powered with a geared 75 h.p. Lycoming engine." What did you mean by a geared engine? H. H., Lynwood, Calif.

Answer: A geared engine is one in which the propeller shaft is driven through a series of gears rather than direct. This enables the engine to revolve at a high speed, thereby increasing the horsepower while the propeller turns at a slower speed, which in some cases is desirable for efficiency.

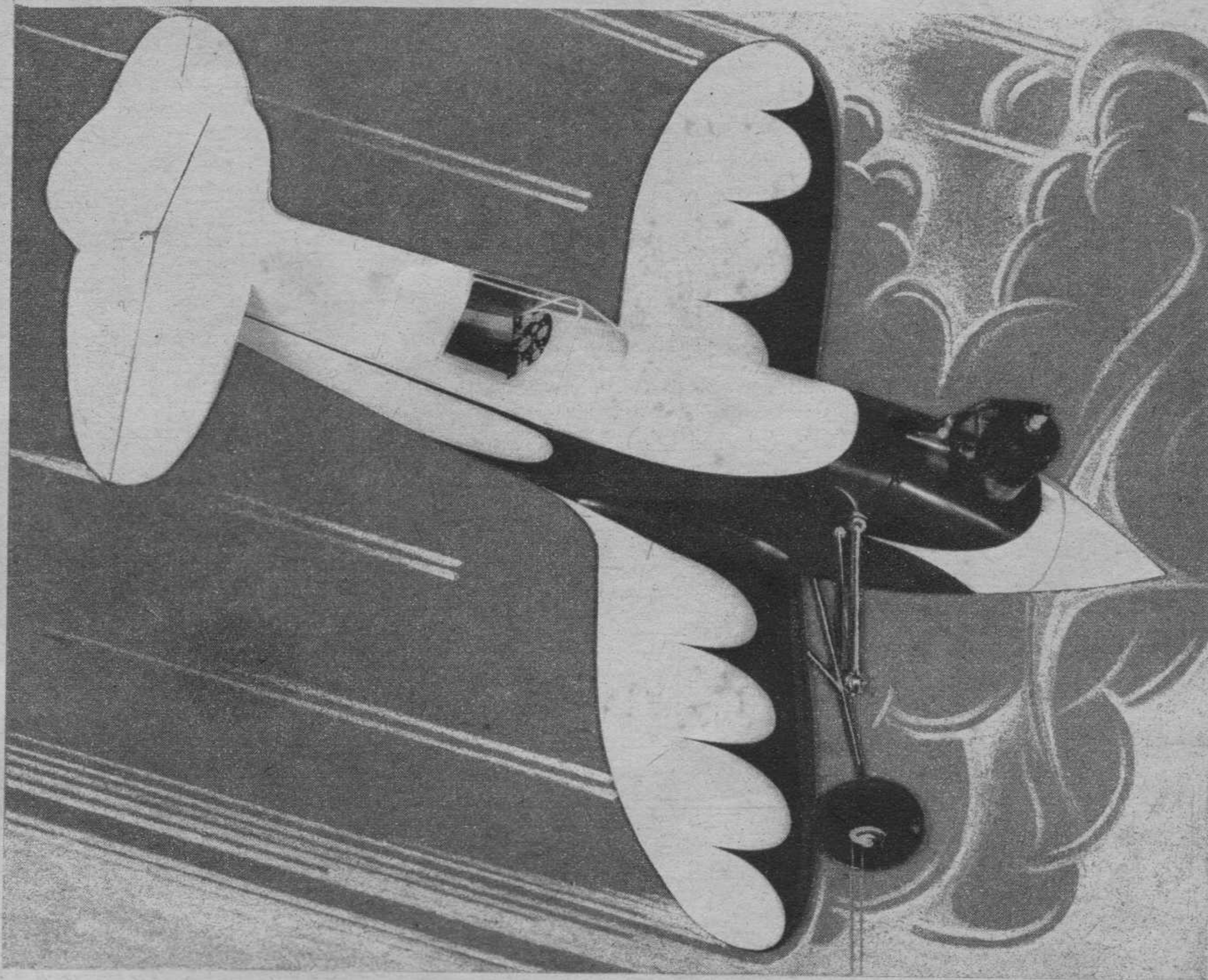
Question: In reading about lighter-than-air craft I often see the expression "gas cell" used. Just what are gas cells and how are they used in such craft? M. B., New York City.

Answer: In lighter-than-air craft the gas is not contained in one huge bag or cell, but in several small units or cells. This is for safety in case of leakage or repair. One of these cells may be deflated without harming seriously the buoyancy of a dirigible. In large rigid-frame dirigibles there are many of these small cells, each fastened to the internal framework. Small free balloons are in themselves single gas cells.

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IT'S HERE, A Sensational New Directional Control System, SUPER "G" LINE FLYING, and a Sensational New Elevator Control Model, the SUPER "G" SHARK illustrated above. Especially designed for Super Speed and Stunt Flying, this Mighty Shark roars through space at tremendous speeds of over 100 M.P.H. Yet, so simple in construction and operation that even the beginner will experience no trouble. May be powered with any Class "C" Motor, such as the Ohlsson "60's, the Tiger Aero, the Super Cyclone, etc.

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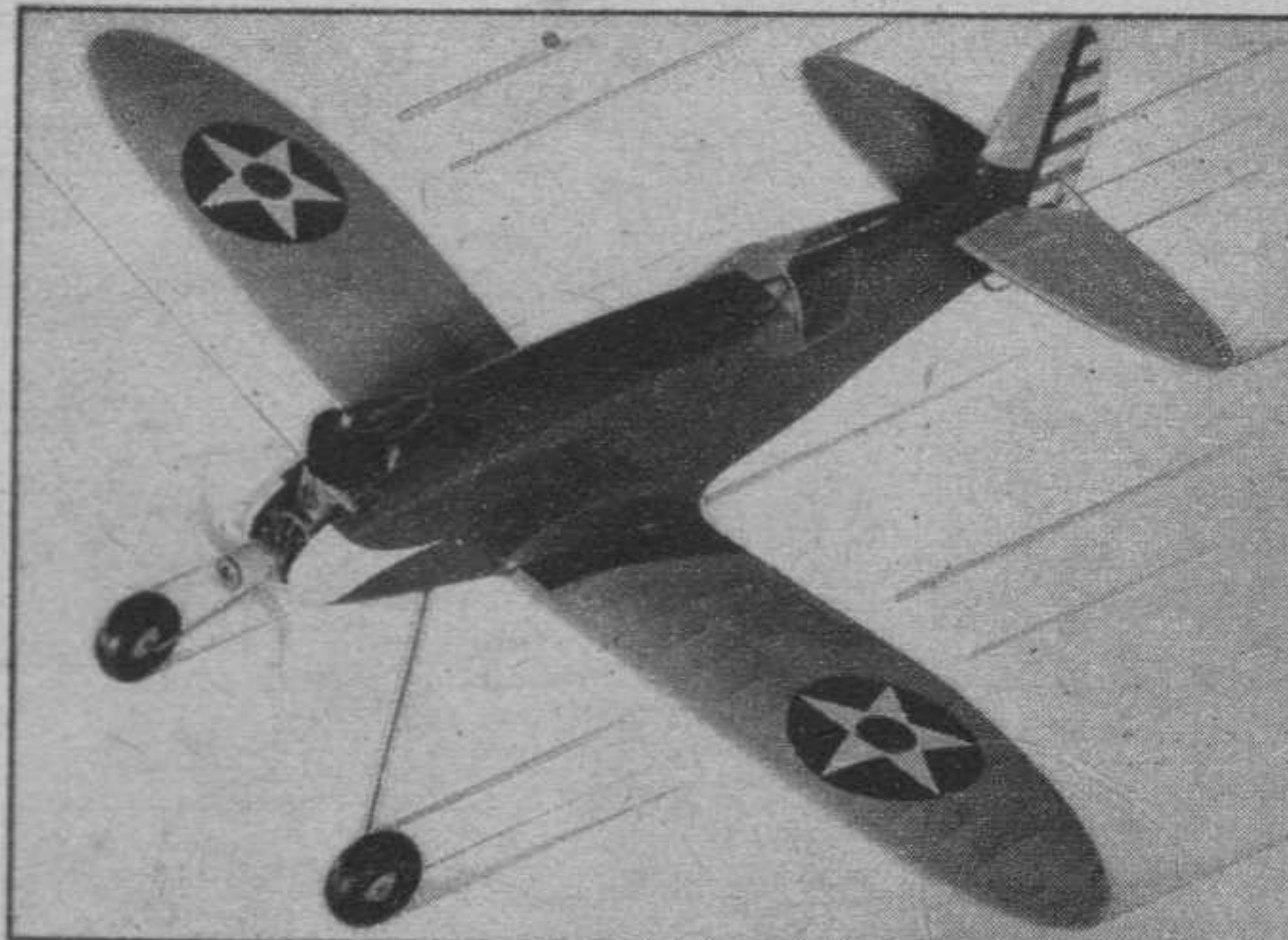
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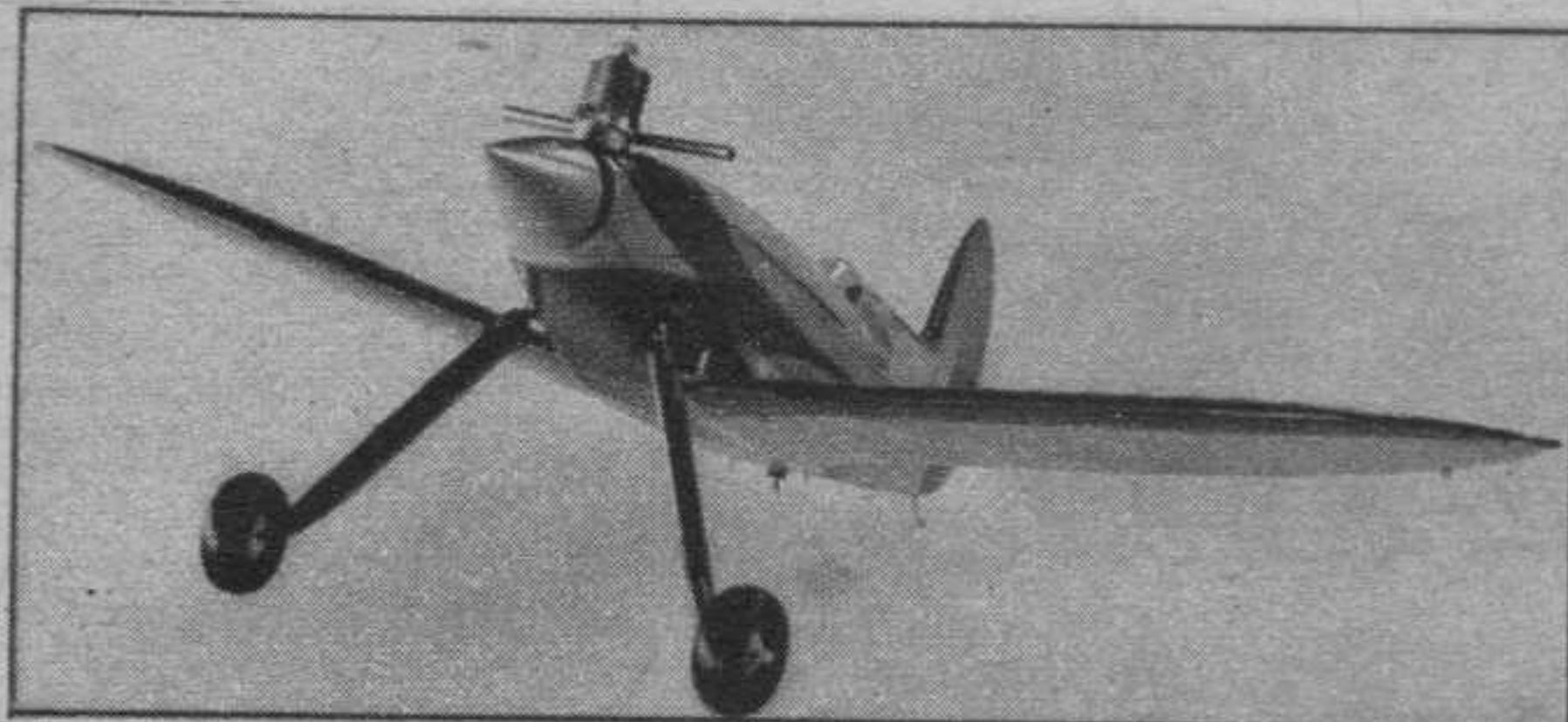
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TIGER SHARK SPEED DEMON



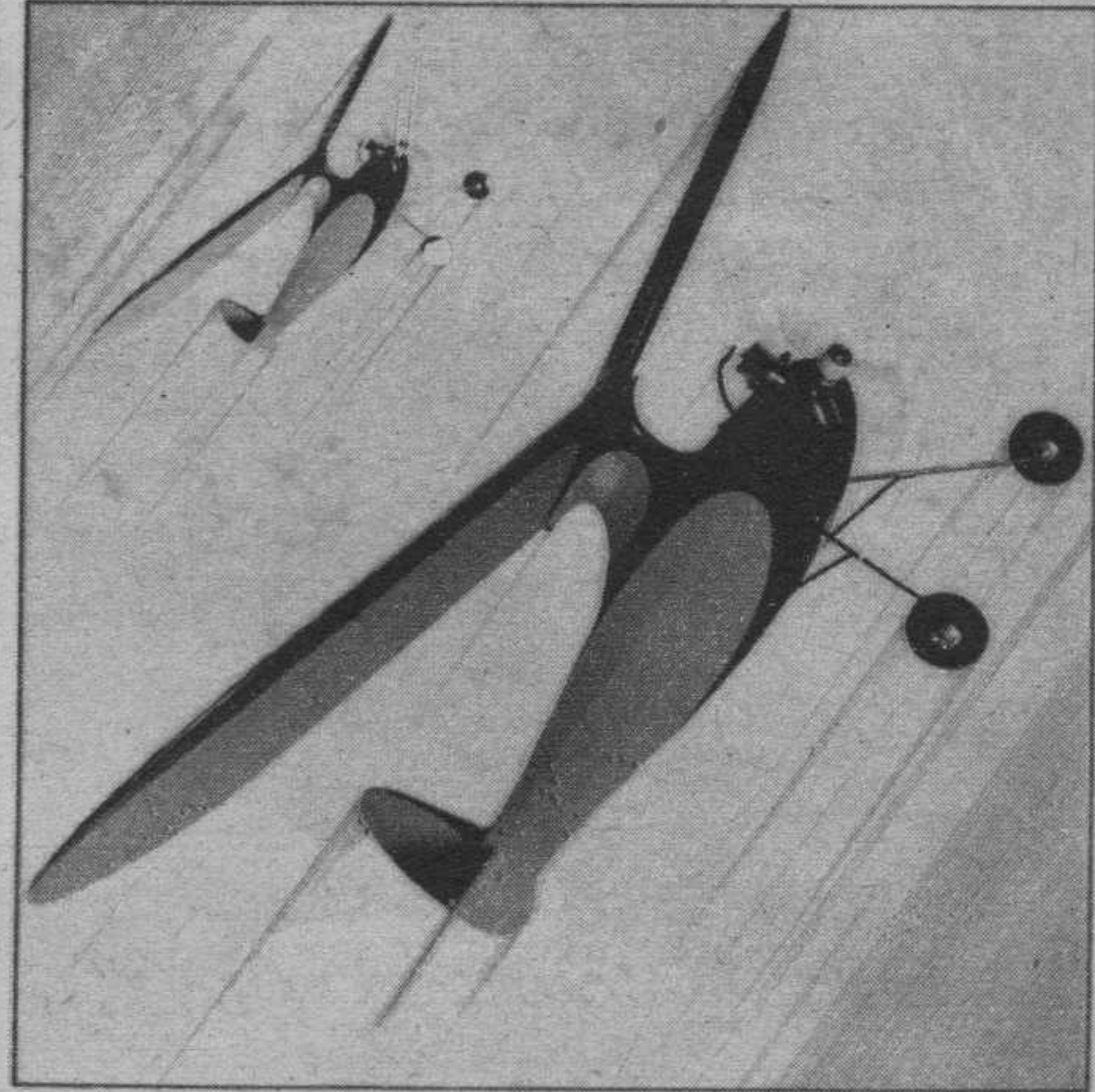
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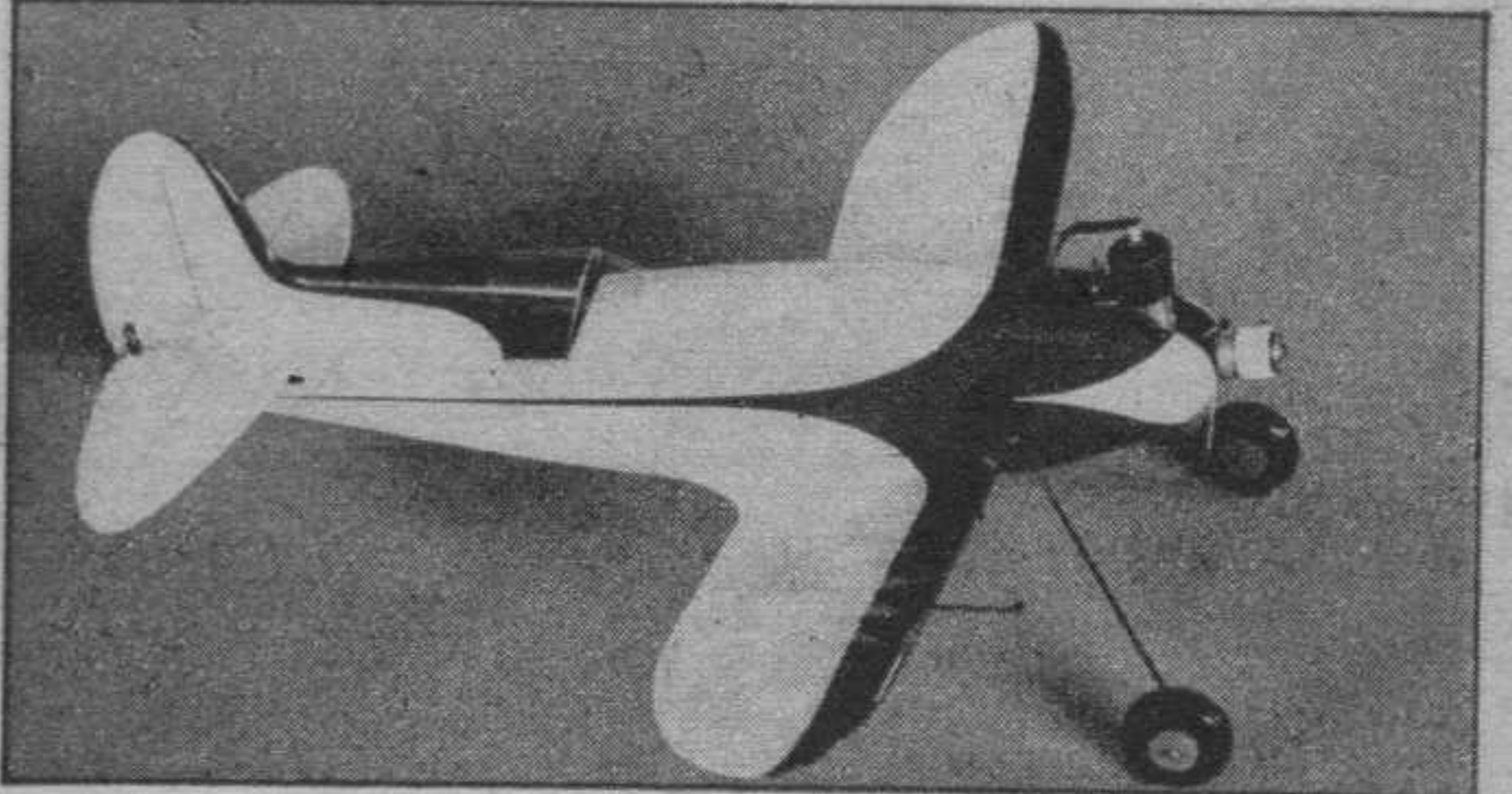
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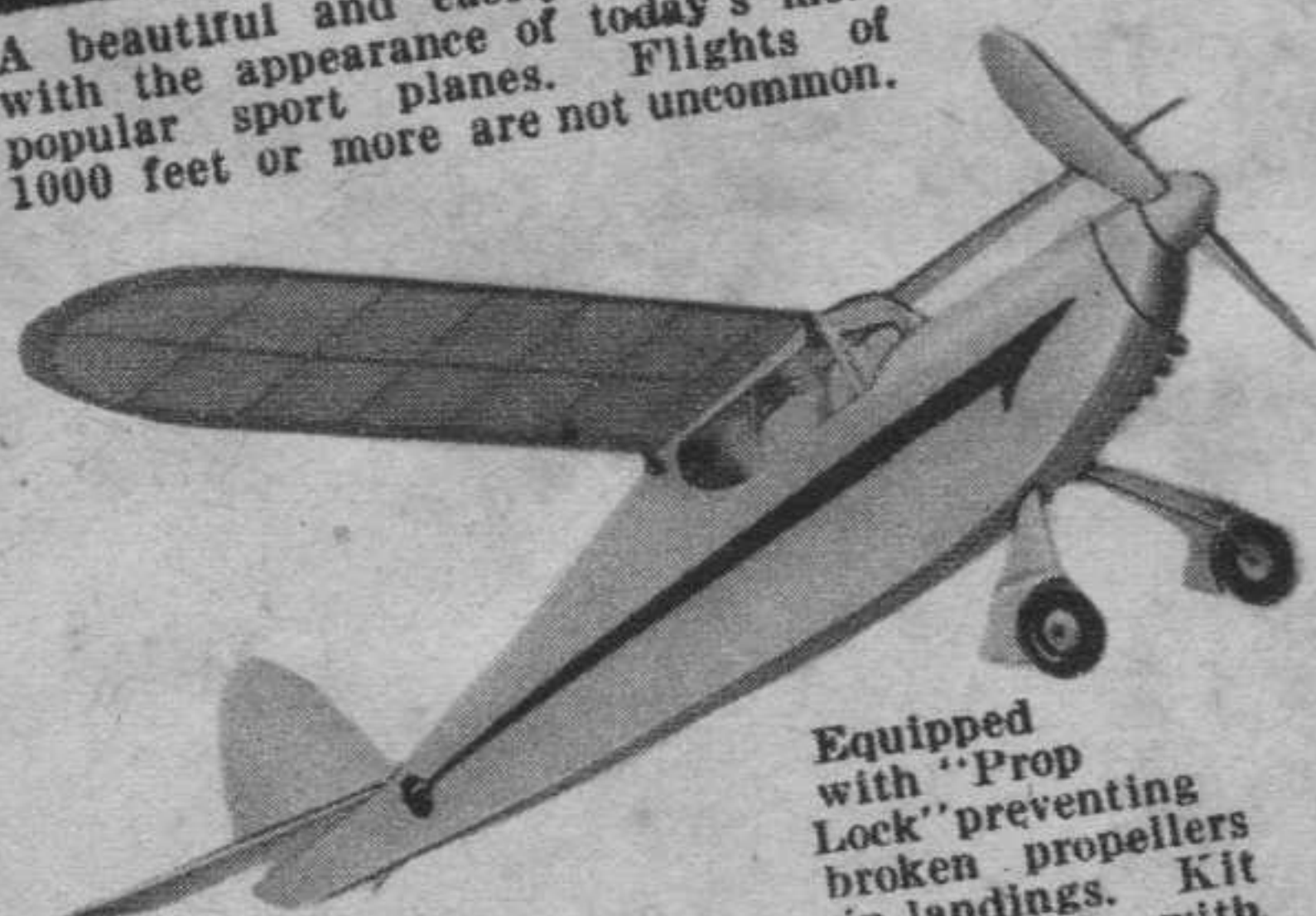
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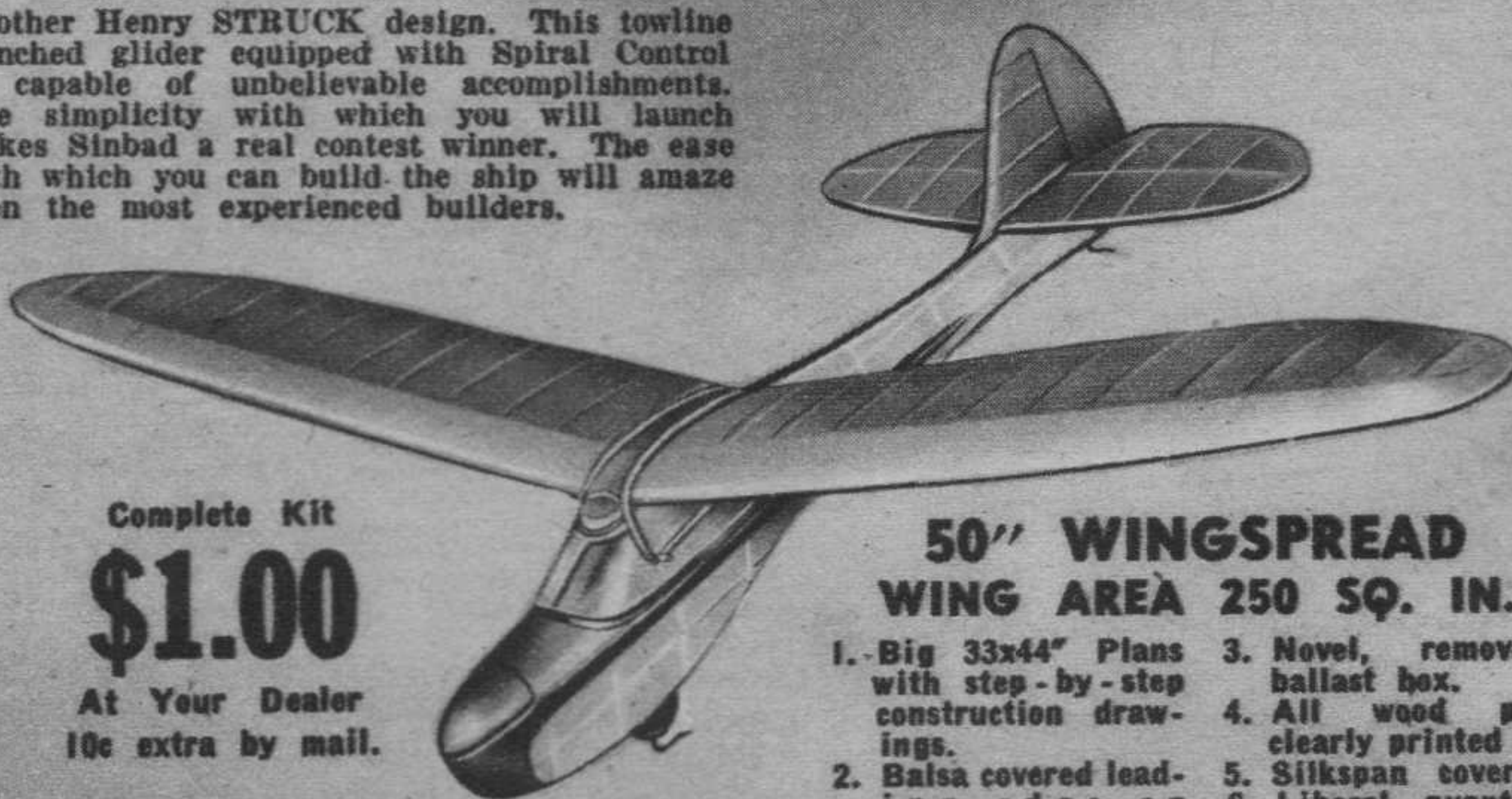


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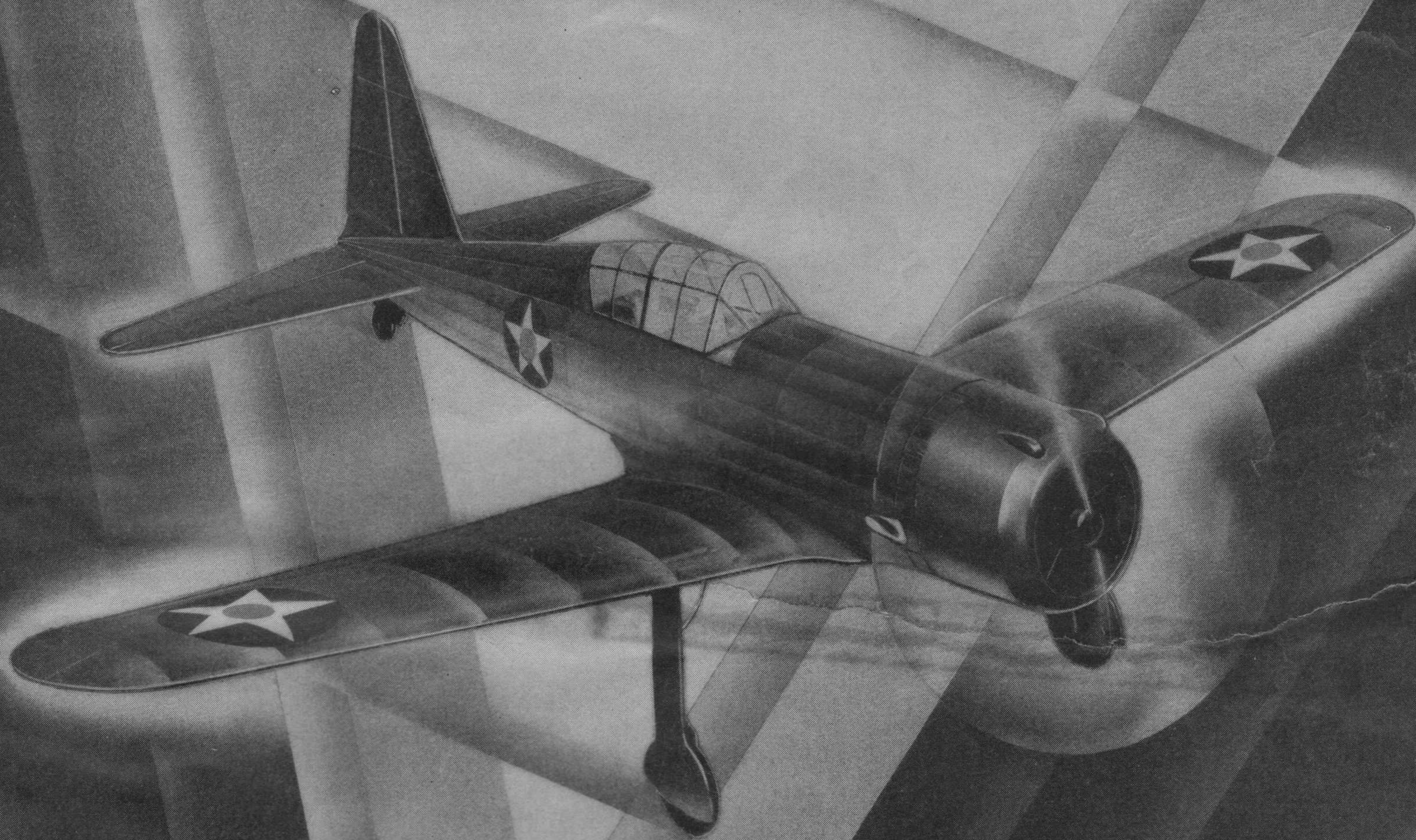


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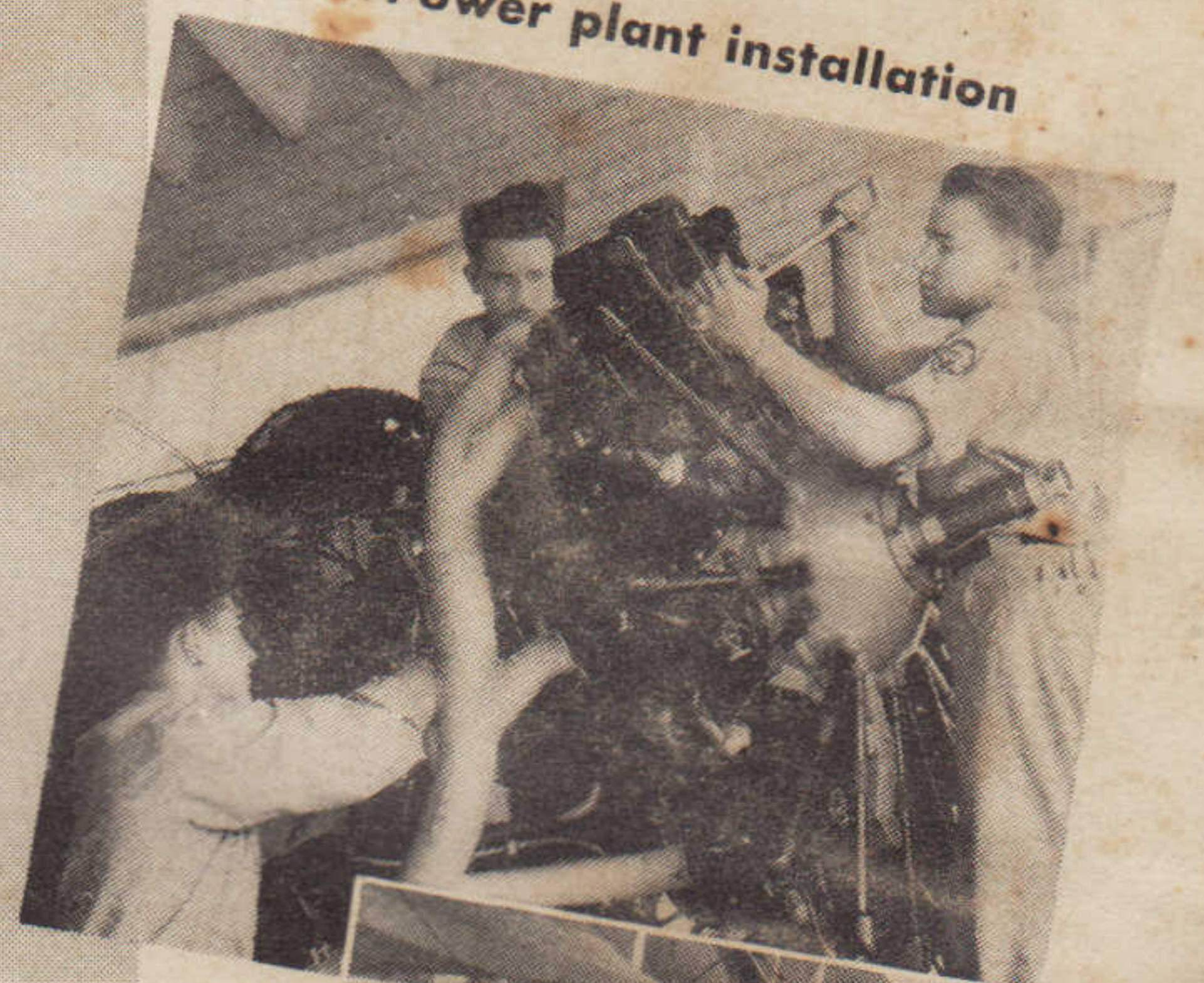
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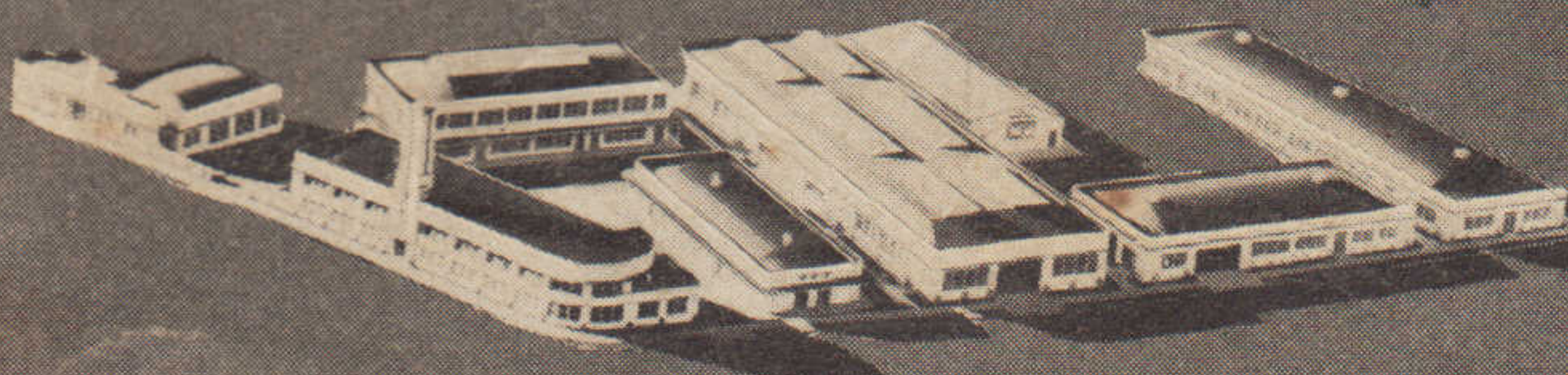
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Please send information on Aero I.T.I. training for Aviation careers. I am interested in the following branch of Aviation: ☐ Aircraft Mechanics; ☐ Aeronautical Engineering; ☐ Undecided, please send more information. Years High School: ☐ 1, ☐ 2, ☐ 3, ☐ 4. Years College (Liberal Arts): ☐ 1, ☐ 2, ☐ 3, ☐ 4. Years Engineering College: ☐ 1, ☐ 2, ☐ 3, ☐ 4.

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