

An Encyclopedia  
of the

# GOLDEN AGE OF MODEL AIRPLANES

Volume 3

Through World War II  
to the introduction  
of glow engines

1941-1949



Reproductions of Original Catalogs

PLUS

Selected Stories and Plans from This Period



THE ULTIMATE PICTURE BOOK  
FROM AN ERA LONG PAST

AN ENCYCLOPEDIA OF THE  
***GOLDEN AGE OF MODEL AIRPLANES***

Volume 3  
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Plus  
Selected Stories and Plans  
From Old Magazines of This Period

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## **DEDICATION**

This Volume is dedicated to all  
those modelers who started  
flying in the '20s - '30s or '40s  
are living and continue to fly or influence  
the history of model aviation:

(i.e. Modelers in the U.S.)

Harold deBolt  
Stu Richmond  
Leon Shulman  
Sal Taibi  
John Worth  
Frank Zaic

plus  
Modelers on A.M.A. Honor Rolls  
or  
Honored in other ways  
plus

The Ronnie Moultons and Vic Smeads  
from Britain, whom we will never forget.

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## INTRODUCTION

Welcome to the beginning of my own personal world (perhaps yours too ?!) of model airplane history.

In late '41, as a kid in public school, building solid scale models, I read all the mags and wetted my appetite for lots of free-flight and u-control models .... then actually built and flew free-flights such as the Jersey Javelin - Ad Astra - Brigadier - Airfoiler - Phoenix's - American Ace and Powerhouses, etc. .... also u-controls such as Tyro - deBolts' Bipes and Speedwagons - Hot Rock(s) - and a Zilch, etc.

Exciting times for this kid was watching the 'old (at least in their 30's) pros', who visited the Toronto area for the Canadian Nats (C.G.M.C.) And various Eatons' contests.

An early memory was about Harold deBolt (longtime friend) then living in Williamsville (Buffalo) New York, about 90 miles from Toronto, Canada. Hal always tried to make our Nats and Eatons' contests. In '47, our U/C Nats at Varsity Stadium, on Bloor St. in Toronto, really became the Canadian 'deBolt' Nationals where he won A - B - C- D Speed plus Stunt with a pre-production Drone .49 powered Super Bipe .... as a kid, I watched these wins, awestruck ! Spectators treading on lines resulted in one of his Mac .49 powered Speedwagons (clocked at 122 !) breaking loose, arcing up over the Stadium, clearing the roof of the adjacent hockey arena, then finally knocking a chunk off the parapet wall of the roof on the Royal Ontario Museum .... at about 11 P.M. in downtown Toronto ! ... under the stadium lights with the mist of unburnt castor oil and the cloying scent of nitrobenzene hanging in the air .... memories !!

The added thrill of Fran McElwee with his Drone powered R/C, assisted by Leon Shulman, flying at an Eatons' contest in Toronto are more memories !

I'm sure you'll also have many memories which will surface as you enjoy fingering through this volume.

While researching the magazines of this era I found pictures and information on a good looking kid called Paul MacCready Jr., from New Haven Connecticut, who held the 1941 Junior National Records in Indoor and Outdoor Autogiro. At the 1941 Nats, Paul (15 years old), having won some Indoor and Outdoor events was named Junior National Champion .... little more than a month later (at 16) he'd soloed in a Piper Cub .... and became a Navy Pilot in '43 .... this is THE Paul MacCready of Gossamer Condor fame (first human powered aircraft to perform a prescribed figure - 8 pattern one-half mile long, 1977) and Gossamer Albatross fame (first pedal powered aircraft to cross the English Channel, 1979) .... two incredible engineering feats ! .... and more, such as the radio controlled Pterodactyl which followed .... some Modeler !!

In Golden Age Volume 2, I said that Charlie Grants' theory of 'Center of Lateral Area or Law of Rotational Stability' was finished after Goldberg developed his Zipper. This never diminished the fact that he had an unwavering belief in the value of model aviation for American youth, and worked at it !

We're all fortunate in having Stu Richmond give us more insights into 'Uncle Charlie', pages 4 and 5.

I could not believe how quickly modeling developed into many new events before 1949 .... 'specially u-control while radio control continued to struggle along with a single frequency .... and those of us who were interested had to 'cook' the XFGI or RK-61 tubes to gain extra life.

The advent of Ray Ardens Glow Plug and subsequent development of the K & B Infant engine took us to modeling heights by 1949 that no one dreamed of before World War II.

Those of you who lived this era will recall memories as you finger the pages .... those of you who weren't as fortunate can enjoy and actually see where all this modeling action came from.

I hope all of you will enjoy this book as much as the fun I had reminiscing, while compiling it.

**Frank Anderson**



**"The Long (and supposedly untold) Story Behind the Origin of the Grant X  
and the Clark Y Airfoils" ..... By Stu Richmond**

In early 1984 I started getting long phone calls from Charlie Grant who was living in Manchester, Vermont. Each incoming phone call made me feel a bit like I was being called by God himself ! He would talk to me about model theory and design, about manufacturing and aeronautics...and about life in general.

During this time I was among the most-published of the model airplane writers and Charlie found me through the office of Model Builder Magazine. He'd lecture me repeatedly on the need to TEACH. He'd say, "Stu, you've gotten the respect of the magazine editors it seems ... now you GOTTA DO MORE THAN ENTERTAIN YOUR READERS - YOU MUST TEACH!!!

But first please let me back up to a time almost fifty years earlier and give you some background to this story. In the 1930's, Bob Allen and I were model airplane buddies...we lived just a few houses apart in Worcester, Massachusetts. Bob's parents got him a subscription to Flying Aces and my parents had gotten me a subscription to Model Airplane News. Bob and I spent hours together...building models and reading about the doings of Phineas Pinkham and the teaching of Charlie Grant. I tended to concentrate on building models that flew rather than scale-like models that looked pretty...I tried to learn basic aeronautics from the Grant articles published in Model Airplane News. I still have Grant's Article No. 51 entitled "Proportioning Your Model For Stability" torn and saved from the June 1936 issue of MAN...when I was seven years old.

When I reflect back, Charlie Grant had quite some influence on my life. In 1947 I lived adjacent to the campus of Worcester Polytechnic Institute, a fine engineering college. But I enrolled at Georgia Institute of Technology in Atlanta because they had the Gugenheim School of Aeronautics right there in Atlanta ! I graduated from Georgia Tech, but not in Aero Engineering. I was having a terrible time in all the aero math and World War II was over. An English professor named Glen Rainey told me I was dumb to persue Aero Engineering when the US deserts were full of left-over airplanes that were all preserved in "mothballs" for future use. Rainey convinced me that America's future needs were not in airplanes, but were in factory management, and I graduated in December 1951 with a Bachelor of Science degree in Industrial Management. Rainey, like Grant, had done me a favor because I've been essentially retired from private industry (the photo finishing business) since 1973. Since 1973 I've been able to devote much time to model aviation...I'm among the lucky few... today I write the "Sunday Fun" column that appears in R/C Modeler Magazine.

Please let me now take you back to the incoming phone calls from "Uncle Charlie", as I was now calling him. I had visions of a smart elderly gentlemen living on a meager pension of some sort, spending much of his money calling me to get/have a willing listener. If I wasn't home, he'd talk with my wife, Lynn, at great lengths about models and life in general. At different times he mentioned his "first issue of editing Model Airplane News, which was in February 1932...that he never really learned to spell but the MAN Advertising Manager talked him into coming to New York and taking the job, and that he didn't need to know how to spell well, to be their editor". He detailed how he had enrolled earlier in Princeton University to lean the mechanics of structures, but dropped out to join the Army about 1918. The Army sent him to a short school held at MIT, graduating him as a 2nd Lieutenant in 5 months from which he luckily got assigned to McCook Field. He got this "cherry" assignment through his aero-interest background.

Another phone call detailed how, as a youngster, he built a boy-carrying glider and it's first crash broke a fuselage longeron and it speared through the front of his winter jacket and out the back side...the longeron just grazed his skin...his tales were always entertaining. Happily, I made notes during his phone calls !. One time he told me his mother was the daughter of Dewitt Clinton of America's railroad heritage. Other times he told me his father was the designer of many of America's railroad bridges built as the railroads pushed westward.

Then one day his phone calls dropped a "bombshell" on me. He said to me..."I'm the originator of the Grant X airfoils...and NOBODY knows where they came from. Next time I call I'll tell you about their origin...and about the origin of the Clark Y airfoil too !"

Finally...the next phone call came. It began with the story of how he regarded himself as being a scientist based on the facts of nature. One of his favorite sayings was, "nature never lies". The call proceeded to how he ran a boys' summer camp in Vermont...and took the earnings to buy 300 acres which he finally surveyed and cut up for residential housing...and he could afford these lengthy phone calls which were his remaining pleasures in life. In this phone call he swore that NOBODY KNEW THE ORIGIN OF THE NOW-FAMOUS GRANT SERIES AIRFOILS...and that I was going to be the first person he ever shared this background with. I was in awe and I still believe he was telling me the straight facts.



He used to watch fish swim in a local stream...and after hours of study he determined that trout were the fastest swimmers he observed. He'd look down and study for hours...and he believed the study unlocked for him the SCIENCE OF AIRFOILS FOR EFFECTIVE AND EFFICIENT FLIGHT. The youngest trout were the slimmest and seemed to swim the fastest. The oldest trout were the fattest and heaviest and seemed to swim the slowest. He managed to catch a young, an old, and a middle-aged trout and took them home. He stood them up and fully arched their backbones to maximum natural flexion as he looked on from above ...AND TRACED AROUND THEM IN THAT POSITION onto a piece of paper on his mother's kitchen table. The young trout was the slimmest. The maximum body width was about 8% of the fish's length and that became the Grant X-8 airfoil. The letter "X" has always stood for the mathematical unknown and since Charlie wanted to preserve his secrecy, the "8" was preceded by the letter "X". (Pretty smart, huh ?). The Grant X-10 and X-12 falls right into place behind the X-8.

Using these 'airfoils' on early model airplanes proved out that "nature never lies". Models with the Grant X-8 flew the fastest and carried the least load; models with the Grant X-12 flew the slowest and carried the heavier loads more easily. Charlie Grant became famous through his family of airfoils !!

And now for the origin of the Clark Y airfoil. When Grant was commissioned a second lieutenant and assigned to McCook Field he was an "aero design" engineer under the command of a Colonel Virginius Clark. Earlier, in 1916, it was understood that the French had carried forward the scientific research of flight dynamics further than others and the United States bought, for the sum of \$250,000 US dollars, complete access to the French research. Colonel Clark and a Major Martin went to France and brought back the files of data which were locked in the vault at McCook Field. Grant's wife, Lillian, was the librarian and keeper of the vault. Colonel Clark was, as Uncle Charlie told me, known to have a "drinking problem". One day Clark checked out from the vault the entire French aerodynamics file, sat at his desk with Martin (they'd both had a few drinks) and proceeded to slide into the metal wastebasket section after section of the data from France. Colonel Clark laid a single solitary section of the files on his desktop and hollered to Grant something like "Grant, you're famous for your Grant X airfoils...this section is the ONLY GOOD THING WE GOT FROM FRANCE FOR OUR \$250,000, and I'm gonna call it the CLARK Y and I'll be famous like you."

The janitor emptied the wastebaskets into the furnace that night and the "lock 'n key" remaining data was essentially destroyed except for that which became the famous...Clark Y airfoil still in use. My own most-recent original design R/C model design called 'CHEAP FUN' uses the Clark Y airfoil that survived that drunken/burning incident as told to me by Uncle Charlie Grant.

The downside of the Clark Y airfoil is that both Clark and Martin were tried for destroying "vital government property" and were subsequently court martialed and dishonorably discharged from the U.S. Army. I assume all that was told to me was true/factual. If so, YOU are among those very first few to know the origin of these famous airfoils...I thank Frank Anderson for allowing me the opportunity to share this with you.

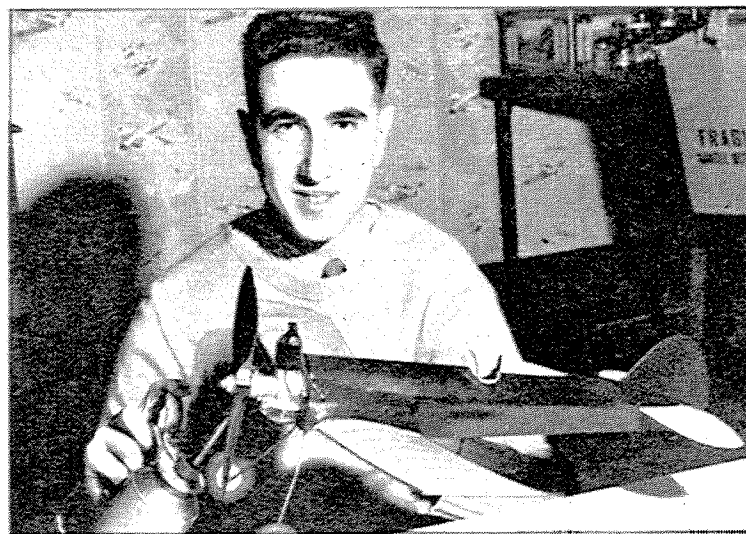
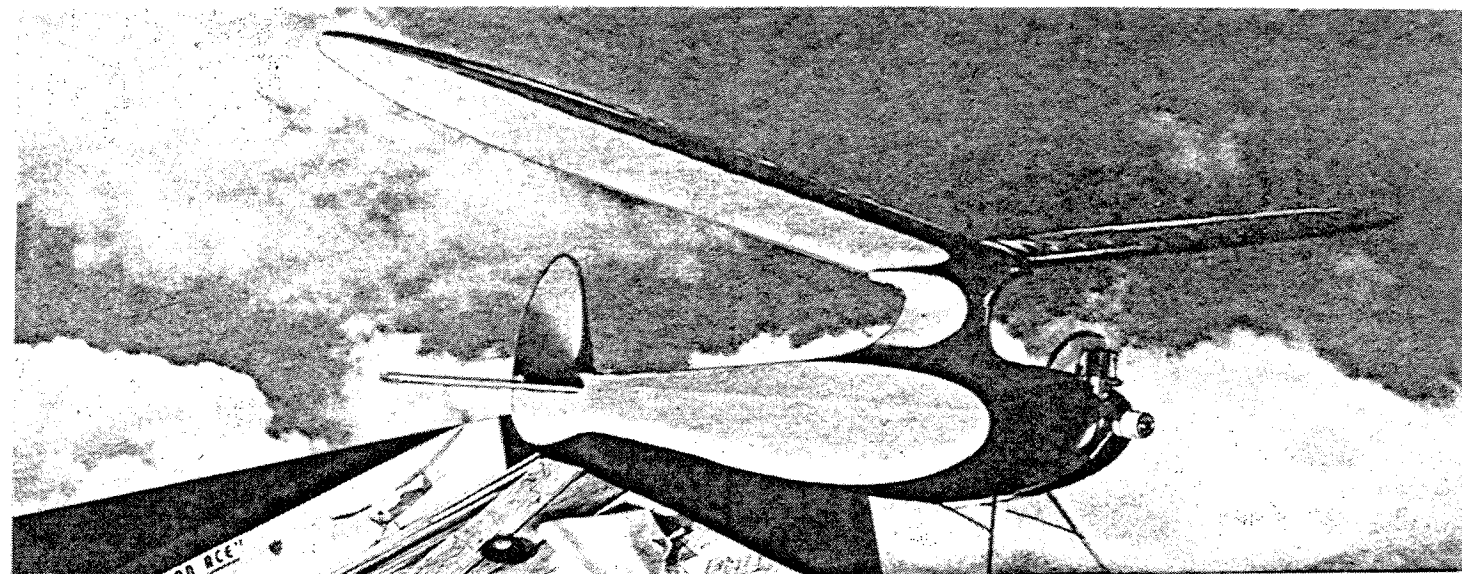


PHOTO - MICRO BUILT AD APRIL 1947

**ANOTHER SPEED RECORD** - Control line, Class 1, Senior National Speed Record established by Stuart L. Richmond at the 1946 New England U-Control Championship Meet plane powered by an Arden .099.

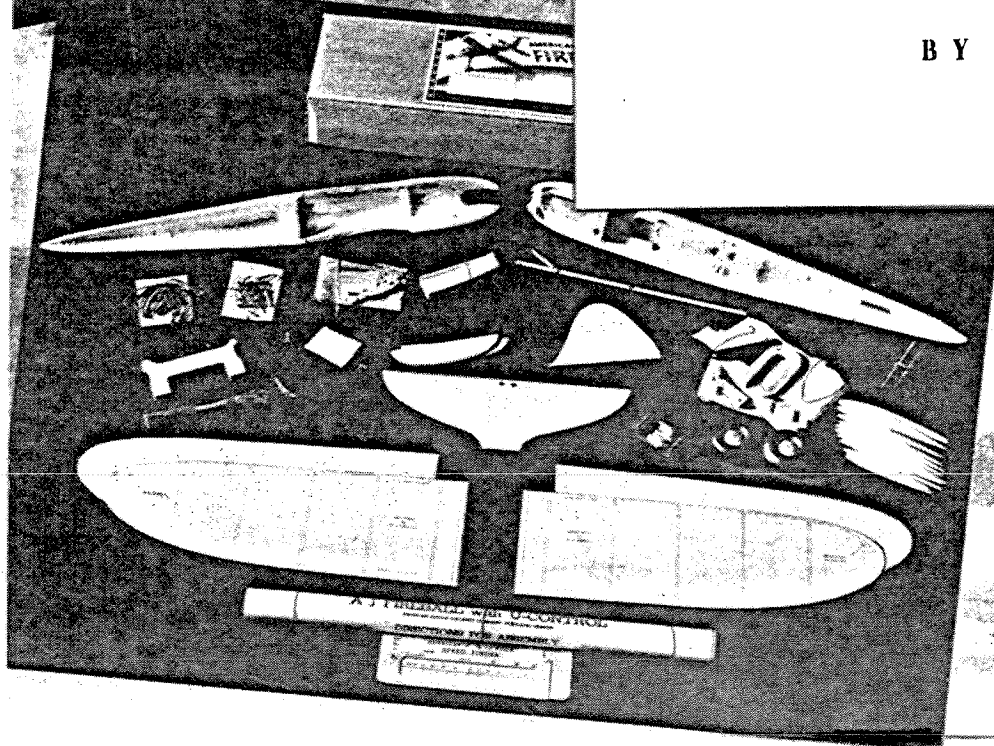




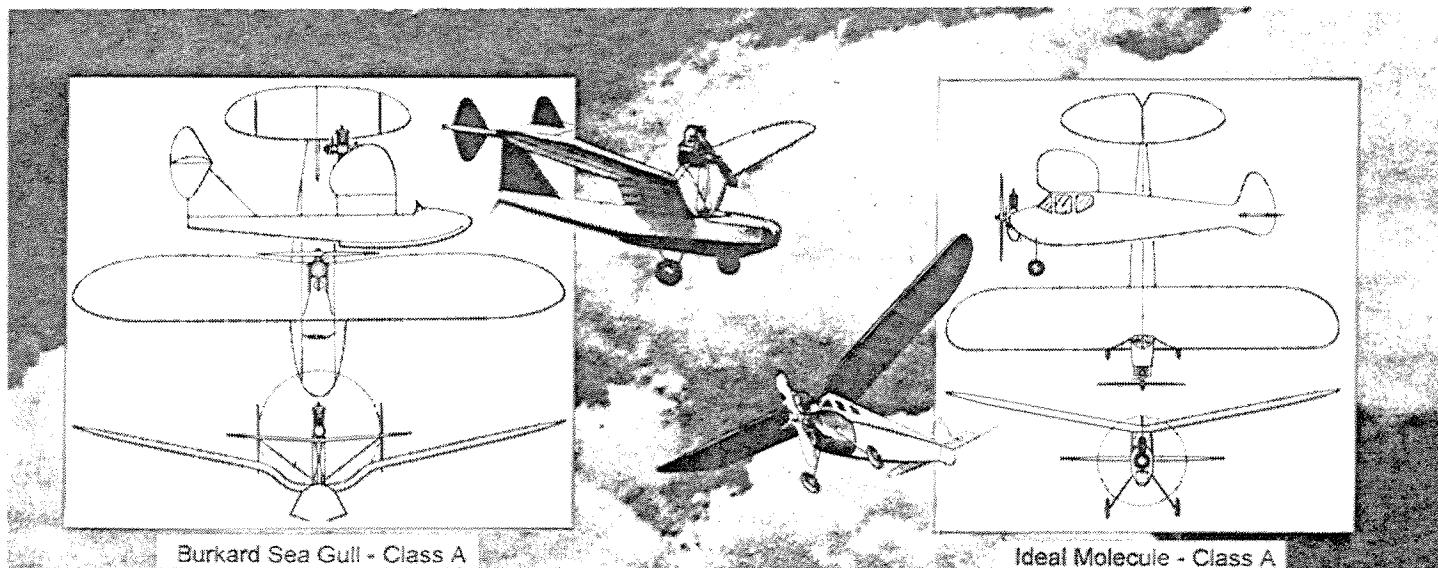
# YOUR CHOICE OF KITS

Gas model kits, big and little, racers, scale, amphibians, seaplanes, radio controlled, pushers, canards and contest models of every description, pass in review. Sound design insures top performance. Look them over and take your pick.

BY CARROLL MOON







Burkard Sea Gull - Class A

Ideal Molecule - Class A

**T**HE next time you find a vacant plot of land and the roaring of miniature motors tells you that gas-model enthusiasts are reveling in their favorite madness, note carefully the planes that soar above you.

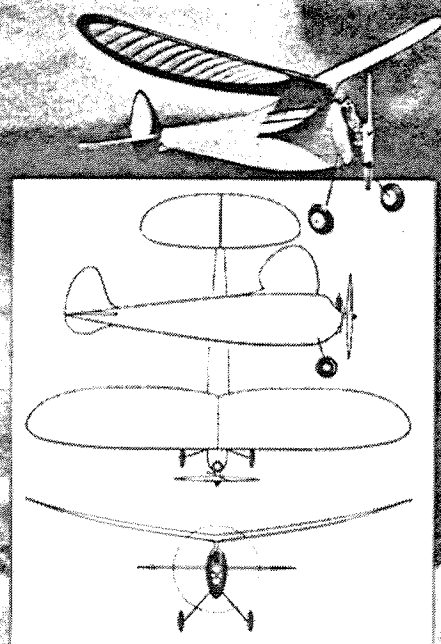
Many of them, perhaps a majority of the sleek craft, were assembled from kits marketed by any one of nearly a hundred concerns throughout the country. Each kit contained full-size plans of the model to be built, all the necessary balsa and other wood for construction, cement, paper, silk, dope, fittings. The builder, in each case, followed the plans carefully, installed a motor and immediately joined the gas-modeling fraternity.

However, never let it be said that only beginners build ships from kits. Many experienced modelers build kit ships time after time, taking advantage of the convenience of this method and the dependability of the planes marketed by the manufacturers.

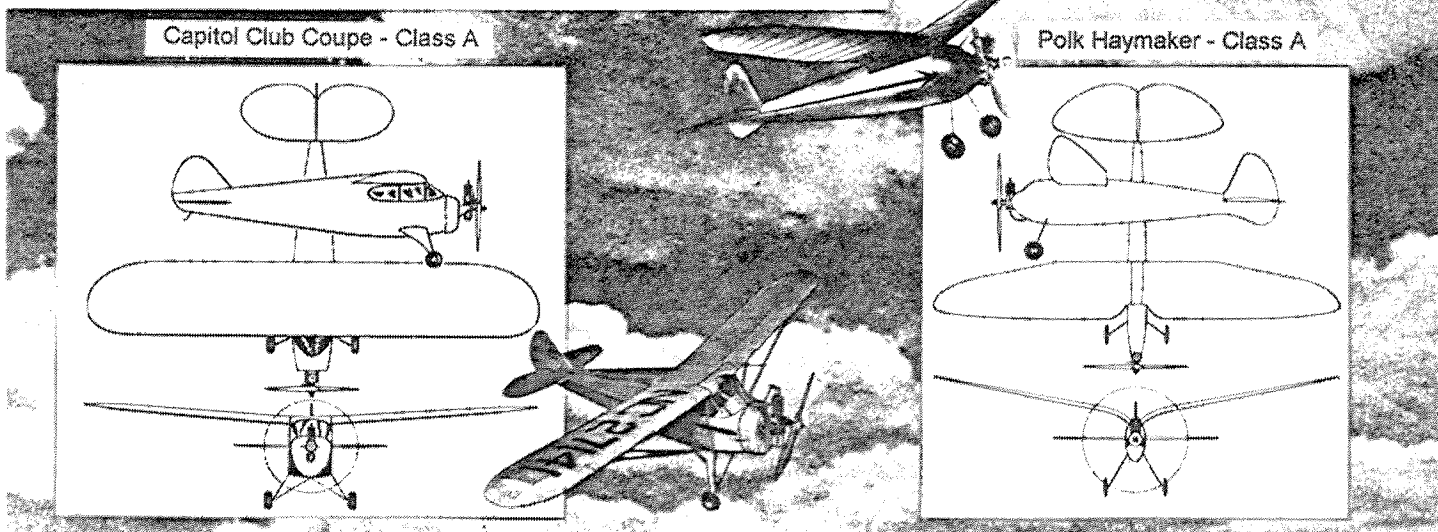
Kit ships come in all sizes from tiny Class A jobs of less than 3-foot span and weighing a scant 8 ounces, to huge 10-foot, radio-control giants weighing upward to 12 pounds. In price they may range from fifty cents to twenty-five dollars. Nevertheless, each one was at some time the "original design" of a model builder and was probably marketed to a concern after proving its worth on the flying field.

Manufacturers began marketing gas kits shortly after Maxwell Bassett flew his first gas model; indeed, *Miss Philadelphia* appeared as one of the first kit ships in the field. Originally kit ships were rather expensive, but improved methods of building, the reduction in size of the average ship, and better methods of processing the balsa have reduced the cost to a great extent.

In this survey the products of each manufacturer will be covered and the latest or "leading" model of each concern will be described in detail. So here are the kit ships. Suit them to your motor and pocketbook, and act accordingly.



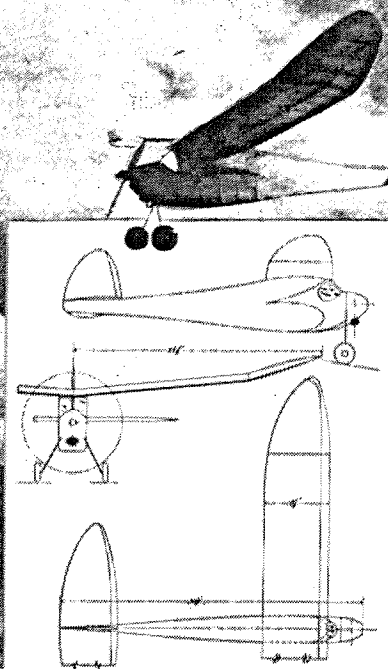
H & F Jiffy - Class A



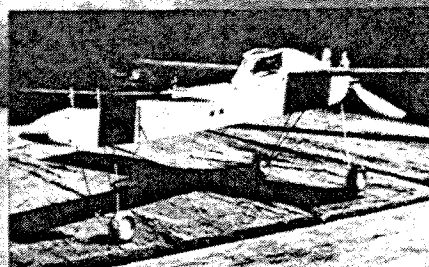
Capitol Club Coupe - Class A

Polk Haymaker - Class A

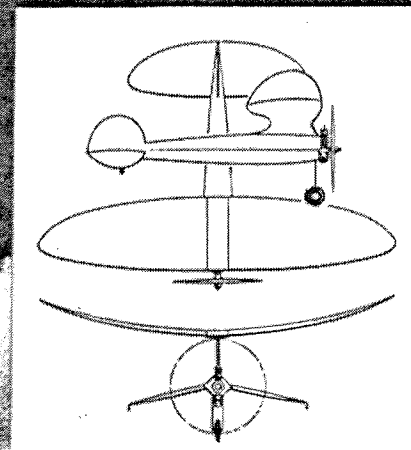




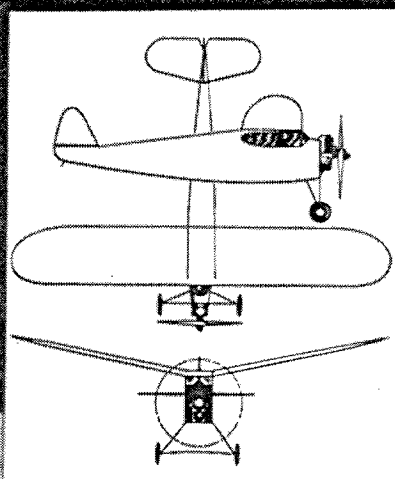
**Advanced Engineering Challenger  
Class A**



**Jones Canard - Class A**

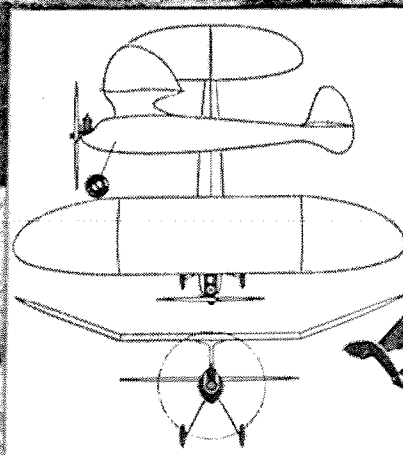


**Continental Invader - Class A**



**Guillow Flight Leader - Class A**

**Megow Ranger - Class A & B**



### **Advance Engineering Co., Fresno, Calif.**

The Advance concern has taken advantage of the popularity of certain builders, and its feature kit, the Challenger, was designed by John Drobshoff, who won the Air Trails Trophy at the 1940 Nationals flying one of these jobs. The ship, a Class A job designed for the larger motors of the group, has a span of 51¼ inches and an area of 290 square inches, which definitely puts it in the larger group of models for the A group. The ship won first place in the Los Angeles Gas Contest in December, 1940, against 375 contestants with a time of 12:30. Incidentally, in this contest the next nineteen places were won by Class C ships, proving the Challenger's efficiency.

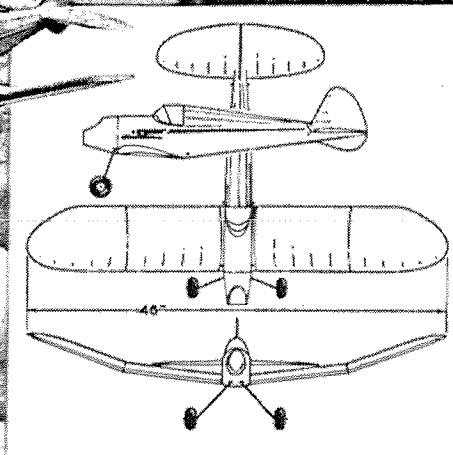
Other ships in the Advance line include the Explorer, a Class B job with 50 inches of span and 312 square inches of area. Large Class A motors may also be used with the ship. The Vanguard, another ship of the line, has a 5½-foot span, and an area of 532 square inches. The ship will accommodate smaller Class C motors such as Bunch, Comet 35, Little Dynamite, OK 49, et cetera. Drobshoff also designed this job. Drobshoff, by the way, won seven first places and placed second and third in four other contests during 1940. He is acknowledged as the 1940 Pacific coast model champ.

### **Aircraft, Chicago, Ill.**

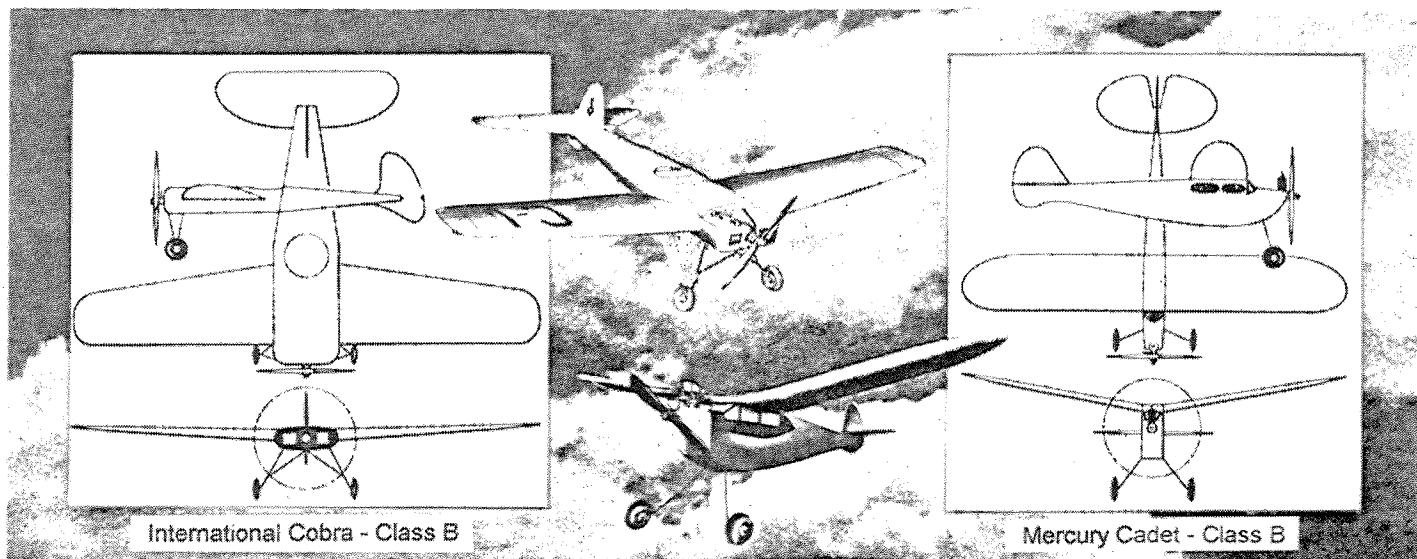
This Midwest concern has become particularly famed for its kits of the Buzzard Bombshell and the So-long, both of which took first places at the 1940 Nationals and were subsequently featured in Air Trails.

The Bombshell is a 6-foot "boxlike contraption" decidedly unlovely to the aesthetic builder, but a ship of tremendous flight prowess. At the Nationals this ship, flown by Joe Konefes who designed it, did 49:40 on one flight, which should go far to disprove all previous streamlined theories. Its span is 6 feet and in that wing is packed 6 square feet of area giving a wing

**Peerless Panther - Class B**







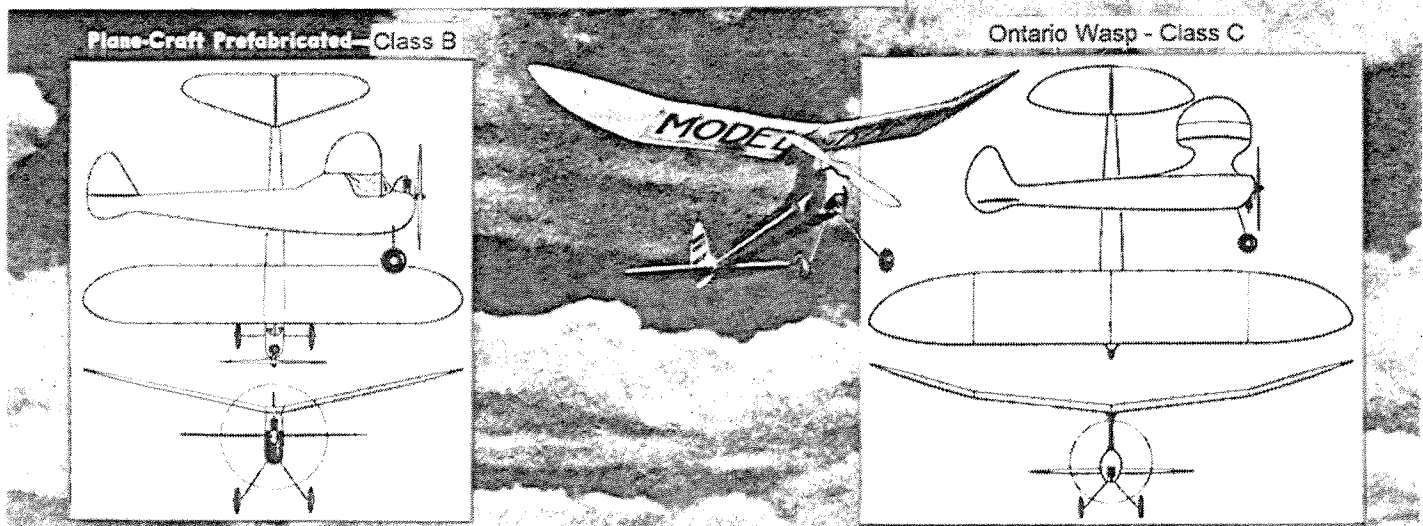
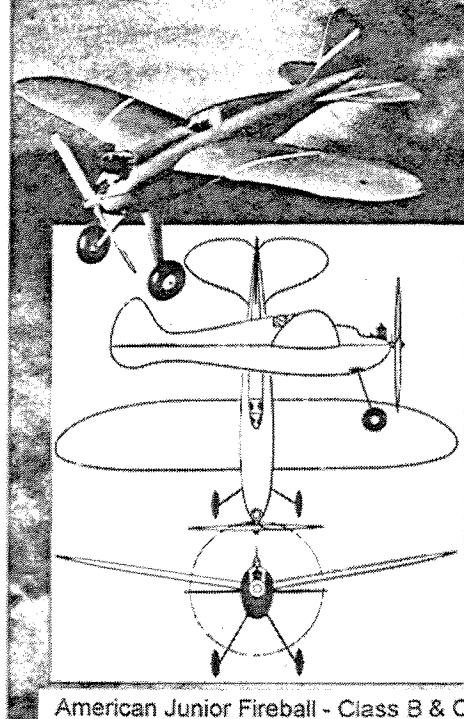
loading of 8 ounces, when weighing 3 pounds. It may be flown with any Class C motor. Distinctly easy to build, it is very rugged and dependable.

The So-long is fundamentally a small Bombshell and suitable for Class B motor. It has a span of 50 inches, and greatly resembles its larger counterpart. Recent addition to the Aircraft line are the Cloud Snoopers, which come in three classes. Class A has 40 inches span, Class B 50 inches and Class C 72 inches.

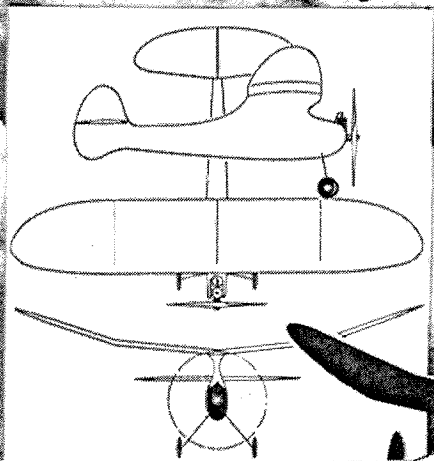
#### American Junior Aircraft Co., Portland, Ore.

The American Junior Aircraft Co. specializes in kits for a recently developed type of model known as the U-control ships. Such ships are not made for free flight, but are controlled from the ground by means of a control horn from which two wires run to the ship. The motor is started, the pilot standing about fifty feet from the model, while a helper launches the ship downwind. Centrifugal force causes the plane to fly around the pilot in a circle. With practice the ship may be made to loop, dive and do other maneuvers. By means of a special device marketed by the A-J concern, flight speeds may be calculated and several California meets this year will feature speed events with ground-control ships.

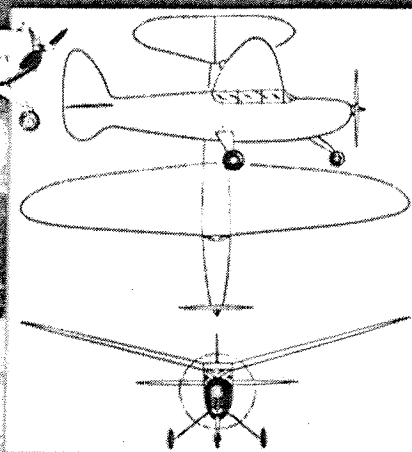
Flight leader of the A-J concern is the Fireball, a beautiful little job of almost solid construction. The 36-inch wing is sheet balsa, and the fuselage is already rough carved from a block of the same wood. All parts in the kit are cut to shape, wire parts are ready formed. Battery box, wheels, pyralin windshield, hardwood motor mounts and construction diagrams are included. A U-control mechanism with 50 feet of control lines and an A-J speed finder make up the kit. The Fireball was designed for Class B motors, but has been used with much success by Class C motor owners who wish additional speed.



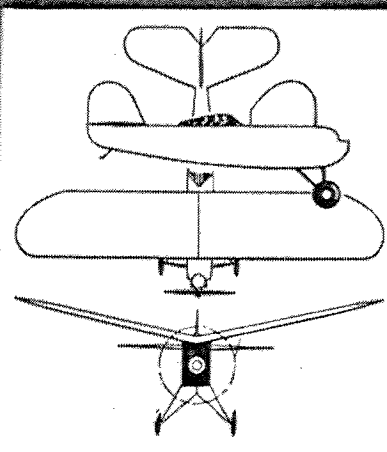




Scientific Flagship - Class C

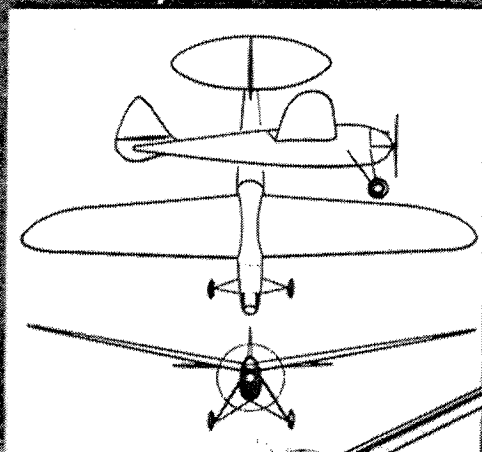


W.I.T. Triax - Class C

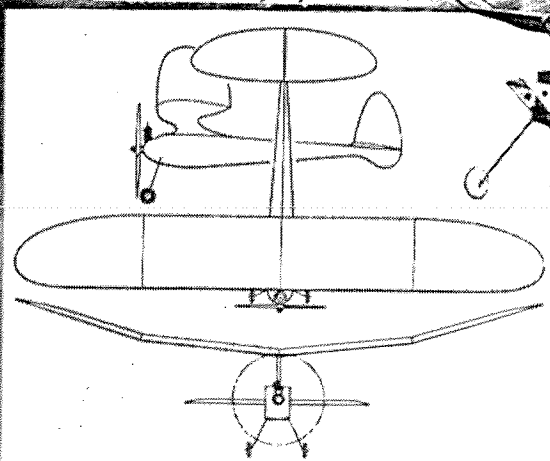


G.H.Q. Sportster - Class C

Berkeley Custom Cavalier—Class C



Cleveland Playboy - Class C



#### Bay Ridge Model Airplane & Supply Co., Brooklyn, N. Y.

Bay Ridge, as this concern is commonly known, has specialized in gas models exclusively in the kit line, and is also well known as a model supply house. It was one of the first concerns in the field to put out a small ship, and the Bay Ridge Mike won considerable fame when it first appeared.

Flight leader of the Bay Ridge concern is a Class B-C design by Sal Taibi—the Pacer. This snub-nosed ship has a span of 53 inches, and 432 square inches of area. It has been tested and shows excellent performance with such motors as the Torpedo, Forster 29, Brownie, Baby Cyclone, Comet 35 and similar engines. The kit contains Stream-Lite wheels, fuselage silk, Silkspan for the wings, printed sheets, formed landing gear, clear and color dopes. An unusual feature about the ship is a "low-lift" tail, designed to keep the glide flat. In flight the ship climbs to the right under power, no matter what settings are used, and consistently turns in sensational performances.

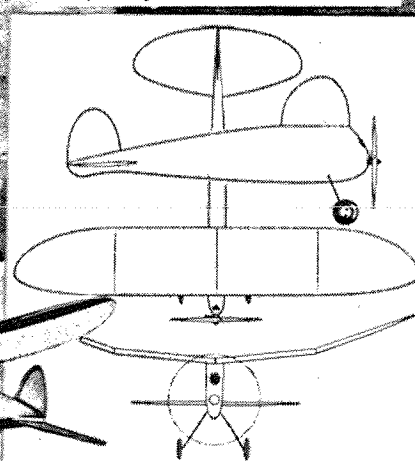
Secondary leader of the Bay Ridge line is the Topper, designed by Gordon Murray, and the Topper-A by the same builder. Both ships feature elliptical dihedral, sparless wings and extremely fine appearance and rugged construction. The famed Bay Ridge Mike and the Diamond-Demon are suited for Class A or B engines. The Thermal-Magnet, a Class C, 6-foot ship, was one of the first commercial models with a taper wing.

#### Berkeley Models, Inc., Brooklyn, N. Y.

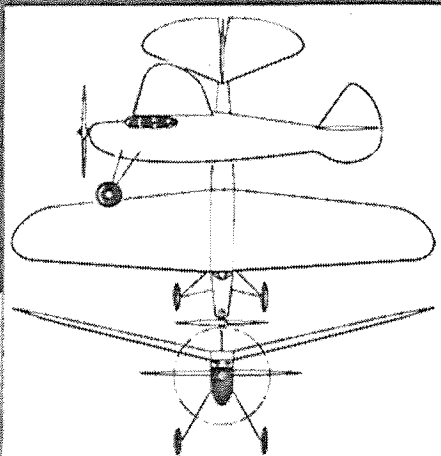
The Berkeley concern, headed by William Effinger, is one of the oldest houses of its kind in the country and was one of the first to market a gas model kit to the hobbyists. Such ships as the Cavalier, Buccaneer, Musketeer, American Ace and other models have made this firm a builder's byword throughout the country. Berkeley is noted in particular for rugged construction of all models and clean designs throughout.

Flight leader of the Berkeley line is the Custom Cavalier, a 9-foot ship

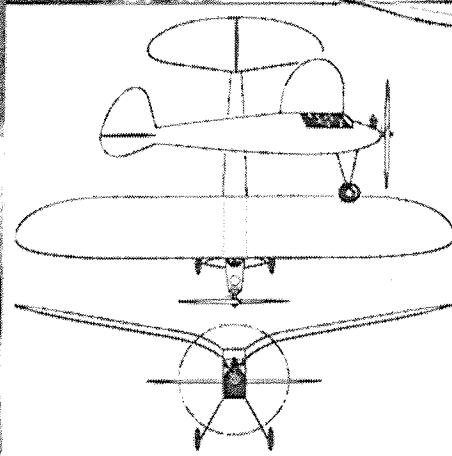
Bay Ridge Pacer - Class B & C



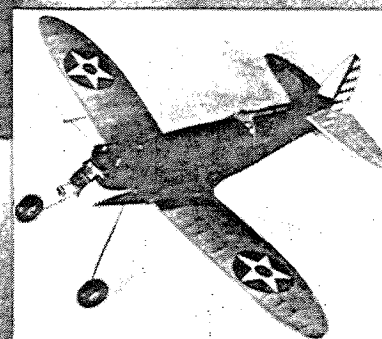
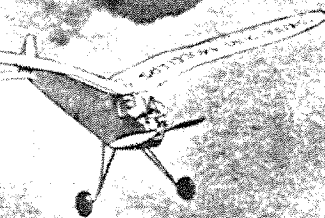




Triangle Commander - Class C



Modelcraft Spook - Class C



Stanzel Tiger Shark - Class C



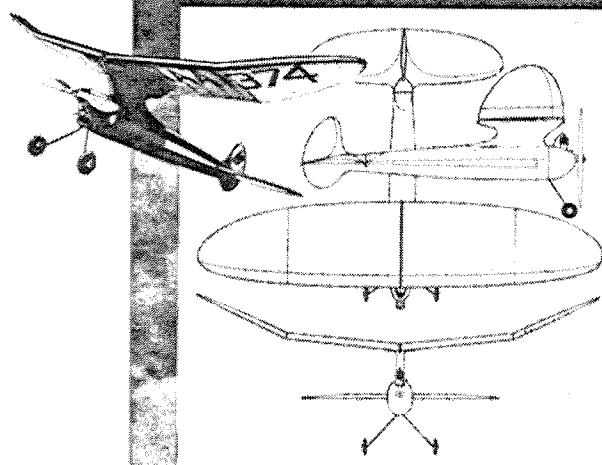
Miniature Taylorcraft - Class C

which recently has won much favor for radio-control work. Several years ago this ship won the Texaco Trophy when it was flown by its originator, Ben Sheresaw. The ship is 67 inches long, and should weigh 6 pounds ready to fly. The fuselage is of simplified monocoque construction and is planked throughout. Wing and tail units are movable. The kit contains full-size plans (and they're *some* size—as you may imagine), printed sheets for all wing ribs and bulkheads, balsa strips, cut-to-size balsa blocks, landing-gear wire, six square yards of silk for covering, quarts of cement, clear dope and Pearlene dope, ignition accessories, hardware and metal fittings. In design the ship is especially clean. The wing is tapered, and construction calls for sheeted leading edge with cap strips to aid in maintaining proper airfoil contour. More than fifteen colleges and universities have adopted the Cavalier for experimental and radio-control work.

Berkeley also markets the Cavalier Standard, a 6-foot Class C ship for motors from .45 to .60-cubic-inch displacement. The Cavalier "60" is for Class B and small Class C engines, has an area of 3 square feet.

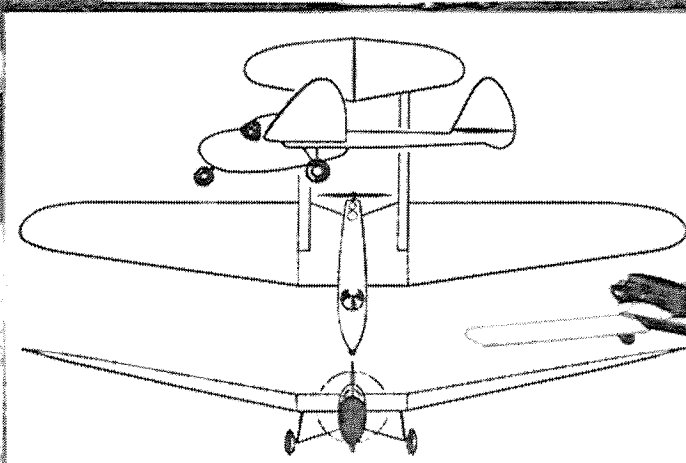
The famous Buccaneer models by Berkeley are known throughout the country. Largest of these is the Super Buccaneer, of 7½-foot span and with 8.3-square-foot area. Berkeley claims that the average life of a Super-Buccaneer is over 400 flights. The Buccaneer Special, a 6-footer with 6 square feet of area, is a recent design by Bill Effinger and features exceptionally rugged construction with light weight. The Buccaneer Standard has probably won more contests than any ship in the Berkeley line. Designed for Class C motors from .45 to .60 cubic inches, it has an area of 4.375 square feet with a 5½-foot span. It was one of the first super-climb models in the field and can still give a good account of itself in contest work, being especially rugged and consistent. The Buccaneer "48" is designed for A and B motors, has an area of 360 square inches. The Buccaneer "36" is for Atom motors.

Berkeley's second line of models consists of the Musketeers.

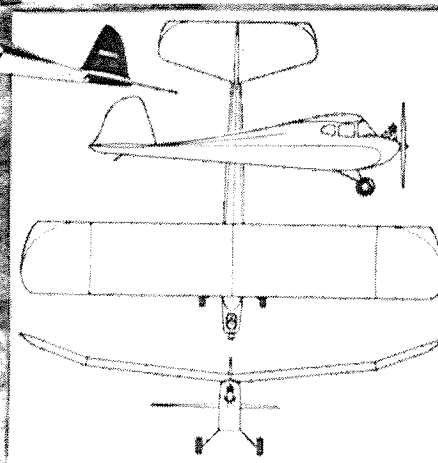


New Comet Zipper - Class B & C

Radio Control Headquarters RC-1 - Class C



Aircraft Buzzard Bombshell - Class C





which come in three sizes—6 feet, 54 inches, and 42 inches.

Another Berkeley ship, the American Ace, designed by Henry Struck (an adaptation of New Ruler), can use motors from .19 to .49-cubic-inch displacement. It has an area of 432 square inches and uses an NACA 6409 airfoil. A smaller version is made for Atom motors.

Other Berkeley models include Leon Shulman's famed Skyrocket Class A ship, and the 6-foot Courier-Sportster for Class C motors, and the Gondolier float model.



Hissel Texas Racer Hissel Interceptor

#### Burd Model Airplane Co., Baltimore, Md.

Burd has been known for many years as a house of rubber-powered ships. However, recently this firm has brought out a new gas model which, to all appearances, has fine flight characteristics.

The Snap, as the ship is known, is a 4-foot Class A or B job, with a semistreamlined contour to the fuselage and a double section wing mount which raises the center of lift (as do all pylons and fins) and would seem to give a far more stable wing platform. Ribs come cut out with the ship, the motor unit is detachable, finished prop and landing gear are provided and elevator and rudder are cut out. The fuselage is planned.

#### Burkard Model Engineering Co., Lombard, N. Y.

The Burkard concern, a comparative newcomer to the circle of manufacturers, markets a line of gas-powered seaplanes, something relatively new to the building fraternity. All ships are from thoroughly tested designs and represent many months of development work.

Flight leader of the Burkard firm is the Seawasp, a cute little Class A seaplane for Atom motors. The ship has a 3-foot span, is 23 inches long and 10 inches high. The wing has 185 square inches of area, stab is 86 square inches, and rudders are 23 square inches. Fundamentally it is a single-step flying boat with gull wings and motor in a streamlined mount above the hull. Original tests showed the ship to be exceptionally stable with flat glide and good landing characteristics.

The Scagull Amphibian of the Burkard concern is for Class B motors, has a 48-inch span and 204 square inches of area. The Sea Hornet, by Burkard, is a 44-inch Class B model of twin-float design.

#### Capitol Aircraft & Supply Co., Brooklyn, N. Y.

Capitol, although another relative newcomer in the field of model airplanes, has fast established a reputation for fine ships which it is adding to every day.

Flight leader of the Capitol line is the Class A Cub Coupé, one of the

smallest scale gas jobs in the country. It has a span of 40 inches, and complete weighs 14 ounces. The little ship should be just fine for Atom owners who want to see their motors in a model that looks like a real ship.

The Capitol Flightmaster, designed by Ray Heit, is a twin-rudder Class B ship of much merit. It has a span of 4 feet and has turned in some fine performances. The Ambassador, another Heit design, is a 6-foot Class C ship, sleek and of great possibilities under capable adjustment.

#### Cleveland Model & Supply Co., Inc., Cleveland, O.

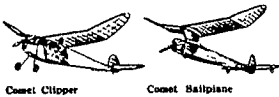
The Cleveland concern has profited much from new designs during the past year, and the new ships of this concern are making fine records in contest and sport flying throughout the country. The concern is especially noted for the excellent kit plans.

Flight leader of the Cleveland line is the Playboy, Sr., a big Class C job ideal for such motors as the Ohlsson 60 and Super Cyclone. The ship is a fin job of 80-inch span, and extremely rugged in design throughout. The wing has a chord of 11 inches and packs in 800 square inches of area. For all its size, the Playboy, Sr., is relatively short, being only 43 inches long. It has held several national records and scored many times this year throughout the country.

Other ships in the Cleveland line include the Baby Playboy, a 33-inch job for either rubber or an Atom motor. The Playboy, Jr., has a 46-inch span and is ideal for Class B or large A motors. Itsy-Bitsy is an Atom job, with a 33-inch span. Cleveland also puts out the Cloudster, a 50-inch Class B job, the Viking, a 4-foot A or B ship, and two scale gas jobs. Of these the Stinson Reliant has a span of 82 inches, and the Rearwin Speedster has a 64-inch span. The Reliant has been popular for radio-control experiments.

#### Comet Model Airplane & Supply Co., Chicago, Ill.

Comet has pioneered so many ships that its name has become famous in gas modeling. First big winner in the Comet line was the Carl Goldberg-designed Clipper, followed by the Zipper and Mercury and more



Comet Clipper Comet Sailplane

recently by the Sailplane. All these ships have made history in their particular classes and are among the most popular contest jobs marketed today.

In 1941, according to the manufacturer, the redesigned Zipper will lead the Comet fleet. The new Zipper has been streamlined, the airfoil has been improved and the area has been cut ten square inches. The motor is more smoothly cowled in the new ship, the ignition unit has been

rearranged and general Goldberg touches have been added throughout. With a Comet 35 engine the ship should weigh 28 ounces, giving a wing loading of 8.68 ounces per square foot. Span is still 54 inches and the area is now 465, projected. The ship has proven a winner with any motor in Class B, as well as in Class C with smaller motors in this group.

The Sailplane, Goldberg's 1940 design, has a 78-inch span with 6 square feet of area. This ship has a retractable single-wheel landing gear, crashproof motor mount, and other unique features besides unusual performance.



Peerless Pippin Jolt's Eve

The Mercury is a Class A or B ship, similar to the Zipper, with 280 square inches of area and a 42-inch span. The redesigned Clipper has a 6-foot wing with 654 square inches of area. Zipper A, for Atom and similar motors, has a 32-inch wing and 165 square inches of area.

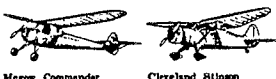
#### Continental Model Airplane Co., 1129 Myrtle Avenue, Brooklyn, N. Y.

This concern, another semiscalar rubber model vender for some years, is now putting out a tiny Class A ship called the Invader, to be used with Atom engines. The Invader is quite unique in both design and construction. It features a Sky-Scraper wing, and a single-wheel landing gear. The elevator has cathedral, and two tiny skids on the tips of this elevator act to hold the ship upright on the ground. Jerry Stoloff designed the model and made exhaustive flight tests with it until it reached perfected form. The fuselage is diamond in shape, and the wing rests on a fin. Span is 32 inches, area is 157 square inches, and ready to fly the ship should weigh 8½ ounces.

#### GHQ Motors, Inc., New York, N. Y.

The GHQ firm, motor manufacturers, also produce two gas model kits which deserve attention.

The largest of these kits is the GHQ Sportster, which was designed by Julius Unrath. The ship has a 76-inch wing span. With plenty of area this ship has turned in some fine flights and is rugged enough for



Megow Commander Cleveland Hissman

any sort of flying. The fuselage is built entirely of basswood. Special aluminum motor mounts are used and bamboo paper is the covering material.

The GHQ Robotaire model is a 5½-foot job with a 10½-inch chord. It will accommodate Class C or large Class B engines.

#### Paul K. Guillon, Wakefield, Mass.

Although primarily a house of rubber models, the Guillon concern does put out one small gas job, which is by far the least expensive model in

the country today. The ship, known as the Flight Leader, has a 3-foot span, and with 171 square inches of area just weighs 8 ounces per square foot with an Atom engine. The ship is a simple box, but nicely stressed to stand the hard knocks of competitive flying. Especially to be noted is a really rugged landing gear.

#### H. & F. Model Airplane Co., Brooklyn, N. Y.

The H. & F. company, after several successful seasons manufacturing rubber scale models, is now putting out three gas jobs all of which are capable performers.

Leading ship in H. & F.'s 1941 line is the Jiffy, a 36-inch Atom job designed by Sid Struhl. The little ship is unique for ease of construction. Primarily it is a semifiin job, with a single-surface wing. Complete with motor it weighs but 8 ounces, yet is a fine performer in any kind of flying weather.

The Rocketeer-A, a Class A or B ship by Maurice Schoenbrun (a scaled-down version of the Rocketeer which appeared in November, 1939, Air Trails), has a span of 40 inches and 320 square inches of area. At the Nationals in 1940 this ship did 65 minutes on a witnessed test flight. The H. & F. Bee, another design by Sid Struhl, is another Class A or B job, with a 48-inch wing and unique sheet-covered fuselage construction with plenty of strength.



Cleveland Bity-Bity Scientific Ensign

#### Ideal Aeroplane & Supply Co., New York, N. Y.

Ideal is perhaps the oldest model airplane concern in the country today. To our knowledge it was in operation in 1920, and throughout the years it has kept pace with the industry.

Chief gas model of the Ideal line is the Molecule, designed by Louis Garami. The ship has a span of 36 inches and was introduced primarily for the Atom motor. The ship is the same one that took the 1939 Class A National record, making one official flight of over six minutes during an Eastern meet.

#### International Model Products, New York, N. Y.

International (or IMP to the trade) has been a prominent model manufacturing outfit for many, many years. With Professor T. N. de Brobrowsky as designer, this firm has produced some fine flying planes and made quite a name for itself in the industry.

Most unique ship of the IMP line is the Cobra, a gas job which is also unique among ships of the day. It is a Class B job with a wing span of 50 inches and an area of 315 square inches. The statistics sound simple enough, but the design is radical, to say the least. The fuselage is of pancake form, as is the engine mount. The engine may be mounted upright or on its side. It is the first plane in the field with navigation lights, the pancake mounting feature of

motor, flat fuselage, cockpit instruments, spinproof tail assembly and adjustable dihedral. Any motor from .19 to .3 cubic inches may be used. Professor de Brobrowsky is responsible for the design.

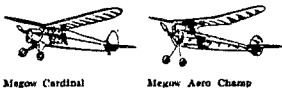
The Nova-Petrol of the IMP line is a Class A cabin job with a span of 33 inches and an area of 176 square inches. Any small Class A engine may be used. The Rearwin Speedster, scale gas job, has a 64-inch span, an area of 532 square inches and is suitable for any Class C engine. IMP states that this was the first flying scale gas job in the market with detachable power unit, adjustable angle of incidence, dihedral and control surfaces.

#### A. L. Jones Co., Staten Island, N. Y.

The A. L. Jones Co. manufactures probably the only canard-type plane in the country today available in kit form. Their latest model, designed by Professor T. N. de Brobrowsky, comes complete with an Elf engine. The main wing has an area of 200 square inches and the front wing 48 square inches. Wings, cabin and landing gear are removable. Angular change of front wing acts as rudder. The fuselage is of all-balsa construction.

#### Megow's, Philadelphia, Pa.

Another one of the old-timers among model concerns is Megow's,



Megow Cardinal Megow Aero Champ

the firm that really put the Quaker City on the map as a hotbed of modeling.

Top ship of Megow's line for 1941 is the Ranger, designed by Mathew Kania. The ship is a pylon-type Class A or B performer with a 44-inch wing of 348 square inches area. Any motor from .19 to .23 cubic-inch displacement may be used. The Ranger has a monocoque fuselage, crashproof wing and tail mounting, specially designed battery box. The ship has piled up an amazing record of wins during 1939 and 1940, and Kania himself has won fourteen first places with it in both classes.

Another fleet leader of the Megow line is the Aero Champ, a 46-inch Class A ship with 254 square inches of area. The ship was designed for .199-cubic-inch motors. It is a pylon job with flat center-section wing and upturned tips. The Class C Commander, a 6-footer, has been redesigned for 1941, as has the Cadet, an A-B Class model. Both will appear shortly in their improved versions.

Other ships in the Megow line are the Soaring Eagles. The Class C version, a 6-footer with 550 square inches of area, is almost a midwing job. The wing fair into the fuselage, which is of monocoque construction sheeted throughout. The Class B ship of this line has a span of 54 inches with 300 square inches of area. The Class A Soaring Eagle has 225 square inches of area and a 46-inch span.

The Megow Cardinal is the last ship to be designed by Maxwell Bas-



**AIR YOUTH OF AMERICA**  
adopts the Berkeley  
"BRIGADIER"



sett, pioneer in gas models. The ship is a cute little job for Class B motors, having a 48-inch span. Of course it is a tough little performer, in keeping with all of Maxwell's designs. The Megow Piper Cub is a scale design with a 53-inch span, for Class B motors. The Megow line includes Edo type floats.

#### Mercury Model Airplane Co., Brooklyn, N. Y.

The Mercury firm has, for some time, sold complete units featuring their Mercury Bullet complete with



Cleveland Cloudster Megow Super Caiset

motor. The ship is a Class B job, very rugged and ideal for beginners or advanced hobbyists. It has a span of 48 inches, and lately has been seen making some fine flights in the Long Island flying fields.

#### Miniature Aircraft Corp., Staten Island, N. Y.

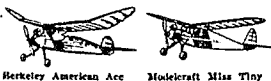
This concern, which has specialized in model supplies for several years, recently put out a 9-foot scale Taylorcraft gas job suitable for radio control, which is one of the largest scale ships on the market.

The plane has an area of 1,550 square inches and is 66 inches long. A Brown motor may be used, but a Forster or an OK Twin are also recommended. The model is particularly easy to build, being of simple construction. The airfoil used insures a slow landing speed, which is of particular advantage in a model of its size. A full-size scale drawing is a big feature of the complete plans issued with the kit.

#### Modelcraft, Los Angeles, Calif.

Modelcraft, the home concern of Barney Snyder, has set the pace for many concerns on the Pacific coast and some fine models have emanated from the drawing board of Barney and Jack Muir.

Flight leader in the Modelcraft line is the Spook, and of course the Class C version is the most widely known. This ship features a gull wing, with a 6-foot span and an area of 864 square inches (6 square feet). Airfoil is a Clark Y-RAF 32 combination. Any Class C engine may be used on this ship, and it is especially



Berkeley American Ace Modelcraft Miss Tiny

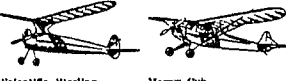
recommended for the Ohlsson 60 or Super Cyclone.

The Spook 48 uses any large Class A or Class B engine, has a 48-inch span and 336 square inches of area. The model is exceptionally easy to handle, the test model having had over 800 flights and still going strong. Modelcraft also puts out the Sky Baby, a Class B ship with 381 square inches of area and 54-inch span. Also the Miss Tiny, with 300 square inches of area, and a 46-inch span. This latter ship was another pioneer in the small-ship field.

#### Modern Model Aircraft & Supply Co., Central Falls, R. I.

Leading ship in the Modern line is the Miss Valiant, a really unique Class B job that "has the climb of a rocket and the glide of a gull." From observation of the ship we can believe this. The job has a 4-foot wing with an 8-inch chord, using an NACA 6409 airfoil. Features are single-wheel landing gear with a twin-rudder empennage.

The Sea Hawk Amphibian, another ship of the Modern line, is for Class C or larger Class B motors. It features



Scientific Starling Megow Cub

a 6-foot wing, a tricycle landing gear and sponsons to facilitate its take-offs. The Cloud-drifter, a Class A ship, has wing slots that improve performance. Span is 40 inches.

#### Ontario Model & Aircraft Co., Toronto, Canada

The Ontario Model Aircraft Co., one of the largest firms of its kind in Canada, has some fine models on the market. Of course, the designs have been influenced by popular trends in the field, but they still present some unique features.

The Hornet, most popular kit of the firm, is a Class B ship with a 4-foot span and 308 square inches of area. It will also accommodate the larger Class A motors. Fundamentally it is a semifin job, neatly designed to give high performance, which it has proven on many occasions. The design is by Ray Smith, a familiar figure in model-design circles. The Wasp, a Class C ship, has a 5-foot wing span, and 485 square inches of area. It has slightly more fin than the smaller model and was designed for an inverted motor. Small Class C or large Class B motors may be used in this ship.

#### Peerless Model Airplane Co., Cleveland, O.

Another concern coming rapidly to the fore is Peerless, which is located in that well-known hotbed of modeling activity—Cleveland.

According to our informants the "hot ship" of the Cleveland line is the Panther, a Class B low-wing ship which really is a fine performer. We've seen models of this job fly, and



Berkeley Musketeer Comet Mercury

despite our pessimism about low-wing ships, the Panther is really "the business." The ship has a span of 46 inches, and an area of 288 square inches. It has a fast and very stable climb and flat glide, which do much to add time. Motor and ignition system are detachable as one unit. Wings and tail are removable. The fuselage is of box-type construction with formers and stringers on top. The fuselage is planked partially for added strength.

For Class C the Peerless concern offers the Cub, a scale gas job with

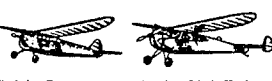
a 6-foot span and 5 square feet of area. Another Class C ship is the Black Hawk, a 6-footer with 5½ feet of area. This ship is especially recommended as an all-weather flier. The Pippin, a 4½-inch span fin job of 288 square inches area, is a Class A or B ship with fine performance characteristics. The Rocket, a Class A-B job, has a span of 4 feet with 2.29 square feet of area.

#### Plane-Craft Co., Washington, D. C.

The Plane-Craft firm manufactures two gas-model kits, both of which are entirely prefabricated. The Class B 50-inch model leads the line. The wing, which uses an RAF 32 airfoil, has 334 square inches of area. The kit consists of seventy-three accurate machine-cut parts and framework units. The Class A model has a 33-inch span and an area of 190 square inches. Both jobs are extremely fine-appearing and should perform well in contest or sport field. They were designed by Brent Daniel, with the co-operation of Robert Little of Langley Field, Va., and John Fogelgren.

#### Polk's Modelcraft Hobbies, New York, N. Y.

When in New York all modelers automatically look up "Polk's" as the leading supply house of Manhattan. Polk's features Atom-powered models, and with the help of their leading



Berkeley Buccaneer Peerless Black Hawk

designer, Louis Garami, the firm really does a fine job on small ships.

There is no particular leader in the Polk line. The Haymaker probably comes closest to being a top-flight seller. The ship, fundamentally, is a nice-looking 33-inch job with 165 square inches of area. The Wahoo, another small ship, has a 33-inch span and the same area, only it is of high-wing fin design. The Buckaroo is a streamlined version of the other ships with a 37-inch span and 180 square inches of area. The Hummingbird (designed by Frank Ehling) is either a biplane or monoplane according to the whim of the builder. It has a span of 39 inches.

The latest model developed by Garami for the Atom is the Eve, a small-cabin job which (according to Lou and his cohorts) is destined to be one of the best performers in the fleet.

All Polk plans are distinguished for clarity.

#### Radio Control Headquarters, Cecil Wink, New York, N. Y.

Although many large standard kit jobs are advertised as "ideal for radio control," only one concern in the country offers a job solely for that purpose. Mr. Wink's firm puts out the RC-1, after designs by Ben Shereslaw, and aside from being the first radio-control ship, it is the only pusher on the market. The ship has a span of 10 feet, and weighs 6 pounds less equipment. It will carry five pounds of control mechanism

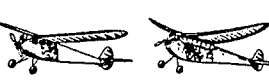
with ease. Originally the design was entered by Shereslaw at the 1940 Nationals in the radio-control event. Fully equipped, it flew beautifully, had a startling climb and only faults of control kept it from scoring even higher than it did. A three-wheel landing gear enables the ship to land well under all conditions. Twin rudders, tapered wings and other features reflect the touch of an engineer, and the ship, when complete, is one of the best and most unique jobs on the market today.

#### Scientific Model Airplane Co., Newark, N. J.

Scientific has long been a familiar concern to model builders, and in 1941 the firm will have several new ships "on the line" which are expected to make big names for themselves during the contest season.

The Flagship is a C job with span of 78 inches and an area of 850 square inches. Using an RAF 32 airfoil, it has an especially fine glide as well as a superior climb. It is a fin-type design, and can capably handle motors of from .45 to .85-cubic-inch displacement. Wing and tail are quickly removable for transportation, while the motor-mount unit is removable for servicing.

The Coronet, a new Scientific Class B job, is similar in design to the Flagship, with a 46-inch span



Ray Ridge Mike Ray Ridge Topper

and 300 square inches of area. Motors from .19 to .30-cubic-inch displacement are advocated. Among other gas models marketed by Scientific are the Ensign, a Class A or B ship, the Mercury, a 6-foot Class C model, and the Starling, a Class A ship with a 40-inch span.

All Scientific ships have made fine contest records throughout the country, winning a reputation for fine design combined with a rugged construction.

#### Victor Stanzel & Co., Schulenburg, Tex.

G-line flying, or flying by guide-line control, is featured by this concern which manufactures several models in this category. Pride of the fleet is the Tiger Shark. With a span of only 36 inches, this ship will take any Class C motor up to and including the Ohlsson 60, and one can well imagine the speed involved. A flight circle of 75 to 100 feet in diameter is recommended. The kit includes fine quality balsa wood, printed parts, hardwood, plywood, cement, dope, covering material, wheels and plenty of extras. Complete with a motor it weighs but 25 ounces.

The Shark P-60 is manufactured in Senior and Junior classes, the Senior model having a 36-inch span and being for Class C motors, while the 24-inch model is for smaller Class A and B motors. A baby Shark, of 24-inch span, is also recommended for A-B motors. The Texas Ranger, a cabin model model for either free flight or G-line flying, has a 45-inch

span with an area of 275 square inches, and can use any large Class A or medium Class B motor. The concern also manufactures the Interceptor, a 52-inch Class B free-flight model which is a nicely designed fin job, with an area of 350 square inches.

#### Triangle Model Supply Co., Long Island City, N. Y.

Although in business for some years, the Triangle firm has recently



Scientific Mercury Megow Soaring Eagle

bought rights to additional gas-model designs (Paramount) and has begun an extensive campaign on these models.

Leader of the Triangle fleet is the Commander, a big 6-foot Class C job. Let no one mistake the claim that the ship is a real performer. With 5.2 square feet of area, it is ideal for all big Class C motors and will turn in an outstanding performance under almost any weather condition.

The Kestrel, a Class B ship, is a fine-appearing model with a 50-inch wing span and 380 square inches of area. The Skipper, another Class B ship, has a 4-foot span and 320 square inches of area. The Dictator is made in two sizes. The Class A model has a 38-inch span and the Class B model is 50 inches from tip to tip.

#### Washington Institute of Technology, Washington, D. C.

WIT, as this concern is known, has specialized for many years in prefabricated kits of great style and variety.

Perhaps the most interesting ship in the WIT line is the Triax, a 6-foot ship with a three-wheel landing gear. The ship is a beautiful piece of construction work, and although seldom seen on the contest fields the Triax will give a fine account of itself in any competition due to its excellent design. Despite its size (and the Triax looks huge on the field) the ship weighs but 3 pounds and has a splendid climb and really exceptional glide. The kit, it is stated, contains some 250 parts.

WIT also manufactures the Withornet, a Class A ship of 36-inch



Modelcraft Sky Baby Aircraft Be-Long

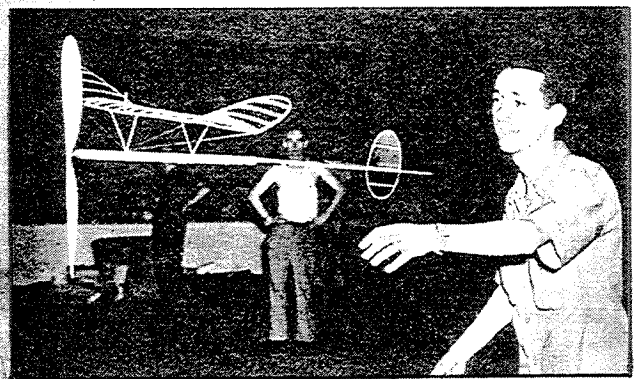
span with 148 square inches of area, and the Witagle, a Class B ship of 4-foot span.







Off to a flying start! Rubber-powered fuselage model jumps off.



Indoor models like this stick were flown in Chicago Amphitheater.

# 1941 NATIONAL CHAMPIONSHIPS

Is your visit to the Chicago jamboree still a dizzy blur? Cheer up—here's what you saw and heard!



Line forms to the right. Usual queues of sunburned contestants waited at a dozen tables for processing models.

**A**BOUT 1300 model builders turned up in Chicago the first week in July for the 14th Annual National Model Airplane Contest. Army and navy service and defense work kept many others away. Currency regulation kept practically all the Canadians at home. Several model builders came up from Mexico. One of them took a second in the best-finish event. New Zealand entered several models in the Moffett Trophy event. These were entered originally in the 1940 contest. Prior to the contest this

Henry Cole of Tacoma, Washington, packs in the turns in his streamlined cabin model. Note retracted wheel.

Jim Walker's crew prepares his first-place-winning radio-controlled model. One radio model did a loop.

Get your props here! Army of gas contestants were well supplied.







Jerry Brofman, Brooklyn, winner of the Air Trails Trophy in gas.

Henry Struck receiving congratulations from Roscoe Turner on being the National Champ.

Ex-Moffett and Wakefield winner, Jim Cahill, was there as usual. Not a bad model, either.

Watch the birdie! Leon Schulman and his Zombie. Retracting wheel, folding prop.

## NATIONAL CHAMPIONSHIPS - 1941

year, the Chicago proxy fliers whipped them into flyable condition, but they were not up to standard.

Chicago seems to be within traveling range of most model builders. There were large delegations from distant cities such as Boston, New Orleans, St. Petersburg and Portland.

All contestants are conscientious the first few days. They register, get their official entry cards, greet a few of the other boys and then retire to do last-minute work on their models.

There was an industrious crowd whittling away at the work-won the Stout Perpetual Trophy. He also won the senior divi-

provided a steady flow of balsa and other material for the boys. The workshop was posted with a few pertinent rules. The printer might as well have saved time and effort on the one that read: "Don't run motors after 10:00 p. m." As usual, there were some who worked day and night to have a model to fly—having arrived in Chicago with only a strong mind and some material.

Wednesday (July 2nd) was the first day of flying. Indoor builders were let loose in the International Amphitheater. Gordon Cain of Boston won the Bloomingdale Trophy for the second year straight. Pete Andrews of Philadelphia added more evidence to the already-long list that he's one of the best indoor men. Stanley Stanwick did 1127.0 seconds with an indoor stick and total time of 1082 seconds. The Moffett International Trophy



Among those present, left to right—Gordon Light, Harold Kulick, Al Lewis, Bill Winter.

Sal Taibi crashed through at last, taking first in Class C Open with his popular Pacer. The Pacer is a Bay Ridge kit.

Dick Korda was the man to boat. Took first in Class C Open in rubber. 300 sq. in. job had timer dethermalizer.

Looks as if H. A. Thomas is a jitterbug in addition to his drawing and model building.

The old maestro himself, Carl Goldberg, with his latest Interceptor. Carl is famous for his Clipper, Zipper, Sailplane.

Porennial contestant, Wally Simmers, Midwest, with his new Dyna-Moo, high-climbing rubber-powered cabin.





## 1941 National Championships

spends a year in Philadelphia in the custody of one of the country's best young modelers. Unfortunately, there were no Canadians entered in this event.

Ray Beaumont was tied with Stanley Stanwick for second place in the individual high-point scores. But Henry Struck topped their 150 points. His 175 won him the Grand Championship. Struck's list of contest victories is a mile long. He's tops in all departments of flying. He won the flying scale event (open division) with an Interstate Cadet that did over 4 minutes, got second in the indoor cabin, tenth in the indoor stick, and eleventh in the outdoor cabin.

Another New Yorker, Sal Tailbi, made Saturday a great day for Brooklyn. He flew his Pacer (Class C, open-

division) for two flights and a Schulman-designed Zombi for one flight for a total of 1482.7, which was high for all three divisions of Class C. Second place went to Ray Acord of Hollywood with 1481.6. Sal must have perspired freely until the official results were announced.

Veteran contest builders didn't lose their grip on the winning spots—actually they seemed to tighten their hold. One of the 1940 gas champs; W. A. Gibson of Hamilton, Ohio, took two firsts—Class A and B gas, open division. He totaled 1297.2 for A and 900.3 for B. Another old champ, Dick Korda, won the outdoor cabin open division with 1082.7, fourth in the Moffett, and several other high places. Previous winners who were right up there again this year were Jim Cahill, Pete Andrews, Gordon Cain, Hank Thomas, Carl Goldberg, Chester Lanzo, Dick Everett, C. C. Johnson, and others.

Director Gunnar Munnick had a team of eleven boys from the Junior Aviation League of Boston. For several years he's been banging away at the Megow Team Championship Trophy. Last year Boston was runner-up. This year the trophy went back with the Boston crowd. Their 150 points were well out in front. Kresge Aero Club of Newark, N. J., was second with 112. The Skyrockets from New Haven, Conn., racked up 47 points to win fourth with only three members entered.

The army and navy have claimed many older model builders. Many have enlisted, others have been conscripted. Bob Roberts of Gary, Indiana, is having a tough time keeping club work moving since practically all the older and experienced builders are in the air corps. A few Chicago boys managed to get home for some of the contest. Their complaint about army life was that cramped living quarters gave them little space to build models. Improvising an army cot into a sort of workbench seems rather inadequate. But there were encouraging signs that the army and navy are thinking seriously of model building as a recreational feature of camp life.

Jim Walker of Portland, Oregon, had things pretty well under control. He gave demonstrations with his U-Controlled Fireball. Flying on the end of fifty-foot control wires, the Fireball is a fast-moving, maneuverable airplane. It can be zoomed, dived, and looped. Walker's other model was radio-controlled. It was a 5½-foot tricycle-gear job with several controls including throttle which

he used in making unassisted take-offs from a standstill. During Friday's flying he had a nasty crack-up that called for some fast work to prepare for the next day. The boys from California pitched in, and at two a. m. they were still going strong. When a photographer let go a flash bulb, Walker looked up with a worried frown. Said he thought it was sunrise and they wouldn't have time to finish the repair job. But they did it well enough to bag a first in the R. C. event in a field of thirteen entries that gets tougher every year.

Defense has claimed much of the brain power and mechanical ability that in ordinary times would be tackling the interesting problem of radio control. There are still many features to be licked. For example, shock-mounting the receiver unit in the model. Vibration must be damped at all engine speeds—a point which has caused more than one apparently tuned receiver to go dead when the engine was revved up for the take-off.

Bill and Walt Good didn't fly their radio-control job this year. It was in shape, all set to fly, but the boys were too busy. Bill has finished college and is working in Pittsburgh. Walt is just winding up his college work at Iowa City and getting ready to move to a new job in Washington, D. C. Both of them managed to get to Chicago as spectators.

Weather was good for the three days of outdoor flying (Thursday, Friday, and Saturday). As usual, the boys flew their ships into all parts of Cook County. Dick Everett of Hampton, Va., followed his gas job thirty-nine miles before losing it out of sight. Dick Korda of Cleveland has the answer to this problem. He equipped his 300-square-inch rubber-powered cabin fuselage with a dethermalizer. After fifteen minutes or any other desired length of time a mechanical timer works a little tab on the rudder which kicks the model into a tight spiral and brings it down out of the thermal.

Seems as though dethermalizers or new rules will soon be necessary. Short-wave patrol cars, diligent chasing, and honest citizens returned many of the roving models. But even so, many of them were lost. Modelers are getting tired of losing models. But how the rules could be changed is something few agree on.

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Allen Vopal of Cleveland won the best-finish event with a beautiful solid-scale Waco. This was one of the several models flown to Chicago from Cleveland, along with their builders, by Arlene Davis, the only woman holding a pilot's rating for the heaviest type transport airplane. Telling about her trip, she said they flew at different altitudes from time to time hunting the smoothest air to prevent damage to the models. In fact, they seemed more concerned about the models than themselves. When the results of the judging were announced late Thursday night, Vopal said the first thing he'd do would be to wire Miss Davis in Cleveland that the model they'd worried about had justified their attention.

The Model Industry Association banquet Thursday night was one of the high spots of contest social life. The Terrace Room of the Morrison Hotel was well filled, food was good, speeches short, and vaudeville entertainment amusing. MIA is a thriving outfit, and the good it's doing for the hobby carries into lasting and worth-while channels—in addition to promoting pleasant banquets.

Airplane model builders were not alone in Chicago—the race car and model railroad boys were holding their meetings and contests the same week. Their headquarters were at the Morrison—just a few blocks from the Hotel Sherman. But the airplane boys dominated the show even at the exhibition of the model companies in the Morrison.

Contestant banquets always wind up the meet. Builders relax after a strenuous week and discard their inhibitions and repressions. They really whooped it up. Each year there are more people at the banquet, and each year the banquets become more hectic. Saturday evening the Grand Ballroom of the Sherman was taken over by the model builders. Exploding firecrackers and squadrons of paper airplanes ruled out any dull moments. Roscoe Turner was master of ceremonies. (Col. Turner started the trip to Chicago in an automobile but it threw a wheel, so he carried on in a safer way—by Taylorcraft.)

The Chicago Park District and the Chicago Times did a good job again this year. They kept 1300 model builders happy with ample timers, officials, and judges. Flying conditions were good. At the beginning

of the meet Maurice Roddy looked as though he had gone without sleep for a week. As the contest moved along, the reason for this became clearer. Roddy and his crew had done a thorough job of planning beforehand. Every feature of the meet seemed to unfold in its place without confusion or delay. It was a smooth-running Nationals, and shows that experience and enthusiasm are an unbeatable combination. Maurice Roddy and the Chicago bunch have both. If they extend an invitation to the Nationals again in '42, there will be more than 1300 takers.

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# 1941 Nationals Results and Award List

## NATIONAL CHAMPION

Name and City	Pls.	Award
Henry Struck, Jackson Heights, L.I., N.Y.	175	Exchange Club of Detroit Trophy and the National Exchange Club Wrist Watch Award
Ray Beaumont, Philadelphia, Pa.	150	
Stanley Stanwick, Pensacola, Fla.	130	
W. A. Gibson, Hamilton, Ohio	125	

## TEAM CHAMPIONSHIP

Junior Aviation League, Boston, Mass.	150	Fred W. Megow Team Trophy
(11 members)		
Krespe Aero Club, Newark, N.J.	112	
(25 members)		
Detroit A.M.A. Chapter, Detroit, Mich.	63	
(25 members)		
New Haven Skyrockets, New Haven, Conn.	47	
(3 members)		

## INTERNATIONAL MOFFET FINALS

Name	Time	Award
Ray Beaumont—U.S.A.	1082.2	Int. Moffet Trophy and Team Trophy
Ralph Brown—U.S.A.	731.6	Team Trophy
James Broderick—U.S.A.	668.5	Team Trophy
Dick Korda—U.S.A.	435.0	Team Trophy
H. A. Thomas—U.S.A.	387.5	Team Trophy
Alfred Leong—New Zealand	286.3	Team Trophy
(Ed. Lidgard—Proxy)		
W. G. Alexander—New Zealand	248.4	Team Trophy
(R. Olsarski—Proxy)		
Charles Lamb—U.S.A.	174.1	Team Trophy
Harold Righton—New Zealand	167.2	Team Trophy
(Walter Fromm—Proxy)		

## RADIO CONTROL EVENT

Jim Walker	88	Edw. Roberts Trophy & \$100.00 Roberts Award
Arthur Earle	83	National Trophy and Edw. Roberts \$50 Award
Charles H. Siegfried	77	National Trophy and Edw. Roberts \$30 Award
Marvin Hamp	73	National Trophy—\$15 Award
John W. Aul	60	National Trophy—\$15 Award
George Karpovich	39	National Trophy—\$15 Award
H. D. Edwards	29	National Trophy—\$15 Award
Robert Reder	13	National Trophy—\$10 Award
Kenneth Barker	9	National Medal
Clark V. Hile	8	National Medal
Cecil Winik	6	National Medal
Allen Trimmer	5	National Medal

## FLYING SCALE EVENT—OPEN DIVISION

Henry Struck	61.1	Thos. Bourne Joy Memorial Trophy Miniature and \$25 Joy Award
Edward Naudzius	54.2	National Trophy and \$15 Joy Award
Chester Lanzo	49.5	National Trophy and \$10 Joy Award
Charles Bleitner	33.9	National Medal
John E. Clemens	26.9	National Medal
John Irving	25.2	National Medal

## FLYING SCALE EVENT—SENIOR DIVISION

Walter S. Eggert	60.5	Pesco Trophy and \$25 Joy Memorial Award
Ray Beaumont	59.3	C. Z. Trophy and \$15 Joy Award
Kenneth Kraemer	52.3	National Trophy and \$10 Joy Award
Gregory Kohn	48.0	Berkeley Award
Frank Schnagel	44.7	National Medal
Leonard Mazewski	39.5	National Medal
Nancel Hill	37.2	National Medal
R. Annas	34.5	National Medal

## FLYING SCALE EVENT—JUNIOR DIVISION

Paul B. McCready, Jr.	49.6	National Trophy
Gordon H. Robertson	42.1	National Medal
Dick Jasion	18.5	National Medal

## LONGEST SINGLE FLIGHT ANY GAS EVENT

Ray Acord	1193.6	Pan American Airways Trophy
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## CLASS "C" GAS—OPEN DIVISION

Sai Talbi	1482.7	MODEL AIRPLANE NEWS Trophy and \$50.00 Emery Award
Ray Acord	1481.6	Ritz Trophy and \$25.00 Emery Award
Herbert P. Andrews	1187.7	National Trophy and \$15.00 Emery Award
Kenneth R. Knisley	1173.1	National Trophy and \$10.00 Emery Award
Malcolm Warner	1070.8	National Trophy
Elmer J. Shapiro	1045.9	National Trophy
Glenn Temte	1043.8	National Medal
Jack Preston	1037.1	National Medal
Robert W. Reich	1034.1	National Medal
George Reynolds	996.4	National Medal
Jon Jacobs	993.9	National Medal
John Findra	979.5	National Medal
William Lain, Jr.	972.5	National Medal
W. P. Stevenson	961.2	National Medal
David F. Kloefer	956.7	National Medal
Charles Carpenter	927.4	National Medal
Jerome Furlong	906.9	National Medal
Charles Weiss	868.7	National Medal
Morris Worick	857.3	National Medal
Alex Horlack	839.5	National Medal
Joe Dallaire	824.4	National Medal
H. Thomas	816.6	National Medal
Howard T. Bonner	799.0	National Medal
Henry R. Chervoznik	798.8	National Medal
Edward Tschernoscha	779.1	National Medal

## CLASS "C" GAS SENIOR DIVISION

Walter Brandt	1322.0	Wheat Memorial Trophy & \$100.00 Cash Award
Bud DeBolt	1196.9	Wheat Memorial Trophy & \$75.00 Cash Award
Charles Atkinson	1178.7	Wheat Memorial Trophy & \$50.00 Cash Award
Edward Komelcs	1111.1	National Trophy and \$25.00 Wheat Award
Earl Steir	1110.4	National Trophy
Jerry Chapman	1076.7	National Trophy
John Findra	999.2	National Medal
Keith M. Torgeson	980.4	National Medal
Bud Bowman	966.2	National Medal
Bill Parmenter	891.1	National Medal
Geo. Reich	869.5	National Medal
Arthur Hoff	864.6	National Medal
Geo. Gentry	860.7	National Medal
Morgan Jones	852.2	National Medal
Don Redding	851.1	National Medal
Jim Fields	819.4	National Medal
Bill Redeker	811.4	National Medal
Edward Funnweher	798.5	National Medal
Anthony Koprivnik	789.4	National Medal
Palmer Fultz	777.2	National Medal
Russell Simmons	745.1	National Medal
Eastman N. Jacobs	732.7	National Medal

## CLASS "C" GAS—JUNIOR DIVISION

Brofman, Jerry	804.1	Air Trails Trophy
Aldorf, Charles	743.3	Trost Trophy
Earle, Walter C.	677.6	National Trophy
Dall, Frank	638.5	Berkeley Award
Repenning, Wm.	608.2	National Medal
Geist, T. Richard	591.1	National Medal
Chas. Lauritsen	591.1	National Medal
Bennett, Porter	488.2	National Medal
Mohs, C. E., Jr.	478.9	National Medal
Huizenga, Bob	474.0	National Medal
Richard D. Wood	448	National Medal
Jung, Melvin J.	403.2	National Medal

## CHICAGO PARK DISTRICT

Division of Recreation

## 1941 NATIONAL MODEL AIRPLANE CHAMPIONSHIPS

## OUTDOOR CABIN—JUNIOR DIVISION

Scurio, Samuel	1008.5	Guiberson Trophy
Blatter, Albert	966.3	National Trophy
Robbins, Harry	788.6	National Trophy
Jennings, R. C.	756.2	National Trophy
Denton, Robert	674.1	National Medal
Noll, H.	624.4	National Medal
Robertson, Bill	622.4	National Medal
MacCready, P.	593	National Medal
Durand, Weiler	592.4	National Medal
Kreigh, Keith	553.7	National Medal
Robertson, G.	537.9	National Medal
Holmes, Warren	507.5	National Medal

## OUTDOOR CABIN—OPEN DIVISION

Dick Korda	1082.7	Berkeley Trophy and Miniature
H. Thomas	1013.5	National Trophy
S. Vermock	791.6	National Trophy
Chester D. Lanzo	786.9	National Trophy
Charles E. Hollinger	775.6	National Trophy
Ray Berens	759.2	National Trophy
Mark Heller	752.3	Air Trails Award
Howard F. Trampenau	745.1	National Medal
Edward Lidgard	724.5	National Medal
John Schneider	680.9	National Medal
Henry Struck	662	National Medal
Conrad H. Renning	631.8	National Medal
Jan Noonan	524	National Medal
L. J. Eichstedt	513.0	National Medal
Robt. W. Reich	508.1	National Medal
Alexander Ligna	502.5	National Medal
Howard Mitchell	500.0	National Medal
Henry A. Thomas, Jr.	488.4	National Medal
C. Weble	459.4	National Medal
Douglas T. Lagerstedt	395.9	National Medal
Edward D. Lamb	434.7	National Medal
Mrs. Hattie Lagerstedt	428.3	National Medal
Jos. Matulis	395.9	National Medal
Frank Vollrath	392.5	National Medal
Irvin N. Berens	386.2	National Medal

## OUTDOOR CABIN—SENIOR DIVISION

Ray Beaumont	1133.5	Burgess Trophy
James A. Broderick	1099.7	National Trophy
	711.5	Longest single flight Outdoor Cabin-Stout Perpetual Trophy
R. Brown	1056.1	National Trophy
Charles A. Lamb	1015.0	National Trophy
Fred West, Jr.	928.7	National Trophy
Dave Steinberg	886.0	National Trophy
Leo S. Sullivan	821.6	Air Trails Award
Palmer Fultz	818.9	National Medal
Leonard Damratouski	792.3	National Medal
Joseph A. Wojcik	791.2	National Medal
Alvin G. Rohrbaugh	784.7	National Medal
Harvey Prochnow	757.6	National Medal
R. Guttman	751.6	National Medal
Stanley Colson	739.6	National Medal
Robert DeBatty	725.9	National Medal
Robert A. Champagne	716.5	National Medal
E. Gumell	692.0	National Medal
William G. Hammer	643.5	National Medal
Joe Linson	631.6	National Medal
Donald A. Mertens	618.1	National Medal
J. Kalremanis	601.5	National Medal
Francis Hech	584.8	National Medal
James R. Stimson	582.8	National Medal
H. Schoenig	567.7	National Medal
Marty Zugel	565.6	National Medal
N. Faget	557.6	National Medal
Dale W. Root	532.3	National Medal
Bob Walston	525.3	National Medal
Frank Schingel	505.7	National Medal
A. Debusschere	500.5	National Medal

## CLASS "B" GAS—JUNIOR DIVISION

Edward A. Vargo	574.9	Chicago Park District and Chicago Times Perpetual Trophy
Gordon Morez	481.0	Model Craftsman Trophy
Allan Mavis	452.5	National Trophy
Edward Spaulding	426.9	National Trophy
Frank Ball, Jr.	409.9	National Trophy
Samuel Senro	405.9	National Medal
Robert Boltz	389.0	National Medal
Walter Waechter	385.0	National Medal
Henry Mester	363.0	National Medal
Creighton Trapp	333.2	National Medal

## "B" GAS EVENT—SENIOR DIVISION

Bill Willmarth	511.1	National Medal
P. R. Donahue	499.8	National Medal
Fred Vance, Jr.	485.8	National Medal
Robert C. Hoffman	461.2	National Medal
Robert Cooper	450	National Medal
Herman Weber	448.7	National Medal
Jack A. Pflug	447.1	National Medal
Roland Dexter	428.2	National Medal
Arthur Peacock	425.1	National Medal
Bill Redeker	422.0	National Medal

## CLASS "B" GAS—OPEN DIVISION

Gibson, W. A.	900.3	Gar Wood Perpetual and Miniature
Gerten, Karl, Jr.	773.4	Forster Trophy
Andrews, Herbert	746.1	National Trophy
Halbert, Wm. C.	743	National Trophy
Ellis, Murray	719.2	National Trophy
Reynolds, George	712.4	National Medal
Malone, J.	682.8	National Medal
Kester, Gene	656.5	National Medal
Mendell, R.	655.9	National Medal
Goldberg, Carl	637.0	National Medal
Talbi, Sai	606.5	National Medal
Kemp, Eugene C.	606.2	National Medal
Benson, Harry	583.6	National Medal
Burley, Robert	559.3	National Medal
Nagle, Lawrence B.	555.0	National Medal

## OUTDOOR STICK—JUNIOR DIVISION

MacCready, Paul B., Jr.	907.2	Gorr Trophy
Jasion, D.	602.1	Aviation Post American Legion Trophy
Robertson, Gordon H.	475.0	National Trophy
Kreigh, Keith	459.8	National Trophy
Thomas, John	438.4	National Medal
Holmes, Warren	437.9	National Medal
Huizenga, Bob	411.8	National Medal
Johnson, C. Robert	397.6	National Medal
Blatter, Albert	382.2	National Medal
Dates, Robert	369.6	National Medal
Wyckoff, Roger	363.3	National Medal
Melicham, Melvin	354.8	National Medal



# 1941 NATIONALS - continued

## CLASS "A" GAS—OPEN DIVISION

Gibson, W. A.	1297.2	Modelcraft Trophy and Miniature
Hall, Franklin M.	1246.8	Flo-Torque Trophy
Jossett, Geo. V.	908.3	National Trophy
Lain, Wm. H., Jr.	753.9	National Trophy
Millice, Chas. Wm.	724.6	National Medal
Hard, Leslie	692.8	National Medal
Goldberg, Carl	687.4	National Medal
Burley, Milton C.	677.6	National Medal
Furlong, Jerome	639.3	National Medal
Findra, John	506.2	National Medal

## OUTDOOR STICK—OPEN DIVISION

Lamb, Edward Day	1002.0	United Airlines Trophy and Brewster Aircraft Award \$25.00
Everett, Dick	949.2	B. J. Kesl Co. Trophy
Lagerstedt, Douglas T.	839.5	National Trophy
Vallrath, Frank	729.5	National Trophy
Johnson, Caldwell C.	602.7	National Trophy
Lanzo, Chester D.	593.2	National Medal
Remming, Conrad B.	589.1	National Medal
Vermock, J.	580.7	National Medal
Struck, Henry	515.6	National Medal
Wilkinson, C. M.	558.6	National Medal
Hollinger, Charles E.	532.9	National Medal
Dick, Korda	525.4	National Medal
Berens, Irvin N.	496.9	National Medal
Swort, Edmund B.	495.8	National Medal
Mertens, Donald A.	485	National Medal

## OUTDOOR STICK—SENIOR DIVISION

Smith, Raymond Foster	1184.5	Mulvihill Trophy
Sass, George	752.1	C. W. Rogers Trophy
Stimek, John	730.0	Brantley Airways Trophy
Lamb, Chas. A.	713.3	National Trophy
Steinberg, Wm.	680.6	National Trophy
Champano, Robert A.	677.5	National Trophy
Huguelet, Milton	669.6	National Medal
Collins, Chas.	657	National Medal
Schnagl, Frank	608.9	National Medal
Schultz, Howard	697.0	National Medal
Hammer, Wm. G.	584.9	National Medal
Hawkins, Robert H.	562.3	National Medal
Kaufmann, Robert J.	559.5	National Medal
Delusschere, A.	556.3	National Medal
West, Fred, Jr.	556	National Medal
Schelle, Henry Jr.	549.3	National Medal
Kimbley, Robert R.	538	National Medal
Gibbs, Robert	537.9	National Medal
Pinney, Jack	537.5	National Medal
Czyryk, Chester	535.0	National Medal
Shapiro, Henry	529.5	National Medal
DeThorn, Wm. Hugh	526.4	National Medal
Olson, Robert	523.1	National Medal
Blanchard, W.	516.2	National Medal
Frankenberg, Gilbert	512.5	National Medal
Peschich, Dushan	490.0	National Medal
Capan, F.	489.9	National Medal
Damratowski, Leonard	488	National Medal
Heeb, Francis	484.5	National Medal
DeBatty, Robert	484.1	National Medal

## CLASS "A" GAS—SENIOR DIVISION

Findra, John L.	668.4	Comet Perpetual and Miniature
Kehl, Jerome	627.9	Atom-Microdyne Trophy
Roberts, Charles	610.7	National Trophy
Gerpheile, Geo. DeLano	552.5	National Trophy
Folz, Robert	513.4	National Trophy
Wassam, Max	486.8	National Trophy
Stokes, Doug	447.1	Air Trails Award
Fotion, Harold Wm.	439.4	National Medal
Olson, O. L.	430.1	National Medal
Girtten, Karl, Jr.	430.1	National Medal
Schulte, Harry, Jr.	419.0	National Medal
Lutz, Bill	408.3	National Medal
Weber, Herman	404.0	National Medal
Leo Shulman	394.2	National Medal
Simmons, Russell	385.0	National Medal

## INDOOR CABIN—JUNIOR DIVISION

Sandborg, Robert	596.5	Guillow Trophy
Blatter, Albert	566.0	Aviation Writers' Trophy
MacReady, Paul, Jr.	459.3	National Trophy
Jasion, Dick	397.5	National Medal
Green, Pat	283.0	National Medal
Northmore, James	256.6	National Medal
Krupp, Donald	193.3	National Medal

## CLASS A GAS—JUNIOR DIVISION

Repenning, Wm.	819.2	Champion Sparkplug Trophy
Callaway, S.	693.3	National Trophy
Morris, Gilbert	616.0	National Trophy
Anderson, Thos. Jr.	440.4	National Trophy
Lauritsen, Chas.	435.8	National Medal
Northmore, J.	426.6	National Medal

## INDOOR CABIN—OPEN DIVISION

Cain, Gordon E.	847.2	Bloomingtondale & Miniature Chgo. & South Airlines
Struck, Henry	837.6	Jack Vilas Trophy
Caill, Jim	797.8	National Trophy
Matulis, J. P.	793.7	National Trophy
Werle, Chas. W.	770.6	National Medal
Hartung, Walter	736.4	National Medal
Janke, Curtis D.	711.0	National Medal
Lanzo, Chester D.	624.0	National Medal

## INDOOR CABIN—SENIOR DIVISION

Stanwick, Stanley	827.3	Eddie Rickenbacker Trophy
De Batty, Robert	712.4	National Trophy
Jasion, Art	701.0	National Trophy
Lerman, Harry	679.0	National Trophy
Keshishian, Harry	647.3	Air Trails Award
Heeb, Francis	639.0	National Medal
Lee, Henry A.	630.0	National Medal
Call, David L.	622.0	National Medal
Sass, George	606.4	National Medal
Morris, James	583.2	National Medal

## INDOOR STICK—SENIOR DIVISION

Stanwick, Stanley W.	1127.0	Stout Perpetual Trophy
		Burgess Trophy
		Standard Oil Award—\$15.00
Lerman, Harry	936.6	Early Bird's Trophy
		Standard Oil Award—\$10.00
Rohrbaugh, Alvin Geo.	902.9	National Trophy
Morris, Jas.	880.8	National Trophy
Call, David Lane	877.6	National Medal
Keshishian, Harry	864.0	National Medal
Miller, Donald F.	851.0	National Medal
Curth, Otto	834.8	National Medal
Gibbs, Robert	832.6	National Medal
Lee, Henry Armistead	822.0	National Medal
Brown, Ralph W.	820.3	National Medal
Palmer, David	816.4	National Medal
Feldmeier, Wilmer	809.1	National Medal
Cole, Henry A.	777.9	National Medal
Sullivan, Leo S.	772.2	National Medal

## INDOOR STICK—OPEN DIVISION

Andrews, Merrick S.	1104.7	Flying Aces Trophy
		Springfield Trophy
Matulis, Jos. P., Jr.	1039.6	Greater Chicago Chapter N.A.A. Trophy
Caill, Jim	1033.1	National Trophy
Janke, Curtis D.	1012.5	National Trophy
Cain, Gordon E.	999.3	National Medal
Gough, Wm. E., Jr.	803.0	National Medal
Nautzius, Edward	799.1	National Medal
Caill, Robert	796.4	National Medal

## INDOOR STICK—JUNIOR DIVISION

Sandborg, Robert	745.9	Croil Hunter Trophy
Jasion, Dick	594.1	American Airlines Trophy
Cadieux, Raymond	572.4	National Trophy
Vargo, Louis	530.8	National Medal
Dorfett, Charles	529.4	National Medal
Thomas, John	493.2	National Medal

## BEST FINISH EVENT

Allen Vopal	Berryloid Trophy
Jose, Salas L.	Berryloid Trophy
Bleitner, Charles	National Trophy
Gregory, John	National Medal
James Noonan	National Medal
Melvin J. Heines	National Medal

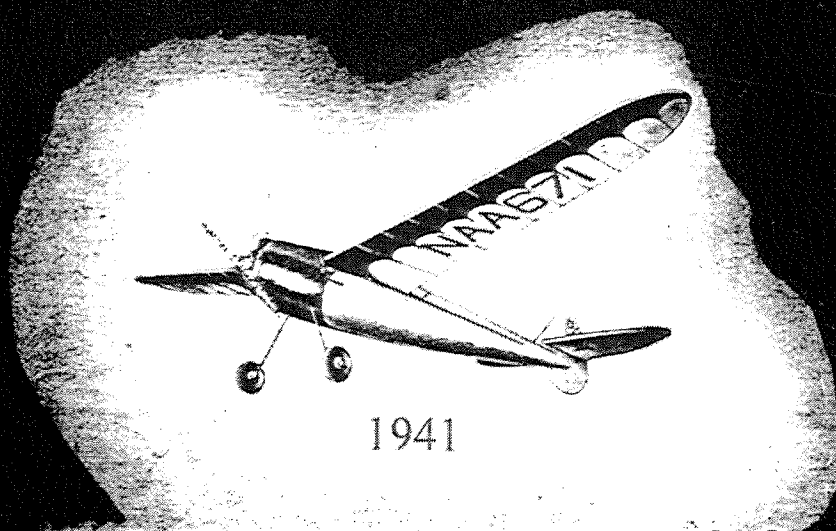
## EARLY STUNT JUDGING AT QUAKER CITY MEET BY SOME 1941 NOTABLES

A good time was had by all—even the judges. Left to right, Cliff Rogers, Paul Msiwurm, Paul Snyder, Irwin Polk, Walter Eggert, Sr. Add stunt events to your contest!





# BERKELEY



## HOBBY CATALOG

PRICE 10 CENTS

BERKELEY MODELS, INC.

230 STEUBEN ST., BROOKLYN, N. Y.



## Foreword

Nearly two years have elapsed since we published our last catalog. During this short span of time many changes have taken place which not only seriously affect the world of model builders but the entire world at large. These new world conditions, due to extensive inroads of war throughout Europe and the Orient, directly affect the thoughts and attitudes of all Americans. We are extremely conscious of the intensive demands and responsibilities placed on American industry, in our need for preparedness and the development of war production to supply both ourselves and our friends.

One of the most vital spheres in our defense plans is aircraft designing and manufacture. Berkeley is proud of accomplishing its share, through the medium of model airplanes. Berkeley helps train and equip thousands of young men to be of value in the factory and on the field. Aircraft manufacturers in their search for trained workers recognize the knowledge of aerodynamics and structure gained from building flying models.

Model airplane construction as a hobby serves a two-fold purpose. Firstly, it affords the builder a wealth of real pleasure, not only in the building, but in flying the model he has created with his own hands. Secondly, it trains and teaches the model maker, theories and mechanics that are invaluable when he desires to apply his knowledge to a paying job.

Although so many of our designers and friends are busy working in aircraft factories they are still interested and enthusiastic about producing superior and new model designs for Berkeley. In addition we have added many new designers to our already large staff.

It has always been the Berkeley policy to supply the finest designs, materials, and service. Today, as in the past, our policy is the same. In spite of constantly rising costs of raw materials we have made every effort to hold to our old scale of prices. Modelers and dealers who want real value, as always, look to Berkeley for leadership.

### CONTEST FLYERS . . . JOIN THE ACADEMY!

In the 500 official model aircraft competitions which were sanctioned in 1940 by the Academy of Model Aeronautics, more than a quarter million contestants made 2,500,000 flights. Model airplane activity is coordinated on a national scale by the Academy, which is a division of the National Aeronautic Association.



Model airplane builders and enthusiasts are invited to write to the Academy, Hotel Willard, Washington, D. C., for information concerning aero-modeling licenses, model insurance or contest rules. Public spirited individuals and institutions interested in sponsoring model aviation activity are likewise invited to write.



# THE FLYING CLOUD

44 inch wingspan (195 square inch wing area).

Contest endurance model designed by Henry Struck . .  
America's Ace contest builder and designer.



View of propeller  
retracted against  
fuselage.

## FEATURES:

- Propeller retracts flush against fuselage sides.
- All propeller parts ready-made.
- Rubber tensioner, ready-made.
- All wire parts ready formed, including landing gear, rubber hooks and tail post.
- Celluloid windshield.
- Silkspan covering

## KIT INCLUDES:

Illustrated plans, cement, clear dope and all wood parts, ready-cut or printed out.

The Flying Cloud is the result of five years consistent experiment, improvement, and research on the same contest design. Twenty-three test models were built before the Flying Cloud was offered to you. Everyone of these models finally disappeared in the clouds on flights up to three hours duration. To the amazement of experts in every country, this ship demonstrated that she has what it takes to be classified as the Champion. Reports of contest winnings have been received from all over America including many winners in the 1940 U. S. Nationals at Chicago.

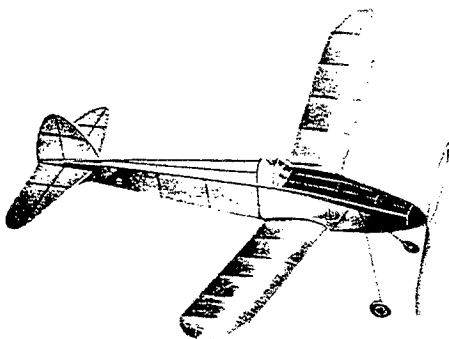
Now you can build this sensational new model from the great and complete kit by Berkeley, including the exclusive feature of a retractable propeller that folds flush against the sides of the fuselage. This lessens air-resistance in the glide, adding those valuable extra flying minutes which makes this model a true champion.

Complete Kit  
Less Rubber

**\$1.00**  
Plus 10c  
Postage

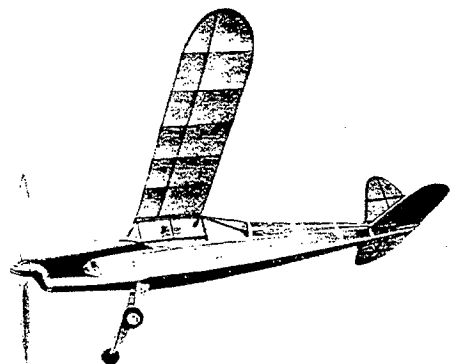
## CHIEFTAIN

A new racy low-wing design with performance and flyability that is spectacular. The wing fits into the fuselage and is removable.



## BUCCANEER JR.

A smaller scale copy of one of America's most famous gas models. You will like its long smooth flights and enduring glides.



# Berkeley's Famous Flyers

## KIT INCLUDES:

Large detailed plans, machine cut propeller, cement, silkspan covering, rubber, wheels and all wooden parts printed out.

**25¢**

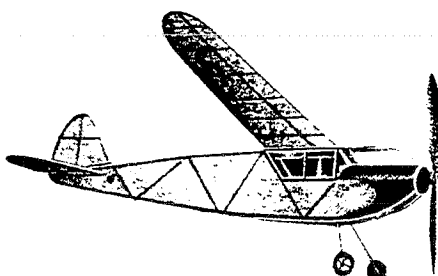
Plus 10c Postage

## FEATURES:

- 26 inch wing span
- Rugged 3/32 inch construction throughout.
- Flexible wire landing gear.
- Shock-absorbing wing mounts.

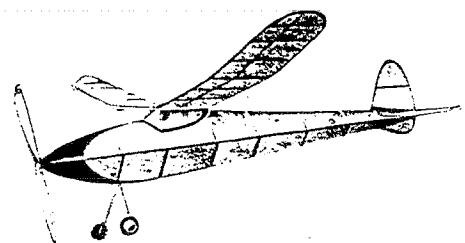
## MUSKETEER Jr.

The perfect model for newcomers in model building. Easy to construct and durable when made.



## FLYING CLOUD Jr.

A smaller edition of one of the worlds most famous contest winners. Ideal for contests among beginners.





# International Fighter Series

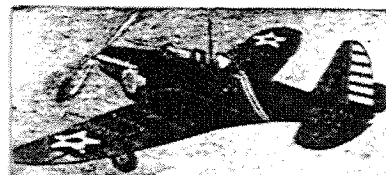
- WITH "SEMI-PLANKED" FUSELAGE • Balsa Covered Leading Edge
- "GAS MODEL" LANDING GEAR • INTERNATIONAL INSIGNIA

ALL

**\$1.00**  
Each  
Post  
Paid

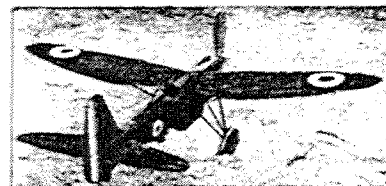
## AMERICAN CONSOLIDATED P-30 25 3/4 inch Wingspan

One of the first pursuit-attack ships of the U. S. Army. Curtis Conqueror powered, it was designed years ahead of its time. The model has beautiful clean lines. Builders report it to be one of the most stable models they have ever built. Colors: Army Blue, Orange and Silver.



## FRENCH MUREAUX PURSUIT 24 3/4 inch Wingspan

France's gull-wing pursuit plane was designed for super-stability and ruggedness in the hands of inexperienced pilots. Had more of these planes been produced, perhaps the fate of France would be different today. The model has been called by many "the finest flying scale model ever designed". Flights of two minutes are not exceptional. If you intend to enter flying scale model contests, you can expect the Mureaux to win for you. Colors: Red and Blue.

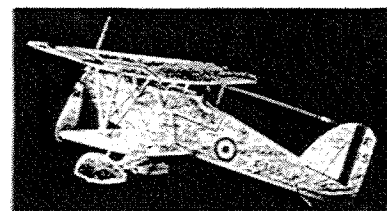


## DUTCH FOKKER D-XVII 24 inch Wingspan

The Modern Fokker Fighter. Designed by Tony Fokker, famous for his World War Planes, for the Dutch Air Forces. The model is sturdy and well designed for flying. Letters on file report it to be a consistent flyer for as high as 95 seconds. Colors: Gray and White.

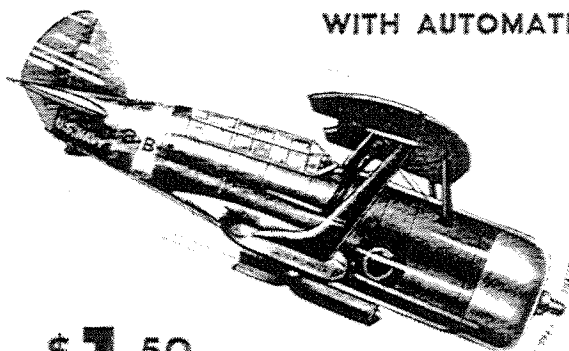
## BRITISH HAWKER SUPER-FURY 24 inch Wingspan

Can you imagine a military biplane swooping across the sky at 273 m.p.h.? The British Hawker Super-Fury represents the modern development in British fighters. The model with its clipped wings, long slender fuselage, performs like its prototype. Without a doubt, this kit is the biggest dollar value on the market. Colors: Silver and White.



# Flying Dive Bombers

WITH AUTOMATIC BOMB RELEASE



**\$1.50**  
Post  
Paid

## STUKA DIVE BOMBER

27 inch Wingspan — Automatic Bomb Release

Everybody has read of the remarkable performance and deadly accuracy of the "Stuka" in Poland, Norway and France. From all available sources Berkeley has compiled the data to develop this Ace ... not just another model airplane ... it actually drops a nest of dive bombs in flight.

### KIT INCLUDES:

Full size plans, model dope and cement, and all wood parts printed out ... everything to build the complete model.

## CURTISS DIVE BOMBER

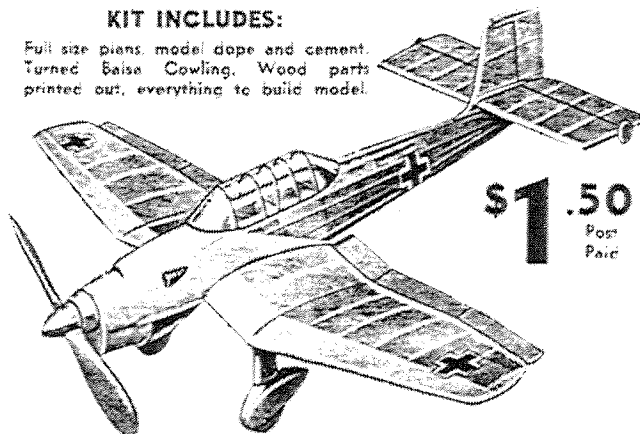
24 inch Wingspan — Automatic Bomb Release

With U. S. Military strategists closely watching the European struggle for air supremacy the U. S. Navy is ordering huge quantities of the fast maneuverable new Curtiss SBC-4 Dive Bombers.

[Note: The U. S. Navy has pioneered the type of dive bombing being used with success abroad]. The bomber will turn in beautiful flights and carries a dummy demolition bomb which is sensationally dropped in flight.

### KIT INCLUDES:

Full size plans, model dope and cement. Turned Balsa Cowling. Wood parts printed out, everything to build model.



**\$1.50**  
Post  
Paid



# America's Famous Rubber Powered Models

## THE "BUCCANEER 30" THE CAVALIER "36"

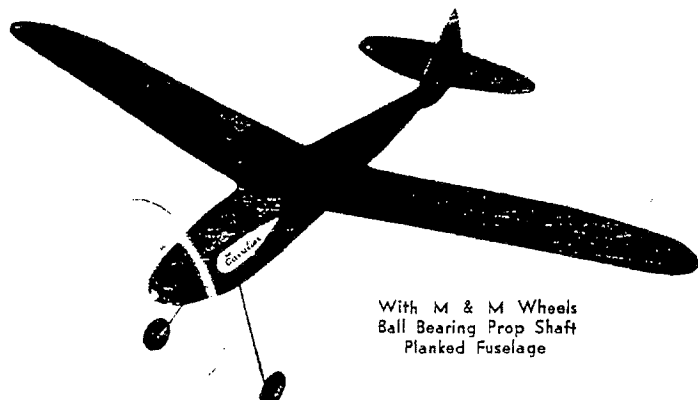
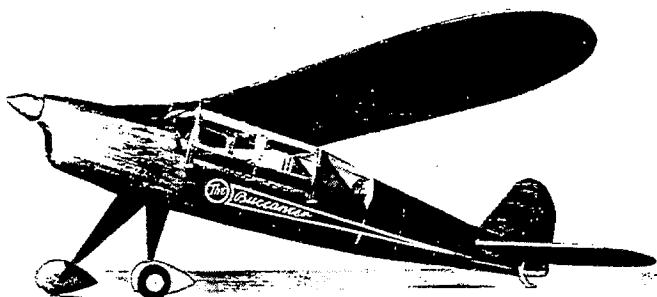
30 inch Wingspan — Ball-Bearing Propeller Shaft

No airplane in the history of model building has established such a long line of records equal to that of the "Buccaneer" Gas Models. In response to your demands we present the rubber-powered "Buccaneer", designed to give scale model appearance. The planked fuselage with "Crutch" construction is the simplest, strongest method ever devised for building model airplanes.

### KIT INCLUDES:

All balsa parts printed out; semi-finished nose block; full size tube of cement; large bottle of clear dope; Celluloid for windshield; carved propeller; brown contest rubber; metal fittings; covering materials; and full size plans with complete instructions.

**\$1.00**  
Post  
Paid



With M & M Wheels  
Ball Bearing Prop Shaft  
Planked Fuselage

The Aristocrat of Model Airplanes in rubber power. Employs the famous Berkeley Gas Model Construction, making it practically crash-proof. Kit includes everything to build the model as pictured. Note the smooth lines of this new super-model, closely resembling the large transports and flying boats.

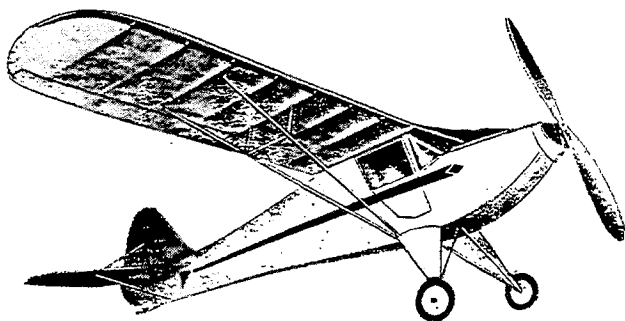
### KIT INCLUDES:

All balsa parts printed out; semi-finished nose block; full size tube of cement; large bottle of clear dope (not a vial); carved propeller; brown contest rubber; metal fittings; covering materials; and full size easy-to-follow plans with complete instructions.

**\$1.95**  
Post  
Paid

## 54" Wingspan Giant Flyers

To meet the demand of those model builders who want big wingspan for little money, Berkeley designed these great planes for greater value. Unlike other "cheap" big wingspan models, they have full 5/32 inch-square fuselage construction, wire reinforced landing gears, and removable shock-proof wings.



### KITS INCLUDE:

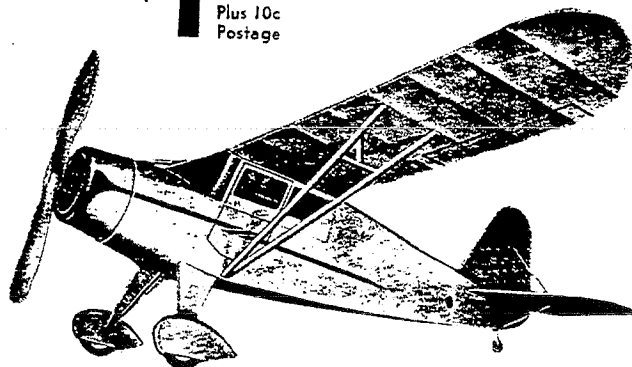
Giant size plans in full detail; celluloid windshield; machine cut propeller; cement and dope; metal nose bushing; wheels; formed motor hook; wire landing gear and all wooden parts printed out.

## TAYLORCRAFT

A real true-to-scale model of the popular, speedy light plane type. This ship with its simple rugged construction will be a delight to the eye of any real model fan. It is as strong as most gas models and it flies and performs just like the plane it was modeled after.

Each Kit  
Less Rubber

**\$1.00**  
Plus 10c  
Postage

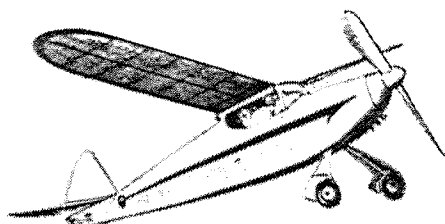


## REARWIN CLOUDSTER

The latest thing in speedy plane design by the famous builders of the Rearwin Sportster and Speedster. If you want a great value that only Berkeley can give, this is the model for you. This Kit includes turned balsa cowl.



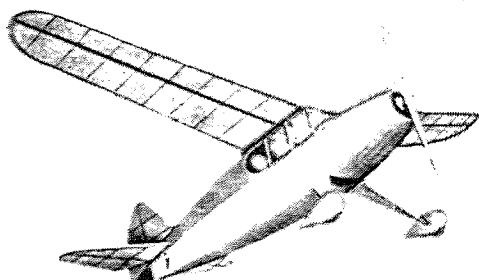
# Banner Series by Berkeley



## Banner Sportsman 30 inch Wingspan

A beautiful and easily built model with the appearance of today's most popular sportplanes. Flights of 1000 feet or more are not uncommon.

**50¢**  
Postpaid



## Banner Executive 40 inch Wingspan

A new design in rugged construction which incorporates the streamlines of many of today's popular passenger ships. Kit includes turned balsa cowl.

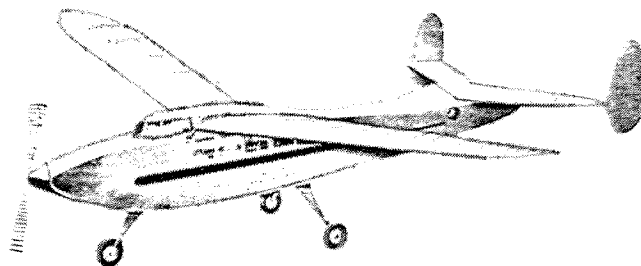
**\$1.00**  
Post Paid

## Featuring Berkeley's New Automatic "Prop-lock"

A safety device designed to protect propellers while the model is landing. The "Prop-lock" automatically stops propeller in a horizontal position when rubber is unwound, preventing "wind-milling." Propeller parts are complete, ready to install.

## KITS INCLUDE:

Plans in full detail, and instructions for building. Cement, dope, rubber motor, wire landing gear, wheels, ready-made propeller fittings and all wooden parts printed out.



## Banner Transport 50 inch Wingspan

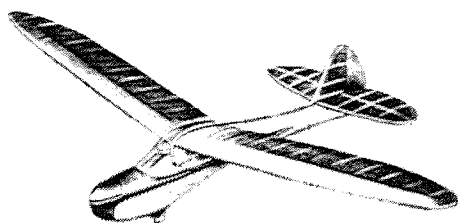
A new twin rudder design with a featured tri-cycle landing gear. Streamlined to resemble the newest modern commercial transports.

**\$1.50**  
Post Paid



## SINBAD THE SAILER

50 inch Wingspan — 250 square inches Wing Area  
Towline Launched Glider with Spiral Control  
(Patent Pending)

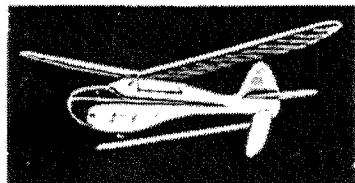


The first new idea in towline gliders during the past 10 years. No longer are zig-zag runs necessary to release the glider once it has reached its peak altitude. By just attaching the "Spiral Control" and running only a few feet with the towline, Sinbad will shoot skyward, automatically releasing itself at the peak of the launch.

**\$1.00**  
Plus 10c  
Postage

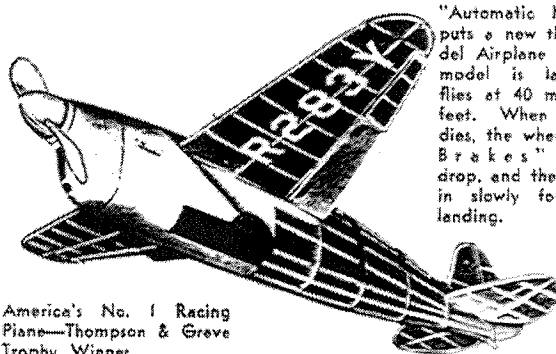
## FEATURES:

- Big 33" x 34" plans.
- Balsa covered wing leading edge.
- Novel removable ballast box.
- Silkspan covering.
- Cement and dope.
- Wood parts printed out.



Picture shows "Spiral Control" attached

## FOLKERT'S RACER



"Automatic Model Pilot" puts a new thrill into Model Airplane Building. The model is launched and flies at 40 m.p.h. for 200 feet. When the power dies, the wheels and "Air Brakes" automatically drop, and the plane glides in slowly for a perfect landing.

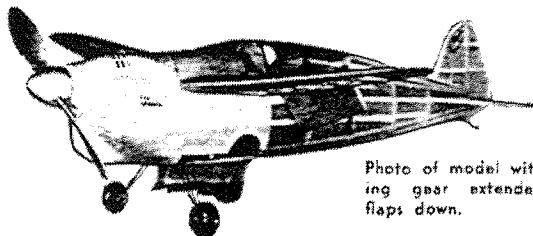
America's No. 1 Racing Plane—Thompson & Greve Trophy Winner.

## KITS INCLUDE:

- METAL SPINNER
- CELLULOID WHEELS
- SEMI-FINISHED NOSE BLOCK
- COLORED DOPES

Wooden parts printed on sheet balsa, carved propeller, brown contest rubber; strips cut to size, large amount of cement and clear dope, covering material, full size plans with special instructions. 20½" overall length

## FEATURING AUTOMATIC MODEL PILOT

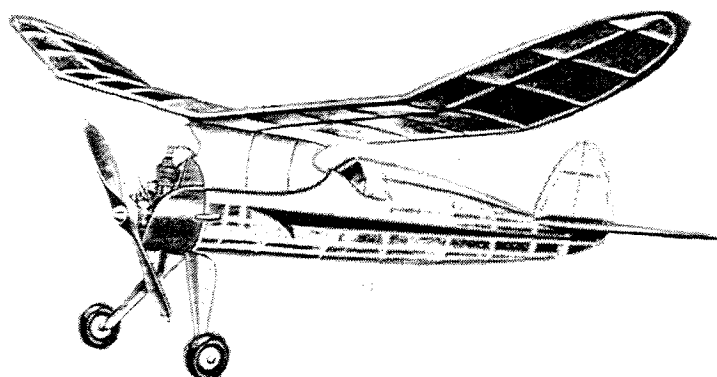


**\$1.50**  
Post Paid

Photo of model with landing gear extended and flaps down.



## Aristocrats of Atom - Powered Gas Models



### AMERICAN ACE "36"

36 inch Wingspan

The first contest performance gas model. Designed with the characteristics and construction of the large size "American Ace", it is popular with Atom engine owners. Additional features are the silk covered center section and the removable motor unit. Rugged construction throughout to withstand constant usage.

**\$1.50**  
Post  
Paid

#### KIT INCLUDES:

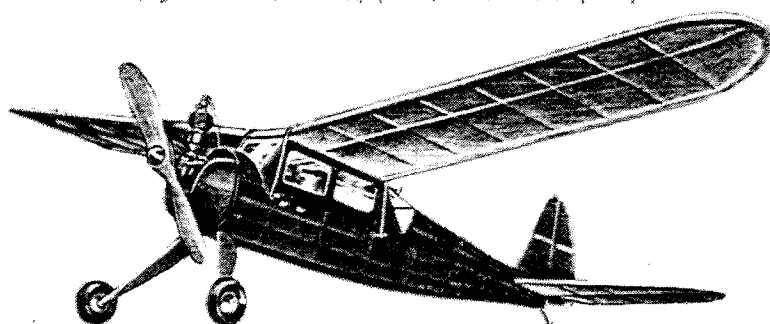
Full size plans, cement, dope, silkspan covering; ready-made landing gear; wheels, ignition and hardware equipment, and all wooden parts printed out.

### BUCCANEER "36"

36 inch Wingspan

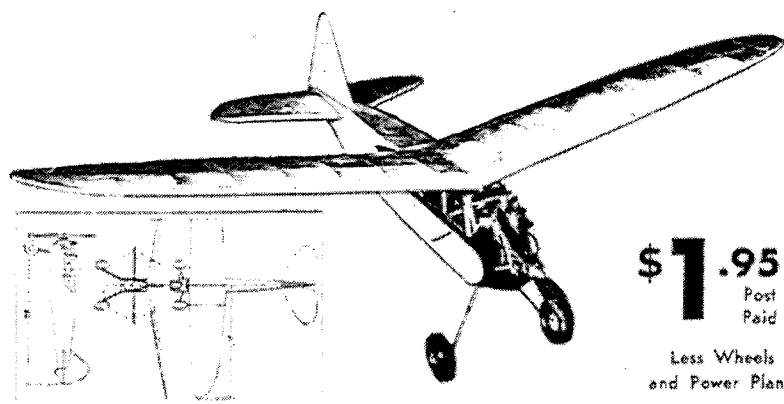
This famous cabin gas model has been designed especially for Atom engine owners. It resembles both in looks and performance the larger sized gas model which has held every national and world's endurance record. It takes off, flies, and glides like a real airplane.

**\$1.50**  
Post  
Paid



### MUSKETEER "42"

42 Inch Wingspan — Class "A"



First place winner in class "A" at Paterson, N. J., on May 21, 1939. Here is the only class "A" model that looks and performs like a real airplane. The original test model after fifty flights did not even have a small hole in the covering. Absolutely the easiest model you ever built. We recommend it to any beginner. The ideal model for the "apartment house" builder. Look at the sensational low price. Unbelievable Berkeley Value!

#### SPECIFICATIONS

Wing area—224 square inches; Flying weight—16 ounces; Airfoil section—Special Low Speed; Cantilever Monospar Wing held to fuselage with "snap-off" rubber band arrangement; Single Strut Cantilever Landing Gear; 3/16" square longeron fuselage. For engines .12 to .19 cubic inch displacement.

**\$1.95**  
Post  
Paid

Less Wheels  
and Power Plant

#### KITS INCLUDE:

Each kit has the same completeness as found in higher priced Berkeley kits. All wooden parts printed out. Semi-finished nose block. Metal fittings. Ignition Equipment. Lightweight Silkspan paper covering. Cement and colored dopes. Standard colors: Orange and Black.

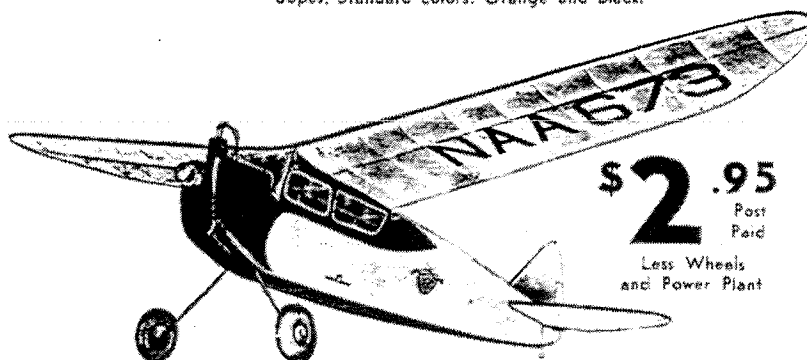
### MUSKETEER "54"

54 inch Wingspan — Class "B"

The newest Musketeer that sets a new standard for performance in its class. Watch this ship perform the next time you go to a contest. Did you ever see such a fast climb and floating glide in any model?

#### SPECIFICATIONS

Wing area—377 square inches. Flying weight—23 ounces. Airfoil section—Special N. A. C. A. Cantilever Monospar Wing held to fuselage with "Snap-off" rubber band arrangement; Single Strut Cantilever Landing Gear; 3/16 inch square longeron fuselage. For engines .19 to .30 cubic inch displacement.



**\$2.95**  
Post  
Paid

Less Wheels  
and Power Plant



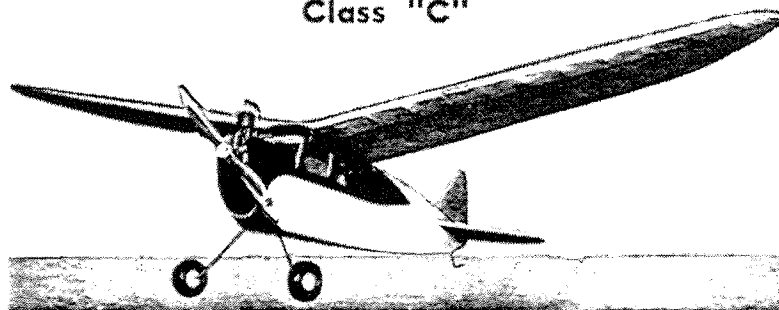
# MUSKETEER "STANDARD"

**SPECIAL  
COMBINATION PRICE**

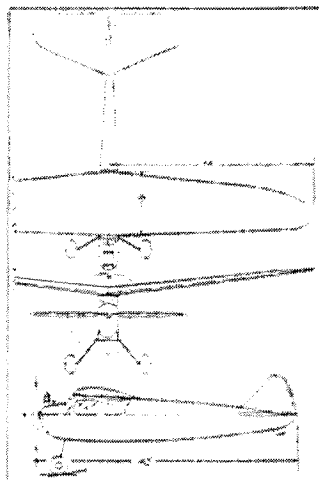
Complete Kit with 14 inch  
DeLuxe Propeller; "Time-Air"  
timer, and rubber wheels.

**\$5.50**  
Post  
Paid

**Six Foot Wingspan — For Engines .40 to .65 Displacement**  
**New "Featherweight" Construction**  
**"Elevator Climb"**  
**Class "C"**



Primarily designed for simplicity and high performance, the ship employs many features found in the "Buccaneer" and "Cavalier". Although the structure is light, it is still sturdy. Weight has been reduced by eliminating fillets, rounded corners, etc. The aerodynamic arrangement is entirely new. The wing and stabilizer are set at high angles of incidence. As a result you get "elevator climb", eliminating the customary dip after the engine cuts. This adds many seconds to the model's flight duration.



## SPECIFICATIONS

Wing area—4.04 square feet; Flying weight—2 lbs. 4 oz.; Airfoil Section—Modified Gottingen; 1/4" square balsa longeron fuselage with additional bracing at nose; "Snap-off" wing attachment; Tail surfaces permanently attached to fuselage cannot lose their adjustment.

Complete Kit

**\$3.95**  
Post  
Paid

Less Wheels  
and Power Plant

## KIT INCLUDES:

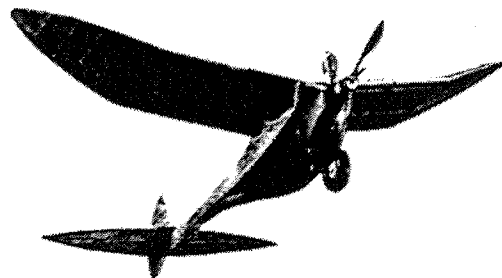
Everything to build the model as pictured (except Wheels and Power Plant). Semi-Finished Nose Blocks; Silkspan Covering; Hardware and ignition equipment; Liberal supply of cement and colored dope. Standard colors: Orange and Black.

# THE SKYROCKET

**36 inch Wingspan — Class "A" Engines**

*Designed by Leon Shulman*

**NATIONAL CLASS "A" CHAMPION**



A new departure in class "A" contest designing, featuring a one wheel landing gear, high lift airfoil, and polyhedral wings. This ship incorporates many aerodynamic principles used by contest winners throughout the country. The Skyrocket has proven itself by taking prizes at both the National and Eastern States Contests.

## SPECIFICATIONS

Wing area—225 square inches, flying weight—14 ounces. "Crutch" fuselage construction with removable wing and tail units, for engines .15 to .19 cubic inch displacement.

## KIT INCLUDES:

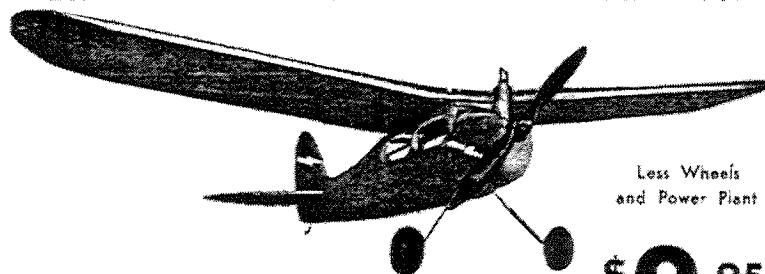
Everything to build model as pictured. Silkspan covering; cement and clear dope; hardware and ignition equipment; rubber landing wheel; and all wood parts printed out.

**\$1.95**  
Post  
Paid

# BUCCANEER "48"

**Four foot Wingspan — Class "A & B" Engines**

**BERKELEY'S CLASS "A & B" CHAMPION**



Less Wheels  
and Power Plant

**\$2.95**  
Post  
Paid

The "Buccaneer-48" created a sensation when it was presented to the model world. We recommend using engines .19 to .23 displacement for best all around performance.

## SPECIFICATIONS

Wing area—360 square inches; Flying weight—20 ounces. Airfoil Section — Modified Eiffel; Cantilever Monospar Wing; Single Strut Cantilever Landing Gear; Berkeley's exclusive vibration proof motor mount; "Crutch" fuselage construction with planked semi-monocoque nose.

## KIT INCLUDES:

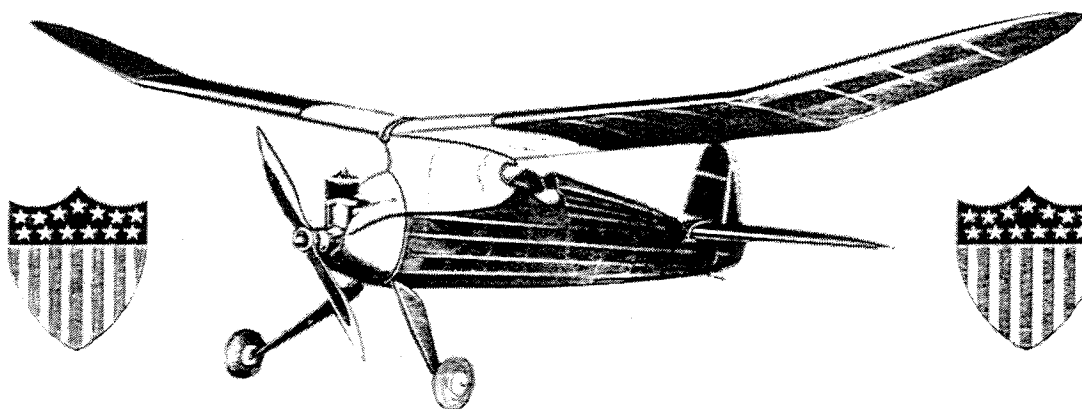
All Balsa blocks semi-finished; special selected Balsa for fuselage planking. Silkspan covering; cement and yellow colored dope. Decal insignias.



*First Place at Philadelphia, Palm Beach,  
New York and Minneapolis Meets.*



# The AMERICAN ACE



54 INCH WINGSPAN — FOR CLASS "B" ENGINES — DESIGNED BY HENRY STRUCK

The first sport gas model that gives superior Contest performance. Adopted from Struck's "New Ruler" gas model which was the most popular ship at the 1940 Nationals, and winner of 3 out of 10 places; the American Ace has been reduced in size to accommodate the more popular engines. It performs best with engines of .29 cubic inch displacement, but can be powered with any engines from .19 to .49 cubic inch displacement, making it suitable for competition in all 3 classes of A. M. A. contests. Thousands of these ships have already been built and flown to prove their stability and popularity.

## KIT INCLUDES:

Silk covering for center section and wing support. Rubber wheels and finished propeller. Formed wire landing gear. Semi-finished wood blocks. Full sized complete detailed plans. Silkspan covering. Championship cement and dope. Complete hardware and ignition equipment. All wood parts printed out.

**\$3.95**  
Post  
Paid

## SPECIFICATIONS

Wing area: 432 square inches. Flying weight: 24 ounces. Airfoil section—N. A. C. A. Cantilever wing with Balsa covered leading edge. Removable nose and motor unit. "Snap-off" wing and tail attachments with adjustable rudder setting. Timer operated from cockpit. Fuselage is of rugged longeron and multiple stringer construction.

# CAVALIER "60"

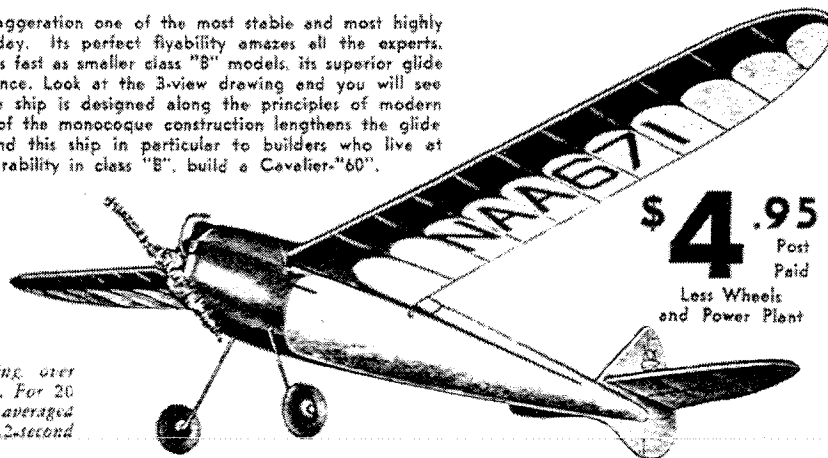
## MONOCOQUE CONSTRUCTION

Five-Foot Wingspan — for .23 to .49 Cubic Inch Class B and C Engines

The Cavalier-"60" is without exaggeration one of the most stable and most highly perfected models in the air today. Its perfect flyability amazes all the experts. While the ship does not climb as fast as smaller class "B" models, its superior glide more than makes up the difference. Look at the 3-view drawing and you will see what we mean when we say the ship is designed along the principles of modern sailplanes. The low skin friction of the monocoque construction lengthens the glide still further! We also recommend this ship in particular to builders who live at altitudes over 2500 feet. For soarability in class "B", build a Cavalier-"60".

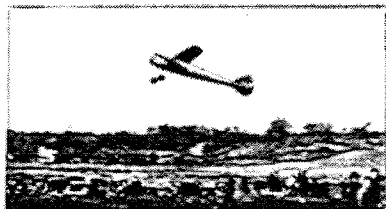
## Kit Includes:

Everything to build the model as pictured. (Except Wheels and Power Plant). All blocks semi-finished. Special selected wood for planking. Silkspan covering. Transfer insignia. Liberal supply of cement and colored dope.



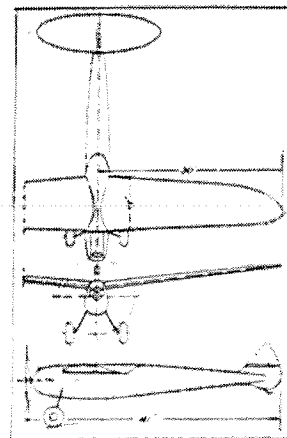
**\$4.95**  
Post  
Paid  
Less Wheels  
and Power Plant

The Cavalier-"60" flying over Creedmore, Long Island. For 20 consecutive flights she averaged over 2 minutes on a 12-second engine run.



## SPECIFICATIONS:

Wing area—420 square inches; Flying weight—30 ounces; Airfoil Section—Modified Goettingen; Cantilever Monospar Wing with Balsa covered leading edge and warp-proof trailing edge; single strut cantilever landing gear; Vibration proof motor mount; Completely planked, skin stressed fuselage with internal "Crutch" and bulkhead construction, making it practically crash proof; "Snap-off" wing attachment; Tail surfaces permanently attached to fuselage; simplified engine cowling.

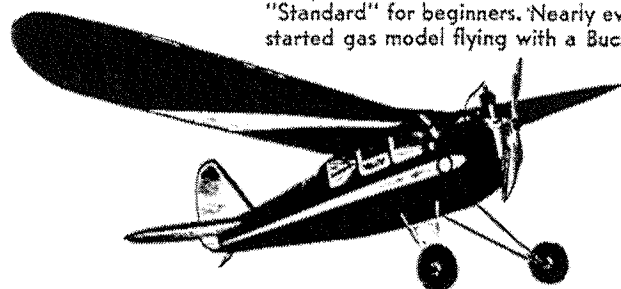




# BUCCANEER "STANDARD"

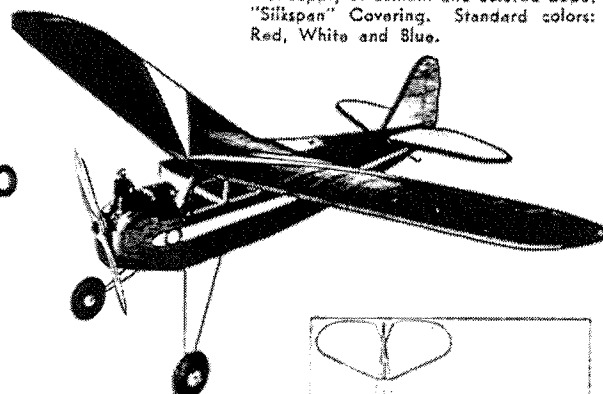
5½ foot Wingspan — .45 to .60 Cubic Inch Engines

Every expert recommends the Buccaneer "Standard" for beginners. Nearly every expert started gas model flying with a Buccaneer.



**\$ 5.00**  
Post Paid

Less Wheels  
and Power Plant



## KIT INCLUDES:

Everything to build model as pictured (except Wheels and Power Plant). Liberal supply of cement and colored dope; "Silkspan" Covering. Standard colors: Red, White and Blue.

## A Part of the Buccaneer- "Standard's" Famous Records

First Place—Krasgo Meet; Oct., 1937;  
Official Time—5 Minutes

First Place—M.M.L. Meet; Oct., 1937;  
Official Time—5 Minutes

First Place—Taylorcraft Meet; May, 1938  
Official Time—3 Minutes

First Place—(3 monthly contests, winner  
each time), Long Beach, Cal., 1938

First Place—Trenton Petrolers Meet;  
Sept., 1938; Official Time—4½ Min.

(Certified N. A. A. Senior World's  
Record)

First Place—Quaker City Meet; Sept.,  
1938; Official Time—5 Minutes

High Time—Syracuse Meet; May, 1939;  
Official Time—1 Hour, 50 Minutes.

\*(Motor ran ½ second overtime, no  
record).

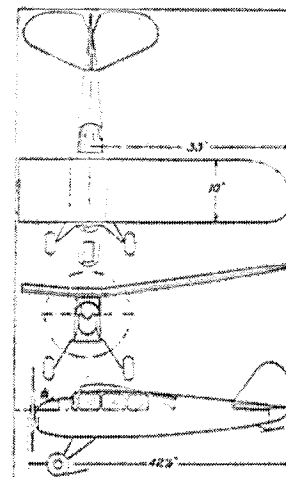
All the above flights were made under  
limited engine run rules.

The Buccaneer-"Standard" introduced "prop climb" to gas models. Three years ago it was believed impossible to use a Class "C" engine in a ship of this size. Today nearly 80% of the contest models in Class "C" are within 6 inches of the size of the Buccaneer-"Standard". She climbs at the rate of over 1000 feet per minute and then levels off in a smooth soaring glide.

Nothing can compare with it for perfected design. Twice as strong as necessary, with practically no engine vibration. Easy to build — it takes only a few nights to construct. Specially recommended for beginners.

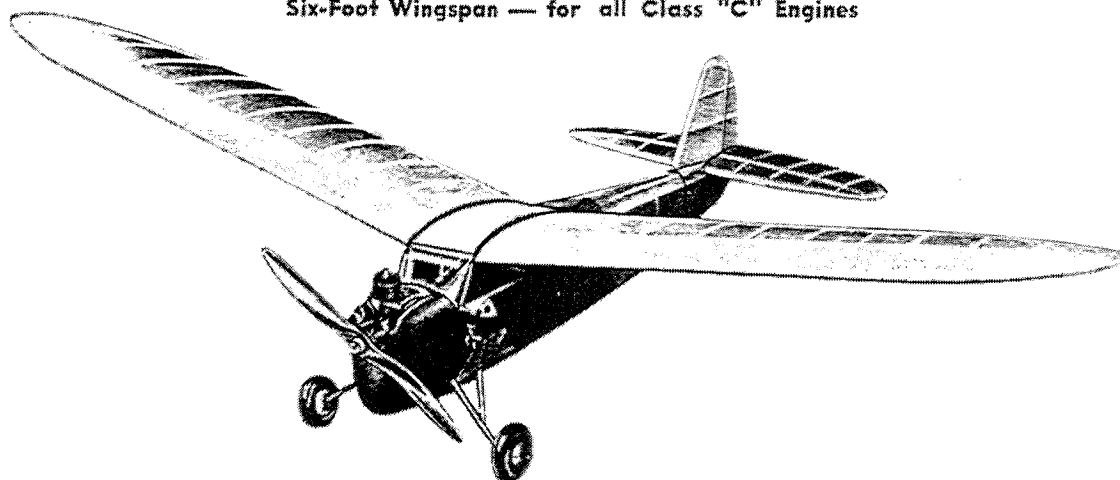
## SPECIFICATIONS

Wing area—630 square inches; Flying weight—3¼ to 3¾ lbs.; Airfoil Section—Special Design; Cantilever Monospar Wing with Balsa Covered Center Section; Heavy duty landing gear; Husky 5/16 square longeron construction; Vibration proof motor mount; Tail surfaces permanently attached cannot lose their adjustment.



# BUCCANEER "SPECIAL"

Six-Foot Wingspan — for all Class "C" Engines



Only those who have built the "Buccaneer-Special" can know what a great ship it really is. Less than one month after we designed this outstanding plane, it was the first place winner at the Grumman Meet, Bethpage, Long Island; and it is still the talk of the model building fraternity. Here is what some of the boys have to say: "Constructed like a Battle Cruiser yet lighter than average models" and "Berkeley has a model to be proud of" and "3½ minutes on the first flight with motor barely turning over". These praises must be well earned.

## SPECIFICATIONS

Wing area—six square feet; Flying weight—3 lbs. (Wing area and flying weight perfect for .60 cubic inch displacement engines). Airfoil section—N. A. C. A. Light weight Cantilever Wings with streamlined tips. "Snap-off" wing and tail attachments. High lift stabilizer with spin-arresting setting.

**\$ 5.95**  
Post Paid

Less Wheels  
and Power Plant

## KIT INCLUDES:

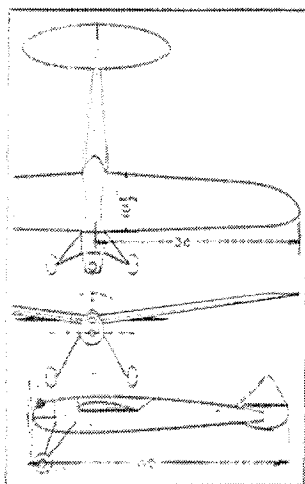
Semi-finished wood blocks. Championship cement, clear and colored dopes, Silkspan covering. Complete hardware and ignition equipment. Full sized plans in detail. All wood parts printed out. Berkeley "Time Air" flight timer and ignition switch as standard equipment.



# CAVALIER "STANDARD"

Six-Foot Wingspan — for .45 to .60 Displacement Motors

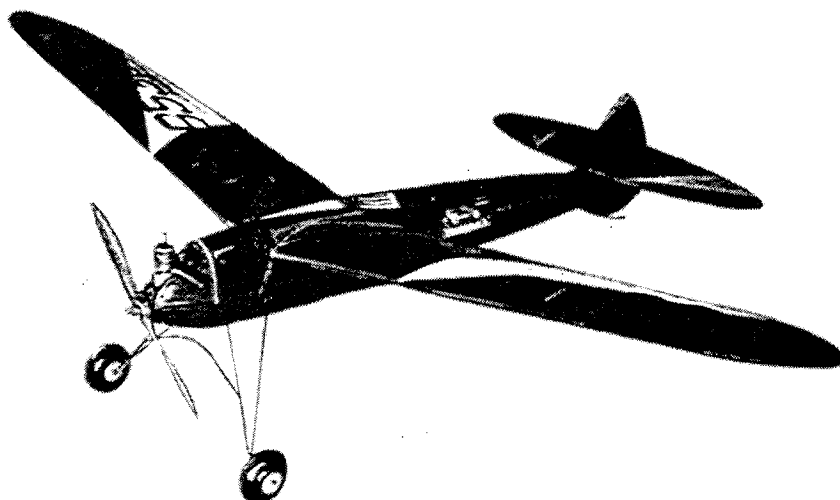
So many requests were received for a smaller Class "C" version of the famous Custom-"Cavalier" that we had to introduce the Cavalier-"Standard." This ship is designed for high performance. When properly adjusted and trimmed, she will outclimb anything.



**\$5.95**  
Post Paid  
Less Wheels and Power Plant

## SPECIFICATIONS

Wing area—4.04 sq. ft.; Flying weight—3 lbs.; Airfoil Section — Gottingen; Cantilever Monospar wing; Crutch and "Diamond" Fuselage Structure with closely spaced stringers (not monocoque); Heavy-duty Landing Gear; Tail Surfaces permanently fastened to fuselage cannot lose adjustment.



## COMBINATION PRICE

Complete materials including Rubber Wheels, Propeller and "Time-Air" Flight Timer.

**\$7.50**  
Post Paid

## KIT INCLUDES:

Everything to build the model as pictured; (except wheels and power plant). All wooden blocks semi-finished; printed out plywood nose bulkheads; Silkspar covering; large "Cavalier" transfer insignia; liberal supply of cement and colored dope. Standard colors: Yellow and India Red.

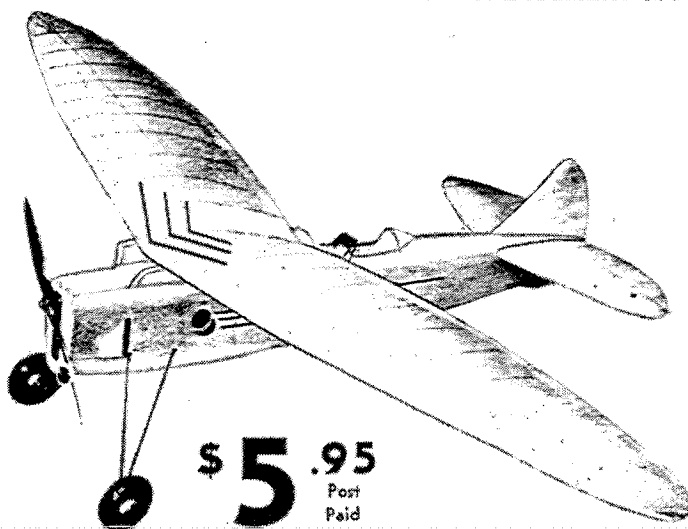
A HENKLEY Construction Kit

# COURIER-"SPORTSTER"

SIX-FOOT WINGSPAN — FOR .45 TO .60 DISPLACEMENT MOTORS

## WINNER 1938 NEW YORK STATE CHAMPIONSHIP

You will like the Courier "Sportster" with its sleek lines and sweep-back gull wing. You will like its flyability even better. The motor can be used either inverted or upright, and can be changed in less than one minute. Cowl is sufficiently large to accommodate any 1/5 h. p. motor. A perfect ship for sport flying and recommended for builders who live at high altitudes.



**\$5.95**  
Post Paid  
Less Wheels and Power Plant

## SPECIFICATIONS

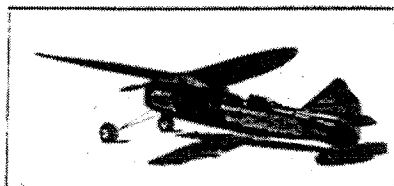
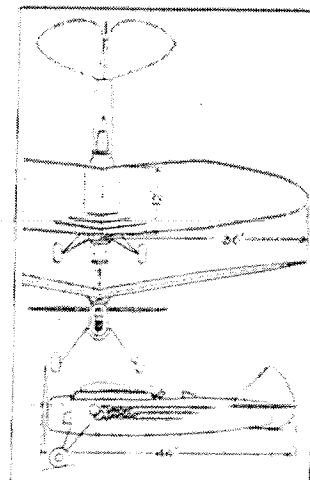
Wing area—5.0 sq. ft.; Flying weight—3 lbs. 4 oz.; Airfoil—Modified Eifel; Cantilever Monospar gull wing with balsa covered center section; Husky 5/16" square longeron fuselage; Tail surfaces permanently attached to fuselage cannot lose their adjustment.

## KIT INCLUDES:

Everything to build the model as pictured (except wheels and power plant); semi-finished leading edge center; plywood bulkheads cut to size; Silkspar covering; transfer insignia; liberal supply of cement and colored dope. Standard color: Yellow.

**COMBINATION PRICE**  
Complete materials including Rubber wheels, and "Time-Air" Flight Timer.

**\$7.50**  
Post Paid



"Courier-Sportster" built by Fred C. Cooper, Corland, N. Y., Contest Director

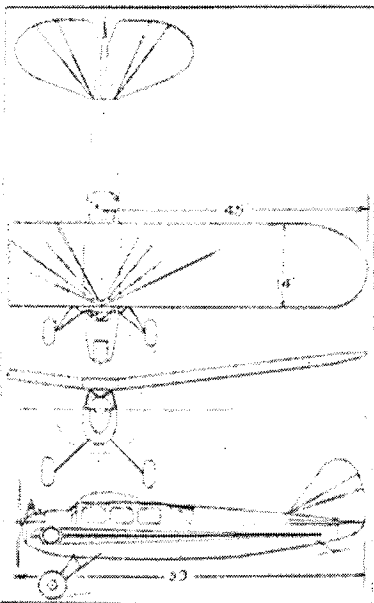


The "Super-Buccaneer" has won so many places in contests that it is impossible to keep an accurate account of its records. The ship is designed to take all the abuse you can give it. The average life of a Super-Buccaneer is over 400 flights, a record in itself.

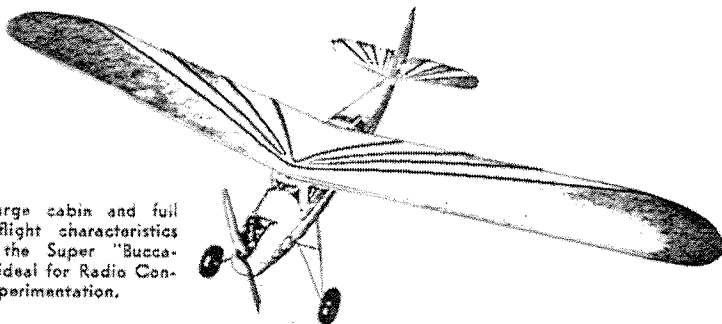
COMPLETE KIT

**\$8.50**  
Post  
Paid

Less Wheels  
and Power Plant



## America's Famous Gas Model



The large cabin and full scale flight characteristics make the Super "Buccaneer" ideal for Radio Control experimentation.

## THE "SUPER" BUCCANEER

7½-Foot Wingspan — for .60 to 1.20 Cubic Inch Engines

Winner of Over Two Hundred Contest Prizes

### SPECIFICATIONS

Wing area—8.3 square feet; Flying weight—5½ lbs.; Airfoil Section—Modified Eiffel; Cantilever Multispar Wing, each spar designed to properly carry its individual load; heavy-duty landing gear, internally and externally braced; "Dual-Strength" fuselage construction, husky 5/16" square longerons with bulkheads and "planked" balsa surface throughout; shock-proof wing attachment to fuselage; removable tail surfaces keyed to fuselage cannot lose their adjustment.

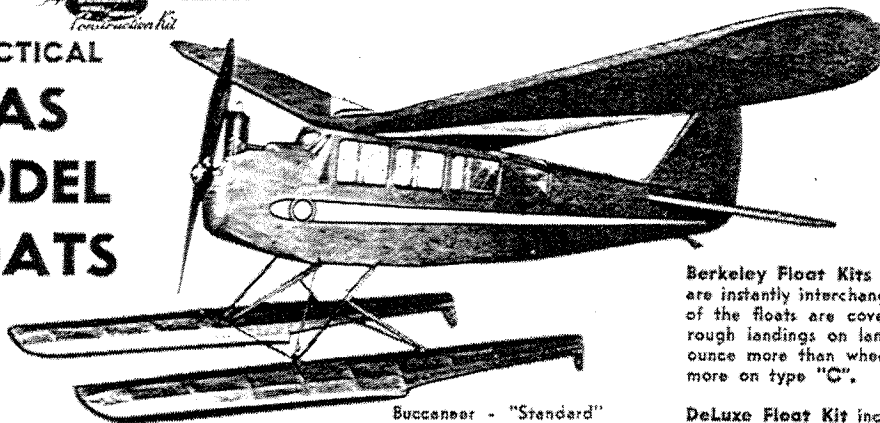
### KIT INCLUDES:

Everything to build the model as pictured (except wheels and power plant); special selected balsa for planking; silk-span covering; liberal supply of cement and colored dope —Standard colors: Chrome Yellow and Red.



Canadian National Champion, J. R. Kennedy's  
"Super-Buccaneer" which won the 1938  
Canadian Nationals

## PRACTICAL GAS MODEL FLOATS



BERKELEY

Buccaneer - "Standard"  
equipped with  
Type "30" Floats

## "GONDOLIER"

### SEA PLANE FLOATS

#### DELUXE KITS

**TYPE "20"** For models from 48" to 60" wingspan. Float capacity—Models up to 2 lbs.; overall length—23". Recommended for the Cavalier—"60", Buccaneer "48", American Ace and Musketeer "54". **\$1.95**

**TYPE "30"** For models from 60" to 80" wingspan. Float capacity—Models from 2 to 3½ lbs. Overall length—30". Recommended for the Buccaneer "Standard", "Cavalier-Standard", "Musketeer-Standard" and "Courier-Sportster". **\$2.95**

**TYPE "40"** For models from 80" to 108" wingspan. Float capacity—Models up to 7 lbs.; overall length—41". Recommended for the "Super-Buccaneer" and "Custom-Cavalier". **\$4.95**

Berkeley "Gondolier" Floats have been designed by Alan Borton after exhaustive tests with our design ships. The entire year of 1938 was spent perfecting the present Berkeley Floats. Air Trails magazine considered the data obtained from these tests to be so important to model aviation that they devoted two issues to the description of their development. (June and July, 1939.)

Berkeley Float Kits are complete in every way and the floats are instantly interchangeable with the regular wheels. The bottom of the floats are covered with sheet balsa and can withstand rough landings on land. The weight of these floats is only one ounce more than wheels on types "A" and "B" and four ounces more on type "C".

DeLuxe Float Kit includes the complete materials to build a set of floats, with all the necessary wire and fittings for attachment to the model. All wooden parts printed out. Plenty of cement, silk for covering. Music wire for additional struts. Aluminum for rudders. Special heavy aluminum dope for waterproofing. Each Float Kit also includes a special sheet of instructions for mounting the floats and seaplane flying technique with many sketches of various types of attachment to all designs of gas models.

**DRY FLOAT**—Same as DeLuxe Kit but including water-proof silk-span covering and less liquids.

#### DRY FLOAT KITS

**TYPE "20DF"** For models from 48" to 50" wingspan. Float capacity up to 2 lbs.; overall length 23". This kit does not include silk covering or liquids. **\$1.00**

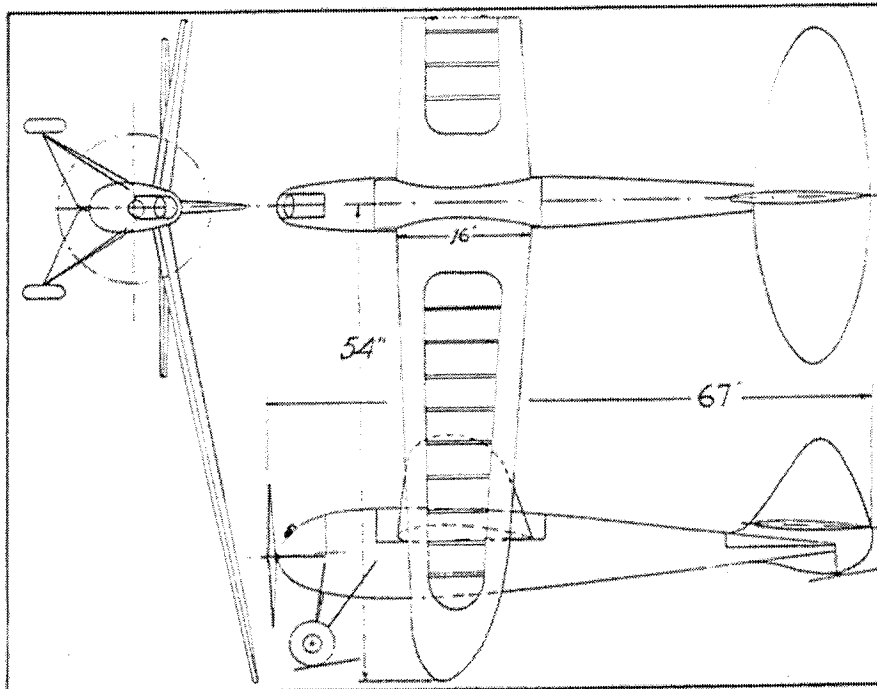
**TYPE "30DF"** For models from 60" to 80" wingspan. Float capacity up to 3½ lbs.; overall length 30". This kit does not include silk covering or liquids. **\$1.50**

**TYPE "40DF"** For models from 80" to 108" wingspan. Float capacity up to 7 lbs.; overall length 41". This kit does not include silk covering or liquids. **\$2.50**





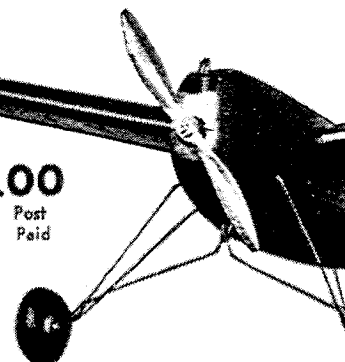
"Custom-Cavalier" built by  
Capt. Alibon of the Royal  
Ulster Rifles, flying over the  
Victoria Barracks in  
Punjab, India



# "The Aristocrat"

**\$15.00**  
Post  
Paid

Less Wheels  
and Power Plant

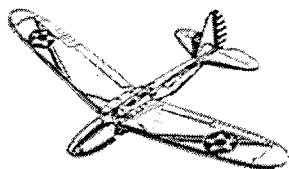


## KIT INCLUDES:

- Full Size Plans with Complete Instructions
- All Wing Ribs and Bulkheads Printed Out
- All Balsa Strips and Blocks cut to size
- Special Steel Wire for Landing Gear
- Materials for Battery Box, Motor Mount and Motor Cowl
- Hardware and Metal Fittings
- Six Square Yards of Silk
- Full Quarts of Cement, Clear Dope and Pearlene Dope
- All Ignition Accessories
- Special Installation Drawings for O. K. Twin and Forster Engine.

## AMERICAN JUNIOR AIRPLANES & GLIDERS

All American Juniors have cambered wings, and many other features. Every American Junior, with the exception of the A-J Fireball, can be flown less than 60 seconds after you remove it from the box. Made and guaranteed to fly by the American Junior Aircraft Company.



### A-J INTERCEPTOR

Just fold wings back, flip into the air for 200 feet and wing snaps automatically into gliding position. Will soar 1/2 mile or more in rising air currents. Marked in 3 colors like latest U. S. Army fighter. Complete with launching stick and powerful rubber motor. Individually packed in colorful box. .25



### A-J HORNET

Takes off ground under its own power, climbs steeply to 100 foot ceiling, flies 500 feet. Balsa construction. Has 18 inch wing span, patented A-J self-aligning sleeve bearing. Heavy duty rubber motor is lubricated for long flights and maximum speed of 42 m.p.h. .25



### A-J COAST GUARD PATROL

Has dummy engine of dur-aluminum and 3-bladed prop. 15 inch wing span. All balsa construction. 3-color Coast Guard markings and New Flight Control

Sold only in standard lots of 12. .10



### A-J BOMBER

A 12 1/4 inch cambered wing, all balsa glider. Wing is adjustable for loops, circles, or long distance glides. Dihedral for uniform stable flights. .05

Sold only in standard lots of 48.

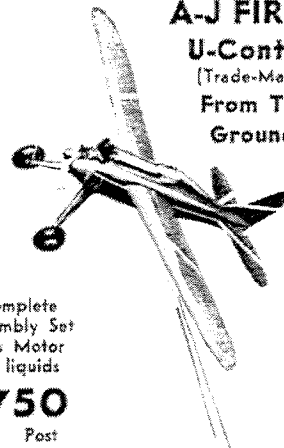


### A-J PURSUIT

Zooms from the ground to 300 ft. altitude. Total flight 1/5 mile! Propeller of 3-ply hardwood that rotates on ball bearings; self-aligning thrust mounting; 19 1/4 inch wing span; superpower contest rubber motor. Streamlined balsa fuselage 3-color paint job. High speed, 48 m.p.h. Weight 1 1/2 oz. .50

### A-J FIREBALL

U-Control  
(Trade-Mark)  
From The  
Ground



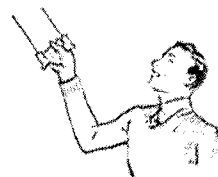
Complete  
Assembly Set  
Less Motor  
and liquids

**\$7.50**  
Post  
Paid

Make it climb, power dive, hedge hop, or loop with U-control. Real speed races are possible with the A-J Fireball. Speed Finder is included in every kit for quick speed computations.

### Ready in 6 Hours

Designed for "B" motors. All parts come ready-cut to shape. Wing span 36 inches. Wing is built of sheet balsa over high speed ribs. Due to semi-finished form, plane can be built in less than 6 hours.





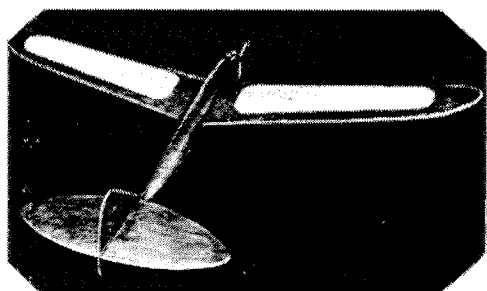
# of Model Airplanes"



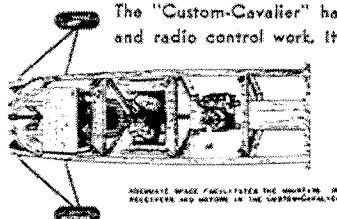
## THE "CUSTOM CAVALIER"

Nine-Foot Wingspan - 67" Overall Length

For .60 to 1.20 Cubic Inch Engines - 6 lbs. Complete Weight



The Custom Cavalier has been adopted by more than fifteen colleges and universities for experimental and radio control work



Installation of Radio Control

There is no model like the "Custom-Cavalier." It is the only model that has everything. Winner of practically every limited fuel contest entered. The biggest threat in limited engine run competition because of its super-soaring ability. It has a sinking speed of less than one foot per second which means that the slightest thermal will send it climbing into the clouds.

The "Custom-Cavalier" has been adopted by over fifteen colleges and universities for experimental and radio control work. Its rugged construction, husky landing gear, and smooth glide make it possible to carry as high as 4½ lbs. payload with ease.

When you have built the "Custom-Cavalier" you will have the "tops" in model airplanes. You will stand out among other model builders. Owning a "Custom-Cavalier" is a source of real satisfaction to any model builder. It is truly the "Rolls Royce of Model Airplanes".

Simplified Monocoque Construction: Removable Wing and Tail Units; Perfect cooling cowl; Filleted wing and tail; Extra strong landing gear; Tail adjustment tabs.

## POWER AND PROPELLERS FOR RUBBER POWERED MODELS

### BROWN CONTEST RUBBER

This Brown Rubber is the same as advertised. It holds every world's endurance record, both indoor and outdoor. It is one of the few rubber threads that has been specially designed for model airplane use. It gives stability and endurance to your plane. Note the exceptionally low prices. Guaranteed to be fresh stock. All sizes are 1/30" thick. 225 feet per skein.

1/32" wide.....	20c per skein	1/8" wide.....	25 ft. for 10c
1/16" wide.....	35 ft. for 10c		60c per skein
	35c per skein	3/16" wide.....	15 ft. for 10c
3/32" wide.....	30 ft. for 10c		85c per skein
	50c per skein	1/4" wide.....	25 ft. for 20c
			\$1.15 per skein

### MACHINE CUT PROPELLERS

5".....	2c	9".....	5c	13".....	10c
6".....	3c	10".....	6c	14".....	12c
7".....	4c	11".....	7c	15".....	15c
8".....	4c	12".....	8c	16".....	20c
Special 15" Flying Cloud Propeller.....	25c	18".....			25c

### PAULONIA WOOD PROPELLERS



	Standard	Steel		Standard	Steel
5".....	10c	15c	9".....	20c	35c
6".....	12c	20c	10".....	25c	40c
7".....	15c	25c	12".....	35c	55c
8".....	18c	30c	15".....	65c	80c

### JASCO RUBBER LUBRICANT

The finest lubricant for contest rubber models. Made to the most exacting specifications.

1 oz. bottle.....	15c	2 oz. Can.....	25c
-------------------	-----	----------------	-----

## TESTED COVERING MATERIALS FOR RUBBER POWERED MODELS



The new AMERICAN covering tissue designed especially to meet the needs of model aeronautics. It has been treated by special methods so that water cannot dissolve it. Easy to Apply. Can be used wet or dry, especially good on curves. Colors: White; Red; Blue; Yellow and Orange. Sheets—19½" x 24½".....3c each.

### SILVER TISSUE

20" x 24", each.....5c Doz. 50c

### JAP TISSUE

Has a soft silk finish and shrinks when doped. 20" x 24" sheet.

White, each.....2c  
Dozen.....20c

### WOOD VENEER

10" x 15".....4c

### COLOR JAP TISSUE

Colors: Red; Green; Dark Blue; Army Cobalt Blue; Yellow; Khaki; Orange; Black.

Each.....3c  
Dozen.....25c

### FOR INDOOR MODELS

#### SUPERFINE TISSUE

24", Sheet.....7c

#### JASCO MICROFILM

2 oz. Can.....25c

## FOR GASOLINE POWERED MODELS



"Silkspan GM" for gas powered planes  
White; Red; Blue; Yellow; Orange  
Sheets—24" x 36" — 3 for 25c.

### BAMBOO PAPER

The finest, toughest grade made.  
24" x 36" sheet.  
White lightweight, per sheet.....5c  
White heavyweight, per sheet.....5c

### MODEL SILK

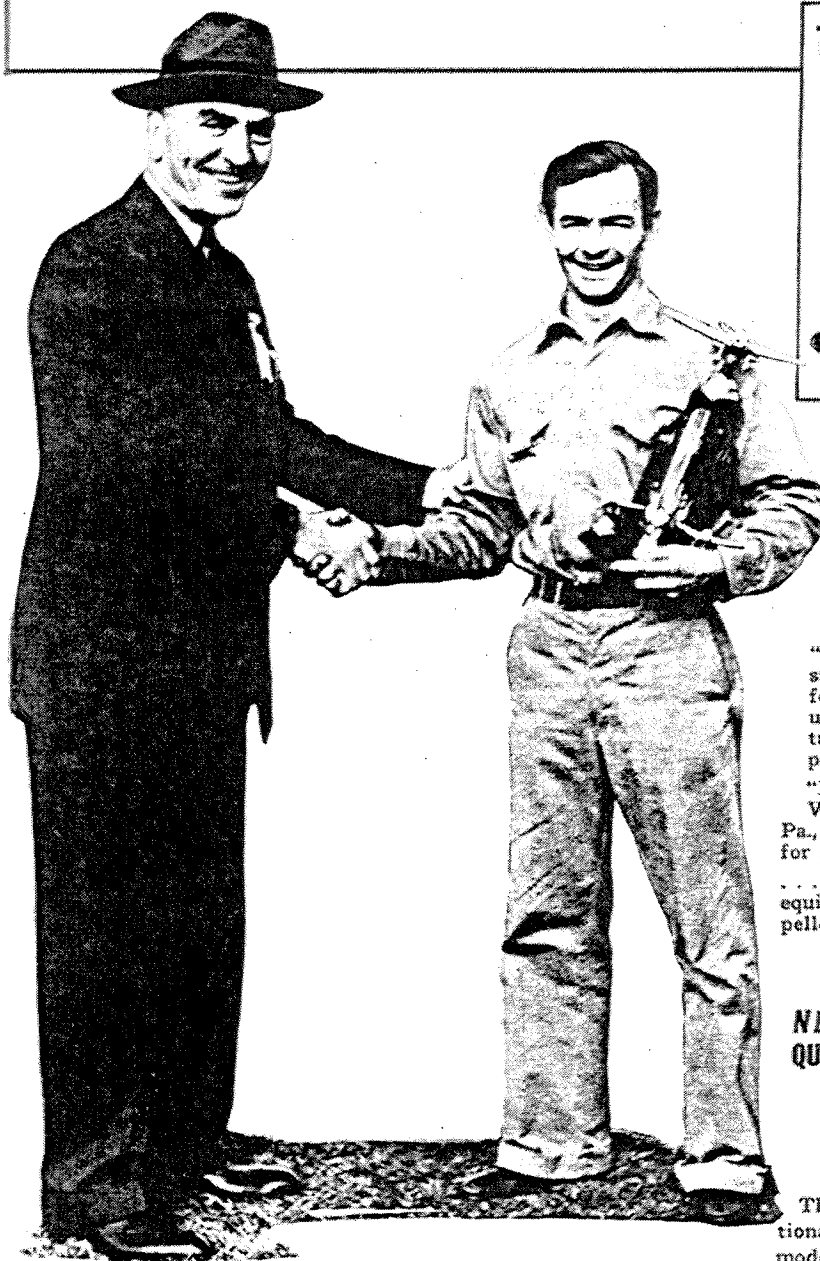
Special for covering gas models.  
Absolutely not weighted. White only. Per square yard.....55c

## INSIGNIA

Gummed sheet with 2" circles and rudder stripes.  
British, French, or United States Army, each.....5c  
Large gummed sheet with 12 pairs of insignia from 1/2" to 1 1/8" diameter and rudder stripes. Four countries. Per sheet.....5c

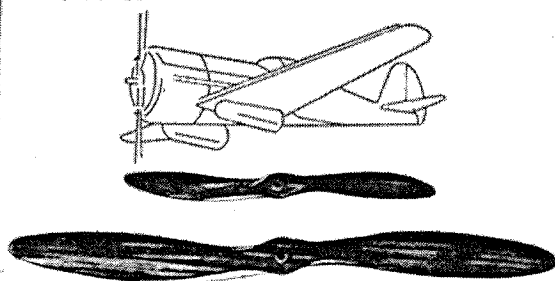


# CAPT. RICKENBACKER CONGRATULATES ANOTHER WINNER USING Flo-Torque!



Capt. Eddie Rickenbacker, world famous flyer, presents Rickenbacker Trophy to Harry Forsyth on October 5, at Elkins, W. Va.

**THIS 20% MORE EFFICIENT PROPELLER  
CHOICE OF CHAMPS EVERYWHERE!**



## **SPEEDIER-FASTER CLIMB GIVES CHAMPS SOMETHING TO TALK ABOUT!**

Yes sir, fellows, the famous Capt. Rickenbacker congratulates Harry Forsyth, winner of Rickenbacker Trophy; and everyday consistent winners throughout the nation depend on Flo-Torque propellers where competition is keenest. But here, let Harry Forsyth tell you in his own words.

"Win with a Flo-Torque" has been my slogan ever since I started using Flo-Torque propellers. I have found them far superior to any other props I have ever used. Regardless of the motor I am using, if it is turning a Flo-Torque I feel very confident that the plane will give maximum performance.

"I have placed high in contests at Morgantown, W. Va., Elkins, W. Va., Butler, Pa., and Waynesburg, Pa., also have had many excellent flights while flying for sport."

... So if you want to rub elbows with big time winners, equip your planes with precision built Flo-Torque Propellers.

**NEWS FLASH!**  
**NEW "INVADER" SETS HIGH STANDARD OF  
QUALITY IN LOWEST PRICED PROPELLER FIELD!**

**ONLY 15¢**

*Lacquered 25c*

The well known "FLO-TORQUE" has made a sensational reputation of being America's most efficient gas model propeller; and now we are putting this efficiency in back of our new, lower priced propeller, the "INVADER."

Manufactured of straight close grain white poplar, wood noted for its durability. Precision machined with workmanship and design to give its users utmost satisfaction.

**SEE THIS NEW LINE OF PROPELLERS NOW!**

**Distributors—Jobbers—Dealers—**

**Overcome competition in your home territory!**

# **FLO-TORQUE**

**3150 Clybourne Ave., Chicago, Ill.**



# Megow

LARGEST HOBBYCRAFT MANUFACTURER IN THE WORLD



PRICE 10 CENTS

CATALOG

1941

No. 11







# GIANT FLYING WARPLANES!



KIT No. D-12

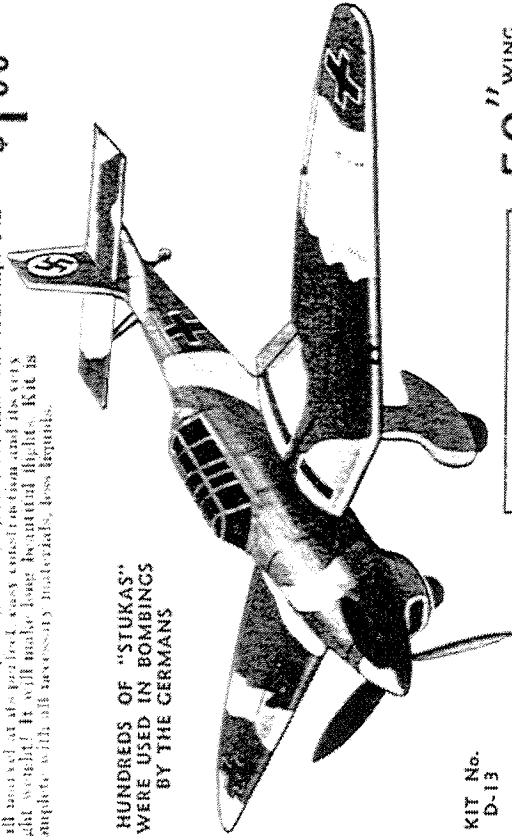
BRITISH "SPITFIRE"

50" WING SPAN

Here is the plane you've heard so much about, in the war headlines! This Supermarine "Spitfire" has shot down hundreds of Nazi bombers, and is considered to be the fastest pursuit plane in the world. This kit builds a superb giant flying model of this wonderful ship! You will marvel at its perfect, easy construction and its very light weight! It will make long beautiful flights. Kit is complete with all necessary materials, less liquids.

Complete Kit \$100

HUNDREDS OF "STUKAS" WERE USED IN BOMBINGS BY THE GERMANS



KIT No. D-13

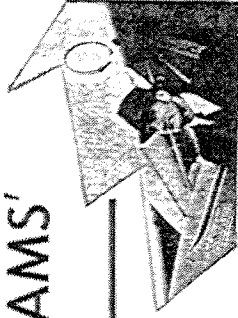
GERMAN "STUKA"

50" WING SPAN

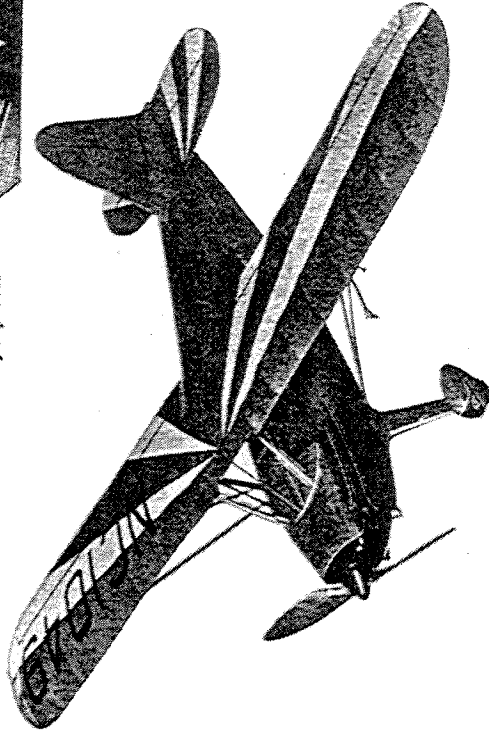
Complete Kit \$100

Whether you favored English or Nazi in the Greatest World War of all time, you undoubtedly saw an enormous model bomber, built to hold planes used by both sides. Here we give you one of the most widely used dive bombers, with complete motorless (less liquid) mechanism. Add this model to your collection, and you'll have a model of one of the planes that were lost by the Germans in operations over Poland, France and England.

# Here is AL WILLIAMS' New Airplane



Alford J. Williams, famous acrobatic and speed pilot, standing beside his new Gulfhawk Jr. plane.



## The "GULFHAWK" Junior

Fellow!—Here is the plane you have been waiting for! "Al" Williams has now added this brand new Stinson "105" to his fleet of famous Gulfhawk planes. It is a beautiful plane, colored orange and white, with black trimmings. It makes a wonderful flying model, as the aerodynamic design of the "105" is perfect for model work. The above photograph (unretouched), is of the model we built of the Gulfhawk Jr. and plans of which have been approved by "Al" Williams himself! A complete \$1.50 kit to build this popular plane.

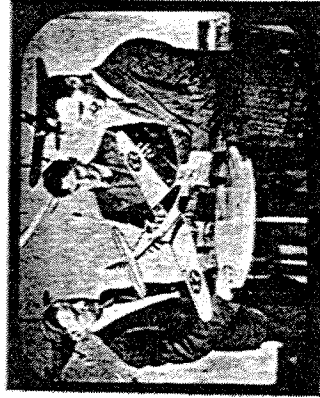
50 inch wing span

KIT No. D10

## TELEVISION!

Model airplanes made history recently! A regular feature television program lasting for one full hour was broadcast April 20th by station W3XB, Philco Corp., Philadelphia, Penna.

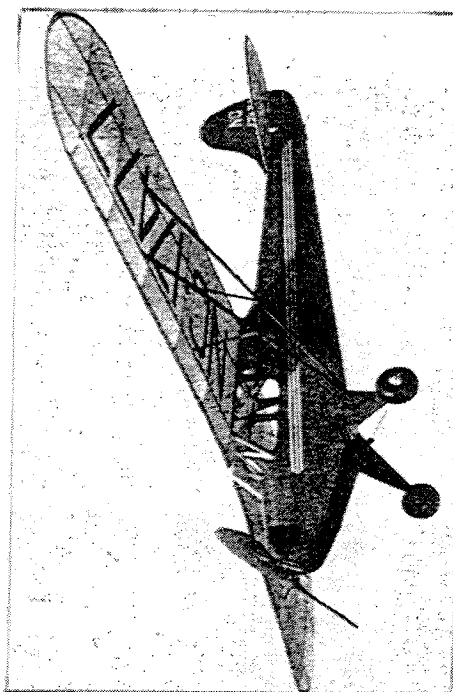
The program consisted of an exhibition and discussion of all the latest type Megow airplane, boat, and railroad models. A "hit" on the program was the actual running of a powerful miniature gasoline motor with full sound effects, which you can well imagine! A model airplane also completed a sensational successful flight in full view of the television screen. Approximately 600 persons in and around Philadelphia tuned in on this unusual program, which was sponsored in conjunction with one of the Quaker City Gas Model Association's regular monthly meetings. Two television receivers were placed at the meeting hall for this occasion.



Left to right: Paul Karnow and Walter Egert, Jr. of Megow's Research Staff discuss the Army's latest airplane model. This is one of the items of the 5th exhibit at it appeared on the television screen.

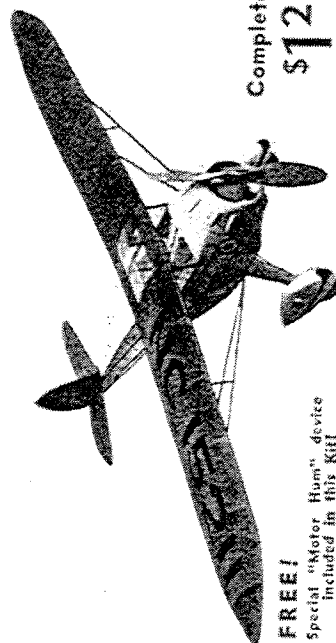


# The TAYLOR "CUB" "GIANT MODEL"



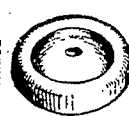
**FREE!** **TAYLOR CUB** Complete Kit  
Special "Motor Hum" device Kit Number D3 \$100  
Included in this Kit!

Wing spread 50", Length 31", Weight complete 5 1/4 ounces. A popular model of a two place sport ship. Being of light weight construction and not too complicated, it is an ideal model for both a beginner and for one whose experience demands that a model be a good, consistent flyer.



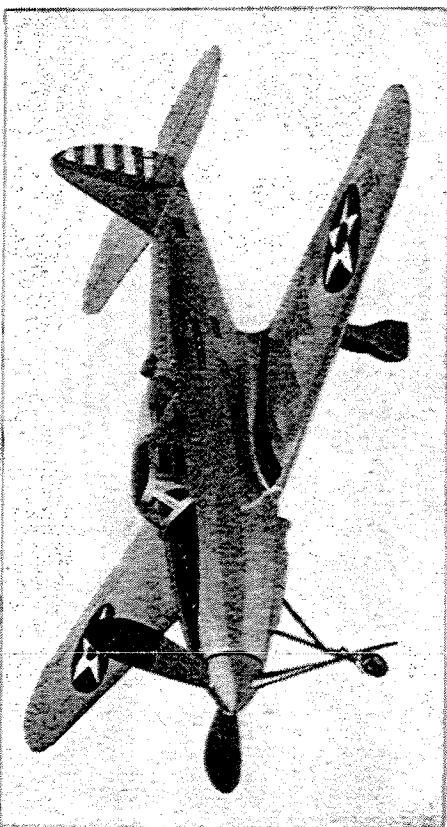
**FREE!** **LAMBERT MONOCOUPÉ** Complete Kit  
Special "Motor Hum" device Kit Number D4 \$125  
Included in this Kit!

TURNED NOSE Included



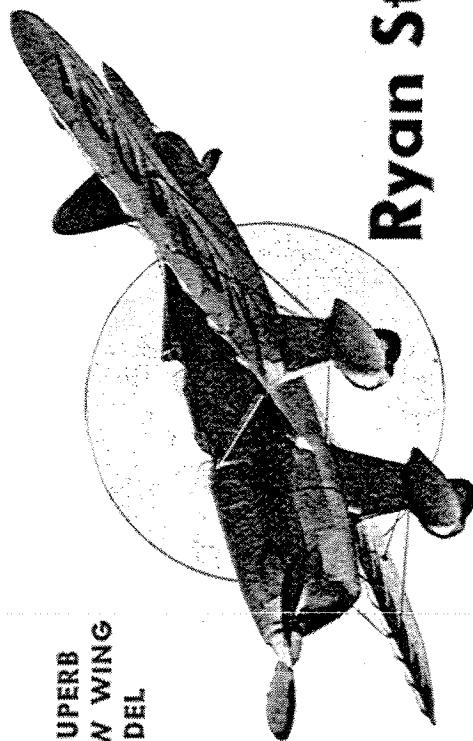
Wing spread 50", Length 32", Weight 6 ounces.

The Monocoupe has always proved popular in our Giant Model Series. When properly constructed and adjusted the model will taxi, take off, and fly under its own power. Its powerful motor will quickly take it up to a high altitude where, after the power is expended, it will gracefully glide to the ground.



## The NEW AIRACOBRA ARMY INTERCEPTOR MODEL

Here is an airplane that is in the news! The "Airacobra" is the Bell P39 Pursuit, which features a tricycle landing gear, three bladed propeller and an engine mounted behind the pilot! Its armament includes the latest type aircraft cannon, firing through a hollow propeller shaft! This kit is complete in every way including special insignia, less rubber. **\$1.00**  
KIT No. D11



A SUPERB  
LOW WING  
MODEL

**Ryan St.**

A model of America's most popular sport airplane. All metal low wing type with tandem cockpit seating, this is the plane that has lately been adopted by the Army for primary training purposes. South American countries have numbers of these planes in their air forces! You will be proud to have this model in your collection. **\$1.50**  
KIT No. D9

50 inch wing span

MEGOW



## 50" Models — "Giants"



Kit No.  
D5

**AERONCA "K"**

Special "Motor Hum" device  
included in this kit!  
**FREE!**

Wing Span 50" Overall Length 28"

A lightplane model streamlined from propeller hub to rudder tip, this ship immediately impresses you with its air of aliveness, alertness, its eagerness to take off and go places. A regular fifty inch span model, it embodies all the regular features necessary for an easy to build, easy to fly authentic scale model.

**\$100**



Kit No.  
D6

**FAIRCHILD RANGER**

Wing Span 50" Overall Length 34"

The Ranger embodies numerous features which are distinctly appealing to the model enthusiast. The "in line" engine with its small frontal area—lends a sleek, racy appearance. With all its detail the model is of amazingly light and strong construction. You will get excellent service from this ship.

**FREE!** Special "Motor Hum" device  
included in this kit!

**\$100**

## 50" Giant Models

**FREE!**  
Special "Motor Hum" device  
included in these kits!

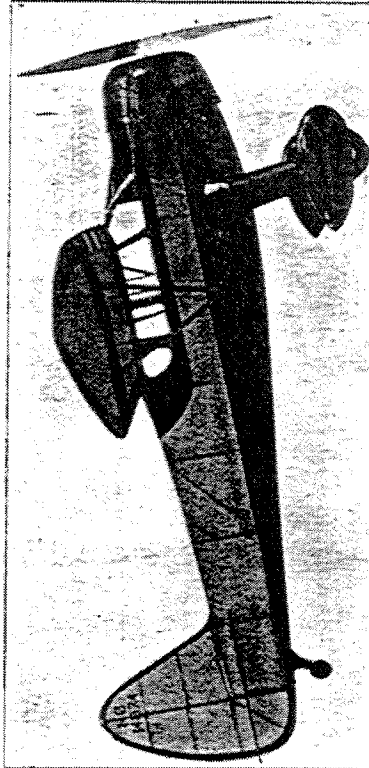


**REARWIN SPEEDSTER**  
Wing Span 50" Overall Length 36"

Kit No.  
D7

Here is the plane that modelists are enthusiastically acclaiming everywhere. It is the most sleek, racy appearing sport plane of today. The aerodynamic set-up, even though it is an exact scale model, is perfect and guarantees long, stable flights and flat glides. A worthy addition to our 50" line, this plane embodies all the features that you have found in Megow Kits.

**\$100**



**HOWARD DG-A8**

Wing Span 50" Overall Length 35"

Kit No.  
D8

When a famous racing plane designer enters the commercial field you can be sure of a sensational development. And our new model lives up to its famous prototype. This ship has been designed to provide excellent flying ability and is of very strong, yet light construction. The kit contains everything necessary to build an authentic scale model. **TURNED NOSE** Included.

**\$125**



# 50¢ FLYING MODELS

30" WING SPAN



## MONOCOUPÉ

The Monocoupe has always proved popular with model builders. We picked it as the first model in our new series for this reason. The kit, complete as all Megow Kits are, contains all necessary material for a good, accurate flying model. Special Feature! A turned nose is included!.....Kit J1



## STINSON RELIANT SR7A

This model has become very popular in our other lines of kits. All external details are described on the plan so that in reality this is a "flying exhibition" model. Complete materials are included in each kit, including a specially turned nose! Kit J2



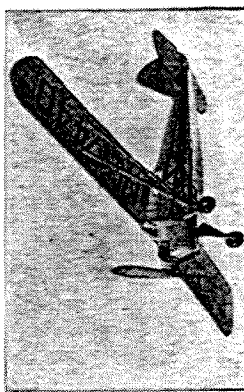
## ARROW SPORT

Any airplane powered with an automobile engine, always attracts attention. The new "Arrow Sport" powered with a Ford V-8 motor has aroused more than ordinary interest. As pictured above, our kit builds itself into a very life-like model. Here too, we include a specially turned nose!.....Kit J3



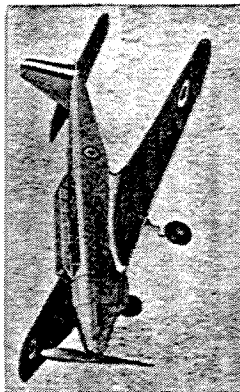
## WATERMAN ARROWBILE

Here is the ship that you have been hearing so much about! Powered with a 6-cylinder Studebaker motor and featured on the sky radio. Our model was thoroughly tested and flies unusually well. Kit J5



## AERONCA K

This new Aeronca is a development of the well-known C8. Based on the past popularity of the Aeroncas, we feel certain that this model will be heartily welcomed. Although a turned nose is not included, due to the old shape, the model is easy to build.....Kit J4



## FAIREY BATTLE

An excellently designed flying model of England's latest and most formidable battle plane. Our kit is complete with all necessary material, including a turned nose!.....Kit J6

# 50¢ FLYING MODELS

30" WING SPAN



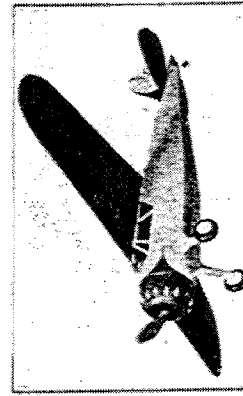
## FAIRCHILD RANGER

Here is a model with plenty of detail that will delight the most exacting scale model builder. Of light, yet very strong construction this model flies exceptionally well and its slow flying speed makes it ideally suited for scale model endurance contests.....Kit No. J7



## REARWIN SPEEDSTER

The plane that is taking America by storm! The appearance of this ship speaks for itself, and is a credit to the designer, Carefree. Carefully designed for fast, stable flights. Kit is complete with all details included.....Kit No. J9



## CESSNA C-34

Acclaimed the most efficient plane, this custom built airplane has been its feature for many years among private owners. Its design is a credit to the designer, Cessna. Carefully designed for fast, stable flights. Kit is complete with all details included.....Kit No. J11



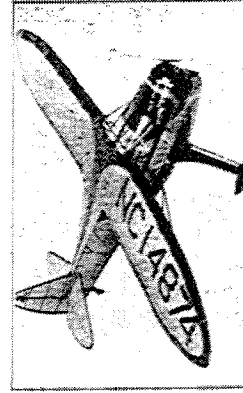
## RYAN SC

This new cabin plane developed by the Ryan Aeronautical Co. (builders of the Spirit of St. Louis), is a worthy companion of their famous "S1." Your model, with its beautiful lines and appearance, will draw admiring glances from everyone. The completed ship is very light and flies exceptionally well.....Kit No. J8



## MESSERSCHMITT M-29

The photographic ship of the new German Air Force! Many wing designs with efficient streamlining. The ship is amazingly accurate in its construction. The kit is amazingly complete, including instructions to construct a miniature working camera for your model!.....Kit No. J10



## HOWARD DGA8

Ben Howard's latest! This fast cabin plane, developed for private owners, makes a beautiful flying scale model. High landing gear permits the model to be stored in a very compact space. Kit is complete to the last detail. A turned landing gear is included.....Kit No. J12

LEARN THE PRINCIPLES OF FLIGHT

Kits 50¢ each

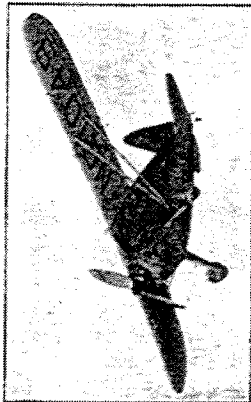
WITH MEGOW MODELS!



MEGOW'S

# NEW 50c MODELS

30 INCH WING SPAN



**"AL" WILLIAMS**  
New Gulfhawk Jr.

This Stinson "105" model is the latest addition to Al Williams' fleet of Gulfhawk airplanes. It is a great thrill to see this beautiful airplane in the air. The pilot will surely want to build his own model of it. The plans of this model have been personally prepared by "Al" Williams. Start building yours today! KIT No. 114



**"TOPPER"**

Advanced Model for beginners

Thrilling, long endurance model is at a minimum of expense and work. This plane is an ideal size and extremely rugged. KIT No. 113



**"STUKA"**

German Dive Bomber

Terror of the Skies! The airplane that brought the "blitzkrieg" to all Europe. Build this model to add to your historic series! KIT No. 117



**RYAN STM**  
New Army Trainer

The Ryan low wing monoplane has been popular with American sport pilots for several years. This ship has now been recognized by the U. S. Army as the ideal training plane for pilots who will later fly America's speedy pursuit planes! Several South American countries already have Ryan in their Air Force! Build and fly this sleek new model! KIT No. 115



**"AIR YOUTH OF AMERICA"**

Project No. 5 Contest Commercial

Designed especially to meet NAA requirements for contest work and approved by Air Youth as its official No. 5 model. Look elsewhere in this catalog for more complete details.

COMPLETE KIT—No. 116



**FELLAS!!!**  
Get this

**"FLYING EAGLE SQUADRON HAT!!!"**

This swappy gold and blue "Cadet" Cap is one that you will be proud to wear! Be the first to have one, and surprise ONLY 10c your friends.

MEGOW'S

# NEW 25c MODELS

24 INCH WING SPAN



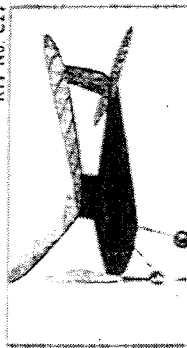
**RYAN STM**

A worthy addition to our 24" line of models, is this latest Army training model. KIT No. C25



**AIRACOBRA BELL P39**

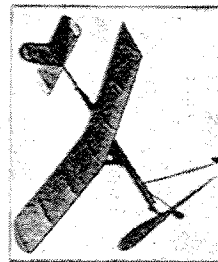
U. S. Army's famous new fighter capable of speeds approaching 600 miles per hour. KIT No. C27



**"SWIFT"**

Elementary Duration Model

A super model for beginners, can be built in one evening and features in streamlined monocoque fuselage. Wing span 21 1/2 inches. KIT No. C24



**AIR YOUTH OF AMERICA**  
Project No. 3  
SENIOR R.O.C.

A wonderful flying "attack" model, several minutes duration and very easy to build. KIT No. C29



**HAWKER "HURRICANE"**

England's famous fighter! This ship is giving a good account of itself in the present World War. KIT No. C26



**CURTISS PURSUIT**

A favorite U. S. Army pursuit airplane, it was also widely used by the U. S. Navy in the present war. KIT No. C28



**"SPITFIRE"**

British Single Seat Fighter

Britain's famous pursuit fighter! Build this renowned fighter. KIT No. C31



**AIR YOUTH OF AMERICA**  
Project No. 4  
Junior Commercial

Cabin type endurance model popularly known as the "Commercial" type in contests! You will be proud of this job! 22 1/2" Wing span. KIT No. C-30



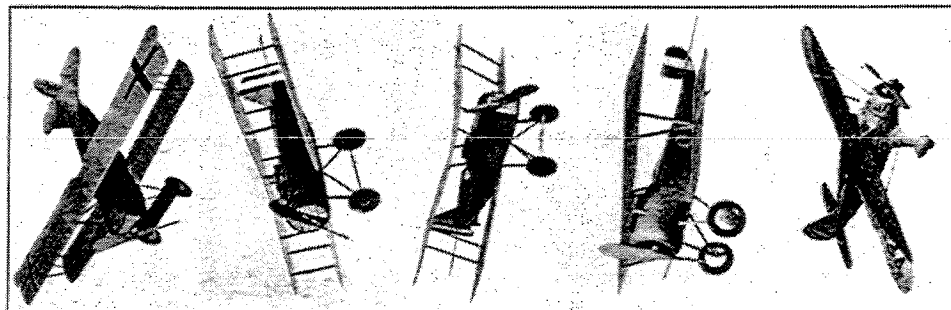
MEGOW'S

## TWENTY FIVE CENT

Megow's famous twenty-five cent flying models are the biggest values ever offered for the price. Simple construction and sound design characterize these ships, resulting in very fine flying models. They are purposely designed with light and sturdy construction, a quality which makes for greater duration. Nevertheless, all the details of the real ships have been faithfully carried out. The models pictured here are all built from our kits and go to show how simple the models really are. As the majority of model builders are familiar with this line of models, a description of each is not necessary. We list them according to number for your ease in ordering.

### 24 INCH WING SPAN!

All models have 24" wing span excepting C11 which has 16" and C17 which has 16"



**C1**  
FOKKER DVII  
World War Plane

**\* C6**  
CORBEN ACE  
Sport Plane

**C2**  
SPAD  
World War Plane

**\* C7**  
WACO  
Cabin Biplane

**C3**  
SE5  
Sopwith War Plane

**\* C8**  
MONOCOUE  
Sport Plane

**C4**  
NIEUPORT  
World War Plane

**\* C9**  
CONSOLIDATED  
U. S. Army

**C5 \***  
STINSON  
Cabin Monoplane

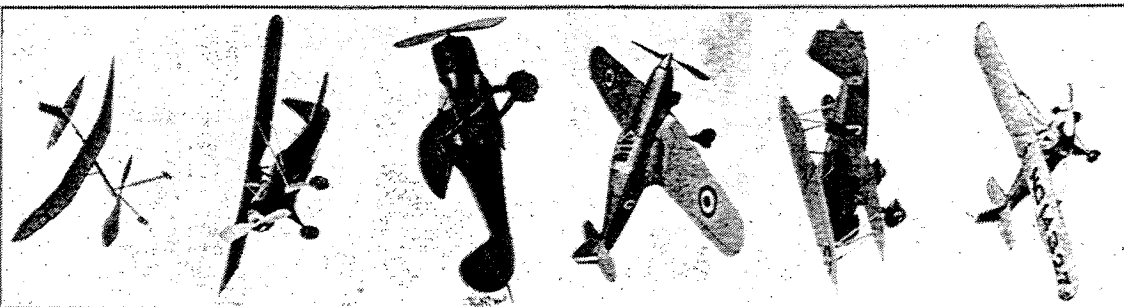
**\* C10**  
KINNER  
Sportster



MEGOW'S

## FLYING MODELS

**\* Turned Balsa Cows Included with These Kits!**



**C11**  
SENIOR R.O.G.  
Endurance Model

**C17**  
CAUDRON  
French Racer

**C12 \***  
FAIRCHILD 22  
Parasol Sport

**\* C18**  
VULTEE  
Transport Plane

**C13 \***  
BEECHCRAFT  
Sport Biplane

**\* C20**  
STINSON  
Cultwing Monoplane

**C14 \***  
HAWKER  
British Fighter

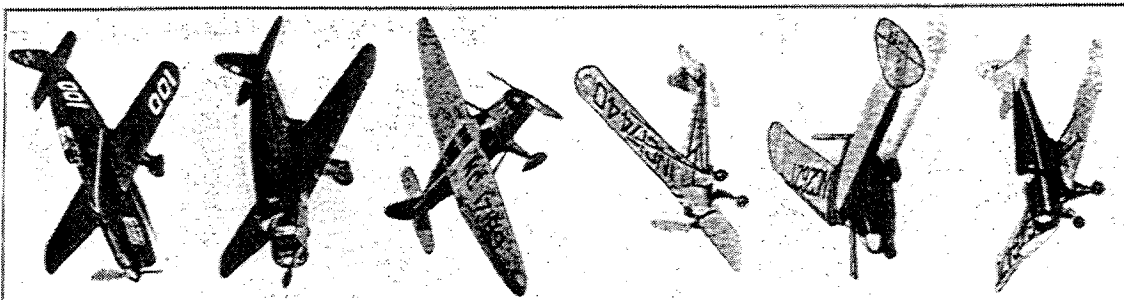
**C21**  
AERONCA  
Sport Plane

**C15**  
CURTISS HAWK  
Biplane Fighter

**C22**  
WATERMAN  
Arrowbile

**C16**  
TAYLOR CUB  
Sport Plane

**\* C23**  
ARROW  
SPORT



MEGOW MODELS ARE

FAMOUS THE WORLD OVER



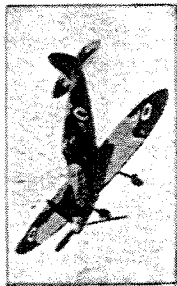
# Big 16" WAR PLANES

Megow is always first with the latest in model airplane developments! Here we present the latest type warplanes and seaplanes. All of the new planes have a wing spread of 16 inches! Most of the models are of ships with "clipped" wing design, resulting in an even larger model due to the relatively longer fuselages! Each model has been carefully designed, so as to be simple to construct, and easy to fly. They are marvels of perfection!



## "AIRACOBRA"

This Boulton Paul aircraft, is said to be England's most formidable plane. Many of its features are still military secrets! KIT No. F42



## "SPITFIRE"

This British Supermarine fighter, has shown itself to be one of the best altiplanes in service on the Western Front! The name "Spitfire" has become a byword with the newspaper!



## "DEFIANT"

This Boulton Paul aircraft, is said to be England's most formidable plane. Many of its features are still military secrets! KIT No. F44



## HEINKEL

Germany's first line pursuit ship. One of the airplanes you hear so much about in the daily war reports. KIT No. F46



## CURTIS PURSUIT

This plane was used in large numbers by the U. S. Air Force. A ship that has outmaneuvered and outdone every opponent. KIT No. F45



## MESSERSCHMITT "109"

Another famous German fighter. Whole fleets of these are in active service against the Allies. KIT No. F47

# Big Values 10¢

These new Big 16 cent Values cannot be beat. Popular models all with a 16 inch wing span, and to "beat", we give you a brand new "seaplane" model with a 28 inch wing span!

Plans to build an entire fleet of the models shown here—they're ready with all the tools and materials to get you started!

Kits are complete in every respect, including an added Megow feature—"BLUEPRINT" plans and full size perspective drawings!—has liquids.



## CURTIS XSOC

Latest naval observation ship built for catapult work on American warships. Distinctive streamlining design. KIT No. F48



## "VANGUARD"

Famous Vultee Interceptor plane, with a speed of 400 miles per hour, and the latest armament. KIT No. F49



## TAYLOR CRAFT SEAPLANE

A popular American sport model, equipped with scale P110 floats. You can see this plane at almost any resort. KIT No. F50



## RYAN OBSERVATION

Sensationally reported as the Army's new "unlikeable" plane capable of locating, over an objective, almost standing still. KIT No. F51



## "SAILPLANE"

Megow presents this sensational value! A high performance sailplane with 28 inch wing span. KIT No. F52



## LUSCOMBE

Model of a popular two place all metal construction sport plane using streamlined fuselage. Easy to build! KIT No. F53

MEGOW

MEGOW



MEGOW'S

# 15" FLYING MODELS 10¢

*\*Kits contain turned balsa cowl*

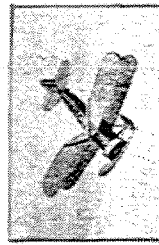
There Are Fifteen Models Having a 15" Wing Spread. The Remaining Models Have a 12" Wing Span.  
See Lower Right Hand Corner of Photo for Correct Size.



F1—AERONCA 12"



F4—CONSOLIDATED 12"



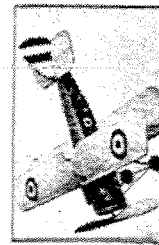
F7—EXPORT FALCON 12"



F10—FOKKER DVIII 12"



F13—KINNER SPORT 15"



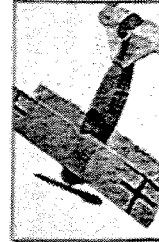
F16—SOPWITH CAMEL 12"



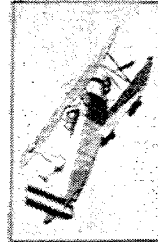
F2—BOEING P12E 12"



F5—CURTISS PURSUIT 12"



F8—FOKKER DVII 15"



F11—HELL DIVER 12"



F14—LOCKHEED VEGA 15"



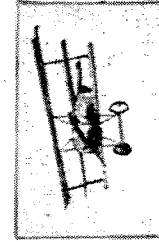
F17—SPAD 12"



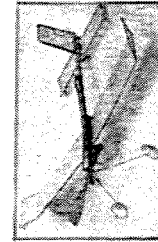
F3—CORBEN ACE 12"



F6—DOUGLAS OBSERV. 12"



F9—FOKKER TRIPLANE 12"



F12—HIGH CLIMBER 12"

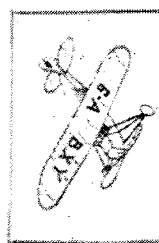


F15—MONOCOQUE 12"



F18—POLISH FIGHTER 12"

MEGOW'S



F19—PUSS MOTH 12"



F22—S. E. 5 12"



F25—VULTEE VIA 12"



F28—RYAN ST 15"



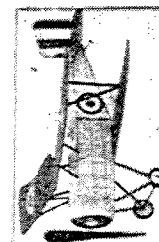
F31—CESSNA C34 15"



F34—TIPSY S 15"



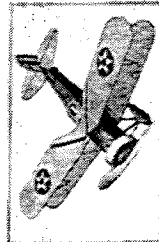
F37—B. A. EAGLE 15"



F20—NIKUPORT 15"



F23—STINSON RELIANT 15"



F26—YOUGHT CONSAIR 12"



F29—REARWIN SPEEDSTER 15"



F32—D.H. HORNET MOOTH 12"



F35—FLEET TRAINER 12"



F38—GULFAWK 12"



F21—NORTHROP 15"



F24—TAYLOR CUB 15"



F27—WACO BIPLANE 12"



F30—PRIMARY GLIDER 20"



F33—MILES MAGISTER 15"



F36—FAIRCHILD '45 15"



F39—MESSERSCHMITT 15"

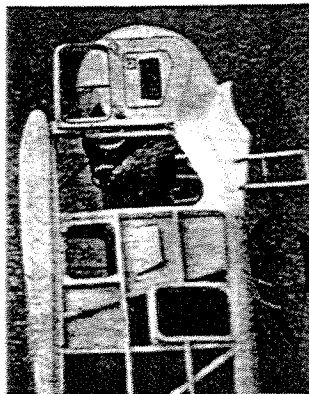
FOR YOUR PARLOR AIRPORT!

SCALE FLYING MODELS



MEGOW'S

## MEGOW'S 3/4 INCH

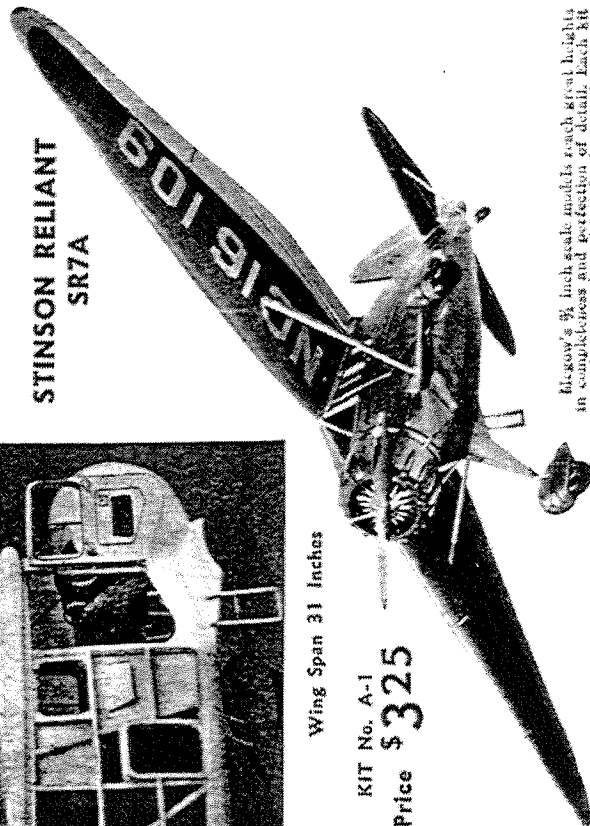


STINSON RELIANT  
SR7A

Wing Span 31 Inches

KIT No. A-1

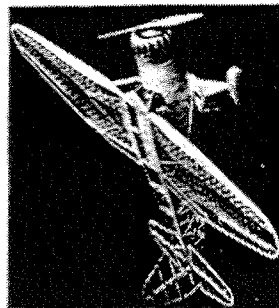
Price \$325



Megow's 3/4 inch scale models reach great heights in realism and detail. Each kit contains a complete set of detailed plans and separate sheets showing step-by-step photographs and instructions. Finished flying prop and blank for scale prop. Shaped wheels, aluminum drag ring, movable controls on tail and wings. Heavy celluloid for cabin windows. All correct colors in paper. Oversize quantities of cement, tissue cement and colors. Description and material to complete cockpit with blocks to make pilot's figure. Seats and hinged cabin doors. Complete . . . \$325

In Ordering Mention Kit Number A1

The Most Complete Kit Offered Builders Today



Skeleton View Showing Internal Details

Also Made in a Complete  
Accurate 1/2 inch Scale

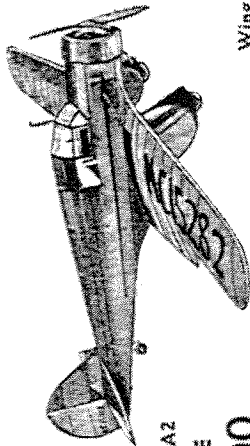
FLYING MODEL

Kit Number B1 Price 80c

Just as accurate in detail and as complete in materials as the larger kits. Everything, including cement and colors in extra quantities needed to produce a beautiful job. Wing Span, 20 3/4 inches.

MEGOW'S

## SCALE MODELS



KIT No. A2

PRICE

\$200

Wing Span 27"

### LOOK WHAT WE HAVE PUT IN THE 3/4" SCALE AERONCA KIT

Complete detailed plans and photos of skeleton and finished models. Finished flying prop and blank for scale prop. Oversize quantities of cement, tissue cement and colors. Correct colors in paper. Shaped wheels. Aluminum drag ring. Heavy celluloid for cabin windows. Movable controls on tail and wings. All insignia. Description and material to complete cockpit, including blocks and coloring to make pilot's figure.

### The New AERONCA

Also Made in

a Complete, Accurate

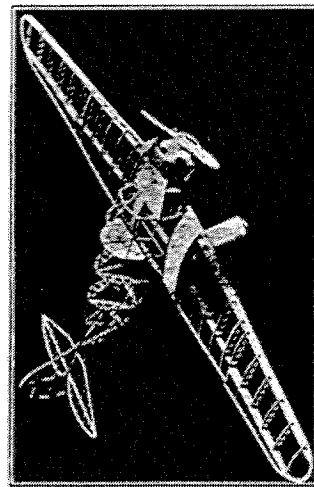
1/2 Inch Scale Kit.

Price 60c

An exact reproduction of our larger kit. Contains all liquids necessary, turned nose, and wheels. Complete supply of all materials and detailed plans.



Wing Span  
17 1/4"



Skeleton View Showing Internal Details

Nothing is to be desired in completeness nor in perfection of detail. Every precaution has been taken to make construction simple and durable. Several months of experimental building and planning is behind the accuracy, the flying ability, and the completeness of these new kits. Read the description of what the new 3/4 inch scale kits contain and then compare the prices with other makes. There is no comparison.

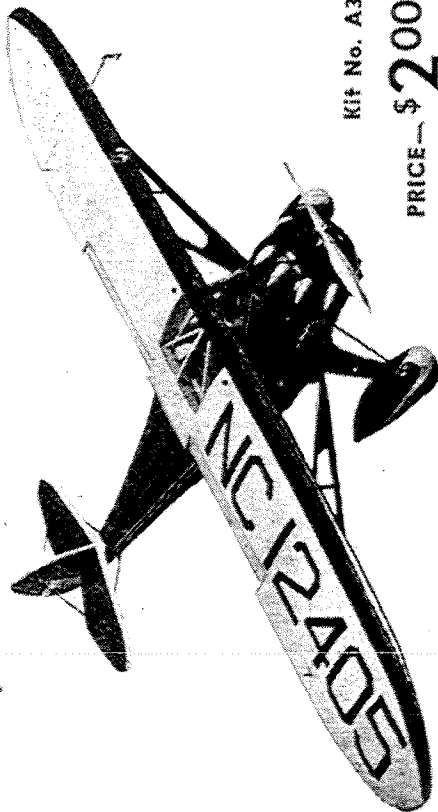
ARE SUPER DETAILED

MEGOW'S 3/4 INCH MODELS



MEGOW'S

## 3/4 INCH SUPER DETAILED



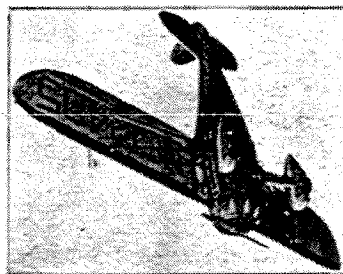
Kit No. A3

PRICE—\$200

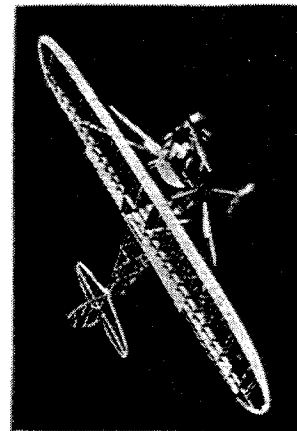
### MONOCOUCPE

1/4" Flying Scale Model - Wing Span 24" - Length 15 1/4"  
Two place cabin ship powered with 90 H. P. Lambert engine. Easy to build, makes an attractive and good flying model. Each kit comprises complete detailed plans with step by step instructions. Semi-finished flying prop and blank for scale prop. Shaped wheels. Aluminum cowling. Heavy celluloid for cabin windows. All insignia, correct colors in paper. Oversize quantities of cement, tissue cement and colors. Description and material to complete cabin interior, with blocks to make pilot's figure and seats. Provision for movable controls on wings and tail and hinged cabin doors, if desired.

When Ordering This Kit Use Kit Number A3



Skeleton View Showing Internal Details



### HALF INCH SCALE "MONOCOUCPE"

Also made in a complete accurate 1/2" scale flying model, just as accurate in detail and as complete in materials as the larger kit. Everything, including cement and colors needed to produce a beautiful job.

Wing Span - 16" Length - 10 13/16"

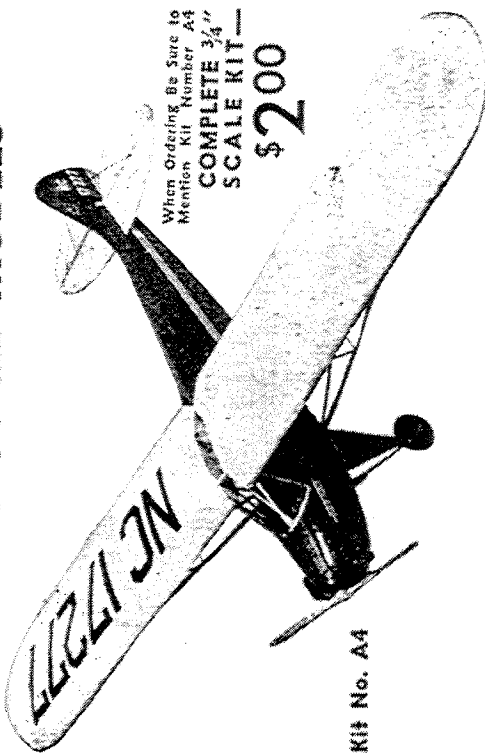
COMPLETE KIT—60c

In Ordering This Kit Use Kit Number B3

MEGOW KITS HAVE

MEGOW'S

## FLYING SCALE MODELS



Kit No. A4

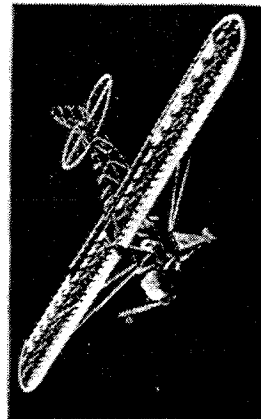
When Ordering Be Sure to Mention Kit Number A4  
COMPLETE 3/4" SCALE KIT—

\$200

### TAYLOR "CUB" J2

3/4" Flying Scale Model - Wing Span 26 3/8" - Length 16 1/2"

A two place, tandem seating, sport lightplane powered with a 4 cylinder twin opposed continental engine. Very popular among the lightplane pilots and found at almost every airport. A remarkable flyer and very easy to build. Kit contains complete detailed plans and photos of skeleton and finished model. Semi-finished flying prop and blank scale prop. Oversize quantities of cement, tissue cement and colors. Correct colors in paper. Shaped wheels. Heavy celluloid for cabin window. All insignia. Description and material to complete cabin interior including blocks to make pilot's figure. Movable ailerons and tail surfaces.



Skeleton View Showing Internal Details

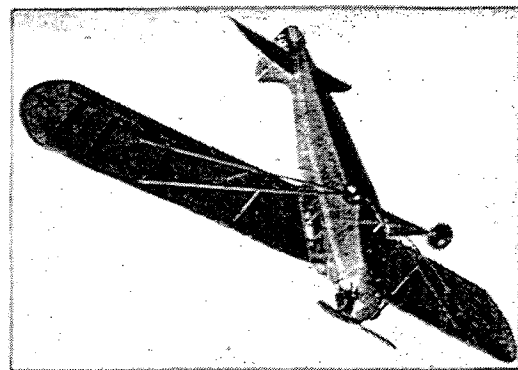
### HALF INCH SCALE "TAYLOR CUB"

This ship is also made in a 1/2" scale model. Kit containing the same features as in the larger kit. Included are necessary supplies and parts to complete this model. WING SPAN 17 1/2", LENGTH 17 1/8".

COMPLETE KIT—60c

When Ordering Be Sure to Mention Kit Number B4

DETAIL TO THE Nth DEGREE

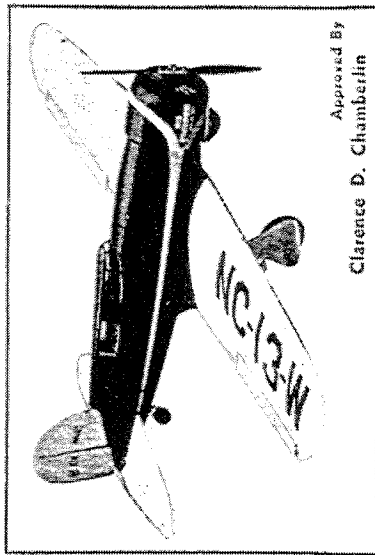




## SPECIAL MODELS SPONSORED BY FAMOUS FLIERS

Chamberlin's "Miss Stratosphere"

FLYING



An Exact Model!  
At 1/2" Scale!

MODELS

Complete Kit  
60c

Approved By  
Clarence D. Chamberlin

"Thousands of you have no doubt witnessed Col. Clarence Chamberlin flying around in his sleek Lockheed 'Altair.' Usually it can be seen circling around the 'Chamberlin Airlines' Condor, on almost every 'barnstorming' hop, with motor 'wide open.' Perhaps you are one of the many who rode in the Condor and thrilled at seeing 'Miss Stratosphere' swiftly zoom past. Then, you will want to build a model of this ship, as a souvenir of that flight.

The model pictured above is exact scale at 1/2 inch equals one foot. The kit builds a flying model with a true "Monocoque" fuselage. The wings and tail are tissue covered. For purely exhibition purposes, the model may be entirely wood covered. This is described in the plans for those who wish to make such a model.

This new kit is one of the regular 1/2 inch series and is complete in every respect, liquids included.

Kit Number B5

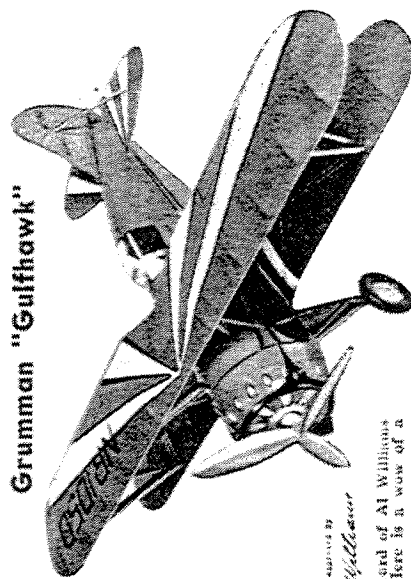
Wing Span 21 1/2"

Al Williams' Grumman "Gulfhawk"

Complete Kit

Wing Span  
17 inches

Special  
Kit



Many of you have heard of Al Williams and his "Gulfhawk". Here is a wow of a model!  
Colored, orange with blue and white trimmings, and powered with a 1000 H.P. engine, it really stands out from the others.  
The plans in these kits are personally approved and autographed by Al Williams, the famous flier.

KIT NUMBER L-1

50c

# A New Thrill!

54" Wing Span



Kit No. Z4

for Class "D" Competition

## BUILD and FLY this TOWLINE

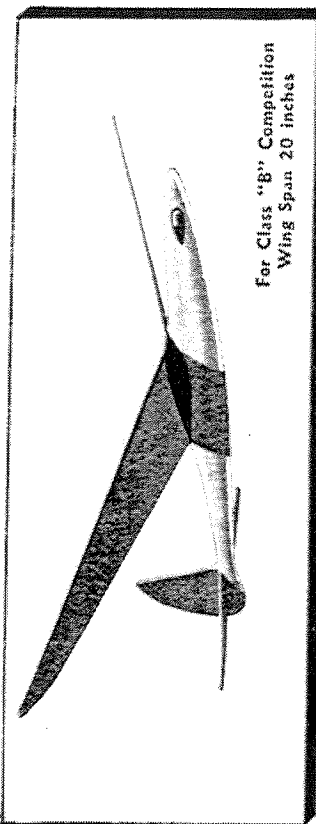
# Sailplane

Enjoy the thrills of motorless "bird" flight! This new Megow Towline Sailplane is scientifically designed after the highly efficient "scoops" used by record sailplane pilots. The initial start for flight is obtained by use of a "towline". When the sailplane reaches a desired height, it disengages from this towline and stays aloft for several minutes to an hour or more.

The study of sailplane flight is a wonderful stepping stone to gas powered model airplane work, as a full knowledge of the action of air currents and "aircraft" is essential in advanced contest model flying.

A complete kit to build this superb sailplane model, only:

\$1.00



For Class "B" Competition  
Wing Span 20 inches

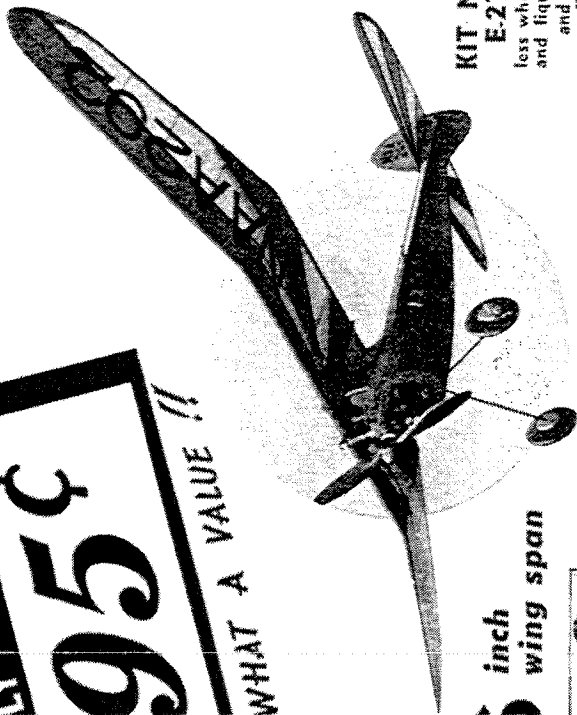
## BUILD and FLY this CONTEST GLIDER

This model is a "glider" of the hand launched type. That is, the initial start of its flight is obtained by tossing or "launching" the model into the air by hand. Many fine flights of several minutes to over an hour have been turned in, by models of this design. You will have hours of pleasant educational fun, flying this advanced type contest glider.

Kit No. Z3 25c

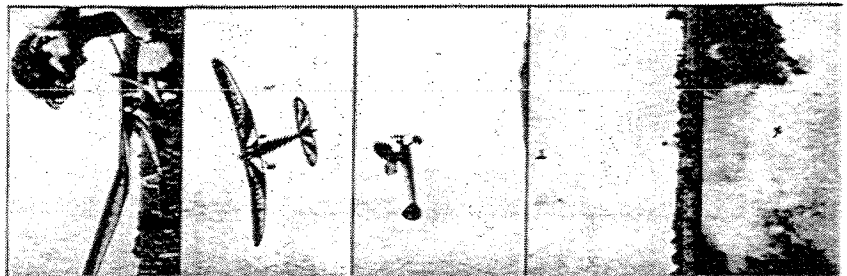


ONLY  
**95¢**  
WHAT A VALUE !!



**46 inch** wing span

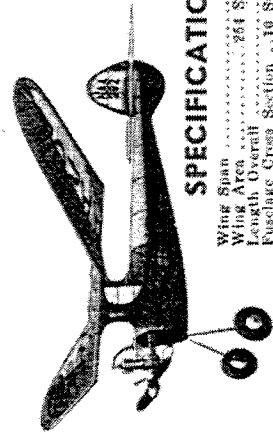
KIT No. E-21  
less wheels and liquids and propeller



**Aero Champ**

**GAS POWER MODEL AIRPLANE**  
For Class "A" Competition

Just think of it! For less than "ONE DUCK" you can now build your own model! It is a big gas model, too... almost four feet long wing spread! Very easy to build. It employs the latest type McGow construction features. Full sized drawings with step by step perspective drawings making this model ultra easy to build. Its flying characteristics are sensational!



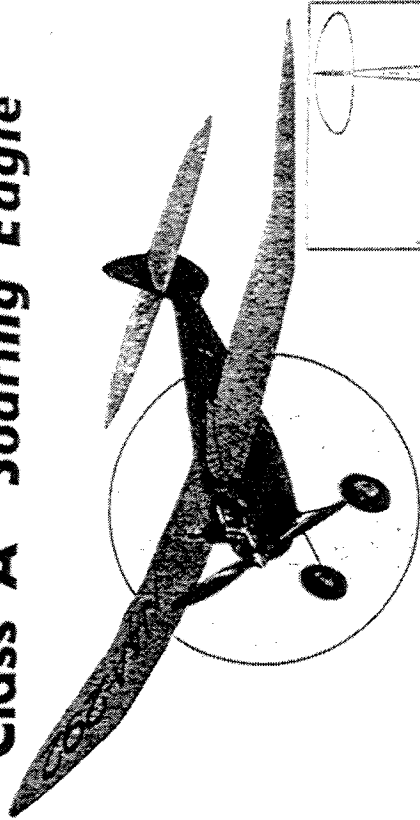
**SPECIFICATIONS**

Wing Span ..... 46 Inches  
Wing Area ..... 264 Square Inches  
Length Overall ..... 26 1/2 Inches  
Fuselage Cross Section ..... 19 Square Inches  
Weight Complete ..... 16 ounces  
Power - Recommended: McGow "199" motor

What fun! - From top to bottom we illustrate in movie strip fashion the flight of an "Aero Champ". 1. "Cranking" her up! 2. Off she goes! 3. Nice flight! Isn't it? 4. Oh... oh, she's flying away and is very, very high. 5. Oh well... 98 cents is all right, but we hate the "heck" to lose that McGow "199" motor!

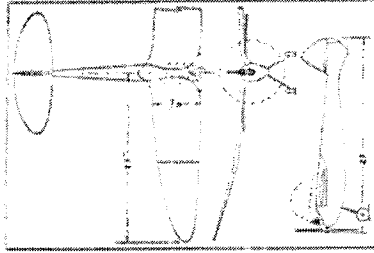
MEGOW'S

**Class A "Soaring Eagle"**



**WINNER OF 1939 QUAKER CITY CONTEST, PHILADELPHIA.**

Follow! You have been waiting for a good Class A design for a long, long time! At last! McGow's presents to you the marvel of all models, the "Class A Soaring Eagle"! It is a fine little ship, carefully engineered to give the same flying characteristics you have noticed in the larger Class B and Class C Eagles! Nothing has been sacrificed. Also with this model you get the same kit completeness as in the larger kits. Meets all N.A.A. rules and it is already a contest winner!



**Complete Kit**

**\$2.95** less power plant

Kit No. E20

**SPECIFICATIONS**

**Class A Soaring Eagle**  
Wing Span ..... 46 in.  
Actual Wing Area ..... 210 sq. in.  
Projected Wing Area ..... 220 sq. in.  
Fuselage Length ..... 26 in.  
Required ..... 6 1/2 sq. in.  
Actual ..... 7 1/2 sq. in.  
Stabilizer Area ..... 16 sq. in.  
Aspect Ratio ..... 9 to 1  
Wing Loading ..... 2.5 oz. per sq. ft.  
Wing Section ..... Special  
Flying Weight ..... 14 to 16 oz. complete  
Power Plant ..... Any motor under 20 sq. in. displacement



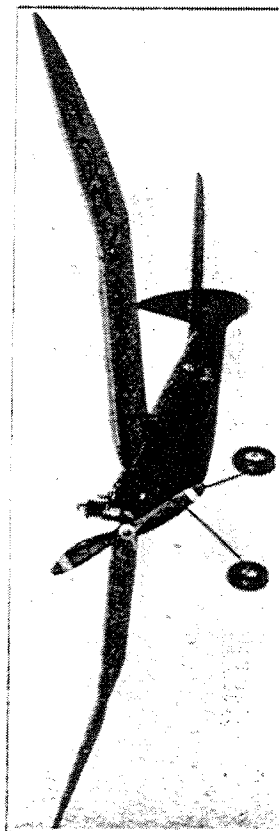
24 Soaring Eagles. Walter E. Edwards, Class "A" winner of first place, Quaker City Contest, Phila., Sept. 9, 1939.



A three-quarter rear view of the Class "A" Soaring Eagle, shows off the very appealing lines of the model



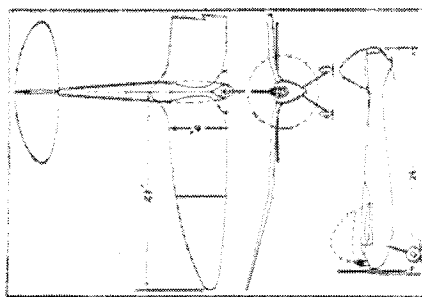
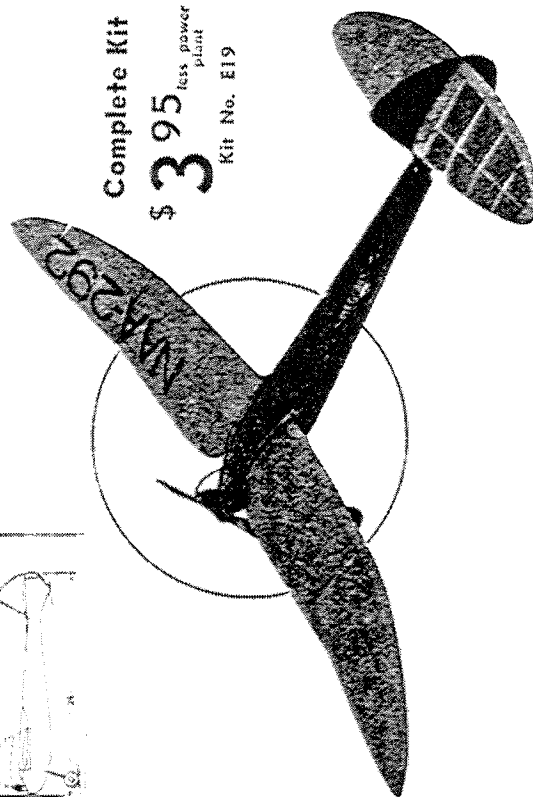
## Class B "Soaring Eagle"



This is the finest class "B" was made yet designed! It is ideal for those builders who prefer a medium size job, not too small, yet not too large! It flies exceptionally well and will eat the "gray" at any level.

Just look at the fine clean lines of this superb new model! Study the specifications! Compare it with any other Class II ship. It cannot be surpassed!

This model has everything! Good sound reproduction, dynamic design, sturdy structural design, and elaborate kit components. We need say no more. The blanda of the kit on page 4, tells you it's over a thousand words!

[illegible]

# Computer

**\$3.95** less power plant

Xin No. 19

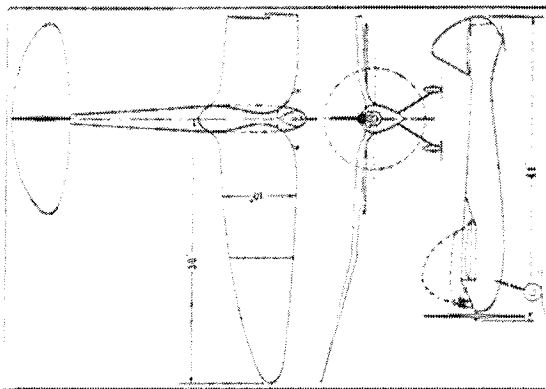
LIKE REAL AIRPLANES!

HERETIC

**HERE IT IS!** The ship that is taking the country by storm! Long before we produced the kit for this job, no less than thirty-six different builders liked this is volume twenty new design so much, that they built ships for themselves. Just like it. We can assure you that the kit you get, has incorporated in it, all the little knobs and levers discovered in these ships, and that the design has been thoroughly proven.

[illegible][illegible]

7. Eagle "climbs" (backing) included with each kit. 8. Model does not hang on its propeller, but climbs at a steep angle without sacrifice of forward speed. 9. Ball, cone, box, front and rear, to attain balance and eliminate the necessity of moving ignition unit. 10. Model designed to catch the animal and meet after motor has cut.



## SPECIFICATIONS

	Span	G ft.
Wing Area	22.9 sq. in.	22.9
Wing Loading	46.8 lbs. per sq. ft.	8.3
Airfoil Profile	NACA No. 2410	10
Dihedral Angle	7°	
Sustainer Area	102 sq. in.	
Weight Complete	31 to 33 oz.	
Climb	2400 ft.	
Overall Length	17.7 in.	
Fuselage Cross Section	.30 in.	
Moment Arm	.50 sq. in.	
Rudder Area	17.5 in.	
Overall Height	26.5 in.	
Sustainer Span	3 in. long (average)	
Power	2½ hp. (average)	
Wheel		

## Complete Kit

\$495

less power

Kit No. E18

1990年 12月 10日 星期三  
 1990年 12月 10日 星期三





## The Commander

### CLASS "C" GAS MODEL

The "Commander" is designed by Megow's primarily as a high performance contest job that can be easily built! Every detail of construction and every part of its design is planned with that end in view!

Notice the pleasing clean lines of this ship! Here is a model that is admired on the field, wherever it makes its appearance. Time and time again it has won "beauty" contests, as well as endurance events!

Our kit contains the usual Megow completeness! Full size plans, with illustrated step by step instructions help to make absolutely clear the revolutionary construction methods used!

**FEATURES:** 1. Ready Carved Landing, Edges, an exclusive Megow feature! 2. Revolutionarily new type motor mount! 3. Universally applicable section! 4. Wing at strongest angle, although we designed it to be built at 18°. 5. Cabin, 7. Simulated with construction. 8. Extremely flat glide. 9. Inlet and Exit easily accessible!

Complete Kit  
\$4.95

Kit No. E16



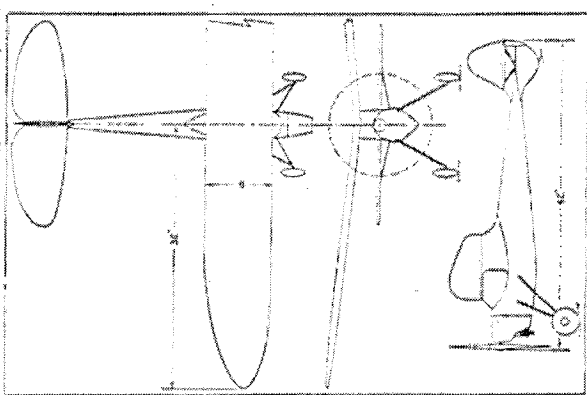
Commander

LEARN THE TRUE PRINCIPLES

KIT NO. E16

**SPECIFICATIONS - Commander Gas Model**

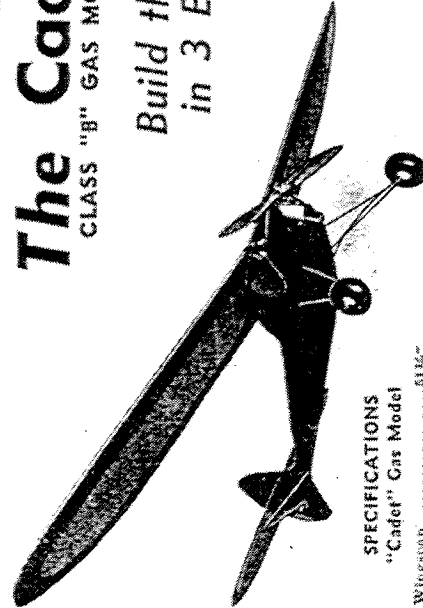
Wing Span	..... 5 ft.
Wing Area	..... 570 sq. in.
Wing Loading per sq. ft.	..... 10.6 oz.
Aspect Ratio	..... 9 to 1
Dihedral	..... 4 1/4 in.
Wing Section	..... Clark X
Overall Length	..... 42 3/8 in.
Fuse. Cross Section	..... 27 sq. in.
Moment Arm	..... 27.75 in.
Motor Area	..... 35 1/2 sq. in.
Overall Height	..... 14 1/2 in.
Stabilizer Area	..... 14 1/2 sq. in.
Wing Span	..... 10 1/2 in.
Weight complete with 2 lbs. 10 oz. Power	..... 3 1/2 in. Dm. Special
Wheels	..... 3 1/2 in. Dm. Special



## The Cadet

### CLASS "B" GAS MODEL

Build this model  
in 3 Evenings!



1. Assemble all parts easily and quickly, first evening.
2. Install your engine and ignition system and evening.
3. Finish and paint your model, third evening.

### SPECIFICATIONS

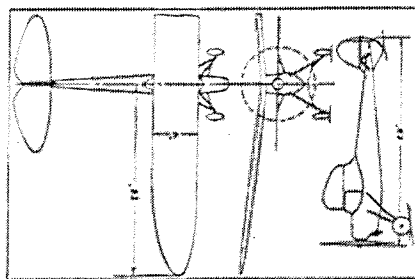
#### "Cadet" Gas Model

Wingspan	..... 51 1/2 in.
Overall Length	..... 27 1/2 in.
Wing Loading per sq. ft.	..... 10.2 oz.
Fuse. Cross Sect.	..... 12 sq. in.
Dihedral	..... 3 in.
Aspect Ratio	..... 10 to 1
Power complete with 1 1/2 lb. motor	..... 1 1/2 lb. bore
Wing Span	..... 19 1/2 in.
Overall Height	..... 18 1/2 in.
Stabilizer Area	..... 24 1/2 sq. in.
Builder Area	..... 24 1/2 sq. in.
Wing Section	..... Clark X
Overall Height	..... 18 1/2 in.
Moment Arm	..... 18 1/2 in.
Wheels	..... 2 1/2 in. Dm. Special

SPECIAL  
\$3.95

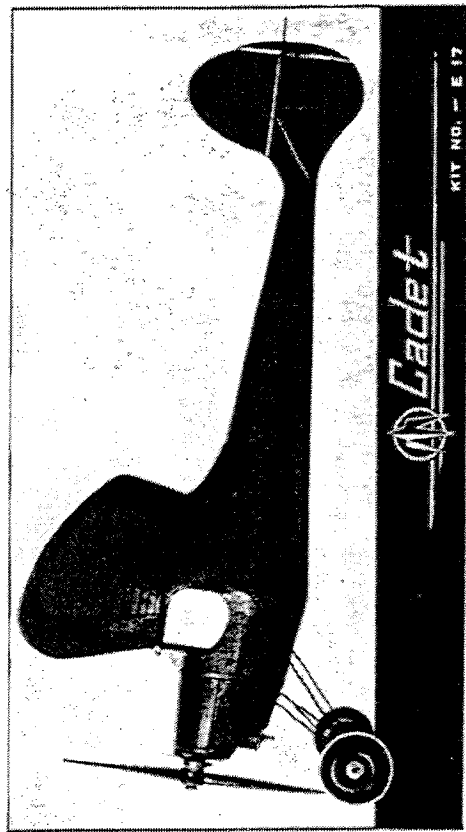
Complete Kit less power plant

Kit No. E-17



Here is the "little brother" to the larger "Commander" model! This "ship" has the same features and characteristics found in the larger job and is one of the few small Class "B" designs that "looks" like a real airplane!

Construction of this model is extremely easy, in fact we have reports of fellows completing this job in less than 12 working hours! It is small size, light weight and sturdy construction make this model practically indestructible! Its features! You get the same as found in the larger ship!



Cadet

KIT NO. - E 17

OF POWERED FLIGHT!



# PLANEFILM!



## PLANEFILM—IT'S MAGIC!

PlaneFilm was first introduced to the model world about a year ago as a revolutionary new model airplane covering!

It is recommended by us, for any model up to four foot wing spread. Models larger than this may be very easily covered, at the builder's own discretion!

We particularly recommend this covering for exhibition scale model work! PlaneFilm covered models are marvelous to look at and readily cannot be surpassed in any way! You must see PLANEFILM COVERED MODELS to appreciate their beauty!

### FEATURES OF PLANEFILM

1. At least 10% lighter in weight than other

**SIZES**

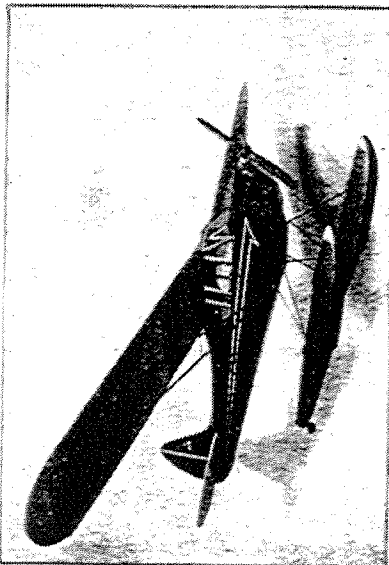
9" x 12" Sheet	18¢
12" x 12" Sheet	23¢
12" x 15" Sheet	32¢
15" x 15" Sheet	37¢
18" x 18" Sheet	47¢
24" x 24" Sheet	67¢
36" x 36" Sheet	\$1.50

Available in any length—36" wide, \$1.50 per yard

### PLANEFILM SOLVENT

$\frac{1}{4}$  ounce...1¢ 1 ounce...10¢ 2 ounces...15¢

In ordering PlaneFilm be sure to order correct amount of solvent. Sheets up to 12" x 12" require  $\frac{1}{4}$  oz. up to 18" x 36"; 1 oz. and per yard 2 oz. This is more than ample.



**PLANEFILM — the Magic Material!**

1. covers. Why? You use no glue or dope finishes!
2. Tough, Elastic and very very glassy!
3. PlaneFilm stretches itself drumlike, smooth over any framework!
4. No seams visible! Will not tear! But if pierced, repairs are invisible!
5. Impervious to water, oil or gasoline!
6. Scientifically manufactured on microcomputer machinery! Assures absolute even distribution of weight throughout your entire model!
7. PlaneFilm comes attached to a backing sheet! Therefore is easily handled!
8. Speed of application unbelievable!
9. Appearance of a PlaneFilm covered model must be seen to be appreciated! Send a self addressed envelope to Megow's for special folder and sample on PlaneFilm!

**COLORS**

RED	WHITE
BLUE	BLACK
SILVER	YELLOW
CLEAR	GREEN

A model covered with PLANEFILM must be seen to really be appreciated!

## ← PLANEFILM COVERED!

This is an unretouched photograph, and we must point out that a black and white photo does not do this beautiful job justice! Nevertheless, upon close examination you will notice, the intricate, smoothness of the covering. The sharp details of the stringing in the model were in front of you would spend hours admiring it. This model is Megow's Piper Cub equipped with scale floats. See page 10.

# "RITE-PITCH"

## GAS MODEL PROPELLERS

SCIENTIFICALLY  
DESIGNED

PERFECTLY  
BALANCED



"Rite-Pitch" propellers are scientifically designed to produce maximum thrust horsepower; they are light enough to break, yet heavy enough to get finest performance from your motor. These propellers are semi-automatically manufactured by our own specially designed machines, are the correct weight for your specified motor, and are all perfectly balanced. We GUARANTEE you will have best results and a smoother running motor with "Rite-Pitch" propellers.

## NEW LOW PRICES

DIAMETER in inches	HARDWOOD Lacquer finish
9	20
10	30
11	37
12	37
13	37
14	37
15	45
16	45
18	56

Rite Pitch Propellers  
Are made in 4", 6", and  
8" Pitch

9, 10, or 11 inch propellers are made in 6 or 8 inch pitch only. All other propellers are available in 6, 8, 10 or 12 inch pitch.

## "ASK THE FELLOWS WHO USE THEM"

Order yours now and have your name in the winners' circle at every contest. In case your dealer does not yet stock these fast selling propellers, write, giving your dealer's name and address.

## TABLE FOR SELECTING DIAMETER AND PITCH OF PROPELLER

FIRST FIGURE INDICATES DIAMETER, SECOND FIGURE PITCH OF PROPELLER

ENGINE WEIGHT	10	15	20	25	30	35	40	45	50	55	60	65	70
BROWN	13	12	14	10	14	8	14	8	14	8	14	8	14
BARTON	9	8	8	8	10	6	10	6	11	6	11	6	11
BRAT	9	8	8	8	9	6	9	6	10	6	10	6	11
CYCLONE "BABY"	13	10	13	8	13	8	13	8	12	10	12	8	13
DEWITT	13	12	13	10	13	10	13	8	13	8	13	8	14
ELF	10	8	8	8	10	6	11	6	11	6	11	6	11
FORSTER	12	12	12	12	12	10	12	10	12	10	12	10	12
GUINARD	12	12	12	12	12	10	12	10	12	10	12	10	12
ATWOOD	10	8	8	8	10	6	11	6	11	6	11	6	11
INDY	10	8	8	8	10	6	11	6	11	6	11	6	11
MADEWELL	11	8	8	8	11	6	11	6	11	6	11	6	11
PLA	12	12	12	12	12	10	12	10	12	10	12	10	12
OHLSOHN	13	10	13	10	13	8	13	8	13	8	13	8	14
OHLSOHN	11	8	8	8	11	6	11	6	11	6	11	6	11
HERKIMER	13	12	14	10	14	8	14	8	14	8	14	8	14
HERKIMER	9	8	8	8	10	6	10	6	11	6	11	6	11
REC-WEE	13	10	13	10	13	8	13	8	13	8	13	8	14
SYNCRON	9	8	8	8	10	6	10	6	11	6	11	6	11
SYNCRON	9	8	8	8	10	6	10	6	11	6	11	6	11
TRUJAH	10	8	8	8	10	6	11	6	11	6	11	6	11

MEGOW'S ARE EXCLUSIVE DISTRIBUTORS  
For "Rite-Pitch" Propellers!



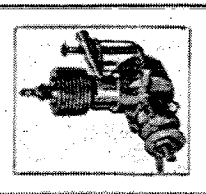


**GOSH!!**

**Here is the World's Latest Wonder!**

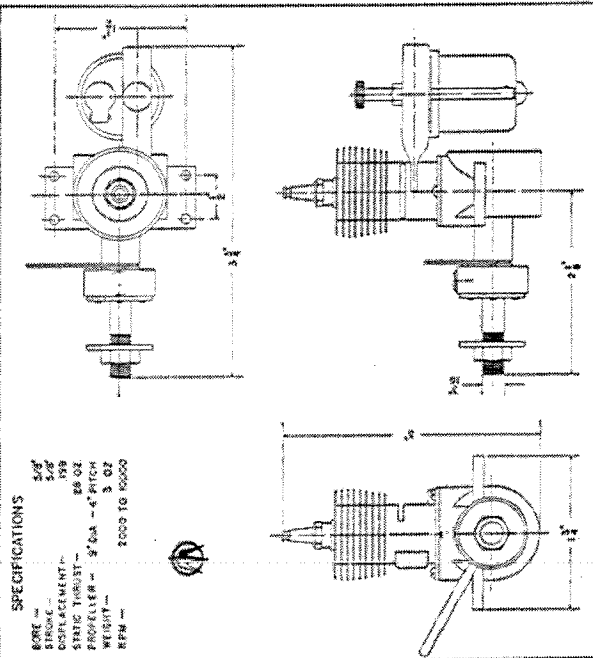
A real gasoline motor no bigger than your thumb!—The Megow "199" Motor is the delight and pride of all who own one!—A dynamic little power plant, that packs more "wallop" for its size and weight than any other motor!

Ask your dealer to show you this Latest of Marvels. Study its features! Boy! . . . you'll be amazed at its perfection.



**SPECIFICATIONS**

BORE — 5/8"  
STROKE — 1/2"  
DISPLACEMENT — 1.99 cu. in.  
PROPPELLER — 2" dia. — 4" pitch  
WEIGHT — 3.02 oz.  
RPM — 2000 TO 4000



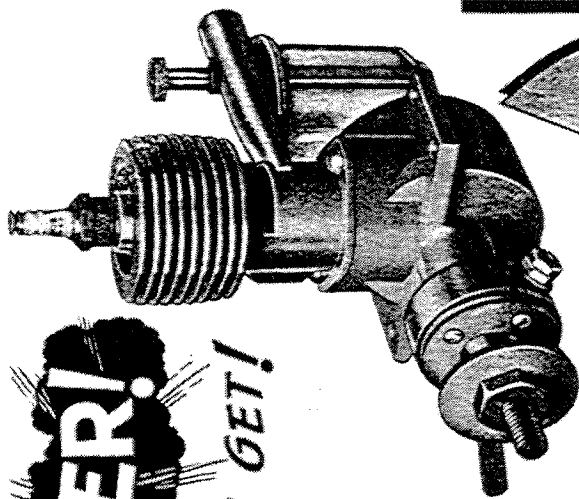
Three-view outline drawing

# POWER!

IS WHAT YOU GET!

*Plus:*

1. Super Lightweight!
2. Compactness
3. Simplicity
4. Easy Running!
5. Long Life!



## MEGOW

199 MOTOR For Class "A" Competitions

ONLY

**\$12.50**  
Complete  
Ready to run.

**SPECIFICATIONS AND FEATURES:**

Displacement . . . . . 1.99 cubic inch  
Bore . . . . . 5/8"  
Stroke . . . . . 1/2"  
R. P. M. Maximum . . . . . 10,000  
Weight . . . . . 3 1/2 ounces

**CYLINDER.** Turned from solid chrome. Chromium plated steel, honed and polished to .001".

**PISTON.** Chromium plated and polished to .001". Cast from special centrifugal cast iron.

**TIMING.** Fully enclosed with special aluminum type arm and auxiliary spring. Points fixed ground and polished tungsten.

**CRANKCASE.** Special Aluminum alloy. Permanently sealed. Extra long special high speed bronze bearing.

**GAS TANK.** Transparent, nonbreakable and flameproof, with special utility fuel cap.

**Win that Contest!**

As a modelbuilder and contestant no doubt, you have tried all engines, large and small. But—You never had a Class "A" engine that quite "filled your bill!"

The new "199" is a custom made motor, designed to meet your specifications.

It has the maximum displacement allowable under Class "A" rules. It is compact, and will go nicely into any model you may design. It is light in weight, and as simple in construction as it was possible for us to make it. Numerous complicated moving parts have been kept down to an efficient minimum. You will have no trouble maintaining this superbly engineered motor at its maximum operating efficiency.

See this motor at your Megow dealer—today!

**GUARANTEE**

Each Megow "199" motor has enclosed with it a certificate, guaranteeing it for 90 days from date of purchase against defective materials or workmanship. All motors are test run before leaving factory.

MEGOW



# Pinch-Hit Materials

BY WILLIAM WINTER

Though we need vital priorities on model materials, government approval had not been given when we went to press.

Meantime, if you run short, here are real tips from old-timers.

"SOAK all strips for fifteen minutes in boiling water," the directions sheets used to say when you started the fuselage sides. That was prior to 1928. Now, thanks to Hitler and Hirohito, there is a strong possibility that we will once again be using hardwood and wire nails and gosh-knows-what—if we want to go on making models. Please don't think this means you should become a balsa hoarder. 'Tain't patriotic and, for quite some months, such doings won't be worth the time and thought.

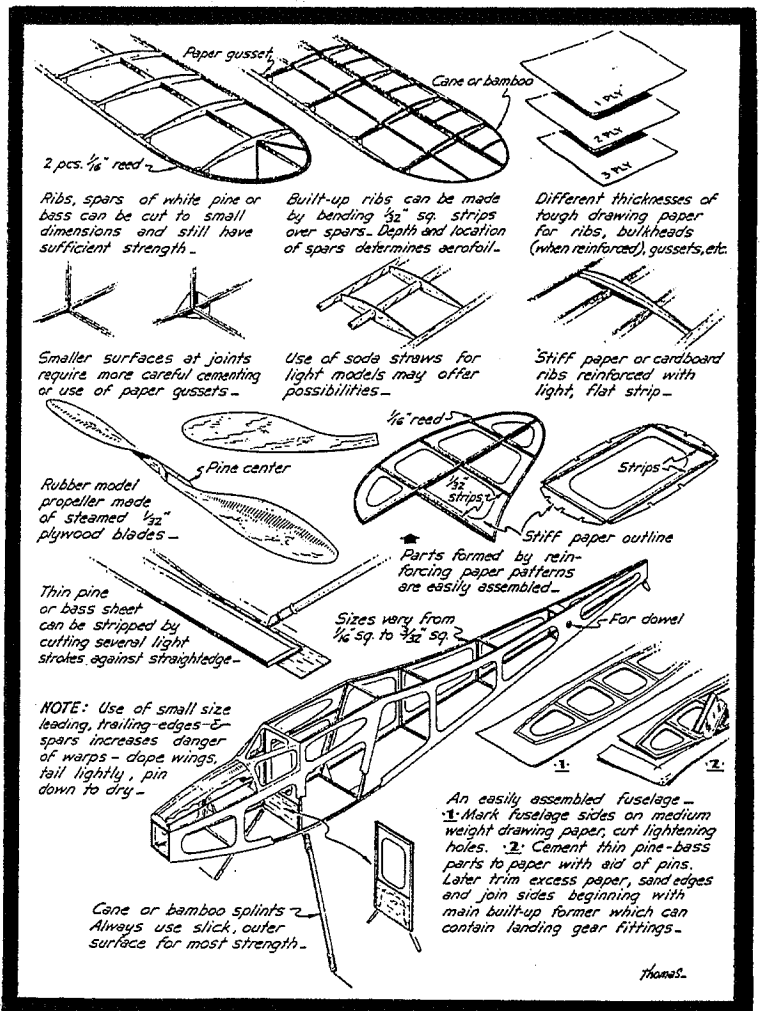
Most manufacturers have ample stocks of that good old balsa and the makings of many a swell model are on the production line. Everyone in the know believes that those all-important priorities will be forthcoming now that the schools are becoming interested in model airplane building courses as a starter for aviation training of American youth. But just in case the pinch begins to hurt in the meanwhile, let's face realities and see what we are going to do about this challenge to the traditional ingenuity of you modelers.

"We did it before and we can do it again" might be our motto. Pine and bass were used, without a squawk, with widespread success in the past, and models so built weren't difficult to make. Yes, and they flew, too. Flew *well*, in case you're asking. At the risk of giving away his age, the writer recalls his first model, built from kite sticks. (Will the gentlemen in the back rows please keep their seats?) Before a model dealer put in an appearance at a nearby town, our local carpenter shops were haunted by model builders with pine planks fresh and hand-picked from the lumber yards. The carpenter charged two cents per each for ripping the plank into strips. Then, as now, fuselage sides were made by pinning strips directly onto the plan. Crosspieces were fastened in place by pushing thin wire brads—ten cents a box at the hardware store—through the longerons into the crosspieces. Outside of such tricks as not putting top and bottom crosspieces at precisely the same station as the side pieces—the nails would meet—the idea was pretty much the same. Perhaps you older fellows remember trying paper napkins, brown wrapping paper, and regular household tissue; shellac and varnish; reed and bamboo.

With the experience every modeler has today we should be able to go on till doomsday building top-notch models no matter what happens. Paul Guillow puts it this way: "So far as we can see, modelers need have no fears about being able to obtain good flying models. And as for the manufacturers, they need not worry too much. All this is predicated on acceptance of the substitutes (*remember, we are considering the long chance that balsa, et cetera, may become scarce—The Editor*) by our customers—the modelers." There you are, you guys. It's dumped right in your laps.

Mr. Guillow passes along some interesting dope for new ways and means of doing all sorts of things. For instance, he's tried cardboard formers on some of his experimental versions of standard kits. A little Republic flying model we saw was a wow, thin pine strips (glued together) and cardboard formers regardless. Joe Ott, too, specifies cardboard formers. Such formers work particularly well with crutch-type fuselages or when slipped over square foundation fuselages. Just remember to reinforce these ersatz formers by gluing to them a thin strip of wood. Cardboard wing ribs are a cinch and have all the strength in the world when reinforced with a thin strip glued along the side of each rib between the leading and trailing edges. There's a tip, men. Conserve that sheet balsa.

One possibility will be kits that substitute pine, bass, ash, or some other similar wood for longerons and spars. Wing ribs, wing tips, and similar parts will be stamped on balsa, as always. Cardboard can be used to advantage for bulkheads—and wing tips as well, for that matter. As a guide to the size hardwood strip to use for longerons, one twentieth to one twenty-fourth-inch square is about equal to one sixteenth-inch square balsa. The regulation cement may not work out too well with hardwoods, but you can trust cement manufacturers to do something about this in plenty of time—if we ever do use hardwood. However, there are some possible glues on the market that might work well with hardwood. But more of this anon.



When you get into three-foot models with one-eighth squares of hardwood, razor blades don't do so well. It's a much better idea to use a coping saw for cutting crosspieces. Ribs, too, are cut out in jig time with a saw. The saw blade should be removed from the saw frame and turned around so that the teeth cut the wood when the saw handle is pulled down. Otherwise, the teeth catch on the upstroke and buckle the blade. We know it ain't right, but it works better.

We asked our friend the Traveling Salesman to give us the low-down on this material business. Followed a flock of earnest telephone calls between said Salesman and sundry unidentified persons (sources heretofore considered reliable). And this is where we began to learn the inside stuff. Did you know there is a Mexican balsa? Well, there is. It's called Bomba wood—we heard ten different spellings—or monkey wood. It's hard, strong, very light. Seems to be a cross between white pine and balsa. We'd say it should do well for longerons and wing spars. (Some kits already use it this way.) When we heard this we figured we had foiled the cargo-space problem. But, alas, there's a shortage of railroad cars, or something, from Mexico. However, we are still counting on getting the usual balsa.

How about paper? Silkspan is available in white only. You model dealers should be interested to know that reports of there being no silkspan aren't necessarily so. Delivery is slow—like everything else these days—taking about five to six weeks. Of course, there is no Jap tissue—hurrah! Whitfield says there is an American bamboo paper which is better anyway. And it comes in colors. It's a little heavy, though, which might limit it to large gas jobs. Asked about this,



Whitfield said it doesn't absorb as much dope as the usual Jap tissue, hence might be used on smaller gas jobs as well without a harmful increase in weight. There is an "American tissue," white, which is adaptable to rubber-powered models—if we had the rubber. We can use it on gas jobs by double covering; that is, by using two layers of paper. If we remember correctly, Henry Struck pioneered double covering. Covered once, sprayed with water but not doped, then covered again, running the grain of the second layer at right angles to the first.

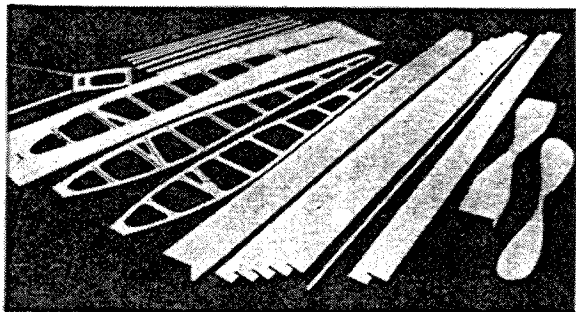
Straight from the feed box we got this tip. Air Associates, Bendix Airport, Bendix, N. J., have an airplane cloth that is O. K. for large gas models. It's made from cotton. As we go to press (the Salesman ran out of nickels for the phone) we are not sure how plentiful this cloth is. Individuals and dealers might drop Air Associates a line to check on this. For small models Christmas-grade wrapping tissue and household tissue can be pressed into service.

All this sounded interesting, so before the Salesman (getting hoarse by this time) had a chance to hang up, we demanded all the gory details. "What do you want to know?" says he. "O. K., smarty," we came back. "Suppose we do have to use pine. What do we do for glue? Maybe cement won't hold so well."

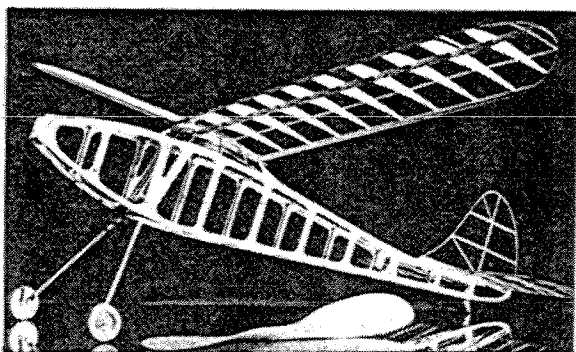
"We won't be using hardwood, anyway, but if it will make you guys feel better, I'll get the dope on glue," he told us. More phone calls, more busy executives (he knows them all) rudely awakened at their desks.

LePage's—yes, the glue-and-mucilage LePage's—has a special cement for model airplanes. It will do the trick on pine or balsa. Price for one and one half ounces is ten cents. Comes in tubes. It's cloudy in appearance but dries clear. Then there is Ambroid, costing a quarter for one and one half ounces. Old-timers will remember Ambroid quite favorably. It's thickish and amber in color. Dries strong and has all the qualifications of the regular model cement. Works well on pine, better on balsa. Your Salesman even tried Weldwood. Sure, you can use it on models. Pressure is required in drying, which makes it preferable for gluing up blocks. Frank Zaic once told us that he used Weldwood for a certain item and that it could be used widely, if time was allowed for drying. Retail at ten cents for about one and one eighth ounces; twenty-five cents for three and one half ounces. Buzz your local hardware store about all these items—if you have trouble getting cement. (Weldwood is made by U. S. Plywood Corp.)

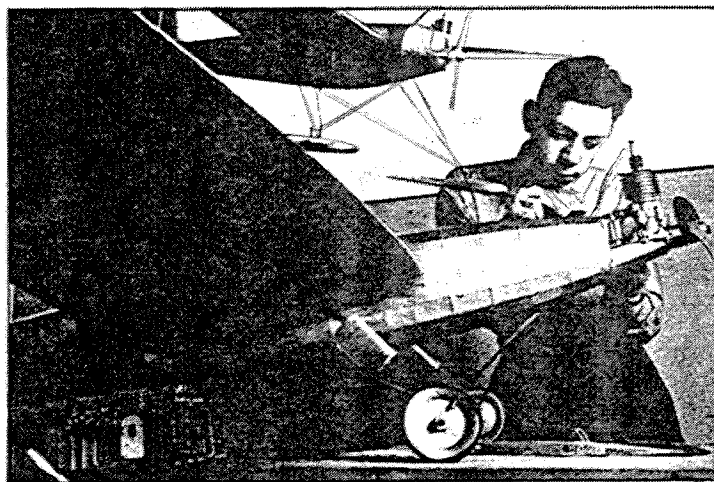
Here we should assure you that there seems to be plenty of dope and cement. Some manufacturers are selling wholesale lots. Speaking of dopes, not necessarily liquid, we know of one chap (he fancies himself an authority) who pulled a prize boner with one of those prebalsa buggies. It seems white shellac was the rage for covering at that time. The technique was to coat the tissue with the shellac and then drape the moist paper over the frame. Once it had dried, the



The author made fuselage from thin hard strips, glued on sheets of paper. Then the paper was trimmed, lightening holes cut.



Nothing the matter with this job. Looks neat and is far stronger. Hard strips will become available when, and if, balsa goes.



Hardwood and other "substitutes" are an old story, balsa a luxury, to Russian and German model builders. Construction follows real plane practice quite closely.

fringes were trimmed with a razor blade. (Sounds familiar.) Anyway, this chap—er, authority—stood the model out in the sun to dry. Ten minutes later the covering had all but disappeared. He had used linseed oil by mistake and the heat of the sun had burned off the paper. Ah, those were the days!

But we bet these old-timers have many a valuable tip we could put to work if hardwood becomes the vogue. Carving balsa props is a cinch. Not so with hardwood, even pine. Most trouble comes with the sanding of a hardwood prop. A favorite trick, which could be put to use again, was to break a discarded china cup. Odd-shaped fragments made excellent tools for scraping and simultaneously smoothing camber.

Wheels should be no trouble at all. Even the rubber-tired ones. We heard of at least one manufacturer who has enough rubber-tired wheels on hand to last for the next two years. Even so, wood wheels are plenty good enough. Hardwood wheels are better than balsa ones, in our opinion, especially on gas models. The bearing holes on hard wheels are less apt to become elongated and wobble. We hear that Victor Stanzel, for one, is now including nicely streamlined hardwood wheels.

When it comes to substituting other materials for sheet-balsa wing tips, stabilizer and rudder outlines, the picture isn't quite so favorable. Trouble is that we need substitutes for the substitutes. The nasty dwarfs from Nippon have cut off bamboo and reed from Malaya and China. But we don't see why curved pieces can't be cut from white pine sheet with a coping saw, jig saw, or what-have-you. Instead of making the curved segment one half inch wide, for example, make it one quarter or even less. Pine will be rigid when pared down.

Steel wire will be increasingly difficult to obtain. The Salesman's

phone calls got two kinds of answers to his queries on wire. A: There isn't any. B: There is plenty. Suppose we assume it will be scarce. That looks logical, with tanks and ships being built faster than you can shake a stick. But do we need steel wire? We wonder. There are all sorts of softer wire that could be used in a pinch. Double-strut landing gear would again be the vogue, and each flight might mean a bent chassis. We are sure gas modelers won't mind in the least having to twist the landing gear straight. There is plenty of old wire of all descriptions a-wasting around the country. If you find an old piano, though, better hide it in your attic.

Well, men, now that we've looked at the dark side of things, let's keep the brighter side in mind. As we said, we still have the regular materials. But while we are hacking away at balsa we should be mighty careful of both rubber and gas engines. We don't know offhand just how many engines there are in the field, but we'd guess several hundred thousand. Given the proper care, the old mill should give us many a flight.

Older model builders will call this sissy stuff. Considering the troubles they had, we can't say we blame them. We remember one "expert" who hit on an improvement over the old flour-paste covering technique—see, we knew you never heard of that. (Incidentally, it isn't a substitute.) The boys used to lay a sheet of white tissue, from the ten-cent store, flat on the table and then coat it quickly with flour paste, then "wrap" the paper around the wing and tuck in the loose edges. Oh, boy, and when it dried! Wings were as stiff as a board—unless the weather got damp, with obvious results. If you made the paste too thick, you watched your nice wing curl up like an autumn leaf. Anyway, this chap was too impatient to wait for moist covering to dry. He put it in the oven. . . . And this is where we came in.





# Cleveland's Model Airplane Hobby Catalog for 1941

#32  
NOW 5¢

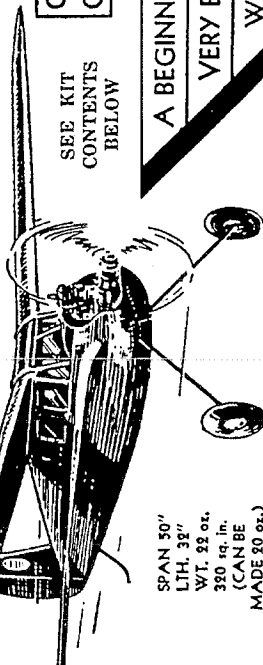
Cleveland Model & Supply Co., Inc.  
4506-12 Lorain Avenue Cleveland, Ohio. U.S.A.



# CLEVELAND-DESIGNED GAS MODELS!

## "CLOUDSTER"

FOR CLASS "B"



SPAN 50"  
LTH. 32"  
WT. 22 oz.  
320 sq. in.  
(CAN BE  
MADE 20 oz.)

SEE KIT  
CONTENTS  
BELOW

COMPLETE KIT \$2.50  
(EXCEPT POWER UNIT)  
GP-5004 Only

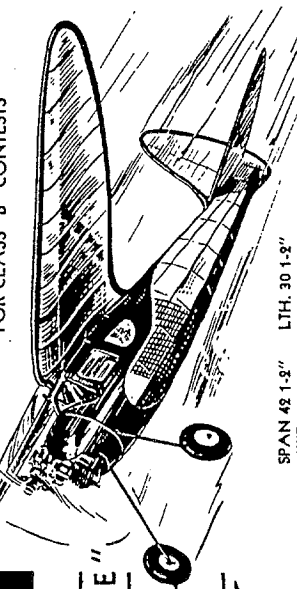
A BEGINNERS GAS MODEL,  
VERY EASY TO BUILD —  
WILL GIVE EXCELLENT  
FLYING PERFORMANCE

Its A Regular "Cloud Tickler"

## "FLEETSTER"

A BEAUTIFUL  
"COMMERCIAL TYPE"  
OF UNUSUAL  
DESIGN

FOR CLASS "B" CONTESTS



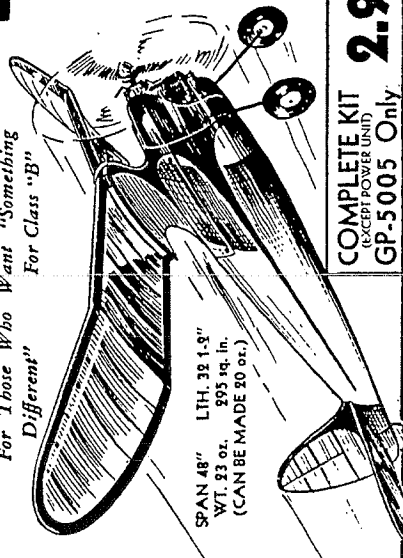
SPAN 42 1/2"  
LTH. 30 1/2"  
WT. 15 1/2 oz.  
300 sq. in.

SEE KIT  
CONTENTS  
BELOW

COMPLETE KIT \$2.50  
(EXCEPT POWER UNIT)  
GP-5007 Only

## A PLANKED FUSELAGE JOB!

For Those Who Want "Something Different" For Class "B"



SPAN 48"  
LTH. 32 1/2"  
WT. 23 oz.  
395 sq. in.  
(CAN BE MADE 20 oz.)

COMPLETE KIT 2.95  
(EXCEPT POWER UNIT)  
GP-5005 Only

## "CHAMPION"

All 3 Class "B"  
Kits Consist of

- Full Size Drawing
- Printed Out Wood Parts
- Shaped Leading Edge
- Plywood For Fire Wall
- Balsa Block For Nose
- Cut To Size Wood Strips
- Colored Tissue
- Wood & Tissue Cements
- Dural Motor Mount
- Formed Landing Gear
- Streamlined Wheels
- Everything Else Needed Except Power Unit.

# 3 Spectacular Contest Winners!

## The PLAYBOYS

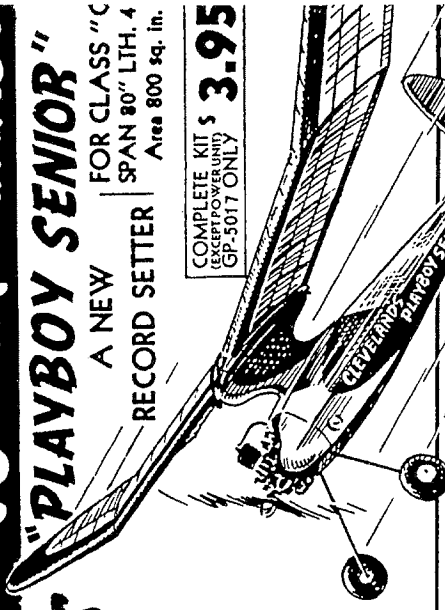
A NEW  
RECORD SETTER

FOR CLASS "C"  
SPAN 80" LTH. 4"

COMPLETE KIT \$3.95  
(EXCEPT POWER UNIT)  
GP-5017 ONLY

Have been built and flown by beginners as well as seasoned model builders who have "placed in the money" in model meets with this design all over the country. Your model hanger is not complete without at least one Playboy model.

The Senior broke the national record twice in 8 days.

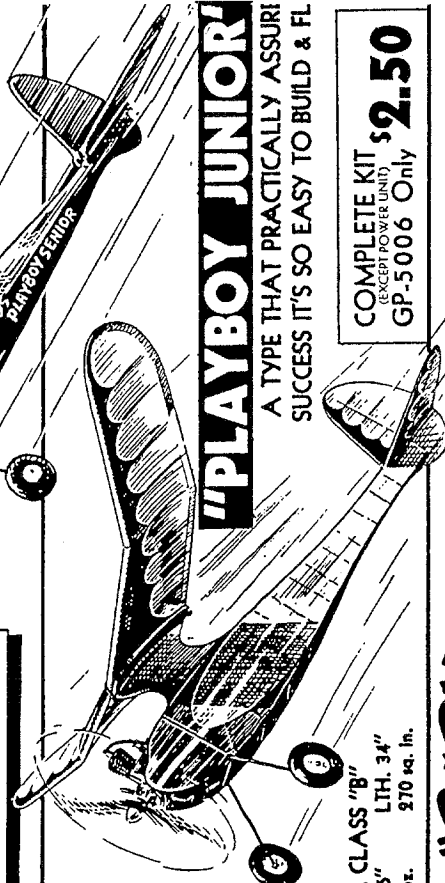


## "PLAYBOY JUNIOR"

A TYPE THAT PRACTICALLY ASSURES  
SUCCESS IT'S SO EASY TO BUILD & FL

COMPLETE KIT \$2.50  
(EXCEPT POWER UNIT)  
GP-5006 Only

FOR CLASS "B"  
SPAN 46" LTH. 34"  
WT. 16 oz. 270 sq. in.



## "BABY PLAYBOY"

A LITTLE "FLYIN' FOOL"

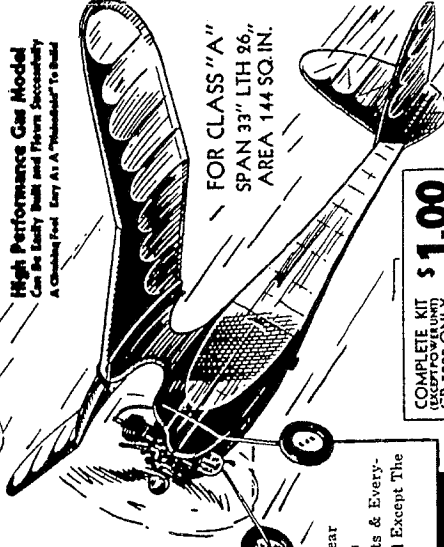
May Also Be Flown By Rubber Power

With Sound Device

KITS CONSISTS OF:

- Full Size Drawing
- Printed Out Wood Parts
- Plywood For Fire Wall
- Cut To Size Wood Strips
- Colored Tissue
- Wood & Tissue Cements
- Dural Motor Mount
- Formed Landing Gear
- Streamlined Wheels
- Celluloid, Nuts, Bolts & Everything Else Needed Except The Power Unit.

High Performance Gas Model  
Can Be Easily Built and Flown Successfully  
A Championship Entry As A "Thunder" To Build



FOR CLASS "A"  
SPAN 33" LTH 26"  
AREA 144 SQ. IN.

COMPLETE KIT \$1.00  
(EXCEPT POWER UNIT)  
GP-5008 ONLY

CLEVELAND MODEL & SUPPLY COMPANY Inc. Modelmaking and Hobby Supplies  
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# Two Fifty Class "A" Jobs!

# THE "VIKING" GAS MODEL



**"ITSY-BITSY"**

- ITSY-BIT**  
**GAS MODEL**  
A MOST UNUSUAL  
HIGH CLIMBING  
★ **GAS MODEL**

**This Neat Little Highly Streamlined Job Has A Terrific Climb And A Relatively Flat Glide**

**"ITSY-BITSY"**

SPAN 64 3/4"  
LENGTH 44"



WEIGHT LESS  
POWER UNIT  
118.19 OZ.

- The "Condor" is a 7 ft class "E" soaring glider with a wing area of 324 sq. in. Its exceptionally efficient high aspect ratio wing makes it a particularly fine model for contest work. May be flown in class "D" by reducing wing span slightly when it may be tow line launched. **\$1.00**

Designed along the lines of the Baby "Bow" The "Eaglet" is a Class "D", 4 ft. soaring glider with pod-shaped fuselage and unusual cylindrical tail boom. This "Eaglet" will give you particularly excellent flights when either in line or hand launched.

**50**  
**COMPLETE KIT No. E-5018**

**CLEVELAND MODEL & SUPPLY COMPANY Inc.** Modelmaking and Hobby Supplies  
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# "Something Different" in Flying Models

**Cleveland's Unique!** "NATURE" SERIES  
— PATENTS PENDING —

**Each kit only**

**25c**

**Don't Miss It!**  
Profits are big!  
No experience necessary!  
Invest today in tools and  
materials—  
Like the real thing!  
at once!

★





**CLEVELAND MODEL & SUPPLY COMPANY**  
★ 4506-12 Lorain Avenue ★

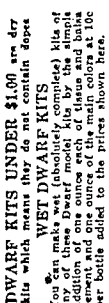
Case	Age	Sex	Duration of disease (years)	Initial symptoms	Course	Response to treatment	Outcome
1	45	M	10	Headache, dizziness, vomiting	Progressive	Yes	Recovery
2	52	F	8	Headache, dizziness, vomiting	Progressive	Yes	Recovery
3	60	M	12	Headache, dizziness, vomiting	Progressive	Yes	Recovery
4	58	F	15	Headache, dizziness, vomiting	Progressive	Yes	Recovery
5	65	M	18	Headache, dizziness, vomiting	Progressive	Yes	Recovery
6	70	F	20	Headache, dizziness, vomiting	Progressive	Yes	Recovery
7	75	M	22	Headache, dizziness, vomiting	Progressive	Yes	Recovery
8	80	F	25	Headache, dizziness, vomiting	Progressive	Yes	Recovery
9	85	M	28	Headache, dizziness, vomiting	Progressive	Yes	Recovery
10	90	F	30	Headache, dizziness, vomiting	Progressive	Yes	Recovery

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CLEVELAND'S DWARF KITS ARE WORLD'S  
★ ★ ★ ★ ★  
BIGGEST LOW PRICED KIT VALUES

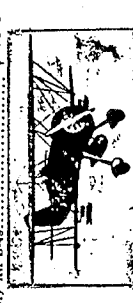
**PODWARE KITS UNDER \$1.00** are dry pills which means they do not contain dope.



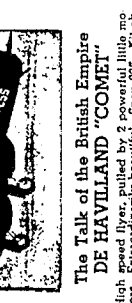
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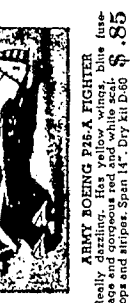

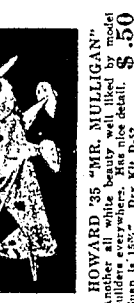
Many Thompson Trophy enthusiasts. Span is 34". Authentic coloring is all Wedell old. \$50



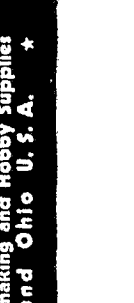
**NAVY CURTISS F11C-2 "GOSHAWK"**  
This is one of the most beautiful detailed models ever produced anywhere and in a contest invariably walks away with first prize if at all possible. Suggested price, \$1.00. Yours for a measurably less price, \$1.00. Navy Curtiss F11C-2, Gray, silver, yellow, red, green tall, Dry Kilt D-49 **\$ .85**



Extra. Extracurricularly beautiful. Span 22". Kit ab-  
solutely complete (but NO LIQUIDS).  
Only \$9.95, only \$5.95 if D-51.



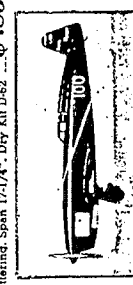
100



**ARMY SEVERSKY P-35 FIGHTER**  
 16". Blue fuselage, yellow wings and tail.  
 Fully trimmed with red stripe, and white out-  
 line. Landing gear retractable. Dry \$ .85



**CUSTOM WACO C-6 CABIN PLANE**  
 as wing panel, stabilizer, rudder light yellow  
 solage white, striped with red. Black \$ 85



**'36 FRENCH CAUDRON RACER**  
This all blue, 1936 Thompson Trophy Winner  
was entered by France. An attractive, speedy  
design. Span 11 1/4".  
Dry Kit D-63..... **\$ .50**



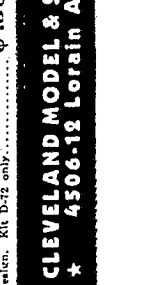
THE BEECHCRAFT  
beautiful all white design trimmed in red  
one of the finest C-B commercial planes with  
a folding landing gear detail, radio antenna,  
opening door, etc. Span 15' 7". \$ .85  
by Kit D-64.



...cupped with cream and red roses  
first place in the 1937 Thompson Trophy Race  
and Rudy Kling. Even though the model has a very  
man of 8" its length is 11½" making it a very  
unusual design in the Thompson race  
newly. Dry Kit D-71..... \$ .50



**MOSCOE TURNER'S TURNER-LAIRE**  
 This is the beauty with which Colonel Moscoe Turner won the 1938 and 1939 Thompson Trophy races. The only difference between the two is the name. In 1938, the ship was named "Petco Special," with "Petco" being the name of the fueling slide. The 1939 winner bore the name of the champion Spark Slug trademark on the fuselage in silver. Colored all silver, Span is 12'6" and the information is supplied for both years \$500.

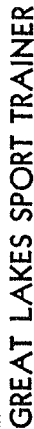




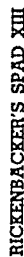




★ THE FINEST AUTHENTIC DESIGNS AVAILABLE ANYWHERE ★



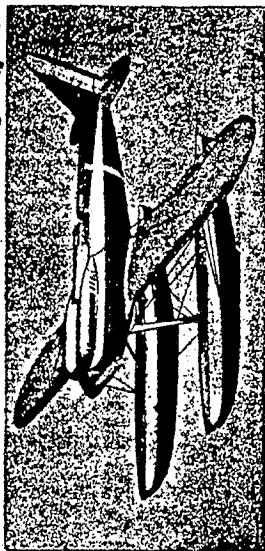
Truly, the "Trainer" is a value seldom passed up by any serious modelbuilder for it's the beautiful flagship of the C-D fleet, capable of fine performances, 20" fuselage and rudder, stripe and balance orange, Span 20" Order Kit SF-1, only **\$1.50**



"Eddie" Rickenbacker flew to fame in the fighting the war. Most of his twenty-six victories were fought in it. It was fast and maneuvering, as is the model. Redesigned drawing is as possible to make it, well detailed. 19". Yellow and green. Klt \$1.50

**ALL MADE TO SCALE OF  
3/4 INCH EQUALS ONE FOOT!**

**FOKKER D-VII FIGHTER**



**SUPERMARINE S.6.B. SEAPLANE RACER**

This airplane was far England the permanent possession of the Schneider Trophy by a speed of 370.95 MPH. But the day following the races it flew approximately 415.2 MPH. The model pictured here duplicates the machine more completely than all others. It will make a beautiful model. It will also include many useful features. All models include glow lights at a high speed. All models are made of quality materials. The proper windshield, motor louvers, dynamic balance, accurate coloring, and most important of all, the fuselage radiators. It should have an honored place in every model maker's collection. It has a span of 22". Overall length overall 21½". Colored silver and blue. Complete Kit \$1.75 SF-19



**Howard Racer "Ike" (or "Mike")**  
These popular twins are known to all air race fans, having won many first place prizes. Our kit from which you may build either one, is easy to assemble into a beautiful decorative home ornament yet capable of interesting fast flights. **95c**  
Span 15-5/8". Color white. Kit SF-42

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Many Started As There Is No Finer, More  
Air-Minded Folks,**

**Fascinating new Building Cleveland-Designed**

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 Try them you, to call especially now, training.  
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 preliminary, or envelope of postcard to  
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**"They Win More Compliments, More Honors, More**  
**Prizes Than Any Other Line of Models in the World."**



FROM  
AIR TRAILS

# BROOKLYN DODGER

BY SAL TAIBI

**T**HE Brooklyn Dodger is a super-simple gas model to build, and one that has very good flight characteristics. The climb will amaze you; it climbs at about forty-five degrees and is extremely fast under power. On the test flights the ship was consistently turning in flights of 3 minutes on a 16-second motor run, so clean off the bench, fellows, and put everything where it is easily accessible so you won't waste any time and get started on one of the best flying ships I've ever owned.

## CONSTRUCTION

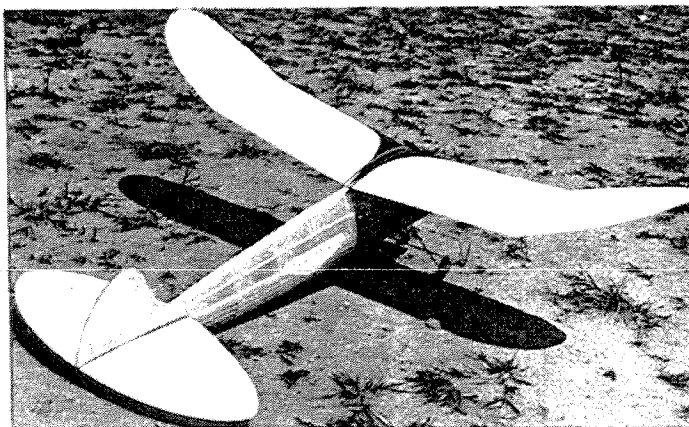
The fuselage is of crutch construction, which the author has found to be one of the strongest types of fuselages that can be built. First splice a gumwood motor-mount bearer into the crutch, then lay the crutch down on the board and insert the cross braces in their proper positions. Bulkhead A is cut from  $\frac{3}{32}$ " plywood and the other bulkheads are cut from  $\frac{1}{8}$ " sheet balsa. The bottom halves of the first five bulkheads (A, B, C, D and E) are identical, and a good way to save a lot of grief when assembling the ship is to pin these bulkheads together and cut the  $\frac{3}{32} \times \frac{1}{4}$ " notches all at once. This will assure perfect alignment later on. The notches for the crutch, of course, are cut individually.

Remove the crutch from the board and insert

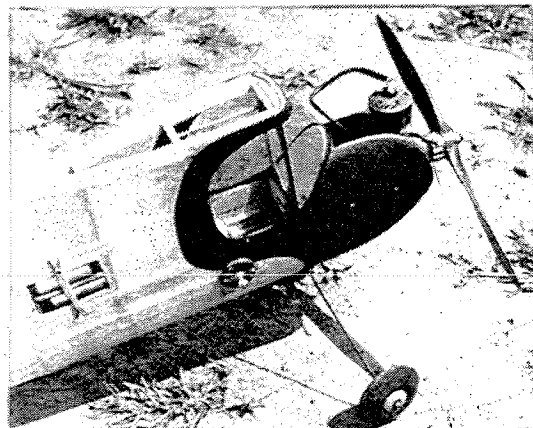
Nationals winner Taibi produces another tried-and-true warrior. It's a Class B job with a Forster 29 motor.



Test glide. Dodger has proper incidences built in, no side thrust, slight downthrust. Climbs wide left circle, glides sharp left circle.



The fuselage employs "crutch" backbone with a teardrop cross section, triangular on top, round on the bottom. Wings and tail—both rudder and stabilizer—fly off in a crash.



Close-up shows front wing attachment dowel, the Forster 29, position of the pencils, and Austin timer. Front bulkhead is of plywood.







## Brooklyn Dodger

bulkheads. After these are in place, a strip of  $\frac{1}{4}$ "-square soft stock is glued from the top of Bulkhead D to Bulkhead H. Individual pieces of  $\frac{3}{16} \times \frac{1}{2}$ " are glued between the bulkheads to give greater strength. The bulkheads are mounted on the crutch by first sliding them into their respective spaces until one notch engages the crutch, and then twisting into place carefully so that the bulkhead rests flat against the cross piece. The lower rear former that connects the bottom stringer and crutch is glued in place. The  $\frac{3}{32} \times \frac{1}{4}$ " bottom stringers are glued in place. The cabin wing rest is cut from  $\frac{1}{4}$ " sheet balsa and cemented to tops of Bulkheads A, B, C, D. The  $\frac{1}{4}$ "-square top longeron is cemented in place, as are the  $\frac{3}{32} \times \frac{1}{4}$ " side stringers.

The landing gear is cemented in place with a piece of  $\frac{3}{8} \times \frac{1}{2}$ " grooved basswood; glue at least four times. If in doubt, consult sketch on plans. The cowl blocks are next glued in place and shaped. It will be noted that although the motor is fairly well cowed, the needle and other parts of the motor are easily accessible. The engine is wired according to plans. Motor mounts are bolted in place with  $\frac{1}{16}$ " bolts. The stringers right behind the firewall are filled in with  $\frac{1}{8}$ " sheet. This is to prevent the firewall from backing up on a hard landing. The window is covered with celloid. It is advisable to cement the body again before covering. Next, the fuselage is covered, either with silk, bamboo paper or Silkspar. Since the fuselage is subject to spray of gas and oil from the engine exhaust, the fuselage should be given at least six coats of clear dope.

The dowel pin to hold the wing in place is  $\frac{1}{8}$ " diameter. It is inserted into Bulkheads A and B. The rear dowel is braced in a triangular piece of balsa just in front of Bulkhead D. The tail skid is embedded into the balsa keel at the rear of the fuselage. It is  $\frac{1}{16}$ " diameter piano wire, and also serves as a hook for the tail.

In its test flights the ship was found to need a little more incidence, so two wedges were glued to the wing rest connecting the first four bulkheads. These wedges are  $9\frac{1}{2}$ " long and measure  $\frac{3}{16}$ " at the thick end.

In designing the Brooklyn Dodger, simplicity of construction in the wing was one factor that was given particular attention, such as simple sparring, butt leading edges, et cetera. In constructing the wing it will be necessary to elevate the front wing spar  $\frac{1}{16}$ " above the board. Pin the lower front spar to the board, slip all the ribs in place, attach the trailing edge and then the leading edge, glue the top spar in place. The rear spar is cemented in place after the wing has been removed from the board.

Repeat this procedure to build the other half of the wing. The false ribs are inserted between the full-size ribs. The wing is then joined at the proper dihedral angles as shown on the plans. Finally, cover with either bamboo paper or Silkspar.

The rudder is built flat and is self-explanatory. After the rudder is built, the tab is attached to it with strips of aluminum.

The stabilizer is flat in construction. The leading edge is cut out of  $\frac{1}{2}$ " sheet, the trailing edge from  $\frac{1}{4}$ " sheet. After the edges are cut out, lay down the spar, then leading edge and trailing edge. The ribs of  $\frac{1}{8} \times \frac{1}{2}$ " are glued in place. When dry, remove from the board and cut the ribs to airfoil shape. (See stabilizer detail.)

### FLYING

The Brooklyn Dodger has been thoroughly test-flown and therefore all the incidences are built in. There is no side thrust, but there is two degrees downthrust. First glide the ship until a smooth glide is obtained. It may need minor adjustments such as  $\frac{1}{16}$ " incidence under either the leading or trailing edge.

The first flight should be at half power, with about a 20-second motor run. Study the flight characteristics carefully, and if the ship performs satisfactorily, fly it again with slightly more power. Repeat this procedure until a fast, zippy climb is obtained. The ship will climb in a very wide left circle and glide in a tight left circle. If any information is needed, write to Sal Taihi, c/o Air Trails, 79 Seventh Ave., New York City. Good luck!

Robert L. Marchant of the AMA Exchange Gas Model Club of Denver, Colo., sends picture 12. Here you see Cowboy Jim Wenrich, foreman of the Glass I Ranch, who has turned to chasing gas models instead of steers. Marchant says:

"While the other cow pokes spin yarns in the bunk house, Cowboy Jim spends his time studying and building model planes. He herds dogies all week long, but on Sunday mornings he can be seen riding up the valley on his pinto with a model strapped across the saddle-horn. It is a common sight to see Jim start his motor, watch the takeoff a few minutes, then jump on his cayuse and follow the plane wherever it goes. Jim and his pinto have chased his model so often he swears that she, Gwendolyn, has learned to do it herself; he simply rides along to pick up the plane.

"The only time Jim wears his 'store clothes' is the night he attends our club meetings. Then he sits uncomfortably perspiring under his high collar, his feet squeezed into unbecoming black oxfords."

This is certainly a new angle to gas model flying and has great possibilities. We hope other cowboy's follow Jim's example; it is really quite an idea. It might also be an idea for dude ranches.

## From Brooklyn To Denver To Hollywood



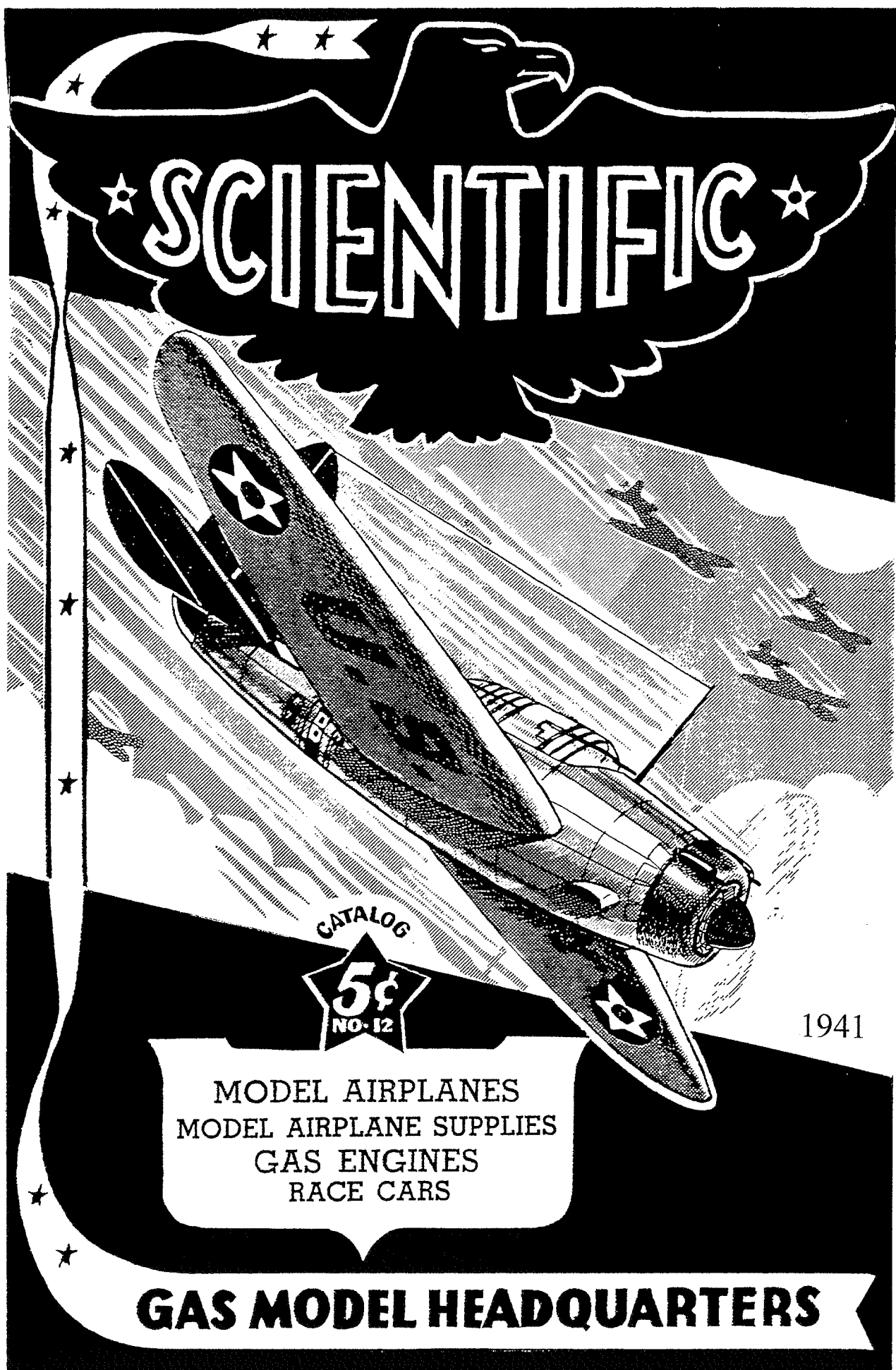
Pict. 3. Screen-cowboy Gene Autry and Jack Bayha with the model Jack designed for Gene

Believe it or not, cowboys have taken up model flying. Apparently riding the range does not hold the thrills of the "old days" so they are supplementing their activities with a few "gallops through the clouds." As proof, picture No. 3 shows Gene Autry, "Public Cowboy No. 1," Hollywood's colorful contribution to the motion picture world. He is looking over the "Gene Autry Special" gas job designed by Jack Bayha, shown at the right. The model is a most versatile one and can be easily converted into an amphibian, seaplane, skiplane or regular land ship. It is powered with a  $\frac{1}{10}$  hp. Atom engine.



And Here's a Real Cowboy





MODEL AIRPLANES  
MODEL AIRPLANE SUPPLIES  
GAS ENGINES  
RACE CARS

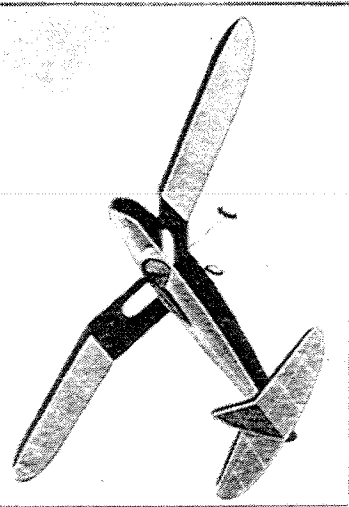
1941

**GAS MODEL HEADQUARTERS**



# New! 25" FLEET of

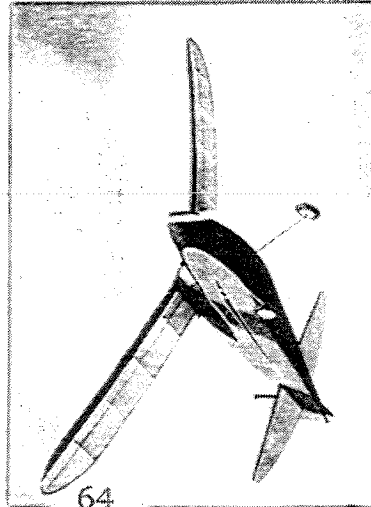
# CHAMPIONS... 25¢



## BLUE PHANTOM

Wingspan 25" — Length 15 1/4"

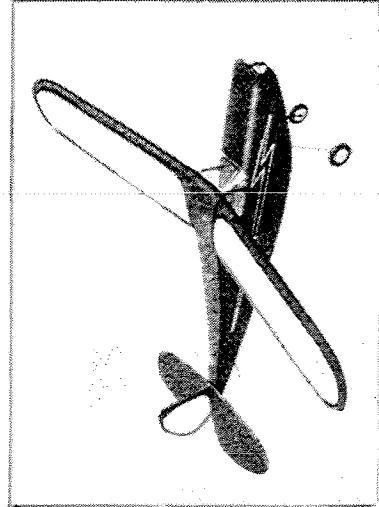
Living up to its name, this model is an eye-catcher, not only on the ground, but also in the air. The wing has windows on both sides of the cockpit for visibility. Gull-wing, open cockpit, single-seater type. The two-toned blue, divided by white, puts the "Phantom" in Class "A." Complete kit containing all necessary parts for easy building such as formed wire parts, 6 inch propeller, printed balsa, tissue, cement, full size plan with instructions, etc. .... **25c**



## LITTLE REBEL

Wingspan 25" — Length 16 3/4"

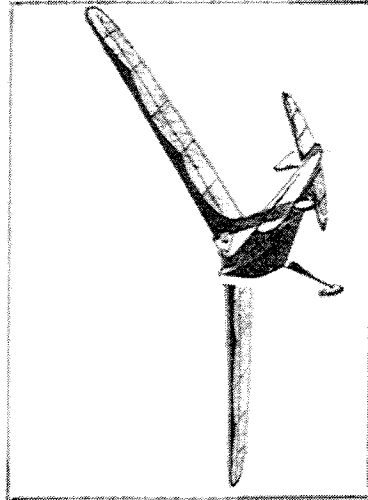
Are you looking for "something different" ... a model that is easily made and yet performs with the best? Here's a model that tops all of that with a color design that speaks for itself. Orange trimmed with blue, and separated by white striping—black and white stripe on fuselage. Wing is fastened by rubber to dowel method. You'll enjoy building this different type of model from the complete kit which contains everything necessary, including full size plan with instructions.... **25c**



## DOODLE BUG

Wingspan 25" — Length 15"

Typical of the popular light planes of today, this sweet little job could meet all comers for looks and performance. Beautifully finished in red and yellow, set off by black and white. Dismountable wing is fastened by rubber bands which hook to dowels set in fuselage. Complete easy to build kit contains drilled nose block, formed wire parts, 6 inch propeller, tissue (2 colors), and everything necessary to construct a model you'll certainly be well proud of. Only ..... **25c**



## WIZARD

Wingspan 25" — Length 16"

After you build and fly this model you'll understand why it was so named. This easily built model hops off the ground so quickly you'll be amazed at the consistently long flights it turns in. Detachable wing uses the rubber to dowel combination which prevents broken spars and allows easy flight adjustment. Strikingly finished in red and white with black stripe on fuselage. Complete kit, including all necessary materials and full size plan with instructions, is yours for ..... **25c**

## AIR RAIDER

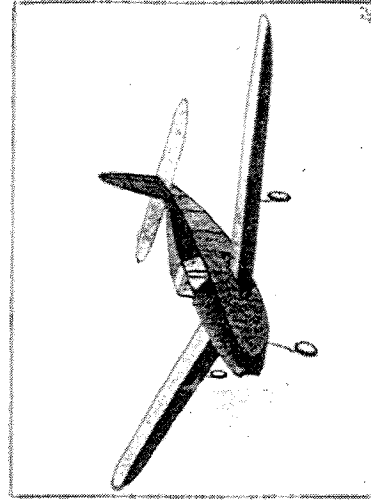
Wingspan 25" — Length 15 3/4"

Here's a pursuit type model that's really worthy of its place in the Fleet. Polyhedral wing can be made demountable or fastened permanently in place. Colored brown and yellow with black and white stripe on fuselage. You'll burst with pride when you see this classy model zoom skyward for a long, smooth flight and then come down to earth with a perfect 3 point landing. Complete kit including 6 inch propeller, formed wire parts, printed wood, cement, tissue, full size plan with instructions, etc. .... **25c**

## SKIPPER

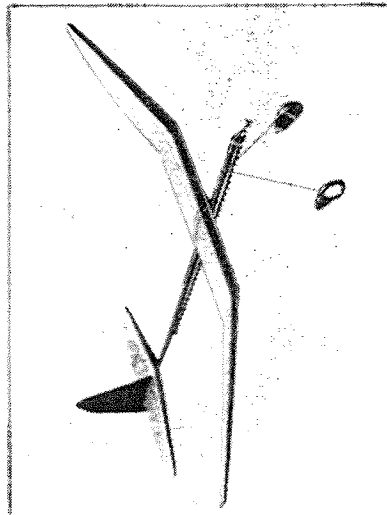
Wingspan 25" — Length 15 1/4"

This model closely follows the modern trend in designing, its snappy low-wing neatly faired into the fuselage sides and the tri-cycle landing gear marks this model as really "up-to-the-minute." Just look at that cockpit with its suggestive side-by-side seating which is now universal practice. Blue and yellow color design set off by black striping leaves nothing to be desired. Easy to build kit contains everything necessary to complete the model ..... **25c**





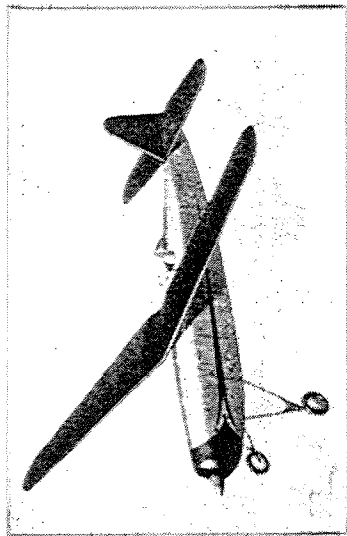
# 25" Wingspan SQUADRON of FLYING DEMONS 25¢



**SCIENTIFIC R.O.G.**  
An advanced type R.O.G., with built up wing and tail surfaces, easily constructed in a short time to give thrilling flights for a long time! Look at that polyhedral wing, the wheel pants. And what a color combination: wing and stabilizer all yellow, trimmed with blue, rudder and stick blue. Kit is complete, including a machine cut 6 inch prop, wheels, tissue, and a set of those explicit Scientific plans **25c**

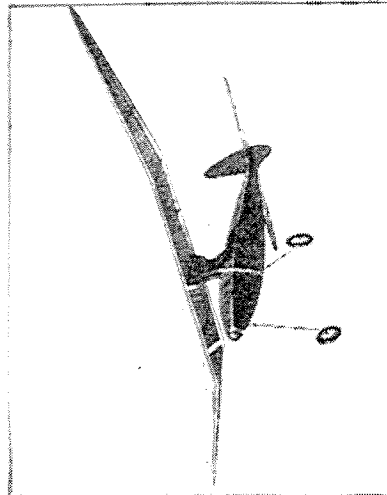
## SPEEDSTER

A speedy, graceful model that is a consistent and steady performer. Takes off from the ground within three feet. Parasol wing type, with open cockpit. Red wing and tail surfaces, fuselage white with red trim. Kit contains full sized detailed drawing with complete instructions, many finished parts, plus hours of flying thrills—priced at the rate of only 1 cent an inch!



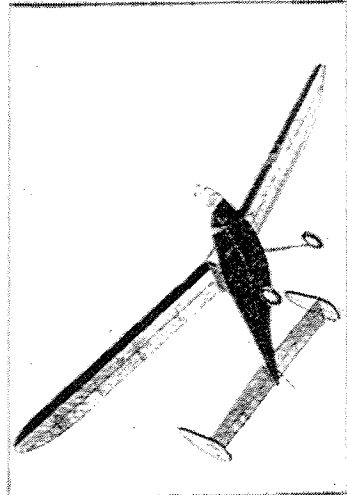
## RAVEN

Here's a contest model that's so easy to construct that a beginner will experience little or no trouble building her. Her diamond shaped fuselage and elevated polyhedral wing assures contest winning flights. Fuselage and rudder covered with light blue tissue, wings and stabilizer yellow. Kit complete including many finished parts and a set of full size plans with easy to understand directions **25c**



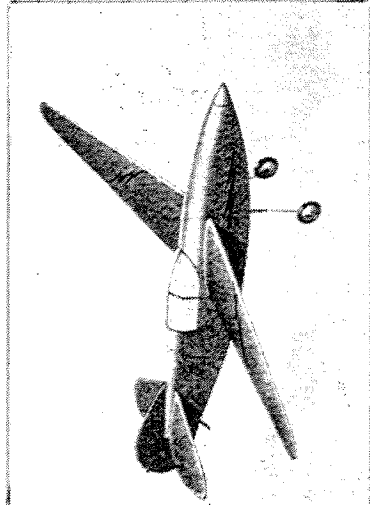
## SKY-SCRAPER

Why was she called a skyscraper? In her trial flights this model consistently made altitude flights of over 500 feet. Her color design makes her a classy looker too fuselage, brown and white, wings and tail surfaces all white with brown trim. The twin rudders assure greater spiral stability. The complete kit, with everything necessary to build this new contest winning model sells for **25c** only



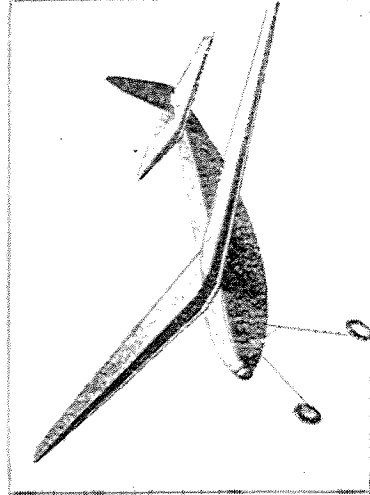
## LIGHTNING

Everything the name implies. The Lightning is one of the Fastest flying models ever designed—yet she's easy to build, too. Adding to her streamlined beauty are the red lightning flashes on her yellow wings and fuselage. Kit comes complete with ribs and bulkheads printed on sheet balsa, a 6 inch prop, formed wire parts, rubber, cement, plans, etc. Here's real value, multiplying itself in real building and flying thrills **25c**



## FURY

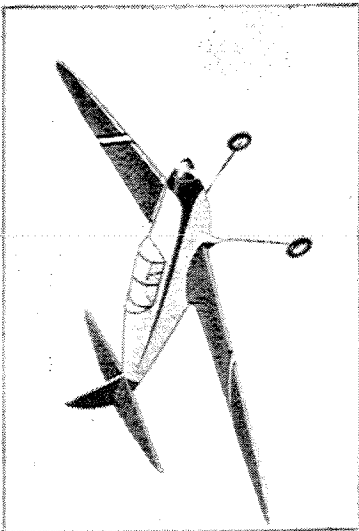
A really beautiful model that gives much pleasure building, and hours of enjoyment in the air. The Fury is easy to build and a real flyer too. Wing and stabilizer light blue with red trim. Body and rudder all red. This complete easy to build kit includes drilled balsa block, printed sheets, 6" machine cut prop, tissue, cement, rubber, and a set of full size plans. Order one today—only **25c**





# 4 NEW 30" MODELS

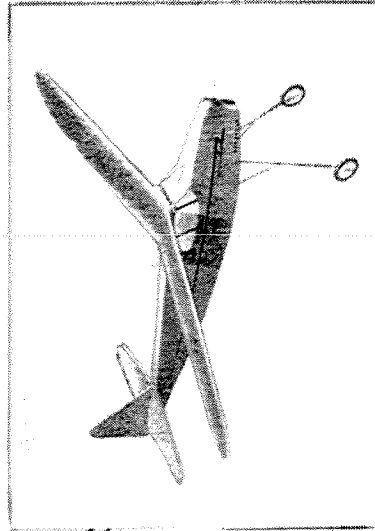
# DESIGNED TO FLY



## BULLET

Wingspan 30"—Length 23"

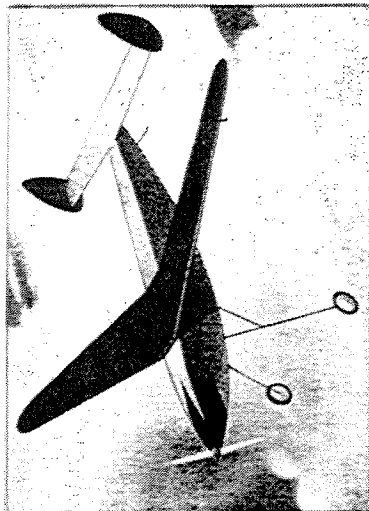
The fastest thing on wings! If you want a model with class, zip, and yet easy to build, get one of these new Scientific Bullets. A pursuit type plane with a low, streamlined, tapered wing; movable tabs on tail surfaces; single strut landing gear; easily constructed enclosed cabin (including instrument panel). The kit is 100% complete and contains all high quality parts. Included are: machine cut propeller, turned wheels, tissue (3 colors), and full size plans with instructions. Priced to fit the pocketbook of all model builders .... **50c**



## YELLOWBIRD

Wingspan 30"—Length 25 3/4"

The Yellowbird is a contest type model, designed for consistent endurance flights. Employs the under chamber swept back wing—movable and detachable. The fuselage is extremel/ easy to construct. Here's a model that will make your fellow contestants take notice at the next contest you enter. Kit contains everything necessary to build this prize-winning model. Don't be the last fellow on your block to fly the Yellowbird. Get yours **50c** today!



## WHIPPET

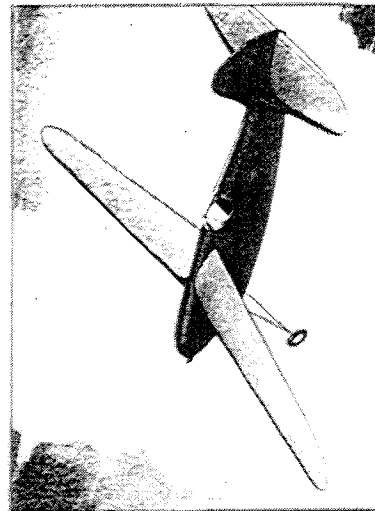
Wingspan 30"—Length 22 1/2"

Ultra modern in contest type design, this Whippet is hard to beat when it comes to endurance. Incorporates such advanced features as: swept back wing, twin rudders, simple and efficient landing gear. Its red wing is adjustable and detachable. Rudders red, fuselage and stabilizer white with red trim. Complete kit, including all necessary materials, finished propeller, finished wheels, 2-color tissue, and **50c** full size plan with instructions .....

## CLARION

Wingspan 30"—Length 23 3/4"

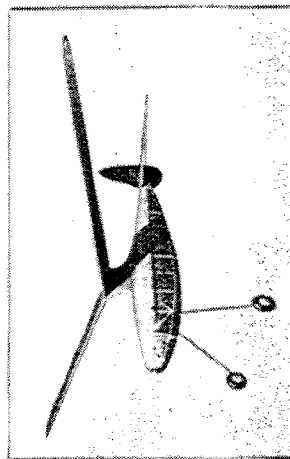
The Clarion is a scale type model, designed primarily for flying. Wing is stationary and faired into the fuselage. (Thus a slick lookin' cockpit, too.) Tail surfaces are designed with movable tabs insuring easy directional control. Her color combination of yellow wings, blue and black stabilizer, blue fuselage and rudder, gives her that classy custom built appearance. Kit is complete, including finished wheels, 10" propeller, tissue (3 colors), full size plans and simplified instructions ..... **50c**



# 2 Models By World's Champion DICK KORDA

## GOLD STAR

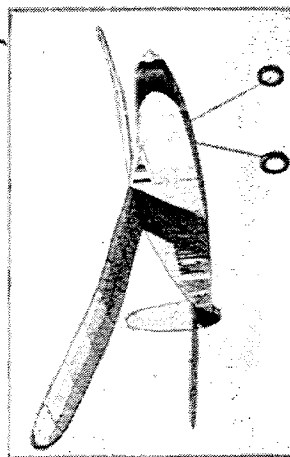
This is Dick's favorite. and no wonder! It's the type of plane any of us would be proud of! You can't beat it for beauty—or performance. Add to this Scientific's complete kit, with our high quality materials and simple instructions and you've got something! (Note: Any similarity to your dream ship is entirely unintentional and purely coincidental!) Wingspan 32"—Length 22 1/2" ..... **50c**



# Who won both the Wakefield and Moffet Trophies!

## VICTORY

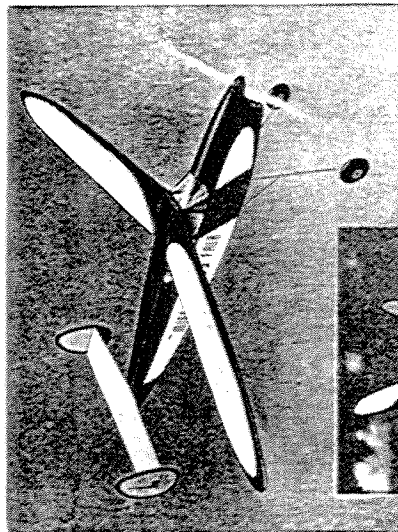
Here's a model that's easy to build and a superb flyer. A copy of the sensational Wakefield winner, it allows the beginner an opportunity to build a proven champion. It is especially recommended because of its ease of construction. Our clear easy to understand full size plans, with detail photos and complete instructions, take care of this! And you know that it will fly! Wingspan 32"—Length 23" ..... **50c**





# "MISS WORLD'S FAIR" Now in 3 SIZES

"Tops" in Appearance . . . Performance . . . Ease of Construction!



**Miss World's Fair #1**  
Wingspan 50"—Length 35½"

This is the original model. Outstandingly illustrates Scientific's "all three" theory: A model, in order to be considered complete, must incorporate (1) Appearance, (2) Performance, and (3) Ease of Construction. No one quality, alone, is worth consideration unless supported by the other two. All three should essentially be combined as one unit. And "Miss World's Fair" does just that! Kit contains a set of clear FULL SIZE plans and detailed instructions

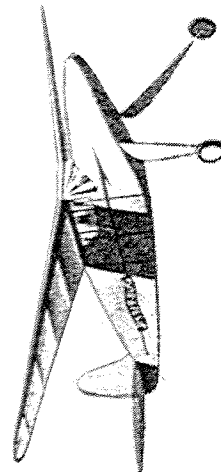
**\$1.50**

**MISS WORLD'S FAIR No. 3**—Cutest little thing on two wheels! Identical to the original. This kit, too, (in spite of the low price), comes complete with all materials, including finished parts and full size plan. 24" Wingspan—Length 17" . . . . . **25c**



**Miss World's Fair No. 2**  
Wingspan 30"—Length 20"

Flies 3,000 ft. Here's the smaller model of the large "Miss World's Fair" that is proving so sensational. Fly one in the next contest you enter . . . but don't hold us responsible if you're chased off the field for showing up the other boys! The kit, as usual, comes 100% complete . . . . . **50c**



## JITTERBUG

Wingspan 25"—Length 20½"

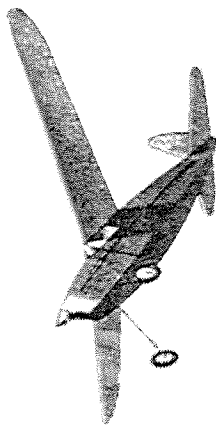
Another of Scientific's famous flying models designed to give you the utmost in model airplane values. Its slick lines will cause you to be the envy of every boy in the neighborhood! Notice the shapely wing (detachable, too!), classy cabin, streamlined nose, thoroughbred appearance. And it's so simple to build that, although you may have little experience, you won't encounter any difficulties. Kit is 100% complete, containing everything needed to build this eye-opener . . . . . **50c**

# EASY to build! THRILLING to fly!

## FLYING YANKEE

Wingspan 20"—Length 13"

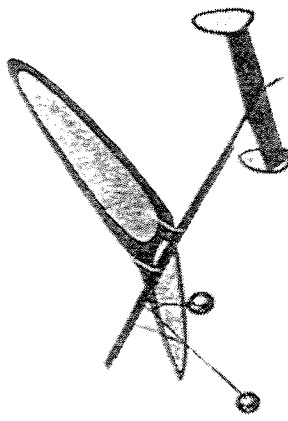
One of the finest model airplanes ever produced. Its clean-cut lines and simplicity make this one of the easiest jobs to build. It comes through with beautiful flights of 200 feet and inspiring 3-point landings that look like the real thing. Although it sells for only 25c the kit is the usual Scientific complete kit, includes a finished balsa propeller, balsa wheels, formed wire parts, drilled nose block, easily understood full size plan, etc. If you're looking for a model that you can build with a minimum of effort—yet still have a good-looking plane and a consistent flyer—get a "Flying Yankee" today! . . . . . **25c**



## FLEETWING

Wingspan 30"—Length 23½"

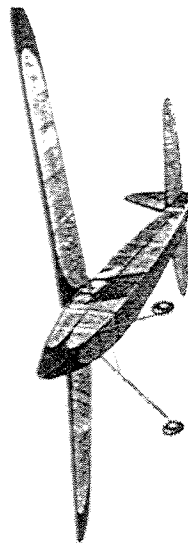
A record breaker that is easily constructed in a short time. The built-up wing and tail surfaces lift this out of the ordinary R.O.C. class and make for a super-flyer that will positively amaze you with its performance. After a short take-off run of 3 feet it climbs upward at the rate of 600 feet per minute, then, at a height of 250 feet, the model levels off and cruises from 1 to 3 thousand feet. Its flying ability can't be beat! The kit comes 100% complete with finished balsa propeller, all ribs and bulkheads cleanly printed on sheet balsa, tissue, formed wire parts, full size plan, etc. NOW . . . . . **35c**



## ORIOLE

Wingspan 50"—Length 34"

Designed for flying! This is primarily a contest endurance model, conforming to A.M.A. contest requirements, and so simple to build that you can easily complete it in a day. We have received letters from coast-to-coast telling us of the Oriole's consistent winning performance and record-breaking flights. And—unlike other endurance models—this doesn't look like a flying boxcar! No sir! We didn't sacrifice beauty! Here, again, we give you all three qualities that you want in a model: Appearance, Performance, and Ease of Construction. This is the most dollar's worth of flying you'll ever buy! Kit is 100% complete, (includes ball bearing washer, too!) . . . . . **\$1.00**





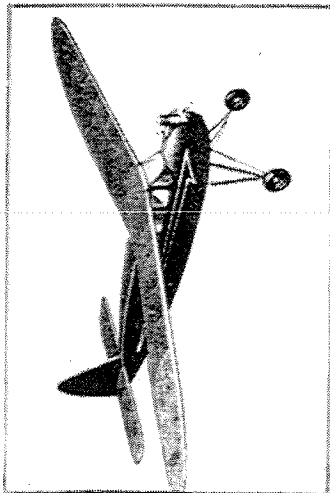
# ALL THE THRILLS OF GAS MODEL FLIGHT

THEY LOOK, FLY, AND SOUND LIKE GAS MODELS!  
EASY TO BUILD—ENTERTAINING—INSTRUCTIVE!

## MISS AMERICA

Wingspan 40". Length 27 1/2"

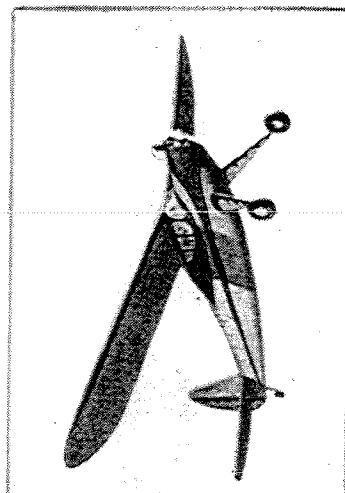
This is an exact replica of the full size Miss America gas model, with all of its features, brought to you in the popular gas-type form. When Scientific introduced the gas-type model it was immediately accepted as a noteworthy innovation. This was further proven by the wave of imitations that began coming out, but though proved to be imitations, we set such a high standard that our models couldn't be duplicated. Easy to build, tool Kit comes 100% complete including M & M pneumatic wheels, liquids, machine cut ladder propeller and brown contest rubber. **\$1.95**



## FLEA

Wingspan 36". Length 28"

The Flea in the "ladder" of the gas type models. Originated by Scientific, for intermediate model builders, it received nation-wide recognition as a worthy development. If you intend to build a gas model in the near future, but don't feel quite ready to it, the Flea will offer excellent preliminary experience that you will need. Among the many features are: movable tabs on tail surfaces for better flight control, shock proof gas model type landing gear, and adjustable wing clips. The kit is absolutely complete and includes a pair of M. & M. pneumatic wheels, machine-cut ladder propeller, new type tail bearing washer, etc. **\$1.95**



## FIREFLY

Wingspan 36". Length 28"

The immediate success of the Flea brought in hundreds of letters requesting us to produce an advanced design in the gas-type field. The Firefly was our answer—and a very well-comed one! We instructed our designer to give us a plane that no one could equal... a plane generous in beauty, easy to build, and a good flyer. The beautiful model that you see here is the result—"custom made" for you! Kit is complete and contains M & M pneumatic wheels, two pitch ladder propeller, cement, bonnet oil, also a complete set of easy-to-understand full size plans. A **\$1.95** real buy!

## BEN HOWARD'S "MR. MULLIGAN"



25" Wingspan  
A true-to-life replica of the famous plane that won both the Ben Howard and Thompson Air Races in the same year. **\$1.50**

## MONOCOUE MODEL 90-A

50" Wingspan  
Weight 10 Oz.

Here's a real flyer. Some modelers call it a "small gas model". It's a real flying machine, scale model, and making changes to convert this into a small gas model.



**\$6.50**

## WACO CUSTOM CABIN



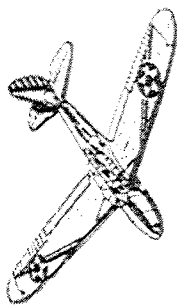
60" Wingspan  
Length 43 1/2"  
Scientific's Cabin Waco Model is the first of its kind. It's a real flying machine, scale model, and making changes to convert this into a small gas model. **\$8.50**

★ ★ ★ ★ ★ ★ ★ ★ ★ ★

## AMERICAN JUNIOR

Ready-to-Fly Model Airplanes

These models come completely finished, ready to fly. Just slip the wing and tail surfaces into the slots, wind the propeller, and you're all set for the real flying action!



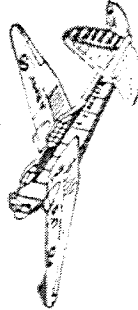
### A.J. INTERCEPTOR—25c

Will come to life as soon as you slip the wing and tail surfaces into the slots. U.S. Army field kit. Complete with launching stick and powerful rubber.



### A.J. PURSUIT—50c

Total flight 1/2 mile! 154 inch wing span. Super power, compact rubber motor. Streamlined body, fuselage, a real paint job. High speed, 40 mph. Weight 1 1/2 oz.

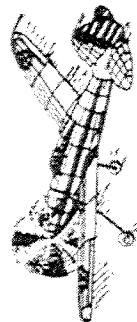


### A.J. BOMBER—5c



### A.J. HORNET—25c

Wing is adjustable for height, angle, or long distance glider.



LOW WING X.P. PURSUIT—35c



# SCIENCE-CRAFT PLANE-SCALE MODELS

For those who want their flying models to be replicas of actual ships. This interesting series offers much building and flying enjoyment.

Science-Craft Kits are 100% complete. All have 20" wingspan.

50c



H-4 Curtiss Helldiver



H-1 Waco Custom Cabin



H-7 Mr. Mulligan



H-3 Waco F-5



H-12 Boeing Fighter



Vought Sincclair "V-80"



H-2 Monocoupe 80-A



Monocoupe Model 145



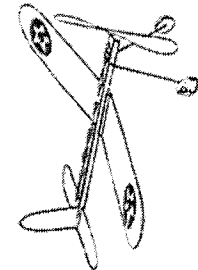
H-18 Army Douglas



H-10 Fokker D-7



H-22 Waco Y.K.C.



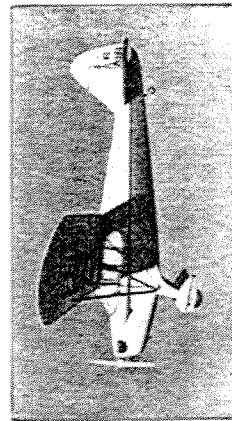
**R. O. G. MODEL**  
Used in 1914 by the U.S. Army. This model is all over the country, as it has been used by many. All parts are complete and the model can be assembled in a few minutes. It has 500 feet wingspan.

25c



## Fairchild Warner Powered Model '22'

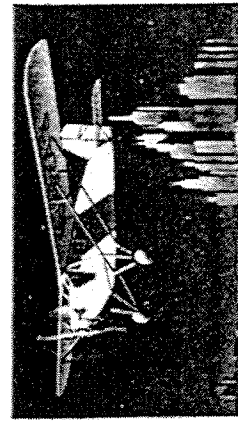
Wingspan 50". Length 35". Weight 8 Oz.  
Takes off from the ground within 10 feet. A steady, constant flyer. Will rise in short surges to about 75 feet altitude and fly from 500 to 750 feet. Complete kit, paint, full-sized detailed drawing and instructions. \$3.50



## New "Cub" Coupe

25" Wingspan—Length 18"

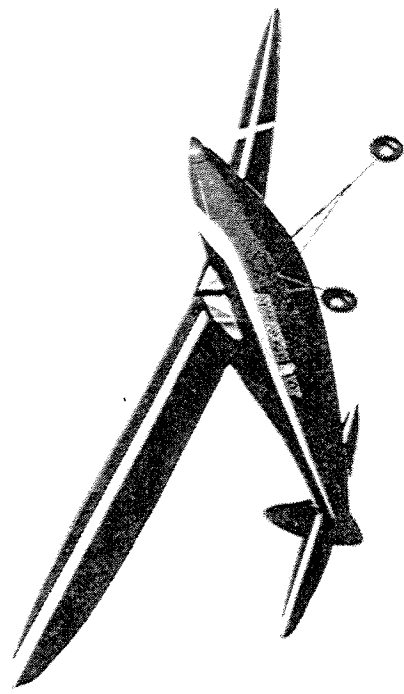
This model is a true replica of the big ship. It is a sturdy flyer, able to take off from the ground within a few feet and climb at an amazingly high rate. Tumbling off at a hand-dred feet, it flies in circles of about 50 feet. Complete kit. 50c



## Curtiss Robin "Wrong Way Plane"

25" Wingspan—Length 18"

This model will give you long distance endurance flights. Kit is complete with all flat parts, ribs, bulkheads, etc., clearly marked on sheet metal; tissue formed wire parts; cement, washers, nose plug, rubber, wheels, and a full sized detail drawing with instructions. 35c



*Scientific's Symbol of Democracy!*

# ALL AMERICAN

*Red, White and Blue Patriot of the Air!*

**WINGSPAN \$1.00**  
**45" LENGTH 34 1/4"**

Show your colors! Build this patriot of the air! Enjoy flights such as you have never experienced before! Designed to fly, the "ALL AMERICAN" has consistently made long, graceful endurance flights of two miles and more! Its dash-ing, patriotic color scheme of red, white and blue will capture your heart. Incorporates many new features such as: adjustable tab rudder; removable tail unit; removable and adjustable wing. Easy to build, too, even for a beginner.





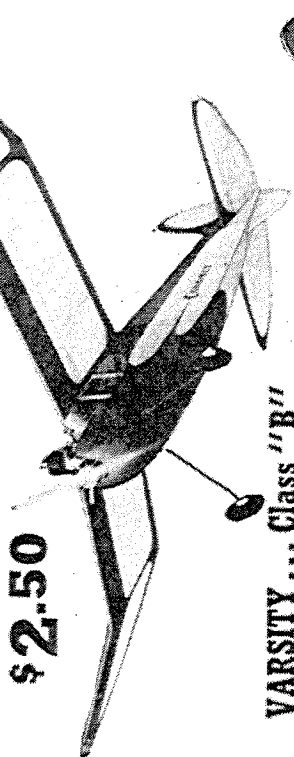
# THE BIG THREE

**\*in the Gas-Powered Field!**

**CORONET... Class "A" or "B,"**

This classy model, a proven contender in either class "A" or "B," is incomparable in simplicity of construction and in low cost. It's a pleasure to use, and it's a pleasure to watch your first night enjoyment! Consistent searing ability incorporated with inherent stability assures you peak performance in any A.M.A. contest. And it has a climb of 2,500 feet per minute! Wingspan—48". Overall length—48". Wing area—300 sq. in. Total weight (with motor)—18 ozs. Complete in 10 minutes! **Get yours today!** **Send \$1.00 to: WINGMASTER, Inc., Postpaid or at your dealer.**

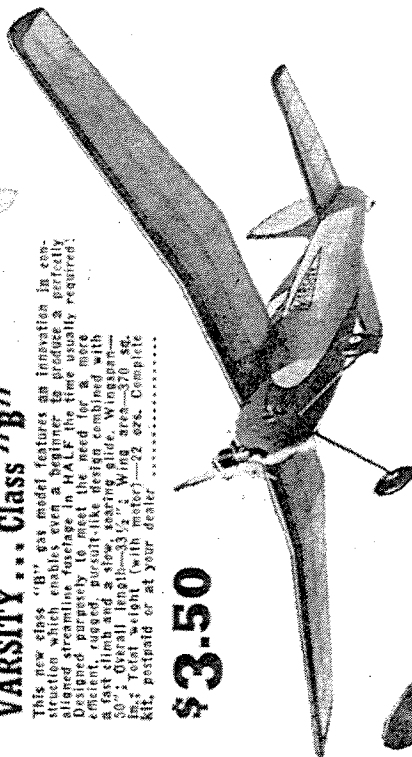
**\$2.50**



## Varsity... Class "B"

This new class "B" gas model features an innovation in construction which enables even a beginner to produce a perfectly balanced streamline fuselage in HALF the time usually required. Designed purposedly to meet the need for a more efficient, rugged, pursuit-like design combined with a fast climb and a slow, soaring glide. Wingspan—30" ; Overall length—33½" ; Wing area—570 sq. in. ; Total weight (with motor)—22 ozs. Complete kit, postpaid or at your dealer.....

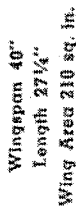
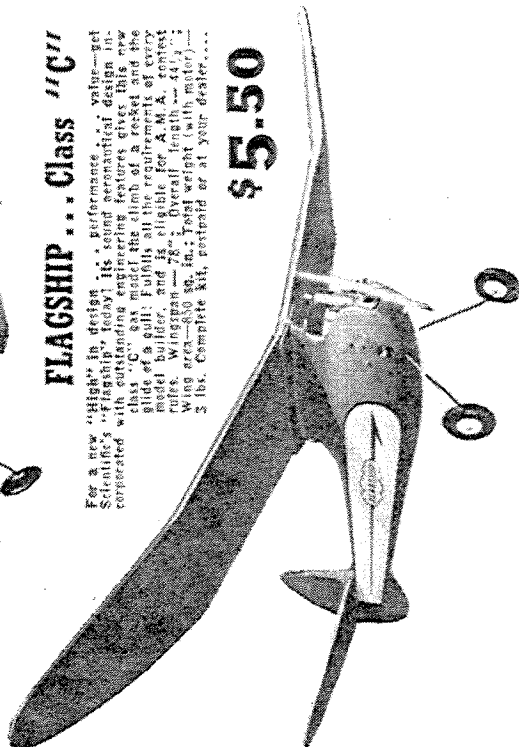
0535



## FLAGSHIP... Class "C"

For a new "lighter" in design . . . performance . . . value—get "Fighting" today! Its sound aeronautical design in class "C" has made the climb of a rocket and the glide of a gull! Fulfills all the requirements of every model builder, and is eligible for A.M.A. contest rules. Wingspan—78". Overall length—44". Wing area—84.0 sq. ft. Total weight (with motor) . . . 3 lbs. Complete kit, postpaid or at your dealer.

0  
5  
5  
\$



**TOPS**  
in class  
"A"  
\$1.95

✱

While the Starling was designed for perfect performance with the Atom motor, it is an all around excel for other class "A" motors, too. The lines and beauty of the Starling are exceeded only by its ability to perform. The wing ribs, tail ports, fuselage sides, and bulkheads are all die cut, assuring you excesses of fit and ease of construction. The fuselage is all balsa and constructed on an entirely new principle, making it many times stronger. The entire motor hook-up and landing gear are attached as one unit with a movable battery case for balance adjustment. Kit is 100% complete and includes the usual clear, detailed, full sized set of plans.



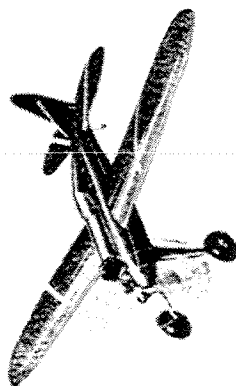
## MISS PHILADELPHIA

Wingspan 8 ft. — Length 57"

Class "C". This Maxwell-Bresselt sensor effort won every conceivable honor and still stands out with the best.

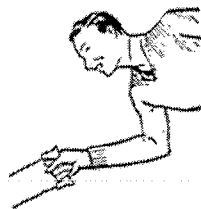
Complete kit .....\$9.95

Delivery Guaranteed on these Motors:	
CLASS "A"	
SUPER AYON	\$15.50
OLLSSON "19"	\$14.50
CLASS "B"	
OLLSSON "21"	\$16.50
ROGERS R.M.C-2	7.50
OLLSSON "17"	12.50
CANNON "300"	18.50
CLASS "C"	
BUNCH TIGER	\$18.50
OLLSSON "60" SPECIAL	18.50
CANNON "338"	19.75
"DK" "49	15.50
ALL OLLSSON PRICES ARE LESS COIL AND CONDENSER	



# A-I FIREBALL

Designed for "B" models. All parts come ready-cut to shape. Wing span 36". Wing is built of sheet balsa over high speed ribs. Due to unfinished form, plane can be built in less than 6 hours. Complete Assembly Set less motor and liquids ..... **\$7.50**



U-CONTROL

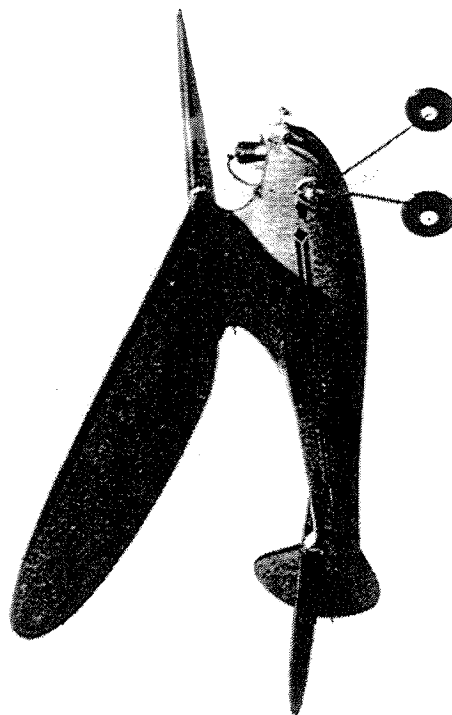
(Trade Mark)

from the

**Ground**



# Ensign



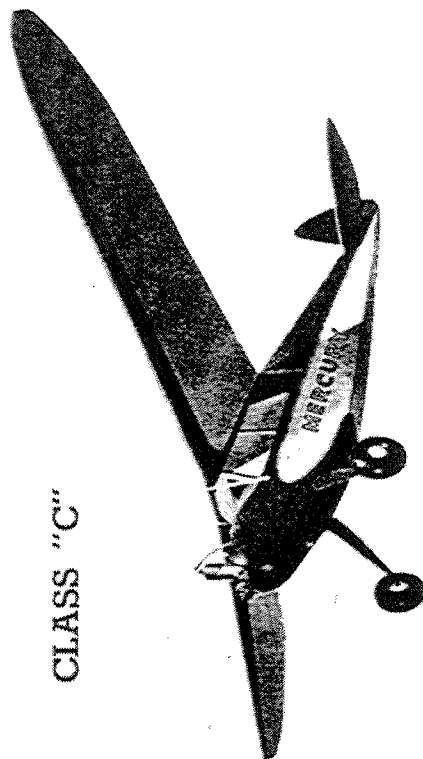
## A "Top Flight" Performer in Class "B"

Wingspan 50" Length 34½" Wing Area 372 sq. in.

The Ensign is the result of nearly a year of intensive effort in designing and building in an endeavor to bring to the model builders a gas model which would more than hold its own in any competition. On test flights, which were made under all types of weather conditions, the Ensign proved to be one of the finest and most stable gas models in existence. The super-streamlining has been simplified to a degree where a model builder with little or no experience can build the model easily. Features include: Motor mount especially constructed to allow for easy mounting and unmounting of power unit; movable battery box, for weight and balance adjustment; finished landing gear; finished landing gear clamp, a new Scientific feature. The kit is complete with large simplified plans and all necessary materials including pair of 2½" streamlined balsa wheels, finished prop, all hardware, ignition wires, cement, bamboo paper, etc.

**\$2.95**

# Mercury



CLASS "C"

## Still Making and Breaking Records!

Wingspan 6 ft. Length 52" Wing Area 720 sq. in.

Tops in beauty, tops in performance—and inexpensive, too! Ever since the day it was first introduced model builders have been singing its praises and acclaiming its championship flights. The completed model is light, weighing only 2½ pounds, ready-to-fly, yet, by the application of regular aircraft construction, it is as strong as ships weighing 4 to 5 pounds. This elimination of excess weight creates a flying quality that exceeds all expectation. With the aid of our large, clear, easy-to-understand, full size plans it actually is easy to build. Kit is complete with all necessary materials including a pair of 3½" streamline balsa wheels, finished propeller, all required hardware, ignition wire, cement, bamboo paper, etc. An unequalled value at

**\$4.95**

**DE LUXE KIT:** Complete as above plus the addition of yellow, blue, and gold Scientific dope, 3½" pneumatic wheels, (in place of balsa wheels). A \$10 value .....\$6.95

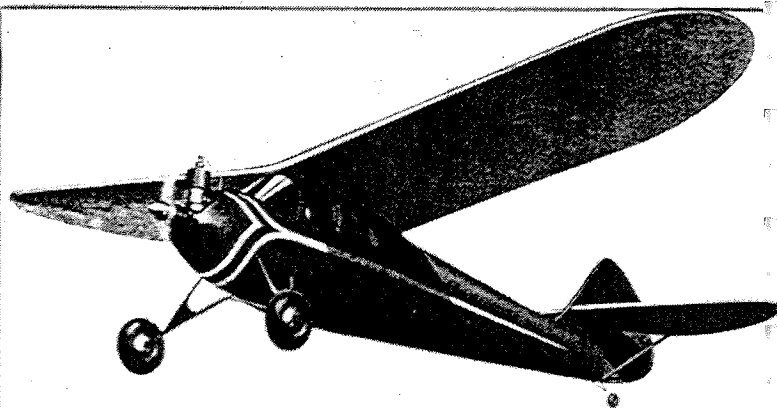


## Wingspan 44" — Length 32" **THE EAGLET**

For use as a class "A" or "B" depending on your motor selection. Designed by Ben Shereshaw, one of the foremost authorities on gas models today and accredited as outstanding designer of super-streamlined planes. Here you get this designer's wealth of experience and knowledge in one outstanding example—designed for your pleasure! The beautiful streamlining evident in the Eaglet is not as hard to build as you may believe. Construction has been carefully planned and simplified so that the average builder with little experience will not encounter any difficulties. During outdoor test flights, (held at Newark Airport) it performed so beautifully that the airline pilots, among the interested spectators, were astonished at its breath-taking flights. They all commented on the amazing resemblance to the real thing! And who should know better? The kit is 100% complete and represents one of the outstanding values in the industry.

De Luxe Kit, with M & M pneumatic wheels .....\$3.95

Standard Kit, with 2½" streamlined balsa wheels .....\$3.50



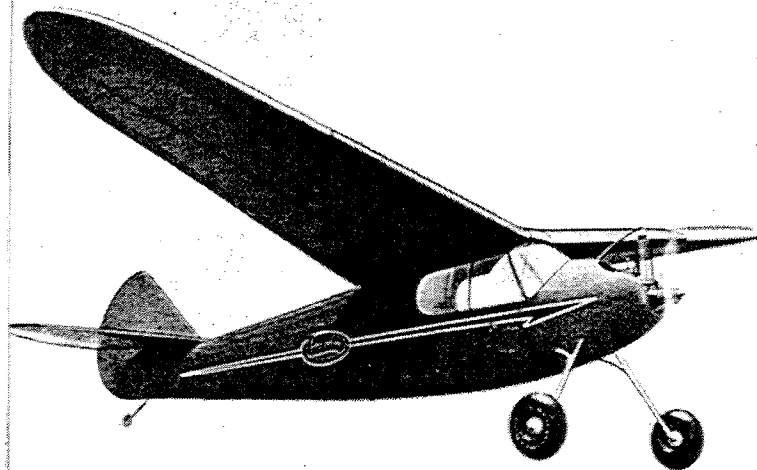
## ◀ **THE COMMODORE**

Wingspan 6 ft. — Length 50" — Wing Area 5.2 ft.

The success of the Eaglet brought in many requests for a larger gas model similar in design and performance. Mr. Shereshaw complied by producing the Commodore, which is considered the finest gas model obtainable. Some of the outstanding features include: Mono strut landing gear; designed to insure against nose-overs in the roughest of fields. Stressing to withstand loads twelve times in excess of that occurring in the severest crack-ups. Efficient aerodynamic design, resulting in a very flat glide ratio and low sinking speed. Trim flaps for finer adjustments. Semi-monocoque wing stressed to resist all torsion and bending imposed in flights and landings. A proven class "C" champion; you couldn't build a better gas job. Kit is 100% complete.

Standard Kit .....\$6.50

De Luxe Kit (addition of red and yellow Scientific dope and a pair of 3½" pneumatic rubber wheels, in place of balsa wheels) .....\$7.95



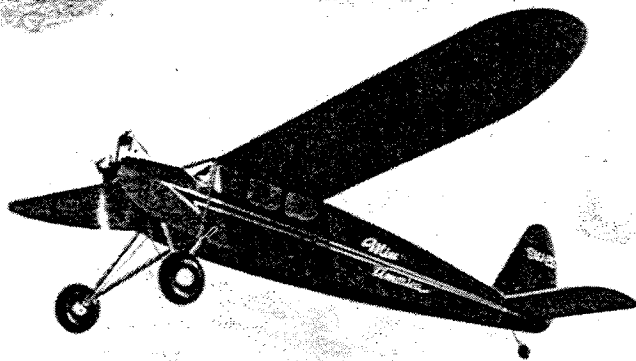
## **MISS AMERICA** ▶

Class "C" gas model — Wingspan 7 ft. — Length 54"

Still one of the nation's favorites. Ever since this model came out it has been winning more contests than we have been able to keep track of. Primarily designed as the "perfect" gas model it incorporates the finest aerodynamical and structural qualities, embodying the same features of design and construction as full scale airplanes. In design, accuracy, detail, and completeness, it represents everything a gas model should be. It's a real flyer and, at the price, a real value! Kit is the usual Scientific complete kit and includes a 14" finished propeller, all required hardware, ignition wire, and a set of complete, clear, full-size plans.

Standard Kit with 3½" balsa wheels .....\$5.95

De Luxe Kit (includes 3½" pneumatic wheels and Scientific red and blue dope) .....\$7.50



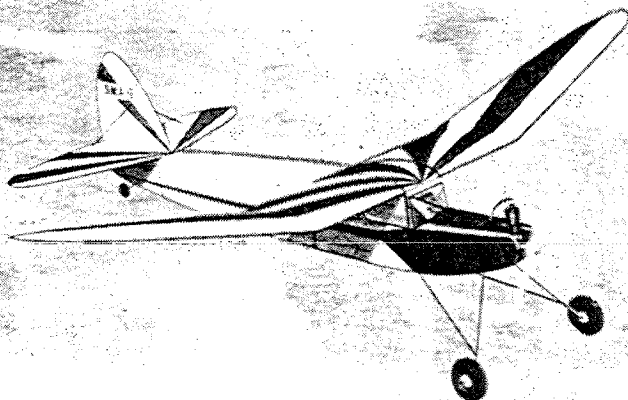
## ◀ **RED ZEPHYR**

Class "C" gas model — Wingspan 6 ft. — Length 56"

The wonderful reputation earned by the Red Zephyr was not accidental or "just luck." As one of the finest medium priced models in the country it has upheld its popularity because of its continued championship performance and record-breaking flights. Among the many features to be found are: Full shock-absorbing landing gear with easily attached brackets, vibration absorbing motor mount, re-enforced nose and hood to protect motor. Our accurate, fully detailed, full-size drawings and complete instructions assure you of a perfect model, easily and quickly constructed. The kit is 100% complete and includes everything required to build this outstanding performer.

Standard Kit (with balsa wheels) .....\$4.95

De Luxe Kit (with 3½" pneumatic wheels) .....\$5.95



**These Four - - - All Proven Champions!**







★ ★ ★ **SCIENTIFIC'S** ★ ★ ★

# DEFENSE SERIES

FLYING SCALE MODELS OF AMERICA'S LATEST

## PURSUITS *and* BOMBERS



**REPUBLIC P-47**  
U. S. ARMY "THUNDERBOLT" PURSUIT

**BIG**  
**30"**  
**WING-SPREAD**



**CURTIS SB2C-1**  
U. S. NAVY DIVE BOMBER

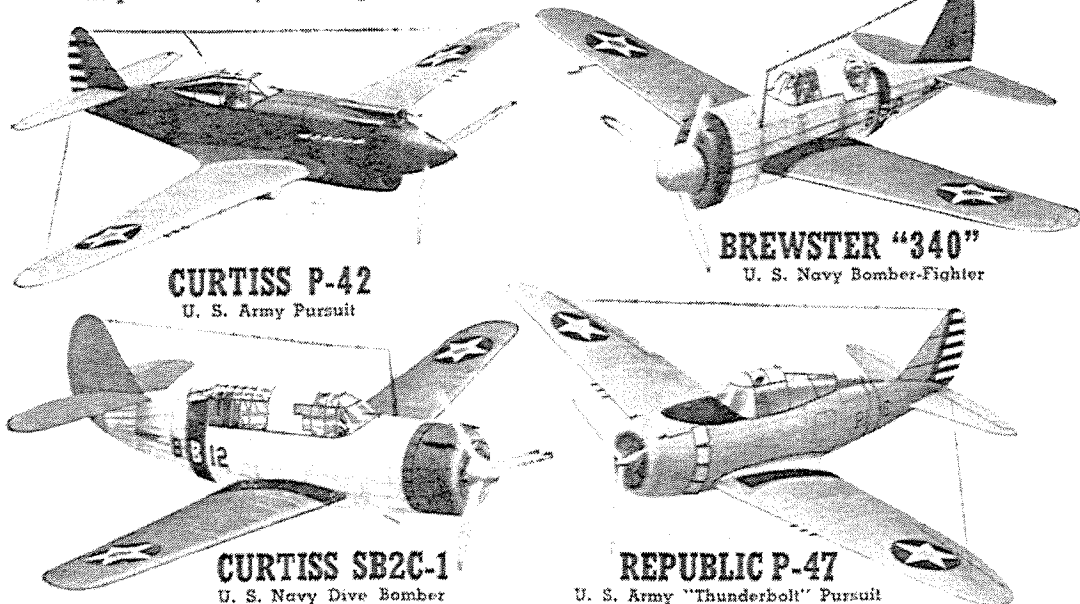


**BREWSTER 340**  
U. S. NAVY DIVE BOMBER



**CURTIS HAWK P-42**  
U. S. ARMY PURSUIT PLANE

Exact flying scale models of the Pursuits and Dive-Bombers that are carving their notches in the skies over the Philippines, Dutch East Indies, China, Libya, and other theatres of World War 2! Here are the planes that are "scooping" the war news!—sleek . . . powerful . . . deadly, with speed, range, maneuverability and fire power surpassing any known planes of the Axis nations! Build them! Get to know the planes that are defending your country! Besides the enjoyment in building, you learn the theory of Aviation, and develop the skill that leads to a career in Aviation! Each and everyone of these models is accurate to the last detail of the real plane! And the complete kits, postpaid or at your dealer, are only **95¢**





**NEW No. 1 Scientific GLIDER**

**25¢**

Postpaid or at your dealer.

NEW! . . . Wing tapered! . . . rudder, stabilizer and fuselage cut to shape! The most beautiful Glider on the market! Easy to construct.

Wingspan—20 3/4" Length—15"



**ZENITH Double-Purpose SOARING GLIDER**

DOUBLE Purpose . . . It's a GLIDER AND a FLYER!  
\*Wingspan 33 3/4" \*Length 21 1/2" \*Class "E" A.M.A. Rules

Kit is complete with everything needed to build both Glider and Flyer.

**50¢**

Postpaid or at your dealer.

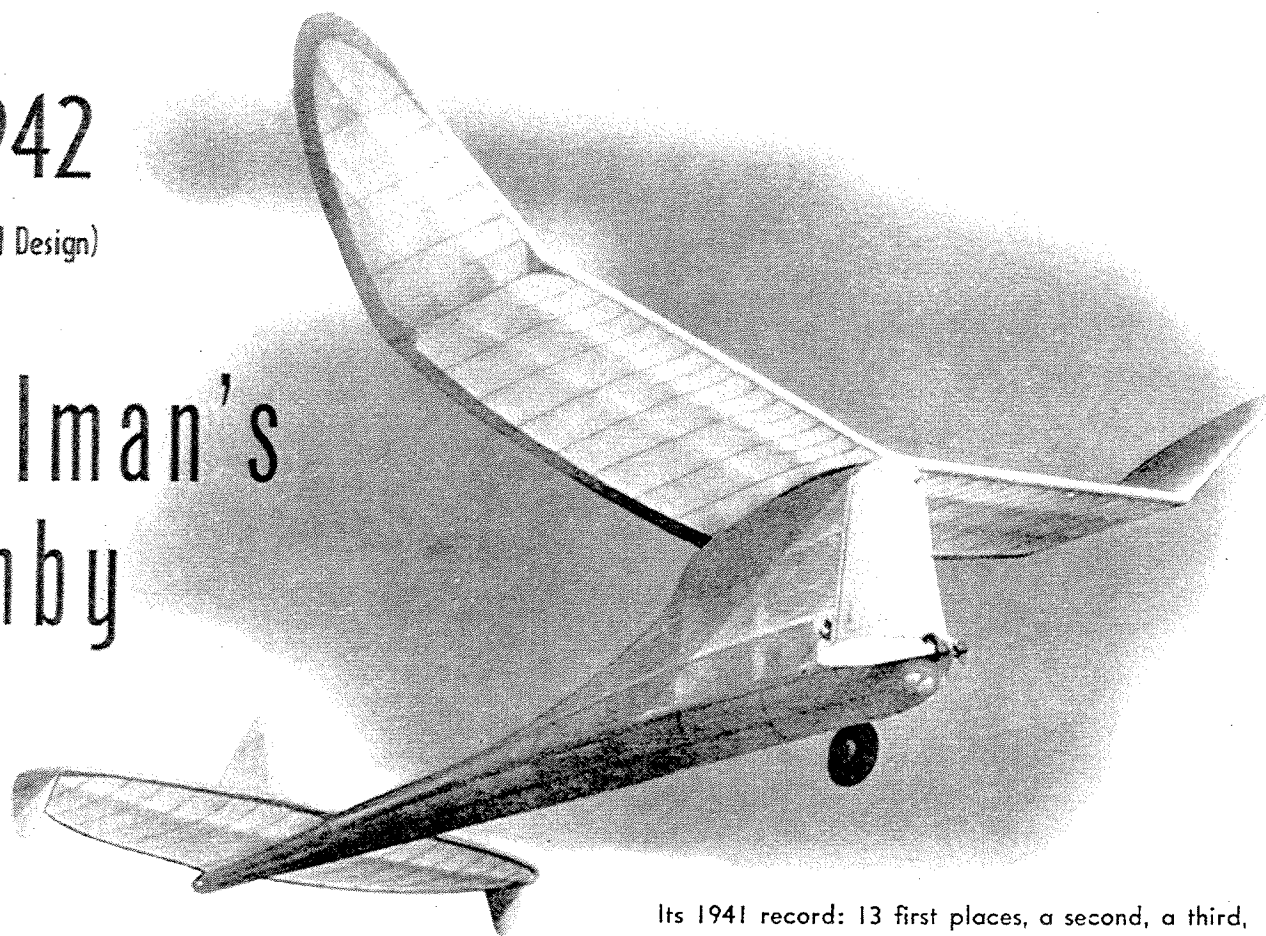


# 1942

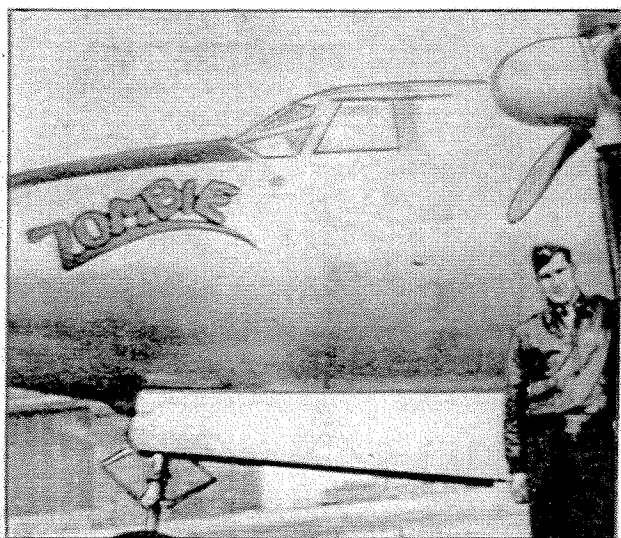
(1941 Design)

## Shulman's Zomby

BY LEON SHULMAN



Its 1941 record: 13 first places, a second, a third, and three fourths. YOU win with it during 1942!



By 1945, having built Zombies of all sizes, Leon now had one he could actually ride in! A Lieutenant in the Air Corps, Leon had his own Martin B-26 Marauder.

**T**O place or win or get satisfying flights in any competition, a model has to "have more" than the next ship. After studying the basic design of winning ships over a long period of time, it was decided that these characteristics would, at the most, give me a model equal to the best in competition. But to assure consistent winning performance, a model had to have a certain something extra. So it was decided to include dynamic soaring tendencies in the design of this new ship. The glide came first. Getting the model up high and fast was the next important consideration, so that extreme stability under power had to be attained. For maximum efficiency a folding propeller and retracting landing gear were employed.

### THEORY

The first problem was designing a force arrangement that would give a slow, stable glide with as little sinking speed as possible. Since a low-wing loading is a basic requirement for a slow, flat glide, the wing area was calculated to give an eight-ounce wing loading for the engine used. Secondly, an efficient airfoil had to be employed. Going over past experiences, I decided on a section having its high point on the upper surface approximately twenty-five percent to the rear of the leading edge and having a narrow cross section with a rounded leading edge and a bit of undercamber starting at about five percent of the chord, then tapering off gently with a slight reflex trailing edge. The location of the center of gravity, center of lateral area, center of lift, center of resistance, had to be found and placed in their respective positions so that all centers would operate in harmony. Locating the center of gravity as the basis, the center of lateral area was placed behind and above it so that when a line was drawn horizontally through the C. G. as the



# Shuman's Zomby

the base line, and a line drawn through the C. G. and the center of lateral area, it would intersect the base line at an acute angle of eight degrees. This arrangement made for a steep spiral climb with exceptional stability, providing the line of thrust was set at a line parallel to the line passing through both the C. G. and center of lateral area. The center of resistance was the next problem. The location of this force had to be in the proper position to cause a climbing tendency while both under power and in the glide. This force was then located sixteen percent of the chord above the C. G. Locating the center of lift was the next step. The location of this center was extremely important because it controlled the climbing attitude of the ship while under power and in the glide.

The center of lift was placed at eighteen percent in front of the center of gravity with a tail moment arm of fifty-five percent of the wing span. A large stabilizer with a symmetrical cross section was set at a positive angle. The smaller the model the greater the positive angle, and vice-versa. Tail area was thirty-five percent.

The rudder area was obtained by the profile cardboard-pattern method and proved too large because of a spinning tendency. After experimentation, the rudder area was decreased above the horizontal C. L. A. line and increased below this line. This was done by giving the rudder a higher aspect ratio above the horizontal line and adding two extra sub-rudders on the stabilizer to increase stability on take-offs and landings.

The line of thrust was placed below the C. G. at a downward angle to give stability in the climb and yet produce a nosing-up tendency under power. The thrust line ran parallel to a line drawn through the C. G. and the center of lateral area. This arrangement allowed the model to have a steep climbing angle with a turning tendency.

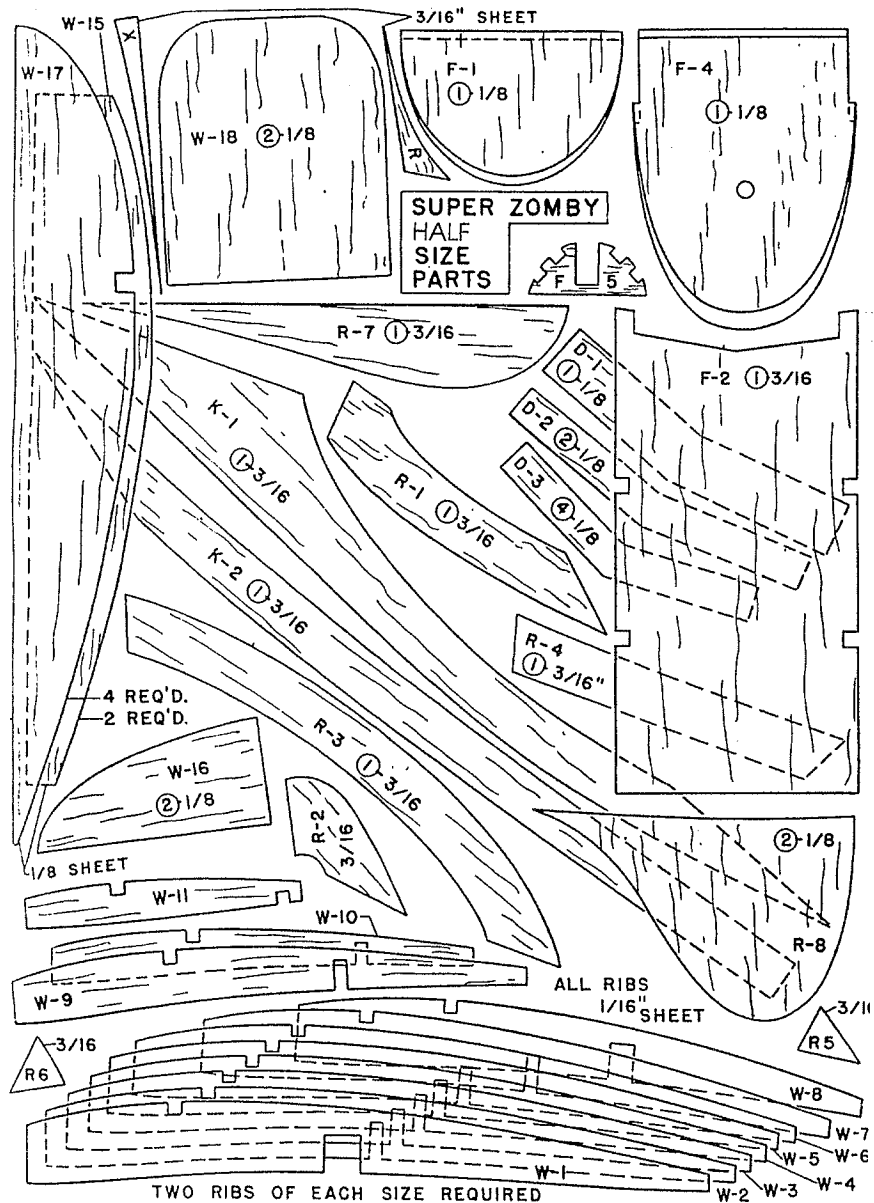
## ACTUAL TESTS

The first tests were made with a Bantam-powered Zomby of fifty-four-inch wing span. The first day, after some looping and stalling, the model hooked a riser and floated away after thirteen and a half minutes O. O. S. Under a little better than half power, the model would climb in a slight bank at a high angle, rolling out on top as the motor shut off, into a slow, flat glide.

This original model, with the revisions, was the basis for a fleet of (seventeen) Zombies that were built, flown and lost this past contest season. The second model built was the Baby Zomby for a super Atom engine. This model, having a thirty-three-inch wing span, was really surprising. Finished, weighing just ten ounces, the model turned in sensational gliding exhibitions.

I believe this model had more time in the air by hand gliding than on power flights. This particular ship had a wire skid for its landing gear and a celluloid-lined hollowed-out balsa cowl for its tank. Shortly after, an Ohlsson 60 Super Zomby was built. The climb was a little slower than the others (due to its large size) but the glide was amazing. The first day out it turned in a timed flight of 3:52 on eighteen seconds at sunset. At its first contest it turned in a timed official flight of thirty-six min-

utes flat O. O. S. on eighteen seconds. At the Nationals, a "C" Super Zomby turned in an official flight of ten minutes and five seconds for Sal Taibi, to win for him the National Class "C" Championship. The next Super Zomby to be built was the intermediate Super Zomby for both Class B and C. While powered by a Forster 29, it turned in an eight-and-a-half-minute timed flight, and when powered by a Comet 35, won the Philadelphia contest for highest single time, highest total time, and first place in Class C, besides the meet's championship.





# MEET LEON SHULMAN

## Just A Few Designs '41 - '49



1941



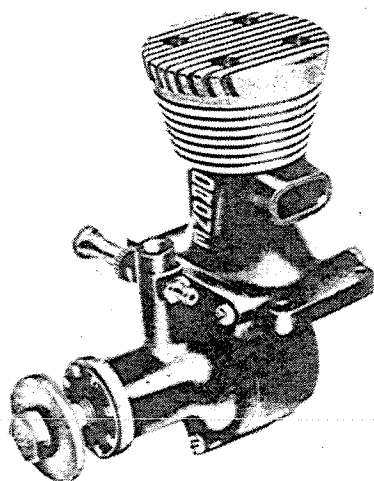
1942

Leon Shulman with his tether gas job that was so fast it broke loose and went on a rampage. Aug. '42



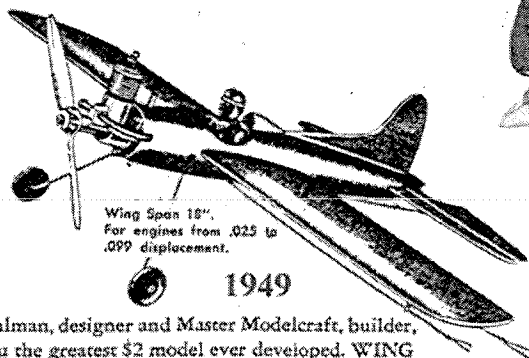
BAT 1944

The control-line model showed promise of good speed with a Super Cyclone engine.



Drone Diesel

1947- 49

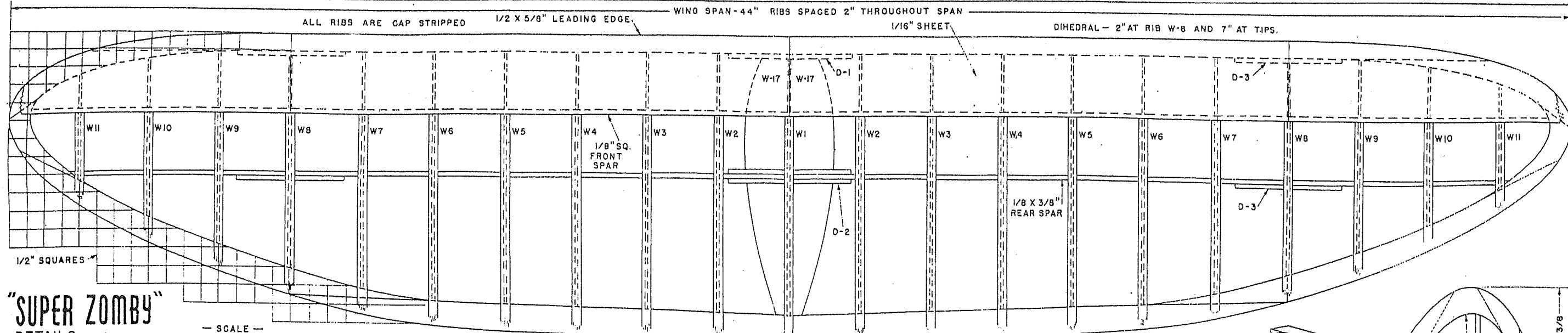


Wing Span 18".  
For engines from .025 to .099 displacement.

1949

Leon Shulman, designer and Master Modelcraft, builder, bring you the greatest \$2 model ever developed. WING DING was created for beginners and experts alike.

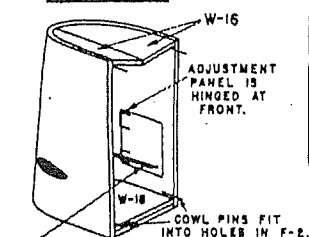




## "SUPER ZOMBY"

### DETAILS

#### COWL DETAIL

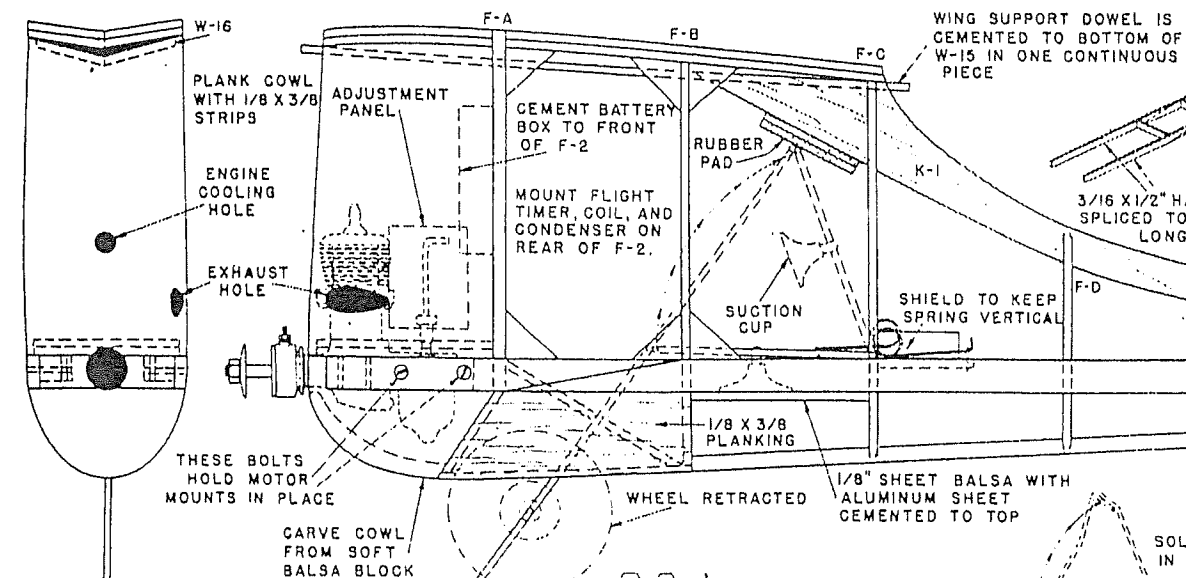


RUBBER BAND KEEPS ADJUSTMENT DOOR CLOSED.

HARDWOOD MOTOR MOUNTS

STRINGERS OMITTED IN SIDE AND TOP VIEWS FOR CLARITY SEE CROSS SECTIONS BELOW FOR PROPER SPACING

SEE TEXT FOR FUSELAGE CONSTRUCTION



W-16

PLANK COWL WITH 1/8 X 3/8" STRIPS

ADJUSTMENT PANEL

ENGINE COOLING HOLE

EXHAUST HOLE

CEMENT BATTERY BOX TO FRONT OF F-2

MOUNT FLIGHT TIMER, COIL, AND CONDENSER ON REAR OF F-2.

RUBBER PAD

WING SUPPORT DOWEL IS CEMENTED TO BOTTOM OF W-15 IN ONE CONTINUOUS PIECE

K-1

3/16 X 1/2" HARDWOOD SPLICED TO MAIN LONGERON

F-E

F-F

F-G

F-H

R-2

R-3

R-4

R-5

THESE BOLTS HOLD MOTOR MOUNTS IN PLACE

CARVE COWL FROM SOFT BALSA BLOCK

WHEEL RETRACTED

1/8" SHEET BALSA WITH ALUMINUM SHEET CEMENTED TO TOP

3/16 X 1/4" BOTTOM STRINGER

F-2

F-3

F-4

F-5

F-6

F-7

F-8

F-9

F-10

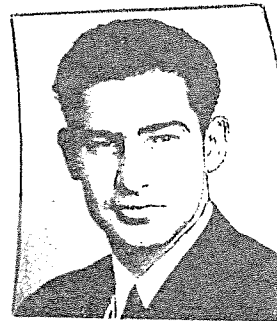
F-11

F-12



# Zomby

ENGINE	MIN. REQ'D. WEIGHT	ENGINE	MIN. REQ'D. WEIGHT
"A" { ATOM ELF SINGLE	10.4 OZ. 10.4 OZ.	"B" { COMET 35 FORSTER 29	28.8 OZ. 28.8 "
"A" { BANTAM ELF TWIN	16 OZ. 16 "	"C" { ROGERS 29 CANNON 30	28.8 " 28.8 "
"A" { OHLSSON 19 OHLSSON 23	16 " 18.4 OZ.	"C" { DENNYMITE BUNCH & GWIN	45.6 " 36 "
"B" { PHANTOM 25 FORSTER 29	20 " 23.2 "	"C" { "O.K." 49 OHLSSON 60	39.2 " 48 "
"B" { ROGERS 29 TORPEDO	23.2 " 24 "	"C" { "O.K." 60 DENNYMITE	48 " 47.2 "
"B" { PHANTOM P-30	24 "	"C" { FORSTER 99	79.9 "

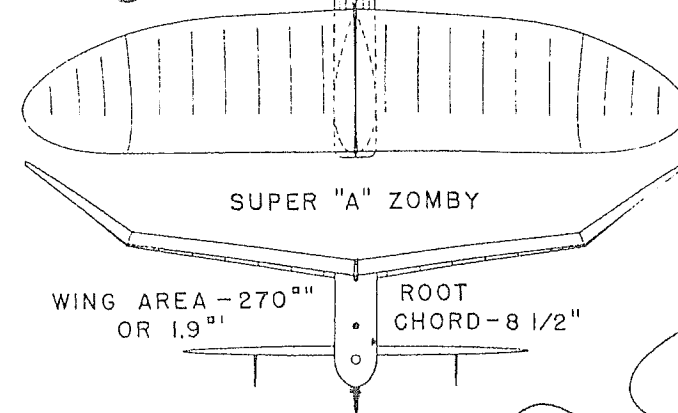
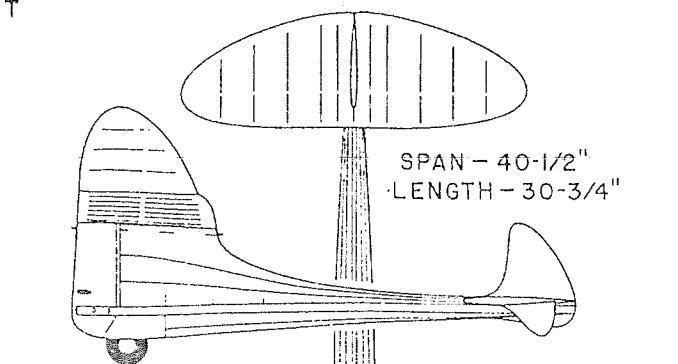
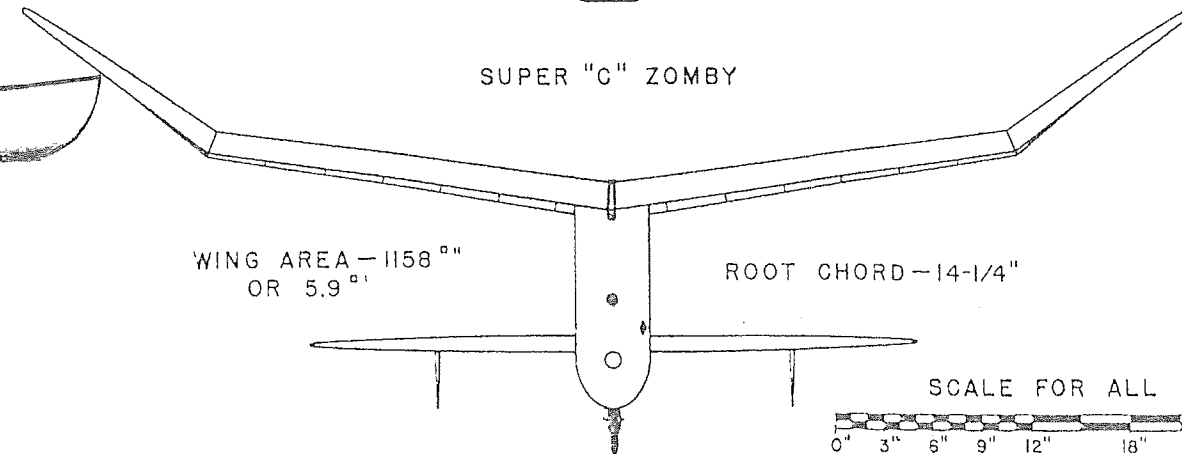
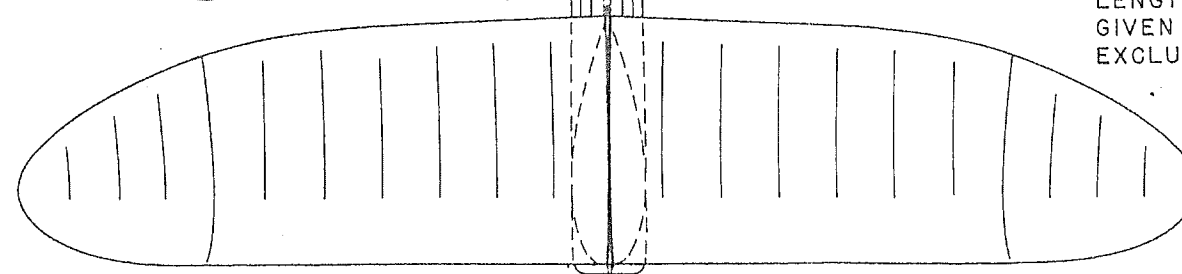
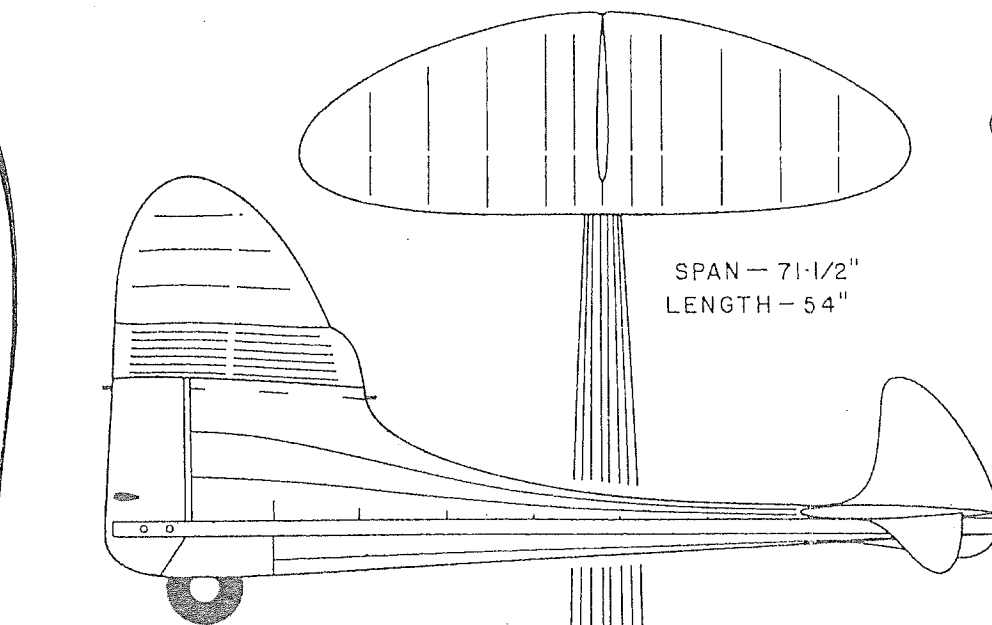


## CONTEST PERFORMANCE

MR. LEON SHULMAN  
Designer of the Zomby

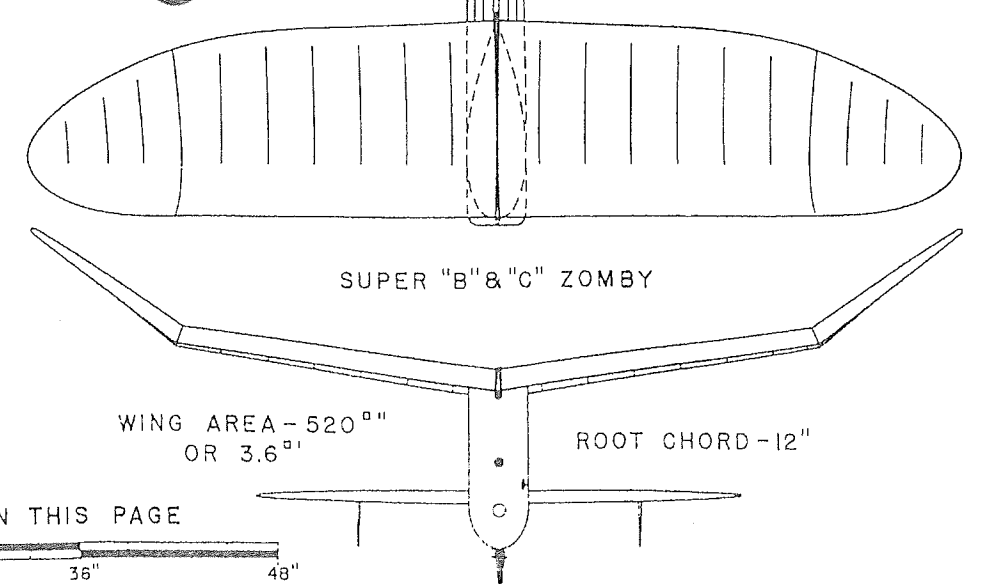
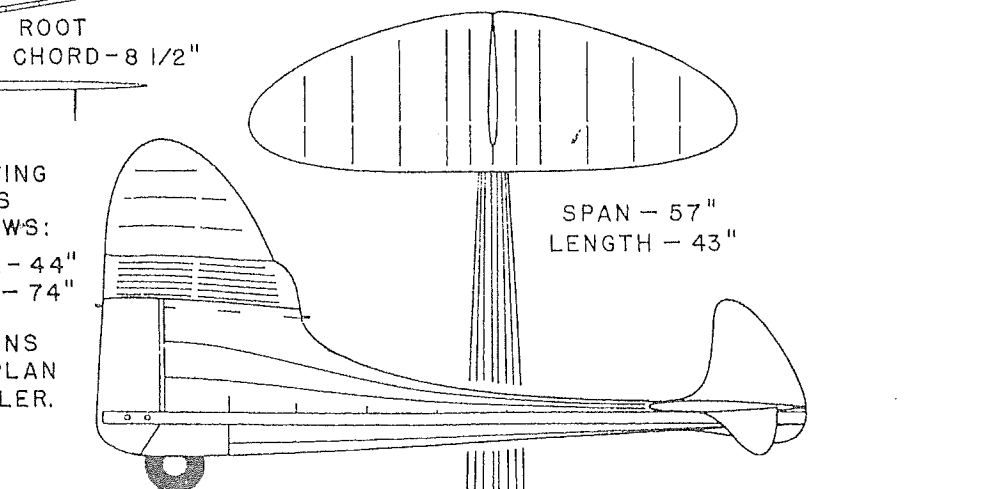
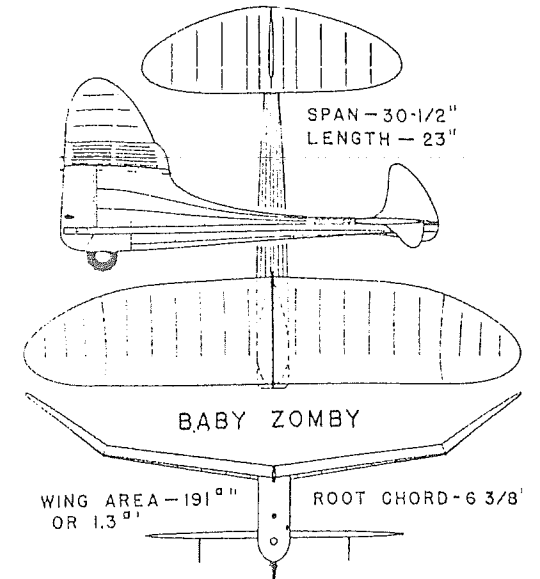
### TWENTY TIMES A WINNER

DATE	CONTEST	CLASS	PLACE	FLIER	OFFICIAL FLIGHTS
2/6/41	Sky-Scrapers	A	First	L. Shulman	3
3/23/41	Sky-Scrapers	A	First	L. Shulman	3
4/6/41	Sky-Scrapers	A	Second	L. Shulman	3
4/26/41	Berlin N. J.	A	First	L. Shulman	2
5/1/41	Creedmore, L. I.	A	First	L. Shulman	3
5/18/41	Pitman, N. J.	A	First	L. Shulman	3
5/31/41	Lake Nelson Park, N. J.	C	First	F. McElwee	1
5/31/41	Lake Nelson Park, N. J.	C	Third	L. Shulman	2
6/8/41	Vineland, N. J.	B	First	L. Shulman	1
6/8/41	Vineland, N. J.	A	Fourth	S. Groedyke	3
6/16/41	Glassboro, N. J.	C	First	L. Shulman	1
7/15/41	Chicago Nationals	C	First	S. Taibi	1
7/15/41	Poughkeepsie, N. Y.	A	Fifth	S. Groedyke	3
8/3/41	Creedmore, L. I.	A	First	L. Shulman	3
8/3/41	Creedmore, L. I.	A	High total time	High point	3
8/10/41	Ringoes, N. J.	C	First	B. Craemer	1
8/10/41	Ringoes, N. J.	C	Fourth	F. McElwee	2
8/24/41	Baltimore, Md.	C	First	F. McElwee	2
9/14/41	Philadelphia, Pa.	C	First	L. Shulman	3
9/14/41	Philadelphia, Pa.	C	High Single Time	High Total Time	High Point
9/21/41	Creedmore, L. I.	C	Fourth	L. Shulman	2



ACTUAL SPAN OF WING  
BEFORE DIHEDRAL IS  
ADDED IS AS FOLLOWS:  
BABY A - 33" SUPER A - 44"  
"B" - "C" - 61-1/2" SUPER C - 74"

LENGTH DIMENSIONS  
GIVEN ON EACH PLAN  
EXCLUDE PROPELLER.



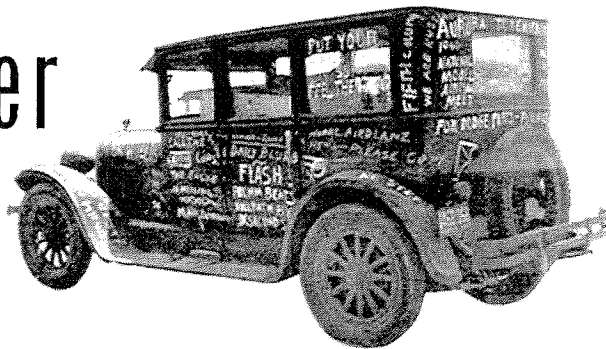
SCALE FOR ALL 3-VIEWS ON THIS PAGE





# "Sure, I Remember the Nationals!"

BY GORDON S. LIGHT 1942



For the first time since 1928 the Nationals have been canceled. Looking back to the days of twin pushers, paper-covered indoor models, first gas models, we are reminded of colorful personalities, boys now in aviation.



Above—And always there was Tent City, with birds and dust and stuff.

YES, I remember the Nationals—and the hundreds of little incidents that made them so colorful. For example, one modeler spent all night building a model for next day's flying in Detroit's Olympia. He was tired and sleepy when he finished sanding, carving and covering. It was early morning when he literally fell asleep on the job. Thoughtlessly, he had put the finished crate on the bed and didn't remove it before piling in for a few hours of well-earned sleep. Equally distressing was the experience of another night-owl builder. After an all-night session he thought he'd catch a little sleep before going to the field. He barely got there in time for an official flight—it was late in the afternoon after the thermals and good flying weather had disappeared.

Model contests aren't all heartaches and tough luck. Contest fliers are a rugged lot, and the breed has grown better and better during the last fourteen national meets. Cancellation of the 1942 Nationals ended a custom that was started back in 1928 when the Airplane Model League of America sponsored by the *American Boy Magazine* conducted the first national meet in Detroit. A helpful series of articles in the *American Boy*, high-powered aviation interest following Lindbergh's flight in 1927, and booming business conditions provided a mighty elaborate setting for the first Nationals. The city of Detroit and the *American Boy* provided liberal cash prizes, trips to Europe for the (Turn to page 38)

Below—Twin pushers were the rage in 1931. The same year the first gas model entered, at Dayton. First Nationals in 1928 at Detroit, winners went to Europe.



Milk and soda pop by the gallons, frankfurters, and sun helmets. Fun!





## "Sure, I Remember the Nationals!"

winners, trophies, and medals. There were no gas models, no microfilm, and few rules. Mulvihill Trophy for outdoor stick models and the Stout Indoor were the only two familiar trophies. The scale model event was a big part of this contest, as it has been in every Nationals since then.

AMLA and Detroit repeated the contest in 1929 and 1930. The Stout Outdoor Fuselage Trophy was put into competition in 1930. There were more trips to Europe, big cash prizes, and a country-wide entry. Tie-ins with newspapers and service clubs made this possible. A Honolulu newspaper sent the winner of their local contest to Detroit.

A slack in business in the early '30s influenced the national contest as it did almost everything else. AMLA was still active but Detroit dropped the idea of a national meet. In 1931 Dayton was host to the boys with the George D. Wanner Co. as sponsor. Instead of trips to Europe the winners were flown to Washington to meet President Hoover. Cash awards fell off. Unfortunately the big cash prizes had fostered a small group of professionals. The \$1,500 in cash seemed like small potatoes after three years of peak prosperity. Cash disappeared entirely in 1932 and following years. Recently it has come back—but in small innocent amounts.

Joe Ehrhardt of St. Louis was the outstanding flier during the first few Nationals. In 1930 he won the Mulvihill, Stout, and Wakefield Trophies. He repeated his Wakefield victory in 1931. Competition had become plenty tough by this time.

The army always co-operated with the national contest effort. In Detroit it was Selfridge Field. In Dayton it was Wright Field. Army men served as timers and officials and manned the motorcycles for retrieving. Lt. Col. H. H. Arnold, now chief of the army air forces, was chief of the materiel division at Wright Field in 1931. His answer to our letter of appreciation following the meet has a prominent page in our scrapbook.

Dayton Nationals were a milestone in the evolution of contest rules. For the first time the weight rule of 1 ounce per 50 square inches was effective for stick models. Models were weighed before and after flights. For the first time in model history modelers added chunks of lead to their ships, all the while mumbling, "It was heavy enough back home on my scales." It took about ten years to clear up this discrepancy between contest scales and workshop balances. But at last the habit of adding weight has virtually disappeared. Weight rules cured the obnoxious habit of using lightweight indoor type models in outdoor events when the weather was calm. For example, in the 1929 Mulvihill contest, Don Burnham won the trophy with a 19" stick tractor powered with two strands of  $\frac{1}{8} \times \frac{1}{32}$  rubber. His flight was 10½ minutes out of sight. The weight rules didn't cut down flights as much as everyone had expected. Steve Klazura did 5:40 in

winning the Mulvihill with a twin pusher. Fuselage models were not subject to weight rule and flew correspondingly long. Emanuel Feinberg of Detroit won the Stout Fuselage Trophy with 29½. Six boys were about the 7½-minute mark. No one was surprised when next year's rules put the fuselage jobs in the one-ounce-to-fifty class.

Most of the early indoor models were tissue-covered. A few used aluminum foil. In 1929 Joe Culver of Oakland, Calif., won the Detroit indoor event with 8:33. It was a 23" tractor, 14" propeller, kite-shaped tail with a teardrop fin extended in the rear. The wing had curved dihedral and clipped to the bottom of the built-up motor stick. A single pusher flown by Al Mott took second with 7½ minutes—one of the few times the single-tractor design has ever been challenged indoors. Lack of flying facilities in Dayton ruled out an indoor contest—the only time during the fourteen Nationals. There was a considerable discussion about indoor design, especially a new covering called microfilm. Great things were predicted for this covering that weighed one tenth the weight of tissue and half the weight of aluminum foil. It sounded good even to conservative builders. But they certainly didn't believe that indoor models would soon be flying 20 minutes or more. In 1932 indoor models were still paper-covered, but the flights soared to 13 minutes. At the 1933 Nationals in New York City the indoor boys got their long pants. They made the most of spacious Kingsbridge Armory. Not only had they solved the problem of making and handling microfilm but Carl Goldberg came within 26 seconds of the 20 minutes mentioned wildly only two years before.

We saw a gas model for the first time at the Dayton Nationals in 1931. Its flight was short but hardly sweet for the two builders who retired with pieces after a few hectic seconds of take-off, stall, and dive. Like many of the breed who followed them, they turned the engine over many more times by hand than with gasoline. Rubber builders weren't very impressed. Rubber was still

king. They couldn't even take the hint in 1932 when Maxwell Bassett put on a good show at the Atlantic City Airport. He did 2:55 officially for fourth in the Wakefield contest. An unofficial flight after the contest was lost after 13 minutes. Bassett spent most of the day making repairs, adjusting his model, and carving props. His clocklike performances were to begin in 1933.

At Roosevelt Field in 1933 outdoor contestants watched the interesting phenomena of one entrant winning all events. There should have been separate events for gas and rubber. Bassett won the Stout and Mulvihill and two new trophies—International Moffett for cabin fuselage and Texaco for gas. Joe Kovel and Charles Grant entered the only other gas model, but engine trouble grounded them. (This was the forerunner of the famous K-G gas model design which did championship flying in the following years.) The hot June sun wasn't the only reason that contestants perspired freely. They were slightly hot under the collar when they saw a gas model walk away with the trophies. It was a brutal but convincing way to prove that rubber was no match for gas.

Next year, 1934, at Akron, Ohio, the seventh Annual Nationals brought out nineteen gas contestants—the largest number ever entered in one contest. Some of the boys had more than one model so the total number of gas jobs was boosted to twenty-six. The boys groaned, grunted, cranked and patched, but when the bell sounded only eight models had made official flights. Max Bassett won the Texaco Trophy with 21:57 and Joe Kovel was second with 14:02. The NAA had formulated the famous fuel-allowance rule for this contest and Bassett's *Miss Philadelphia* carried 1½ ounces. There were two young fellows from the West coast entered in this meet, Bill Atwood and Irwin Ohlsson from Los Angeles. Both have done plenty of good since then. But the best that day was Ohlsson's sixth place with 36 seconds.

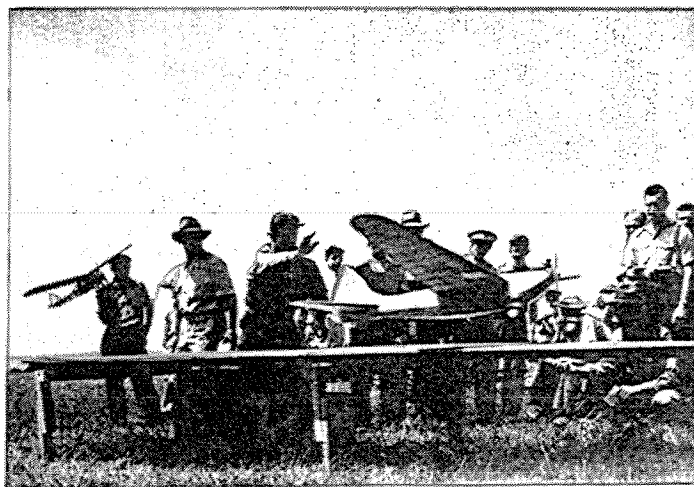
Looking back, it seems that up until 1932 everyone was building rubber models. A few were dabbling

with gas without result. Then all of a sudden came Bassett with a good performance at Atlantic City and in New York in 1933 and *pffft!*—it seemed everyone was building gas models, even little kids. This isn't the case. A few boys learned the knack of making them perform on schedule but the rank-and-file builder found them pretty much of a mystery.

In St. Louis in 1935 the boys were still far from red-hot. The winners racked up good time. Leo Weiss won the Texaco with 61:12. Bruno Marchi was second with 41:55, and Bassett was third with 36:49. Kovel did 31:05 for fourth. Dropping down to twelfth place, the time was 24.6, and last place (seventeenth) was 11.6.

In 1936 the national contest was again in Detroit. Francis J. Tush won the Texaco with 45:34.5 flying a planked, circular-cross-section, tapering model of original design powered by an engine of his own design. Fuel allowance was one quarter ounce per pound. Even though the Texaco event was limited to boys twenty-one and younger, the first twenty-two winners flew more than 11 minutes. Maxwell Bassett wasn't at Detroit in 1936 but he bounced back the following year with a flight of 70:02 to win the Open Event. Carl Goldberg won second with 52:45 flying a beautifully streamlined and clean-looking Valkyrie. This was Carl's first big effort in a gas contest. Indoor flying had been his specialty since the first Nationals in 1928. His record for consistent performance indoors has never been equaled. Second in the Stout Indoor in 1930; third in 1932 and 1933. Bad breaks always pushed Carl out of first place and denied him the Stout Indoor Trophy. His luck changed when he became twenty-one and was no longer eligible for the Stout. Started flying in the open class in 1934 and won the Springfield Trophy with a new world record of 22:59.4. Did it again in 1935 with 23:29.4. The same story in 1936 with 19:26. Second in 1937. First again in '38. From this time on, Carl was too busy with gas models to fly indoors. His gas designs—Clipper, Zipper Sailplane, and Interceptor—proved exceptional and were widely accepted by contestants.

Fiske Hanley of Fort Worth won the 1936 Texaco Trophy with 50:29. Great numbers of long flights proved to the model fraternity they were getting pretty good, and one-eighth ounce per pound was too much gas. The rules were streamlined for the 1938 contest in Detroit. That year the boys struggled under the handicap of a thirty-second engine run and a minimum weight of eight ounces. Timers were limited to a 200-foot radius from the take-off spot. No longer were models checked and weighed—this red tape now assumed the classy name of "processing." Gas contestants appeared in such volume the event was expanded into two full days of flying. Half of the entrants flew each day. But the second day's





Continued —

weather was better—much to the disgust of the boys who flew first. Bob Toft of Minneapolis was leading after the first day but was pushed back into third by longer flights in better air made the next day.

This trouble was cured the following year. Models were classified according to engine displacement and the same event was never extended more than a day. Gas contests in Detroit had always been held at Wayne County Airport. In 1937 and '38 the only handicap had been the ransoming of models which drifted on an adjoining farm. The fee ranged from twenty-five cents to one dollar, depending on the farmer's estimate of the damage to his crops. In '39 there was a new menace. Airport officials herded the boys to the far end of the field and ruled out the use of the runways for take-off. For a while the boys battled the high grass, but finally reverted to the old habit of hand launching and thereby eliminated the possibility of establishing a new national record.

Chicago was well prepared for its first invasion in July, 1940. Preparation was made on a big-league scale. Capably trained Park District personnel were able to time as many flights as the 1,100 contestants were able to turn in. Modelers were king of the hill with no air traffic to worry them. For the first time a national meet was not held on an airport. This convenience backfired in 1942—one of the reasons for canceling the Nationals was the construction of a munitions plant alongside the outdoor flying field.

The Buzzard Gas Model Club of Chicago prepared for the 1940 meet by all building the same design. Joe Konefes flew his Class C Buzzard for a three-flight total of more than 59 minutes. (Both gas and rubber rules called for a three-flight average.) The club put on a mass flight of Buzzards—about fifteen of them, some towing sky signs. Usually the only buzzards at model contests are the youngsters who collect fragments of broken models. They lurk near the take-off boards and pounce on the debris after the crack-up. Sometimes they expedite matters by getting in your way and helping create debris.

More and more extracurricular activities were included on each national contest program. In 1940 the Model Industry Association met and completed its organization. Since 1937 the Academy's annual battle on rules had become a regular feature. The Academy itself started at a national meet—St. Louis in 1935. H. W. Alden proposed the idea. Purpose of the AMA as discussed that hot June evening in St. Louis was to provide a council to direct and supervise contest and research activities of the many expert model builders. Victor Fritz, Bert Pond, John Young, H. T. Sommers, Carl Goldberg, Jesse Bieberman, H. M. Jellison, Frank Zaic, Lawrence Smithline, John Young and several others who are still interested modelers.

After this powwow the AMA slowly gathered some steam. It was a rocky road that wasn't made any smoother when Lieut. H. W. Alden stepped out of the model picture after the 1936 Nationals. As a member of the NAA he had helped the Academy gain prestige. He had done the lion's share of organizing and planning the Nationals from 1932 to 1936. He shared the modeler's viewpoint and believed all contests should be directed to his welfare rather than merely publicity and free advertising for the sponsor. Alden has never taken any further interest in the AMA or national contests.

Nineteen forty-one in Chicago was a field day for more than 1,200 contestants who turned in 30,000 flights. Defense jobs and military service kept many of the older boys away—the hobby was doing its job as a number-one reservoir of the air force and aircraft industry.

Canadian participation in our national events is almost as old as the event itself. Gordon McKinney of Toronto brought a delegation to one of the first Detroit contests. Another colorful visitor was John Dilly of Galt, Ontario. Before defense work cut down his vacation time he always hitchhiked. Turned up in Akron, St. Louis, New York, Detroit, and Chicago. Roy Nelder of Toronto is one of Canada's best. He won the Moffett International in 1938 and did it again in 1940. Roy was barely able to get to this contest. But he made the most of the two-day leave from his job in an aircraft plant.

Our international efforts have hit highs and lows. In 1930, 1931, 1935, 1938, and 1939 the Wakefield was in this country. In nine Moffett International events we've lost the trophy three times. A low spot in our international ranking was 1936. Not only did we lose our grip on the Wakefield but the Moffett as well. Bert Pond of Indiana was the rascal who did so well as a proxy flier with 44:14 that Vernon Gray of New Zealand held the trophy for a year. In 1936 the English weren't content to do things by proxy. Their team of six visited the Detroit Nationals and flew in many of the events in addition to the Wakefield.

France sent an entry to the 1936 Wakefield. André Vincere placed eighth. He couldn't speak English. Larry Smithline met his boat in New York. As soon as they got together on the French and English equivalents of the words in the model jargon, conversation moved right along. Larry made the most of his two years of high-school French.

At this same contest Col. Ralph Royce was among the army fliers from Selfridge Field who attended the contest and talked with the boys. Now the rank is brigadier general and the flying field is somewhere in Australia. Another brigadier general who has helped model builders is Doolittle. In 1935 at St. Louis he attended the contest. He was manager of Shell's aviation department. Shell

distributed an attractive souvenir program with autographed photos of Doolittle and Jimmy Haizlip.

A trophy for radio-controlled gas models was put into competition a year before any models arrived to win it. This was in Detroit in 1936. The trophy went back into the packing case until next year when Chester Lanzo of Cleveland turned in a controlled flight. He was barely able to qualify but even so was far ahead of the five other r. c. models. Walter Good improved the r. c. in 1938 when he demonstrated his model on the ground in snappy fashion. He cracked up trying to fly in a stiff wind. All the other models were land-bound. Walt would have done well if the flying conditions had been reasonable. He proved it in 1939 when Brother Bill joined him. Together they flew their model through a series of 8-turns, spirals, dives, and zooms and landed dead-stick one hundred feet from the take-off spot. In 1940 the Goods' technique was even better and they won the trophy for the third time. In the spring of 1941 both Walter and Bill graduated with doctor's degrees and were off to important research work that didn't give them time for contests. They did make a fast trip to Chicago over July 4th and watched Jim Walker of Portland, Oregon, win the r. c. contest. This event should show considerable progress when competition is resumed. By far it should become the most interesting event in the entire national-contest program.

The 1942 Nationals would have been the fifteenth. Some modelers probably object to this numbering, since efforts had been made prior to 1928 in conducting nation-wide contests. In 1923 the first Mulvihill Trophy contest was held in St. Louis as a part of the National Air Races. The 1924 contest was in Dayton; 1925, in New York. In 1926 it was a part of the National Air Races at Philadelphia's sesquicentennial.

The Playground and Recreation Association of America sponsored model work about 1927. The first National Miniature Aircraft Tournament was held in Memphis in 1927, sponsored by the PRAA. In 1928 the contest was held in Atlantic City. Noteworthy performance at this contest was the 12:30 ROW flight made by Tudor Morris flying a twin pusher equipped with three small floats. The model weighed 2.91, had a 30" span and a 42" V frame.

Mentioning all the championship model builders who have participated in the fourteen national events would call for a list of thousands of names. Whether they finished first or last, they were still champions—they won and lost with equal grace. The builders take flying seriously. Yet they have the stuff to take crack-ups in their stride. "Wait until next year" is the password. Model flying itself is interesting. Yet it's pretty dull stuff compared to the colorful personalities of the boys who fly them. And that's what we remember about the Nationals.

## TOP HOLE GAS MODEL ACCESSORIES



### JUNIOR MOTORS PROPELLERS

No internal combustion engine, regardless of the number of cylinders, will run smoothly without a properly designed propeller. With this in mind, Junior Motors Corporation engineers have designed a propeller exactly suitable to miniature aircraft engines. They are presented here in three price ranges. We especially recommend the Deluxe Birch Propeller.

The following propellers are available in sizes from 8" to 14". Please specify type when ordering.

JM standard Gum Wood Propeller 15c

JM Lacquered Gum Wood Propeller 25c

JM Deluxe Birch Propeller . . . . .35c

### SPARK PLUG WRENCHES

Seamless steel tubing, finest obtainable. Punched with inside and outside dies. Cadmium plated to prevent rusting. Four sizes: Large for V Champion; Medium for Brown, Hurricane & Blue Crown; Small for V-2 and Extra Small for V-3. Medium size also fits propeller nut. Look for Junior Motors stamp on the product. Price only 20c.



### CHAMPION SPARK PLUGS 45c

These famous plugs need no introduction and are used as standard equipment on Junior Motors. Three sizes: V, V2, V3.

### COIL \$1.75

J-M Spark Coil in shock-proof case, semi-enclosed magnetic core from Silicon transformer steel. Vacuum impregnated with wax of special dielectric strength.

### CONDENSER 20c

200 Volts O.I.M.F.D. capacity. Light metal clad unit with combination mounting and ground connection.



### BOOSTER BATTERY LEADS 30c

For connecting booster batteries to gas models. Two "U" clips for battery connections, and two Lucite plugs (Red and Black) for inserting into jacks on model.



### EXHAUST MANIFOLD

Easily attached to any Junior Motor, clip over exhaust ports. Keeps model free from oil, also excellent for cowling.



### HIGH TENSION LEAD 15c

Finest stranded Belden Cord with high tension insulation and phosphorus bronze clips. Oil proof lacquered.

### TEST BLOCK 35c

For running-in your motor, or for handy use when motor is not in model. Makes wiring and mounting simple, and protects motor from slipshod clamping. Special features include metal strap for mounting coil, grooves for wire leads. Complete with crankcase screws and wiring diagram. Inside width 1 1/2", outside width 2 1/4".



### FLYWHEELS \$1.50

Machined from High Grade Alloy Steel, free from flaw or defects. Balanced and Cadmium plated to prevent rust. Weights: 7 oz., 11 oz., 14 oz. & 6 1/2 oz. (Brownie).

### STEEL CONNECTING ROD FOR MODEL D JUNIOR MOTORS \$1.00

Drop forged one piece hi-grade special Alloy Steel.

### BLUE FLASH COIL

\$1.00 including Lead. BLUE FLASH is a top performer right from its lightning start. Suitable for all classes and all uses. Light, economical, and equipped with clips and terminal.



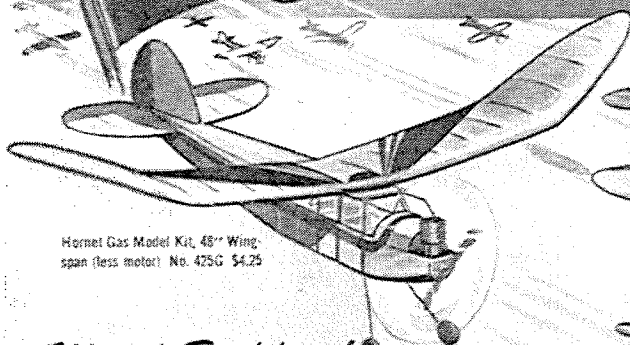
Write for the famous Junior Motors Accessory catalogue.

### JUNIOR MOTORS CORPORATION

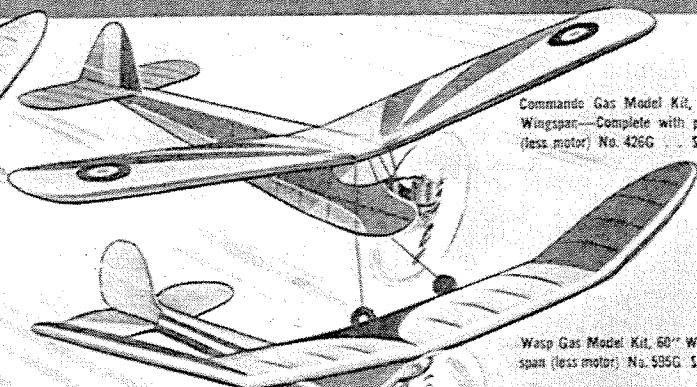
2545 North Broad St., Philadelphia, Pennsylvania



# Champions from CANADA



Hornet Gas Model Kit, 48" Wing-span (less motor) No. 425G \$4.25



Commando Gas Model Kit, 50" Wingspan—Complete with prop. (less motor) No. 426G \$4.25

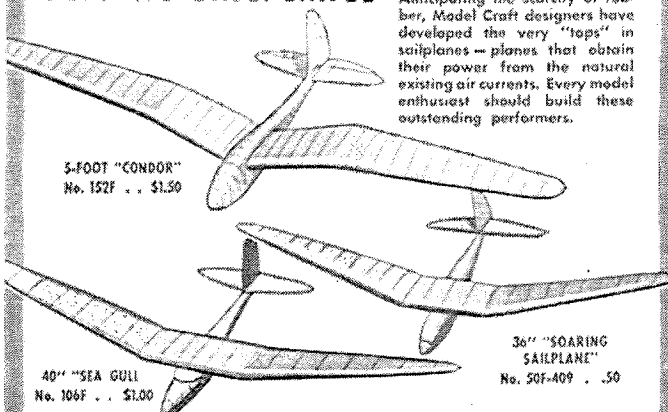
## Model Builders!

You'll like these models from Canada—the world's greatest training centre for war birds from the ends of the earth. Model Craft Kits are available from your local Model Craft dealer, or write direct to the address below, including 5c to cover packing charges on each kit you order. Send 5c for new 1943 illustrated 24-page catalogue now being printed.

**TO OUR AMERICAN ALLIES:** A list of American Dealers, from whom you may obtain these kits, will be sent you upon request.

## GLIDING SAILPLANES

Anticipating the scarcity of rubber, Model Craft designers have developed the very "tops" in sailplanes—planes that obtain their power from the natural existing air currents. Every model enthusiast should build these outstanding performers.



5-FOOT "CONDOR"  
No. 152F . . \$1.50

40" "SEA GULL"  
No. 106F . . \$1.00

36" "SOARING  
SAILPLANE"  
No. 50F-409 . . .50

## MODEL CRAFT WAR SERIES KITS

Special War Series  
Construction Kits that  
you will want to Build—

EACH  
**35c**



No. 45-W56  
King George V Battleship



No. 25-W50  
Light Cruiser



No. 35-W58  
Torpedo Boat



No. 35-W55  
Artillery Gun



No. 35-W52  
British Army Tank



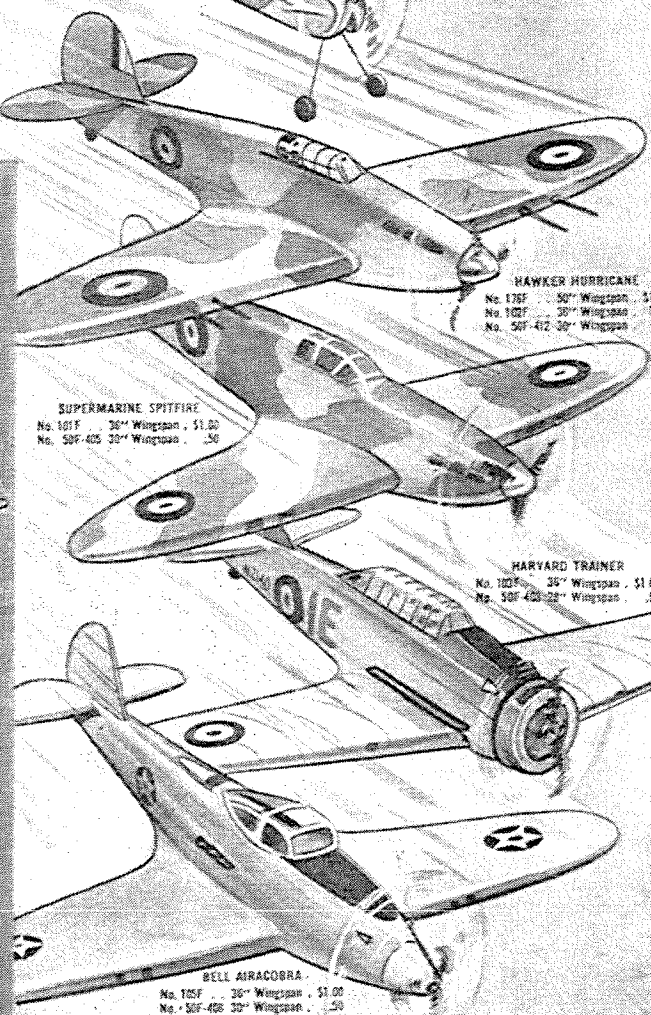
No. 35-W51  
Canadian Army Tank



No. 35-W53  
Artillery Truck



No. 35-W54  
Artillery Tractor



HAWKER HURRICANE  
No. 125F . . 50" Wingspan . \$1.75  
No. 108F . . 30" Wingspan . 1.00  
No. 50F-412 30" Wingspan . .50

SUPERMARINE SPITFIRE  
No. 101F . . 36" Wingspan . \$1.00  
No. 50F-405 30" Wingspan . .50

HARVARD TRAINER  
No. 102F . . 36" Wingspan . \$1.00  
No. 50F-408 30" Wingspan . .50

BELL AIRACOBRA  
No. 105F . . 36" Wingspan . \$1.00  
No. 50F-406 30" Wingspan . .50

# MODEL CRAFT HOBBIES LIMITED

FORMERLY ONTARIO MODEL AIRCRAFT CO.

Dept. 124  
56 EPLANADE ST.  
TORONTO - CANADA



# Ott-O-Former

## MODEL AIRPLANE *Kits*

1942/3 Catalog

NUMBER  
TWENTY  
SIX

Boeing  
Flying Fortress  
NEW

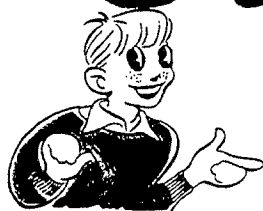
*Joe Ott*

MANUFACTURING CO.,

415 West Superior Street • CHICAGO



# Ott-O-Former



OTTO FORMER, JR.

*America's Finest*

## FLYING MODEL AIRPLANE KITS

*Designed by Joe Ott*



**Ott-O-Formers and all Wood Parts Printed and Ready-Cut.  
Saves Over One-Half Construction Time • Beginners and  
Experienced Model Builders Build Better, Sturdier  
Models With Patented OTT-O-FORMER KITS.**

Ott-O-Former kits are a newer, better and quicker method of building model airplanes because all of the "hard" work is done when the kit leaves the factory. Only the most interesting and fascinating part of the job is left for the model builder to do, who proceeds with the actual building after studying the plans and the simple "time-saving" steps. There is not a lot of preparation and getting ready before construction starts with an Ott-O-Former Kit. That means less time for building—more time for fun and flying.

### **All Models and Sizes Follow Same Easy Construction Method**

The illustrations to the right are given to show the Ott-O-Former Construction Principle. They do not represent any particular model because all Ott-O-Former Kits, regardless of the type or model or the size of the model being built, follow this same principle and same simplified, time-saving method. Full size plans, showing every detail of construction of the particular model to be built accompany each kit.

### **Ott-O-Formers Greatest Development in Model Airplane History**

Ott-O-Formers eliminate half the building time—half the assembly time—and in addition to their time-saving features they are far superior to old-fashioned built-up wooden formers because they are thinner, lighter, stronger, and always perfect in size and shape. The top illustration on the next page shows a set of Ott-O-Formers as they come to you in an Ott-O-Former kit. The next picture shows the same Ott-O-Formers as removed from the ready-cut sheet, while the third picture shows the Ott-O-Formers cemented in place on a simple foundation frame to form the fuselage of your model.

### **Ready-Cut Wing Ribs Can Be Made in a Jiffy**

Making wing ribs was a tiresome, tedious job in old-fashioned kits but it is fun to make them the Ott-O-Former way for in these kits they are clearly printed in outline on fine selected basswood and then ready-cut. All of the old pre-construction preparation has been done away with.

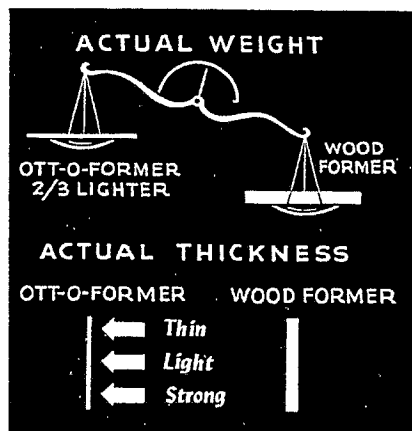
### **Propellers—Nose Blocks—Now Simple and Easy to Make**

The fifth and sixth illustrations on the opposite page show how easy it is to make a built-up nose block or a fine and accurate propeller from an Ott-O-Former Kit. All parts are printed and ready-cut to the exact size, saving hours of time. And each kit contains an ingenious "twisting pattern" or "true pitch jig" used to insure the proper pitch of your propeller which is so important in getting the best results from flying models.

### **No Other Kits in the World Like Joe Ott Designed Ott-O-Formers**

The Ott-O-Former principle and construction method is protected by U. S. patents issued and U. S. copyrights. No other designer or manufacturer is authorized to use this method, thus genuine Ott-O-Former Kits are made only by the Joe Ott Manufacturing Co.

Beginners or experienced model builders will be thrilled with the ease with which they can build the finest flying model planes from an Ott-O-Former Kit. They will be surprised and pleased, too, with the lightness of their model—its sturdiness—its strength—its ability to take "punishment"—and above all its remarkable qualities as a flyer, for which all Joe Ott models are famous.



*Illustration shows relative weight and thickness of Ott-O-Formers and ordinary built-up wooden formers. Ott-O-Formers are lighter, thinner and stronger.*

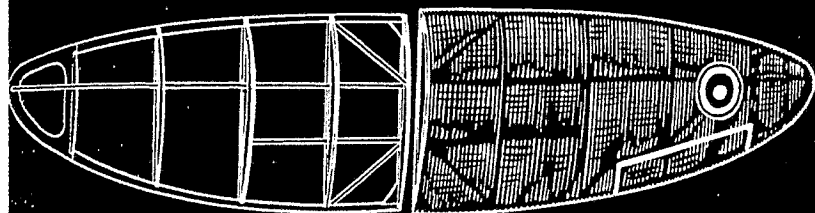
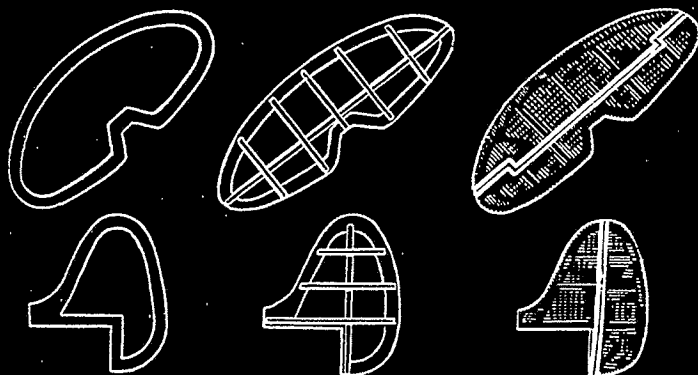
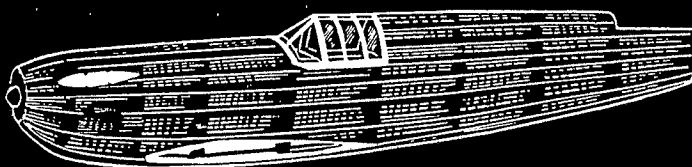
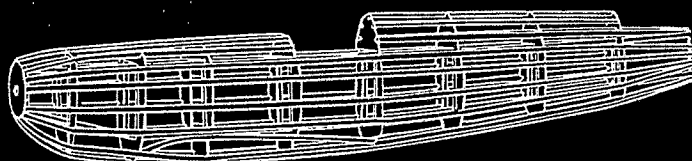
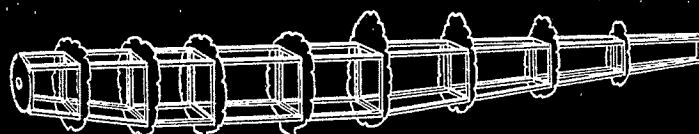
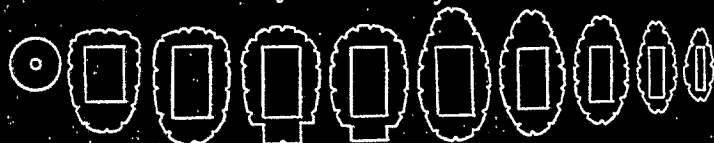
**BUILD WITH OTT-O-FORMERS AND GET 'EM FLYING QUICKER**



# Boys WILL LIKE THESE 12 EASY STEPS

IN OTT-O-FORMER AIRPLANE CONSTRUCTION

Now Fully Protected by U. S. Patent



There Are 17  
OTT-O-FORMERS  
in a 22" Spitfire Kit



These Are  
OTT-O-FORMER  
Wing Tips

## Follow these 12 Steps of Ott-O-Former Construction

### ◀ STEP ONE

Remove from sheet with scissors or sharp blade. Cut Ott-O-Formers.

### ◀ STEP TWO

This is the foundation frame. Make two body sides from long strip material and assemble as shown.

### ◀ STEP THREE

Place Ott-O-Formers over foundation frame and cement in place as shown on plans.

### ◀ STEP FOUR

Cement stringers into notches in edge of formers. In most cases cut notches as you proceed. Finish only 4 to 6 centrally located notches at first. Cut additional notches as more stringers are put in place.

### ◀ STEP FIVE

Cover body in sections and use tissue in as large pieces as possible to prevent undue wrinkling.

### ◀ STEP SIX

Remove prepared form of stabilizer from sheet, cement spar and ribs in place and cover with tissue. Cement on heavy line as shown for control outline if desired.

### ◀ STEP SEVEN

Remove prepared rudder form from sheet, cement spar and ribs in place and cover with tissue. Add control outline if desired.

### ◀ STEP EIGHT

Remove ribs from ready-cut rib sheet.

### ◀ STEP NINE

Remove wing tips from sheet and place in position on plan.

### ◀ STEP TEN

Place leading and trailing edges in position. Use small pins to hold wood in position. Wet wood if bend is large.

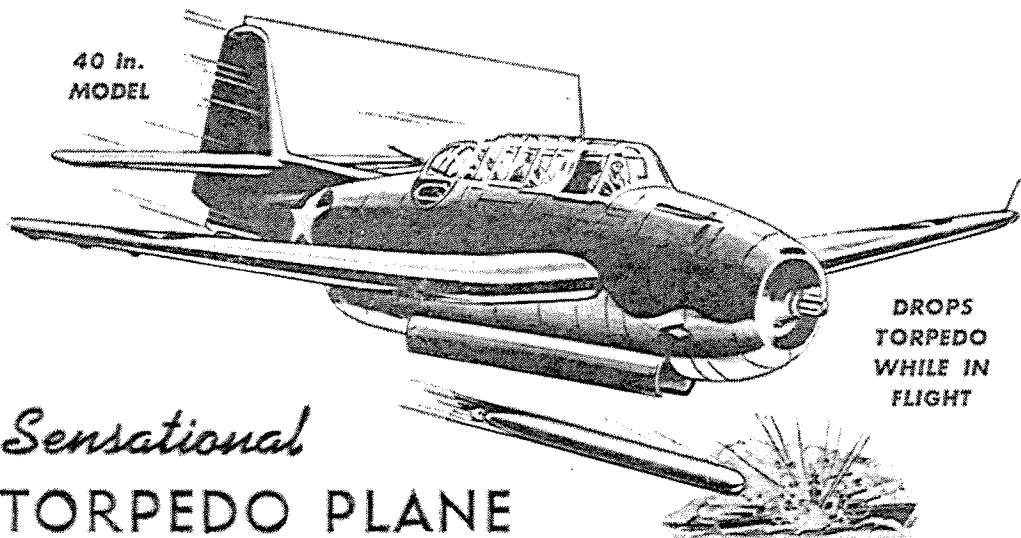
### ◀ STEP ELEVEN

Put lower section of ribs, 1/16" square, in place, add spar over these 1/16" sections.

### ◀ STEP TWELVE

Cement curved rib sections, over spar, on to leading and trailing edges and cover with tissue.





No. 4004

## The "AVENGER" (Grumman)

Packed 1 dozen to carton, or assorted with other 4000 Series. Weight, 13½ pounds per dozen.

RETAIL  
\$1.00

# Sensational TORPEDO PLANE Build the "AVENGER" (Grumman) The Plane That Broke the Back of the Jap Navy at Midway

It's the hit of the year . . . this new 40-inch, Joe Ott model of Midway's "Avenger" . . . the most deadly torpedo bomber in the world. It's a beautiful and faithful model of this great Grumman ship, an excellent flyer, and carries a six-inch model torpedo completely inside the fuselage.

Bomb doors, as shown in illustration, open with release of a pre-set trigger while plane is in flight and torpedo is automatically fired in a most realistic way. The Avenger is easy to build and fly because you make it from a genuine OTT-O-FORMER KIT. Kit is complete, including ready-cut Ott-O-Formers and wing ribs and all required materials.

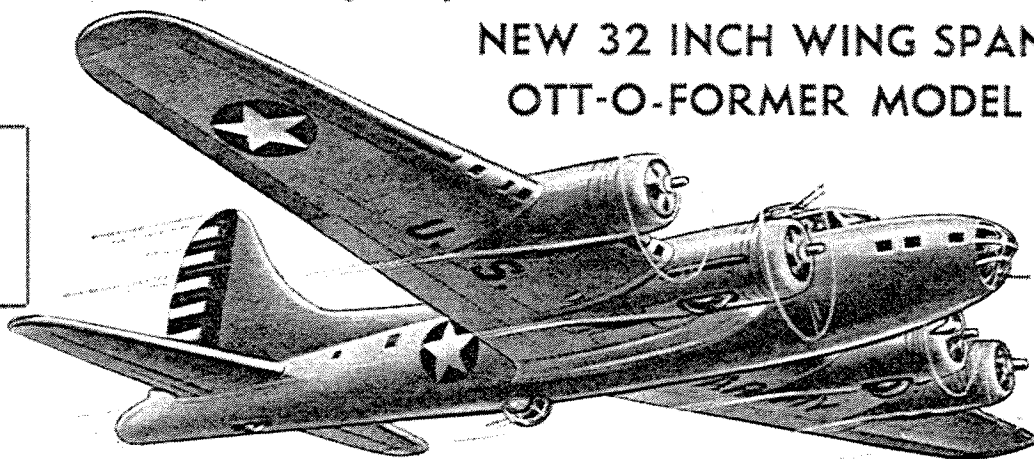
The "AVENGER" is one of the most popular of all Ott-O-Former Kits and a genuine thrill to build and fly.

See Other  
40 Inch Models  
Page 10

## Boeing Flying Fortress!

NEW 32 INCH WING SPAN  
OTT-O-FORMER MODEL

See Other  
32 Inch Models  
Page 8



### NO. 3219—BOEING FLYING FORTRESS

32 Inch Wing Span

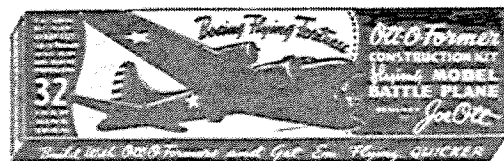
Retail 50 cents

There probably is no other war plane so much in the public eye or so much talked about as the magnificent "Flying Fortress" as built by Boeing. The Ott-O-Former 32-inch wing span model of this famous four-motored bomber follows the great ship faithfully and is a joy to behold and a thrill to build and fly.

Requiring far more materials and considerably more construction work than most models of the same size, the Boeing Flying Fortress is a simple, yet fascinating job when built from an Ott-O-Former Kit.

Packed 2 dozen to carton or assorted with other 3200 Series. Weight per dozen, 7½ pounds.

New models are constantly being added to the Ott-O-Former Line. Watch for announcement and new catalog issues.



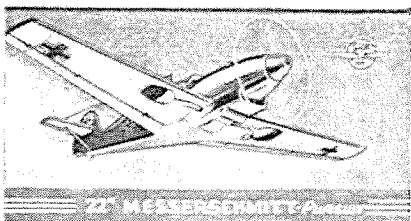


# MODERN BATTLE PLANES

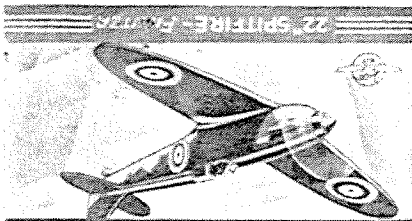
Low price, complete Ott-O-Former construction kits for seven famous ships, all featured in today's news.

## 22 INCH WING SPAN FLYING MODEL KITS

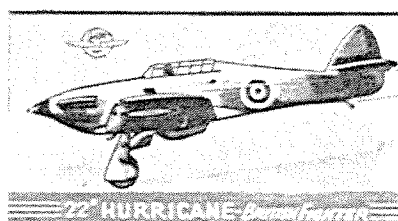
*Retail 15 Cents*



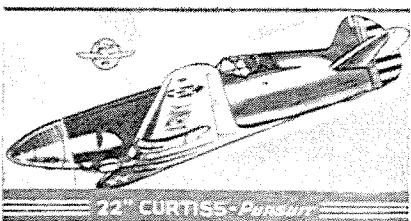
22" MESSERSCHMITT Pursuit



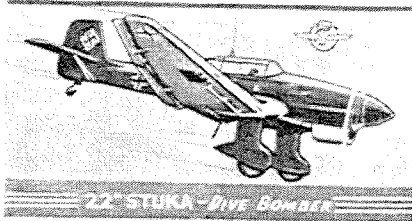
22" SPITFIRE Pursuit



22" HURRICANE Dive Bomber



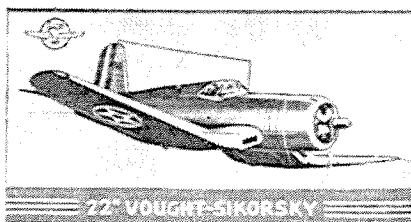
22" CURTISS Pursuit



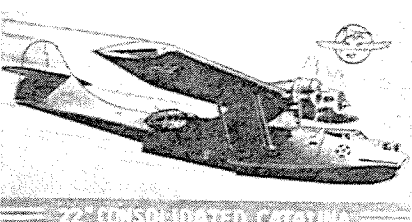
22" STUKA DIVE Bomber



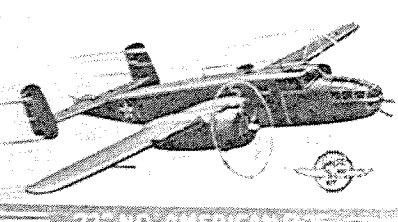
22" AIRABONITA Interceptor



22" VOUCHT-SIKORSKY



22" CONSOLIDATED CATALINA



22" NO. AMERICAN B-25

2201 .....Spitfire Pursuit  
2202 .....Vought Sikorsky  
2203 .....Curtiss Pursuit

2204 .....Hawker Hurricane  
2205 .....Stuka Dive Bomber  
2206 .....Airabonita

2207 .....Messerschmitt  
2208 .....Consolidated Catalina  
2209 .....North American B-25

SERIES 2200. Retail 15 cents each kit. Packed one style or assorted,  
3 dozen to carton. Weight, 4 pounds per dozen.

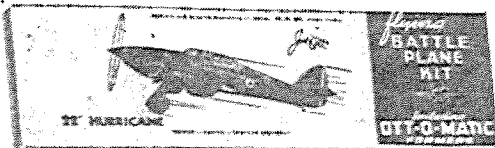
## Special Notice

### DEALERS

All prices shown in this catalog are F.O.B. Chicago. No C.O.D. shipments. Minimum order \$10.00.

### MODEL BUILDERS

Model builders should purchase Ott-O-Former Kits from their dealers, but where there is no dealer or a dealer carrying these kits is not nearby, we will accept orders direct. Minimum order \$1.00, postage 25 cents extra.



See pages 1 and 2 for description of Ott-O-Former Construction . . . makes better, sturdier ships . . . saves building time.



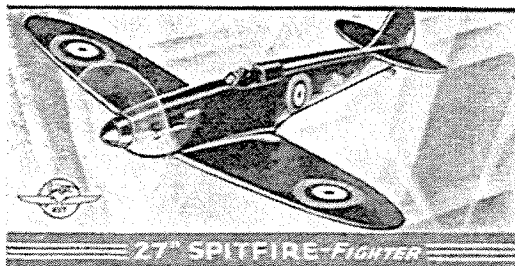
# BATTLE PLANES

## New Series

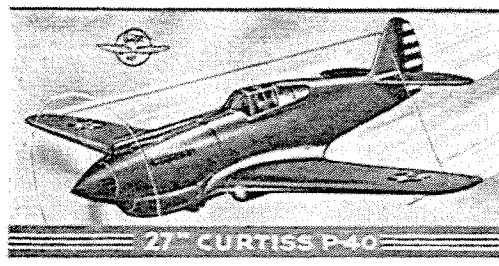
More battle planes. Presenting the first of a new series of Joe Ott Construction Kits using famous Ott-O-Formers.

27 INCH WING SPAN  
FLYING MODEL KITS

Retail 29 Cents



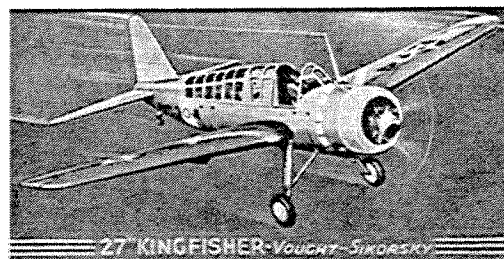
27" SPITFIRE-FIGHTER



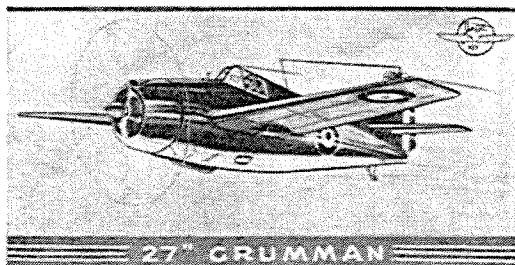
27" CURTISS P-40



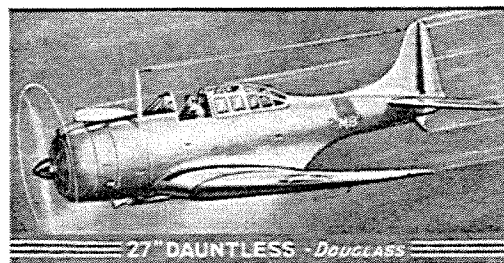
27" MUSTANG



27" KINGFISHER-VOUGHT-SIKORSKY



27" GRUMMAN



27" DAUNTLESS - DOUGLASS

2701 ..... Spitfire  
2702 ..... Mustang N. A.  
2703 ..... Grumman

2704 ..... Curtiss  
2705 ..... Dauntless  
2706 ..... Kingfisher

SERIES 2700. Retail 29 cents each kit. Packed one style or assorted, 2 dozen to carton.  
Weight, 6 pounds per dozen.

### GUARANTEED COMPLETE CONSTRUCTION KITS

The Joe Ott Construction Kits shown on these and the following pages are COMPLETE in every detail. They contain all the material needed to build a flying model in the size and of the airplane as indicated, including wood in proper sizes,

tissue, necessary small parts, full size plans and instructions and the sensational Ott-O-Formers. Ott-O-Formers are copyrighted and fully protected by U. S. Patents covering this type of labor-saving construction.

Ott-O-Former construction saves one-half model building time  
... eliminates one-third of usual assembly problems.



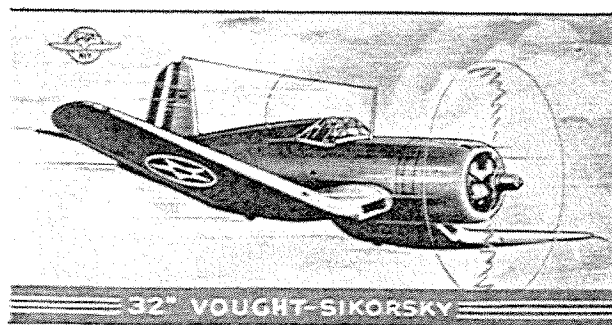
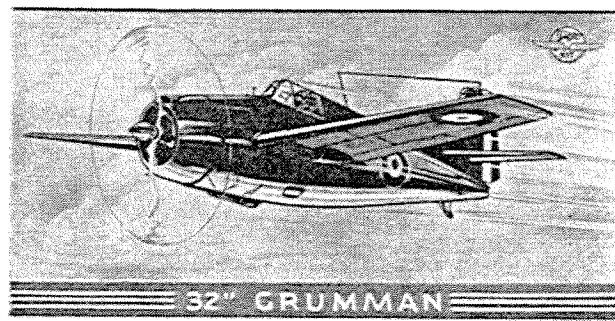
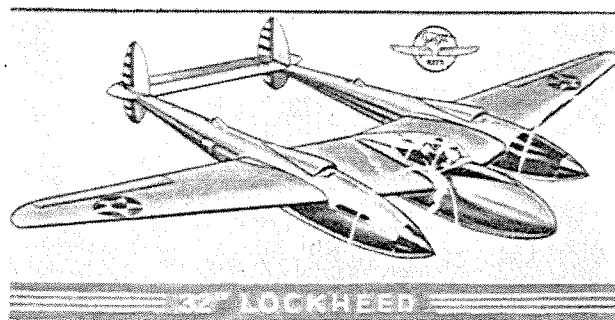
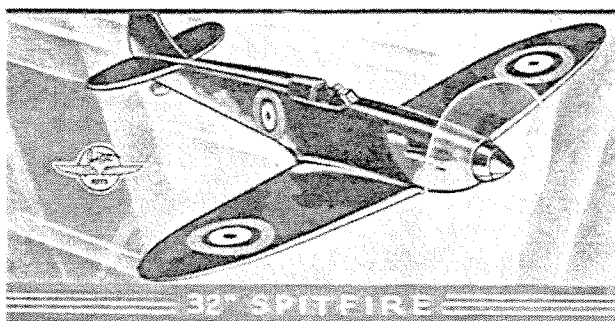


# All New Design BATTLE PLANES

Popular size, popular priced flying model kits that bring a double thrill to the model enthusiast.

## 32 INCH WING SPAN FLYING MODEL KITS

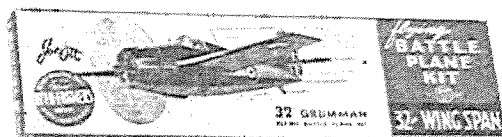
*Retail 50 Cents*



3213 ..... Spitfire  
3214 ..... Airacobra  
3215 ..... Stuka Dive Bomber

3216 ..... Lockheed  
3217 ..... Grumman  
3218 ..... Vought-Sikorsky

SERIES 3200. Retail 50 cents each kit. Packed one style or assorted, 2 dozen to carton. Weight, 7 lbs. per doz.



Designed by Joe Ott, America's Ace Model Designer and  
manufactured under his personal supervision.



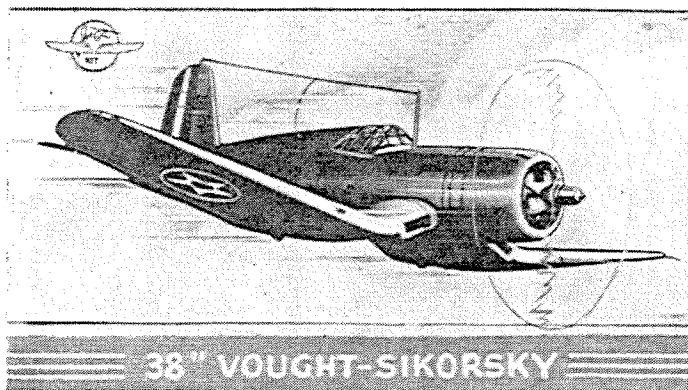
# Three New U. S. BOMBERS

A new series of flying model Ott-O-Former Kits.  
Beautiful models true to war history-making originals.

## 38 INCH WING SPAN

### FLYING MODEL KITS

*Retail 75 Cents*



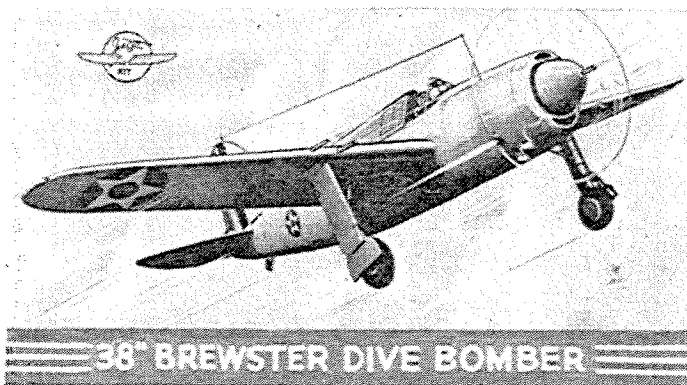
**3807—VOUGHT-SIKORSKY...** Retail 75 cents  
Packed 2 dozen to carton, straight or assorted with other 3800 series. Weight, 8 pounds per dozen.

This is the Vought-Sikorsky official VS 156, a two place Navy Dive Bomber. The original has a 42 foot wing span which is reduced to 38 inches in this superb Joe Ott designed flying model. Furnished in a new Ott-O-Former Kit. Easy to build, good to look at and a dandy flyer.



**3808—MARTIN MARYLAND...** Retail 75 cents  
Packed 2 dozen to carton, straight or assorted with other 3800 series. Weight, 8 pounds per dozen.

Here we give you the new Martin "Maryland", a three place attack bomber with tremendous speed and a record for devastating efficiency that is really something to talk about. We predict that model fans will like this Joe Ott model and will thrill at the ease of construction which only the Ott-O-Former method provides.



**3809—BREWSTER NAVY DIVE BOMBER**  
Retail 75 cents

Packed 2 dozen to carton, straight or assorted with other 3800 series. Weight, 8 pounds per dozen.

This is the new Navy "Tough Guy", said to be the most terrible of the Navy's aerial weapons, a dive bomber than can really dish it out and take a beating too if necessary. The Joe Ott designed model of the "tough guy" is a remarkably simplified building job when made from an Ott-O-Former Kit.

Every Joe Ott Kit contains a generous amount of materials  
and full-size, three-view, picture plans.



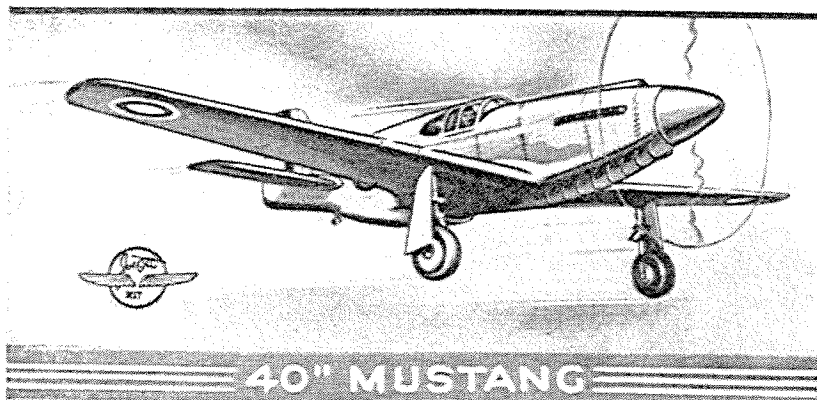


# Big Dollar Value FLYING MODELS

Three world-beating dollar flying models of modern battle planes that fascinate every model builder.

## 40 INCH WING SPAN DELUXE FLYER KITS

*Retail \$7.00*



### 4001...MUSTANG N. A.

Packed 1 dozen to carton, straight or assorted with other 4000 series.

Weight, 13½ pounds per dozen.

This is a new Joe Ott model of North America's famous XP-51 pursuit ship, the "Flying Mustang," which is a single seat, single engine job and one of the world's fastest ships. Ott's design has captured the realism of its prototype and produces a large 40 inch model which can be easily and quickly built with the new Ott-O-Former construction kit.

**Retail \$1.00**



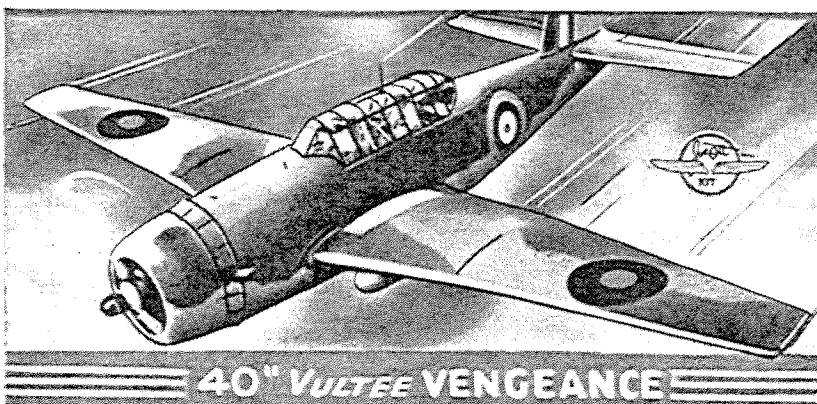
### 4002...CURTISS O-52

Packed 1 dozen to carton, straight or assorted with other 4000 series.

Weight, 13½ pounds per dozen.

One of the most talked-about U. S. Army Air Corps planes is the new Curtiss Observation—O-52. It is built especially for "peeking" duty and has been pronounced remarkably effective. In this new Joe Ott model realism, ease of construction and performance have been combined to an amazing degree. We predict that this Air Corps flying model will be one of the most stable and popular ships of the coming year.

**Retail \$1.00**



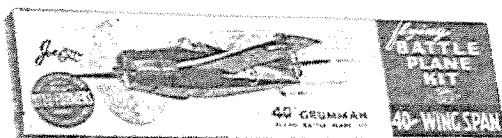
### 4003...VULTEE VENGEANCE

Packed 1 dozen to carton, straight or assorted with other 4000 series.

Weight, 13½ pounds per dozen.

Another fine model in this series—40 inch wing span—is now ready. A terrific fighter and a combination pursuit and dive bomber. Using a 1700 to 2000 H.P. twin row engine, watch for the results this humdinger will turn in when it's turned loose upon our enemies.

**Retail \$1.00**



Joe Ott Kits represent the best in design, quality materials, honest workmanship . . . at a fair price.



# True-to-Scale FLYING MODELS

These are genuine DeLuxe Flying Scale Models, nothing finer in design, completeness, appearance and performance.

## 45 INCH WING SPAN DELUXE FLYER KITS

Retail \$1.39

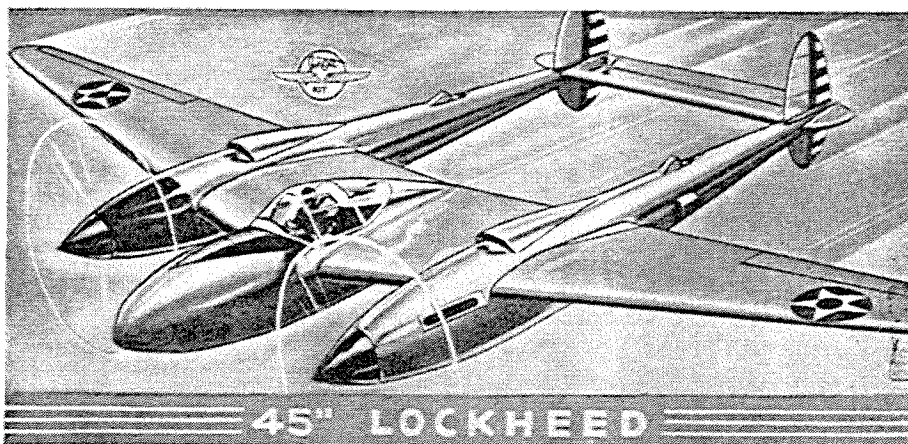
### 4501—LOCKHEED INTERCEPTOR

Packed 1 dozen to carton, straight or assorted with 4502. Weight 17 pounds per dozen.

Commonly called the "Bomber Catcher," this twin-motor plane is produced by the Lockheed Aircraft Corporation of California. It is strictly designed for military offensive use, has a cruising speed of 360 miles per hour and a top speed of about 450 miles.

As our picture indicates, it is an interesting and intriguing model for any builder, who will find the job greatly simplified with Joe Ott's plans and instructions and the sensational Ott-O-Formers.

Retail \$1.39

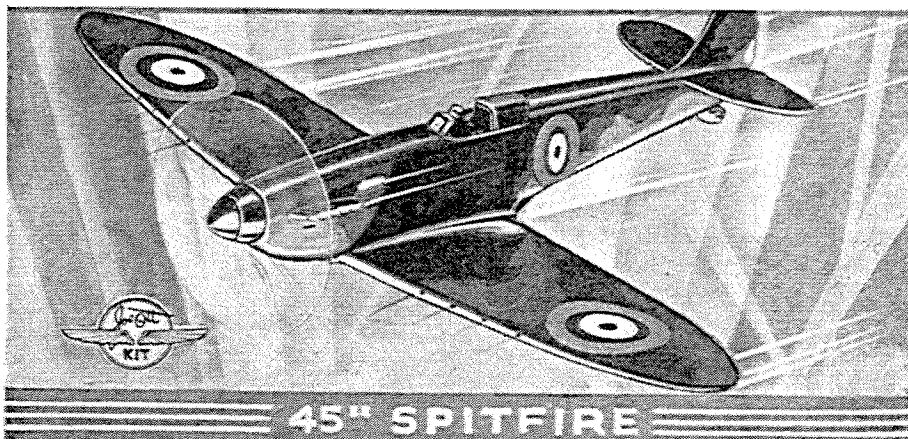


### 4502—SPITFIRE PURSUIT

Packed 1 dozen to carton, straight or assorted with 4501. Weight, 17 pounds per dozen.

The Spitfire is the famous fighter plane of Great Britain's R.A.F. It is considered the fastest and most maneuverable battle plane ever built in Europe; is powered with a Rolls Royce V-12 engine, and is both well armed and armored. Our Joe Ott model, almost 4 feet across its wings, faithfully reproduces this great ship in scale, combining realism and sensational flying performance.

Retail \$1.39



### BIG GENEROUS KITS WITH MUCH EXTRA MATERIAL

All Joe Ott Kits are complete in every detail with generous amounts of all materials and every needed part and accessory.

In our DeLuxe kits quantities are extra liberal

with extra amounts of almost everything included. Thus the builder is never concerned about spoilage, knowing that plenty of material is available within his reach.

Joe Ott Kits are outstanding values in every price class.  
There is nothing better at the price.





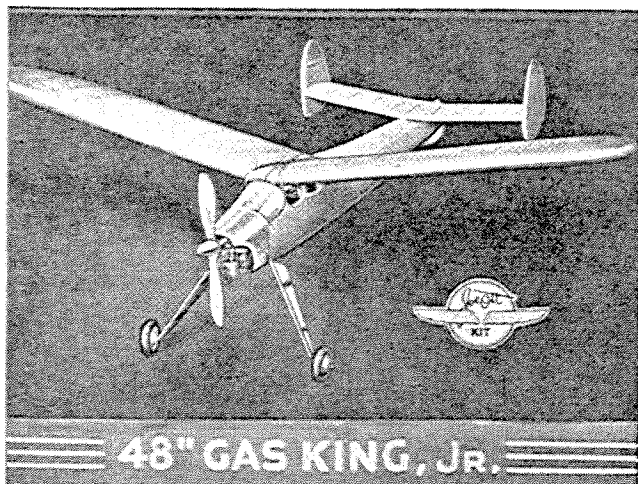
# GAS POWER FLYING MODELS

Joe Ott gas powered models provide tremendous variety of sizes and types in really fine flying ships.

FOUR LATEST MODELS  
48 to 72 inch WING SPAN

\$2.50      \$3.75      \$5.00

\$6.75 Retail



**G-4801 -- GAS KING, JR. -- 48 Inch Wing Span**

Packed as ordered. Shipping weight, 4 pounds.  
A special contest kit at a price all can afford. Small and compact for transporting. When constructed according to our full size picture plans it is exceptionally strong and will take a lot of punishment. Total weight 22 to 26 ounces. Use Class "B" motor with 9 or 10 inch propeller. For contest flying we recommend the Ohlsson "23" and "19" or the "Brownie Jr."—also other motors of similar power, size and weight. Retail.....

**\$3.75**

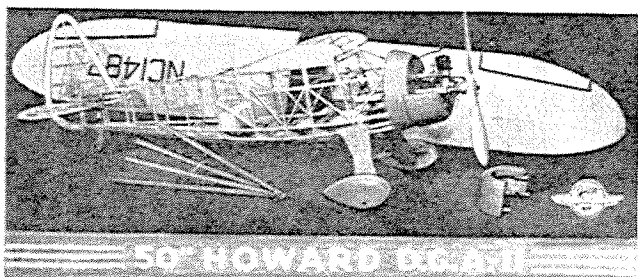


**G-6001 -- KINGFISHER -- 60-72 Inch Wing Span**

Packed as ordered. Shipping weight, 7 pounds.

Our Kingfisher lends itself very well to both land and water flying. Provision is made on our full size Joe Ott plans for a 6 foot or 72" wing when model is to be built for seaplane type. This model has an exceptional amount of inherent stability and it stays right-side up at all times. Designed for Class "C" motors and 14" propeller. Retail.....

**\$6.75**



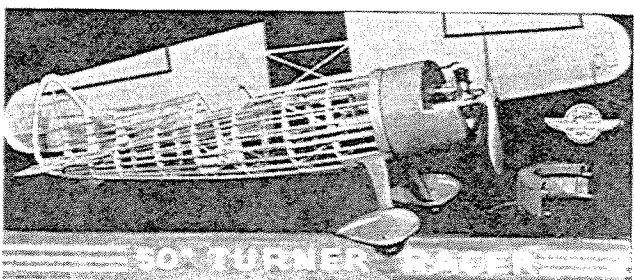
**G-5001 -- HOWARD D.G.A.-11 -- 50 Inch Wing Span**

Packed as ordered. Shipping weight, 3 pounds.

A faithful scale model of this famous ship which was designed along the lines of the equally famous "Mr. Mulligan"—Thompson Trophy, 1935 Winner. The original plane was designed, built and flown by Mr. Benny Howard. Our Joe Ott model does justice to its prototype in both looks and flying ability. Uses Class "B" motor with 9 or 10 inch propeller.

Retail **\$3.75**

**5001 -- HOWARD D.G.A.-11 -- 50 Inch Wing Span**  
Rubber Power Type Motor      Retail **\$2.00**



**G-5002 -- TURNER RACER -- 50 Inch Wing Span**

Packed as ordered. Shipping weight, 3 pounds.

This is a Joe Ott designed model in construction kit form of one of the world's most famous speed planes. Twice Thompson Trophy winner. It makes a very beautiful and superb flying gas model when built according to our detailed instructions and Joe Ott's own picture plans. Exact scale is maintained throughout the model construction. Class "B" motor recommended with 11 inch propeller.

Retail **\$3.75**

**5002 -- TURNER RACER -- 50 Inch Wing Span**  
Rubber Power Type Motor      Retail **\$2.00**



Joe Ott, former U. S. Army Aviation Instructor, puts his basic knowledge of flying and planes into every Ott model.

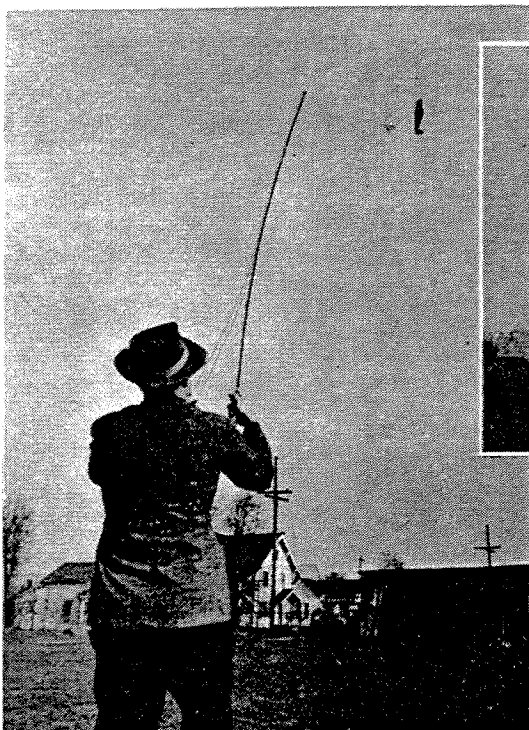




# WALKER—THE UNPREDICTABLE

**T**HREE developments highlight the growth of model building in America: the use of balsa wood, the gas engine and control-line flying. The first two, improvements in material and motive power, were taken for granted. But what the daddy of U-control is doing now with controlling a model in flight is really something. His newest wrinkles are previewed here in the hope

that they will stimulate the lagging interest in gas-model flying. You can apply these stunts to your pet thermal sniffer to keep it flying—in the back yard. Walker is a storehouse of invention and produces everything from all kinds of gliders to radio-control jobs that actually chase birds. We know what he sits up at night to read, but we'd certainly like to know his brand of breakfast cereal.

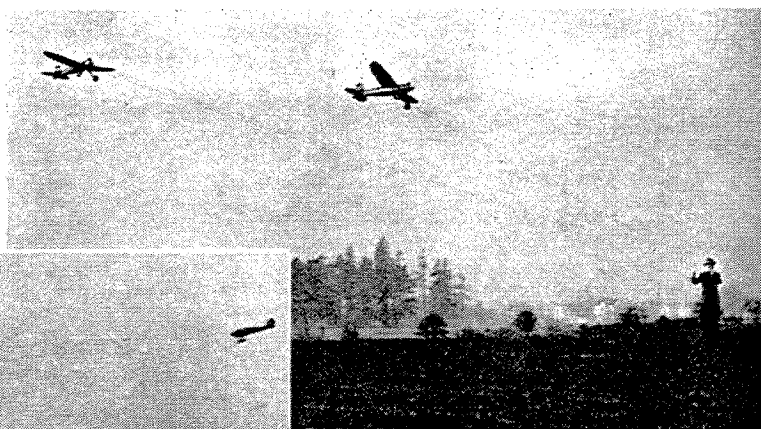


**W**ALKER'S latest development is a model plane which can be flown at terrifically high speeds entirely without the aid of an engine and will perform any maneuver with the exception of a barrel roll. A regular U-control handle is held in the left hand and a standard-size fish pole in the right. The model is so designed and balanced that, merely by turning around, the ship will zoom at the end of a thirty to forty-foot line. Maneuvering, of course, is done by using the standard U-control handle, just as in powered flight.

FISH POLE GLIDER

1943

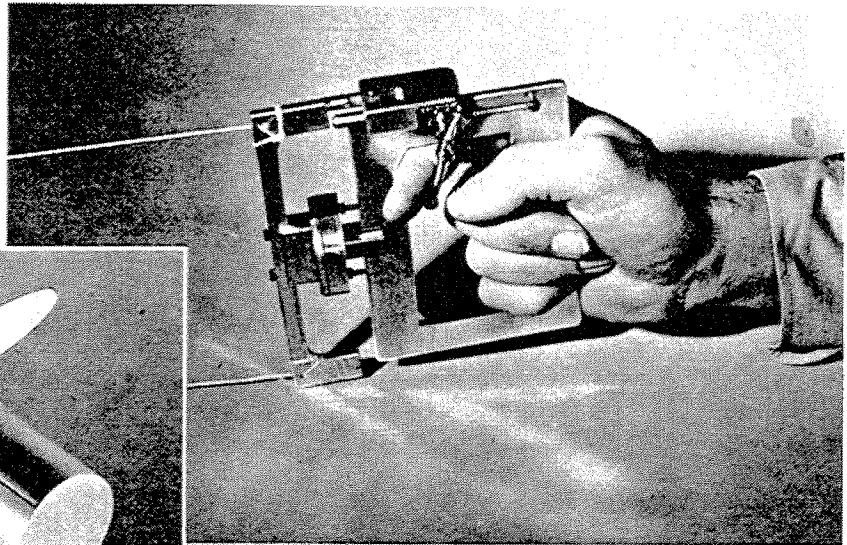
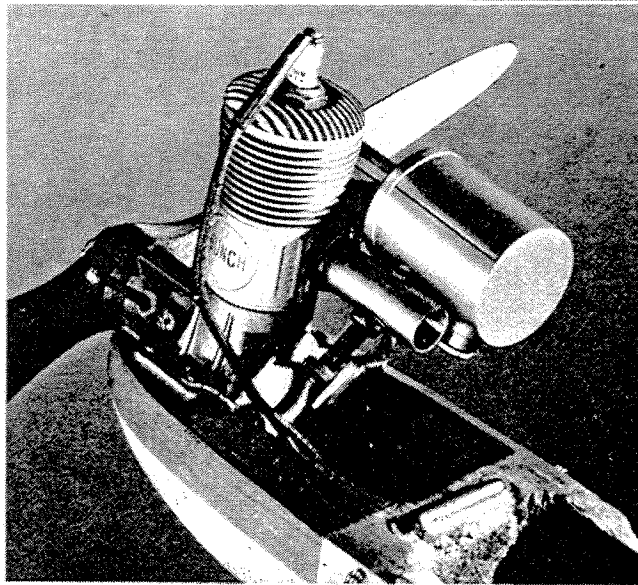
TWO AT A TIME



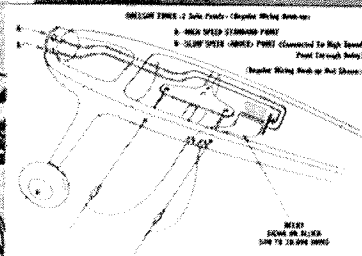
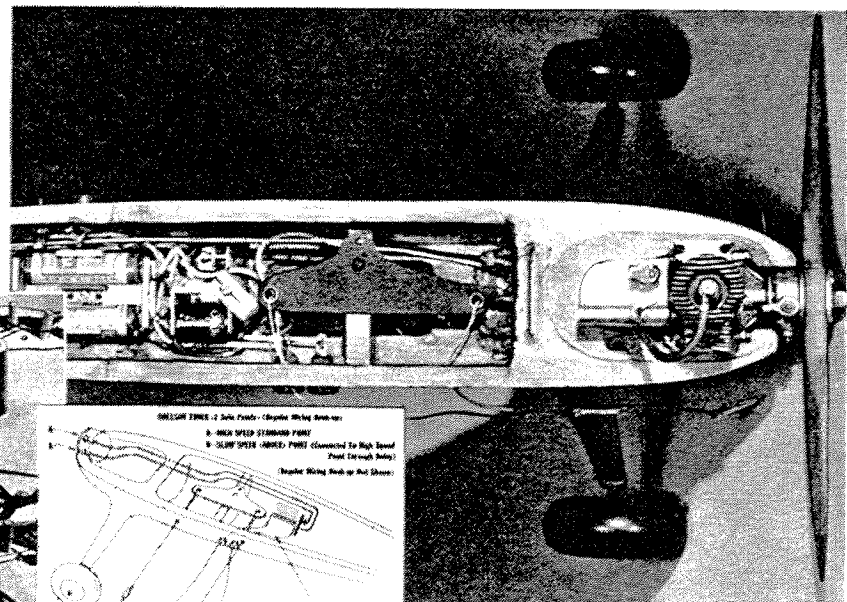
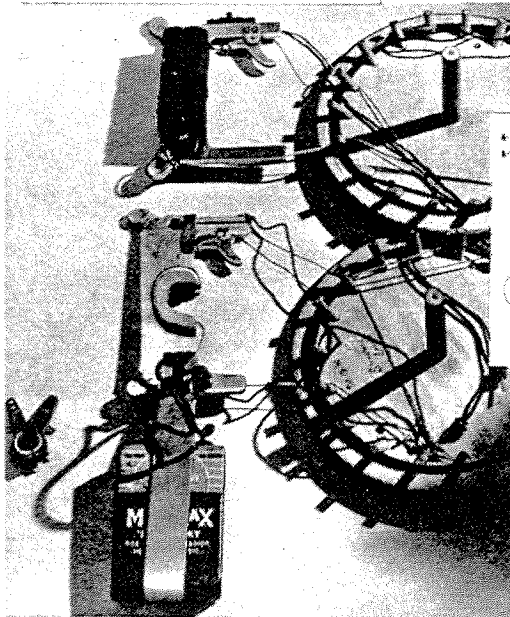
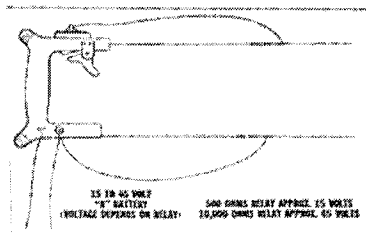
**N**O, you're not seeing double. It's just another Walker stunt—flying two Fireballs at the same time. This trick requires a good motor equipped with throttle control. The plane held in the left hand is kept at constant speed, below the top speed of the following plane. This allows the other to fly in perfect formation, for it can gain, fly over or under its mate at will.



## INVERTED FLIGHT



UPSIDE-DOWN flight requires a swiveling gas tank so that gas will flow in any direction. Picture, left, shows this type of tank installed on a Bunch Aero Tiger. Two handles are also needed, but Walker has devised a new type of handle that incorporates a trigger. As the plane is brought forward into the top of a loop, the trigger releases the forward portion of the handle 180 degrees and the plane is flown as though it were right side up. The procedure is repeated to bring the model back to a normal position.

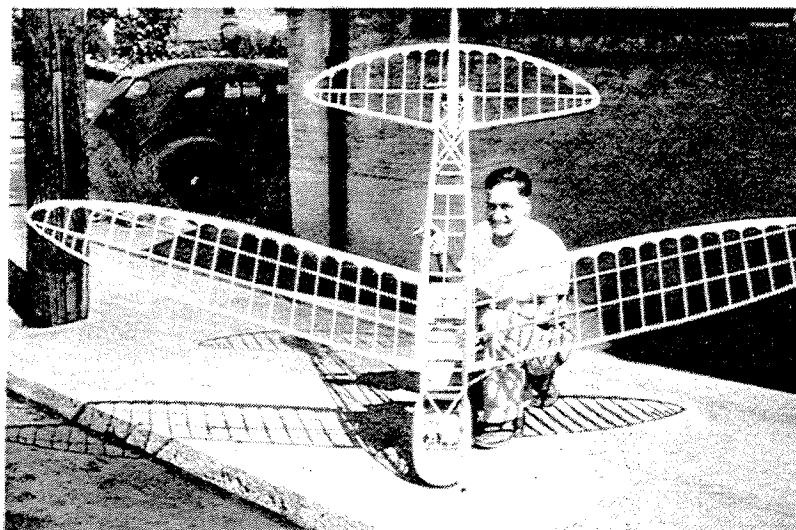


## SPEED CONTROL

THIS is the perfect answer to motor control for control-line models. The diagrams and pictures show technical details. You will note two timer points on timer case and, in the fuselage proper, a Sigma relay which is operated by current shot through the wires by means of a battery and a trigger handle. All in all, this device adds as much again to controlled flight as we had before. You can do take-offs with an idling motor, change speed in the air, make innumerable landings, refuel and zoom off. Some fun!



# SONIC CONTROL



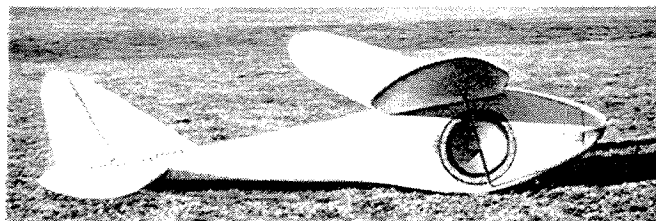
Fireball Jim Walker poses with glider to show size. The model was designed for stability and ruggedness needed to conduct tests of his sonic-control system which operates the rudder.

1943

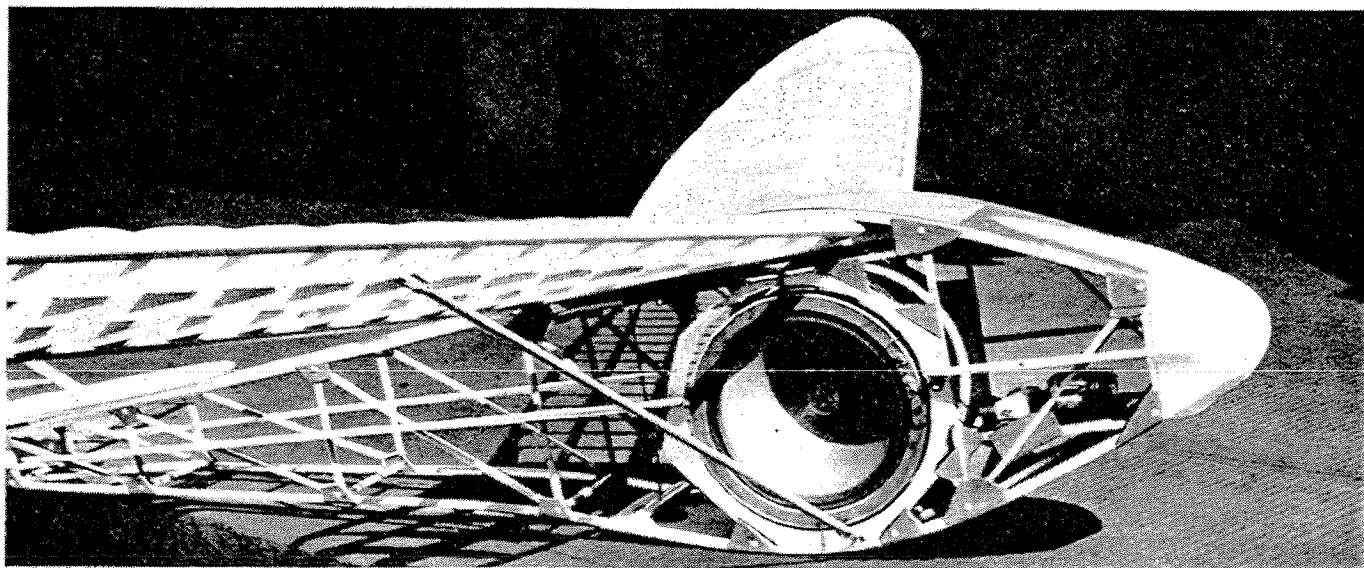
COME postwar and you'll be able to whistle your model out of a thermal and bring it down to a perfect three-point landing right at your feet by using Jim Walker's latest development—an "ear," which, when placed in a model and attached to the rudder, responds to certain notes or concussions and moves the rudder. Technically, the ear consists of two loud-speaker cones with a delicate contact apparatus at their apices. It is so arranged that noise of a predetermined frequency will break an electric circuit, known as a "Ross Hull" movement, thus operating the rudder. According to Walker, good control may be obtained at over 1,000 feet, and the ear may be adjusted to such sensitivity that out in the country, away from noise, the control will work at nearly 2,000 feet. To date, controlled flights of over ten minutes have been obtained with the model landing to within ten feet of the operator. The "ear" is now installed in a tow-line glider, but may be adapted to free-flight gas models by linking

the flight timer with the control so that when the timer cuts off the engine the "ear" becomes activated.

But what Walker didn't explain was what to do when a dozen or so of these "ear"-equipped models are floating around and the owners get their signals crossed.



At present the sonic-control device is being used experimentally on this towline glider. Adaptation to free-flight gas models is made practical by using timer.

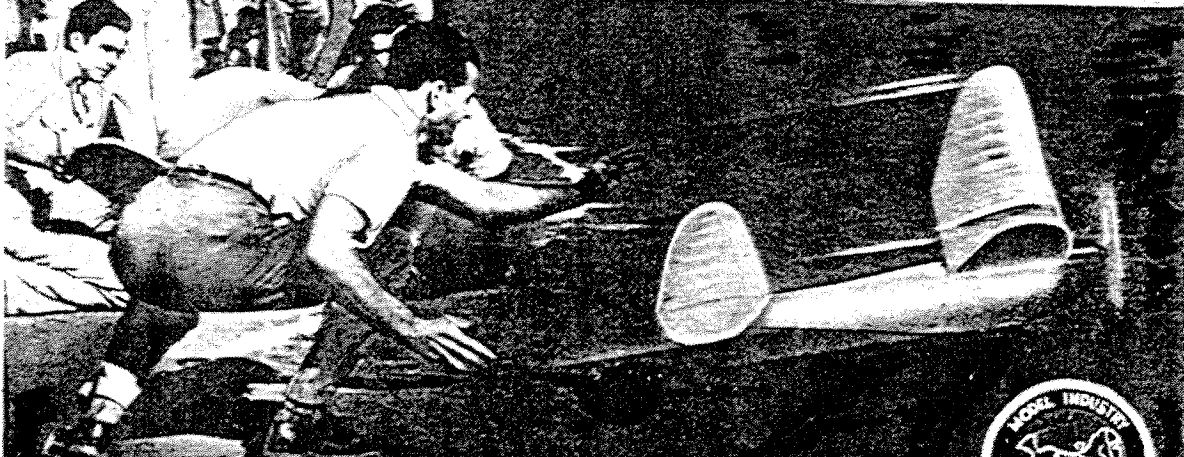
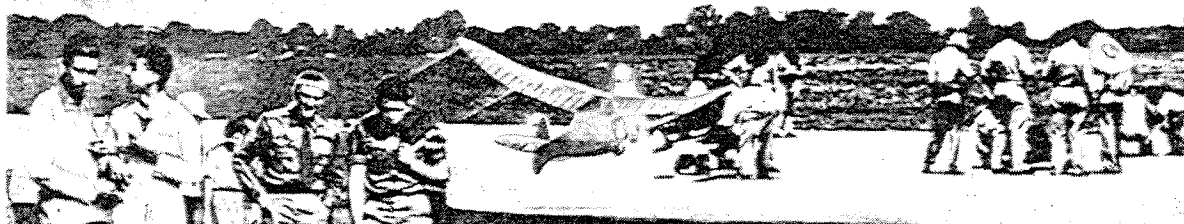
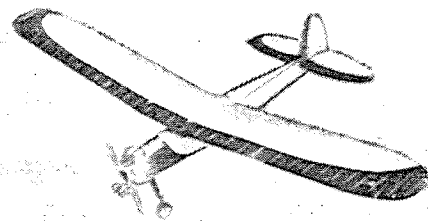


Two radio loud-speaker cones are mounted in either side of the fuselage. A delicate contact apparatus attached to the apices of the cones operates the rudder.



# POLK'S

Model Craft Hobbies, Inc.



*It's "Polk's for Power Plants"*

1943

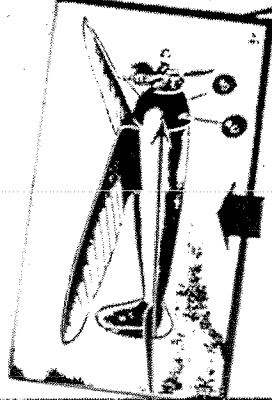
10¢





**"EASILY REMOVED"**

All in all, the most popular of the new line of models designed to be removed from the fuselage without the use of tools. The most popular of the new line of models designed to be removed from the fuselage without the use of tools. The most popular of the new line of models designed to be removed from the fuselage without the use of tools.

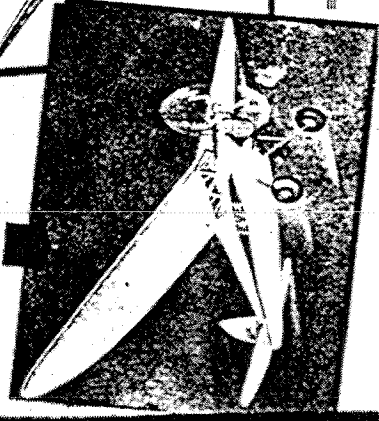


**HAYMAKER \$1.50**

A knockout in Class 33. Built simplified, easy to assemble. Removable motor unit. Span 33 in. 100 sq. in. 4 oz. Nicotene fuel.

**2nd New — EVE \$1.00**

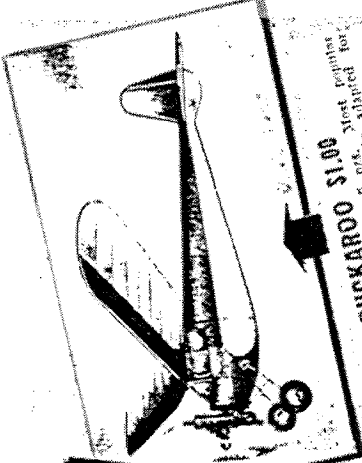
Prepare now for Summer contests with EVE, Garami's latest design creation. 33" Span—25" Wt. 4 1/2 oz. Smart appearance, amazing performance.



**M. C. H. P.**

**Models Designed by Garami**

Look! Garami, the most distinguished name in model plane design, has designed a new line of models. The very first of this line is the "EVE" model. It is a 33" span, 25" long, 4 1/2 oz. weight, 100 sq. in. wing area, 4 oz. weight, 100 sq. in. wing area, 4 oz. weight, 100 sq. in. wing area.

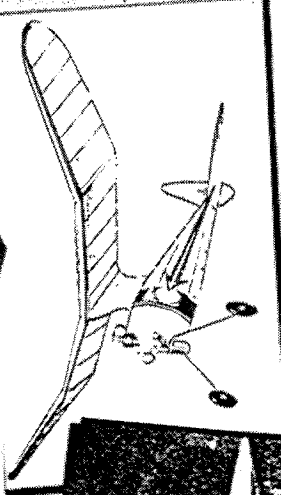


**BUCKAROO \$1.00**

33" wingspan. 100 sq. in. wing area. 4 oz. weight. 100 sq. in. wing area. 4 oz. weight. 100 sq. in. wing area.

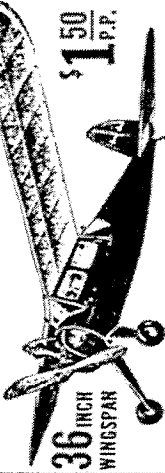
**33" (4 1/2 oz.) WAHOO \$1.00**

The supreme in small, high speed, great performance contest design. 33" span, 25" long, 4 1/2 oz. weight, 100 sq. in. wing area, 4 oz. weight, 100 sq. in. wing area.



It's "Polk's for Power Plants"

**BUCCANEER "36"**



36 INCH WINGSPAN  
\$1.50  
1 P.P.

First of Garami's Class 'A' Models. Very close to the 36" and 36" span. 36" span, 36" long, 36" weight, 36" wing area, 36" weight, 36" wing area.



\$2.95

**THE SKYROCKET**

DESIGNED BY IRON SHULMAN, THE 1940 NATIONAL CLASS "A" CHAMPION



\$2.25



Wow! What a Climber!

The newest departure in gas models CLEVELAND IT'SY-BITSY. The new line of models designed to be removed from the fuselage without the use of tools. The most popular of the new line of models designed to be removed from the fuselage without the use of tools.



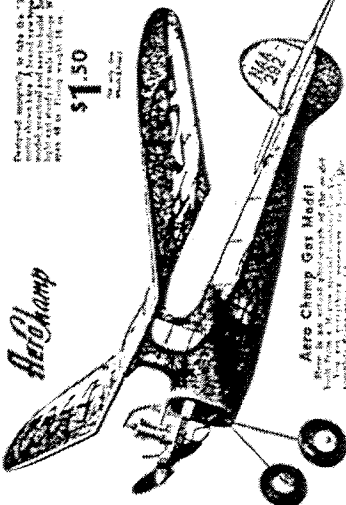
**AMERICAN ACE**

The sensation caused by the American Ace made so realistic that it would be popular in the eyes of small gas models. Faithfully reproduces the "Ace" carried in the eyes of small gas models. Faithfully reproduces the "Ace" carried in the eyes of small gas models.



**MUSKETEER "42"**

32" WINGSPAN FOR CLASS "A" MOTORS. There is the only gas model you ever built. We have perfected it to a real degree. It is the most successful gas model ever built. It is the most successful gas model ever built.



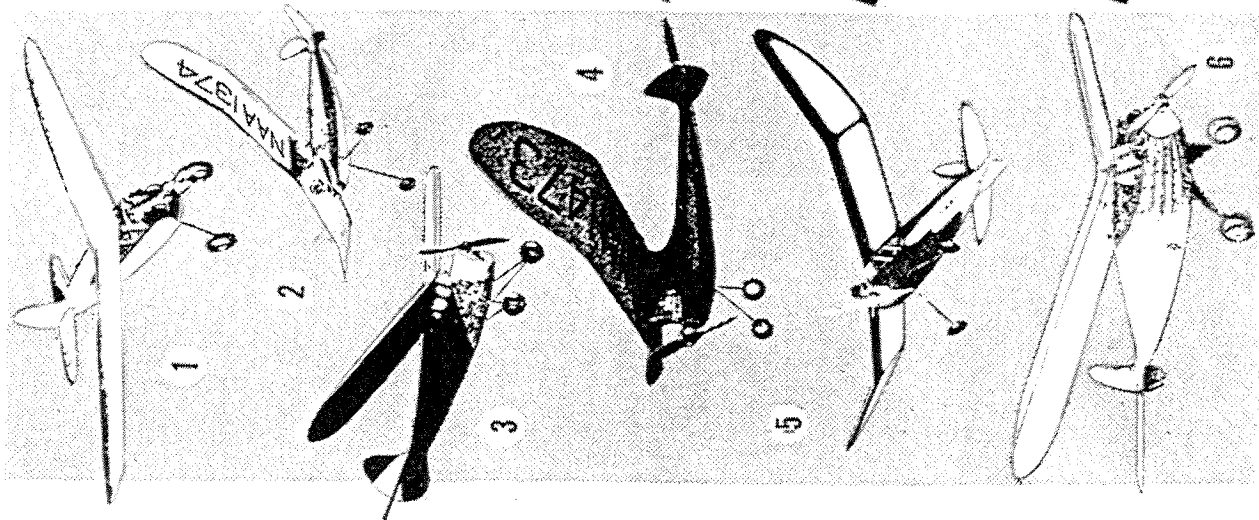
**Aero Champ Gas Model**

36" span, 36" long, 36" weight, 36" wing area, 36" weight, 36" wing area.

It's "Polk's for Power Plants"



**Polk's**  
MOBILE  
CRAY  
HOBBIES  
CLASS 'B' Planes



**BRIGADIER** \$2.95  
For the AIR YOUTH of AMERICA  
58" WINGSPAN

**D**

**MOLECULE**

The MOLECULE helps you understand the Class A-123. It's out of sight, it's out of mind. Designed by Team Science, it's the most effective way to get the job done. It's the only way to get the job done.

**\$1.95**

Class A-123  
P&A, Springfield, MA  
01101-1234

"STARLING" CLASS "A" GAS MODEL  
WINGSPAN—48" WT. WITH MOTOR 13½ LB.  
LENGTH OVERALL 27½" WING AREA—116  
The wing ribs, tail parts, fuselage sides and tail-  
fins are all the cut-fetched propeller, full size  
ribbed streamlined hollow wood.

other items, like, less the motor

**"Soaring Eagle"**

Wing Span	.....48 in.	less
Actual Wing Area	.....215 sq. in.	speed
Planing Surface	.....250 sq. in.	plant
Parasail Length	.....25 ft.	
Parasail Area	.....176 sq. ft.	
Project Work	.....\$14 to \$18 an hour.	

**\$295**



It's "Path's for Power Plants"

1

**Musketeer "54"**

The newest Modeler that sets a new standard for performance in its class. Much thinking put into the next time you want climb and racing this is your Model! Complete kit with colored figures. Weighs 75 gr. **\$3.50**

Complete ready to fly.

2

**Comet Mercury**

Winograd Q100 Wing Area: 21 in. Overall Length: 11 in. Power Band: Wing Area: 1 sq. ft. Key Class: 2 Meters. Total Weight: 18 oz. Climb: 1870 ft. per min. Wing Loading: 187.0 lb. per sq. ft. For first h. **\$3.50**

Complete kit

3

**Bay Ridge Mikoyan**

**RAY RIDGE MIKE** - a winner in the RAY Mikoyan and also with 100% performance. We get this model for just \$1.19. A Class B with 46" wingspan, weighs 34.5 grams. Total fuel tank 1.5 cc. Speed 1800 ft. per min. Total weight 18.5 gr. **\$1.19**

Complete kit for 4th h.

4

**Ranger**

Finally a Class B model, holding the National "Open" record, it can also be flown as a Class A with a smaller motor. Span, 46 inches. Wing area, 325 square inches. Weight, ready to fly, 18 1/2 ounces. Price only **\$1.95**

5

**Coronet**

CLASS "A" or "B"

- Wingspan-46 1/4"
- Overall Length-10
- Wing Area-300 sq. in.

**\$2.50**

6

**Westwind**

For Class B or Small Class C

Unbeaten the B model, the small Model, sells for only \$1.95. As try our model you will find it is a top performer. From aluminum and the addition that has flown like an eagle across contest fields from its first flight and has won 1st place in 100 ft. class. **\$3.95**

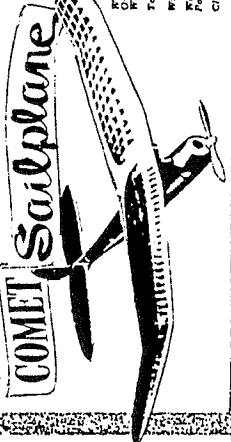


# Class 'B' Ships

*It's "Polk's for Power Plants"*



# MODEL CRAFT HOBBIES Class 'C' Ships



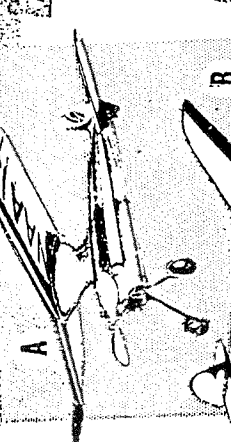
**COMET Sailplane** \$6.75

Wingspan 78" 25" 1/2  
 Overall Length 35" 1/2  
 Total Weight (with motor) 3 lbs.  
 Wing Loading 60 sq. in. per sq. ft.  
 Wing Area 100 sq. in.  
 Motor 1/2 H.P.  
 Climb 1600 ft. per min.



**PACER-C** \$4.95

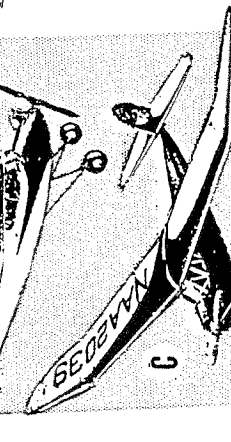
The champion 1st model at 1911 winner of the Class C race crowd at the Nationals with the highest time at the 1st trials.



**The COMET ZIPPER** \$4.50

Specifications

Wingspan	34"	Wing Loading	8.7 sq. ft. per sq. ft.
Overall Length	34 1/2"	Wing Area	34 1/2 sq. ft.
Wing Area	144 sq. ft. (493 sq. in.)	Power	1/2 H.P. or 1/4 H.P.
Total Weight (with motor)	30 oz.	Climb	2000 ft. per min.



**THERMAL MAGNET, Class C**

six-footer, has won fame from coast to coast. For sheer leanness, outstanding durability and value plus, build this Bay Ridge put former. Standard Kit, plenty of the most complete available, spare at \$1.95



**COMMODORE** GAS MODEL

Wingspan 50" 1/2  
 Overall Length 30" 1/2  
 Total Weight (with motor and propeller) 3 1/2 lbs.  
 Wing Area 100 sq. in.  
 Motor 1/2 H.P.  
 Climb 1600 ft. per min.

ALL KITS INCLUDE A FINISHED 14" PROPELLER

**STANDARD KIT \$6.50**

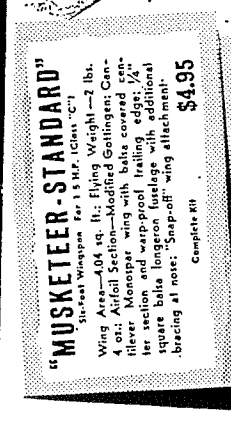


**"Soaring Eagle"**

Wing Span 6 ft. 6 in.  
 Overall Length 31 in.  
 Weight Complete 2 1/2 lbs. (average)  
 Power 1/2 H.P.  
 Climb 1000 ft. per min.

**Complete Kit \$4.95 less power**

# MODEL CRAFT HOBBIES Class 'C' Planes

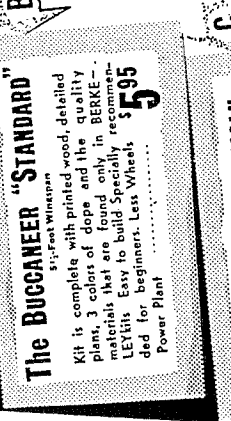


**"MUSKETEER-STANDARD"**

51-foot Wingspan for 1 1/2 H.P. (Class 'C')

Wing Area—104 sq. ft.; Flying Weight—2 lbs. 4 oz.; Airfoil Section—Modified Göttingen; Can-fliver; Monoplane wing with built-in ailerons; section and war-proof trailing edge; additional square built-in longeron fuselage attachment; bracing at nose; Snap-off wing attachment.

**Complete Kit \$4.95**

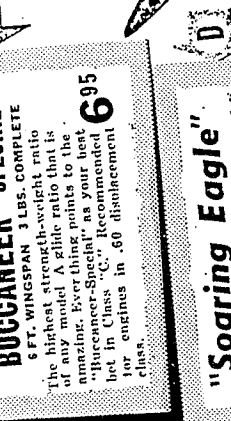


**The BUCCANEER "STANDARD"**

51-foot Wingspan

Kit is complete with printed wood, detailed plans, 3 colors of dope and the quality materials that are found only in BERVE-LEVEs. Easy to build. Specially recommended for beginners. Less Wheels.

**Power Plant \$5.95**

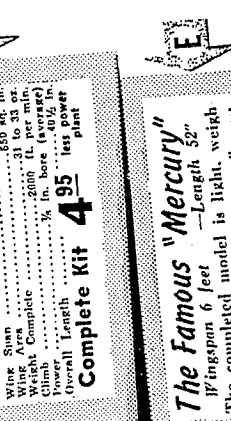


**BUCCANEER "SPECIAL"**

6 FT. WINGSPAN 3 LBS. COMPLETE

The highest strength-weight ratio of any model. A glider ratio that is amazing. Ever thing point your best "Buccaneer-Special" as you intend to bet in Class "C". Recommended for engines in .60 displacement class.

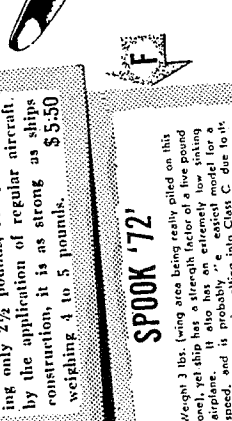
**Complete Kit \$4.95 less power**



**"Soaring Eagle"**

Wing Span 6 ft. 6 in.  
 Overall Length 31 in.  
 Weight Complete 2 1/2 lbs. (average)  
 Power 1/2 H.P.  
 Climb 1000 ft. per min.

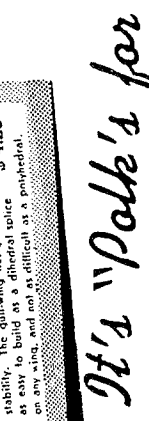
**Complete Kit \$4.95 less power**



**The Famous "Mercury"**

Wingspan 6 feet —Length 52"

The completed model is light, weighing only 2 1/2 pounds, ready-to-fly, yet, by the application of regular aircraft construction, it is as strong as ships weighing 4 to 5 pounds.



**SPOOK '72**

Weight 3 lbs. (wing area being really piled on this one), yet ship has a strength factor of a five pound airplane. It is probably the easiest model to build, and it probably "e" easiest model to fly. The Spook '72 is a real "C" class ship. The Spook '72 is a real "C" class ship. The Spook '72 is a real "C" class ship.

**"B" \$1.95**

It's "Polk's for Power Plants"

It's "Polk's for Power Plants"



**Model Craft  
POLK'S  
HOBBIES**

**This and that**

**Model Craft  
POLK'S  
HOBBIES**

**This and that**

### Six-Foot Wingspan

**For 1/6 to 1/4 H. P. Motors**

56.95

**"CUSTOM" CAVALIER**  
9-Foot Wingspan  
67" Overall Length  
**\$1500**  
Less Wheels and  
Power Plant

Less Wheels and Power Plant

# The Commander

**Complete Kit**  
**\$ 550**

## The SUPER BUGCANEER

**7½-Foot Wingspan—  
—For 1/6 to 1/3 H. P. Motors**

Less  
Wheels  
and  
Power  
steering

# CAVALIER - "60"

**\$5.95**

### Five-Foot Wingspan

It's "Poke's for Power Plants"

# X-ACTO Detachable Blade Knife

The new X-ACTO Detachable Blade Knife is sturdy, all metal, pencil-shaped, streamlined . . . well-balanced, easy to handle, quick-cutting. No other knife equals X-ACTO's standard of sharpness for most delicate\* to heaviest-duty cutting requirements. X-ACTO does the job right — the first time.

**IRVING POKER, Famous Model expert 'The best model knife for airplane and boat**

## X-ACTO KNIVES AND SETS

No. 61. X-ACTO DOUBLE KNIFE SET 2 Holes Per Inch 12 Assorted Blades each \$2.00  
No. 62. Same as ab. ve with Curved Blades each \$2.00

No. 12. X-ACTO KNIFE CHEST 1 X-ACTO Knife has blades 12 metal blades in handy wooden Kalle Chest, practical design, fetch 11.50 but is its own convenient and easy to take out and ready to use. each \$3.50

No. 13. X-ACTO KNIFE CHEST 1 X-ACTO Knife has blades 12 metal blades in handy wooden Kalle Chest, practical design, fetch 11.50 but is its own convenient and easy to take out and ready to use. each \$3.50

## HURLEMAN BIG CARBURETOR

This popular carburetor is made integral with a 1 1/4 oz. capacity metal tank. It is easily taken apart for cleaning and was designed for large bore motors and mid-gal racers. The Hurlman Carburetor fits all makes of motors and increases R.P.M. as much as 1500. Adaptable to upright or inverted motors. List price, \$3.50.

## HURLEMAN MEDIUM CARBURETOR

Suitable for average size motors. The integral metal tank has a  $\frac{3}{4}$  oz. capacity. Fits all make motors and is easily taken apart for cleaning. Will also increase R.P.M. 1500. Adaptable to upright or inverted motors. List price, \$3.00.

## HURLEMAN GLASS CARBURETOR

Designed for small motors. The  $\frac{1}{4}$  oz. glass tank is made integral with carburetor. Can also be taken apart for cleaning, is adaptable to upright or inverted motors and increases R.P.M. 1500. Fits all make motors. List price, \$2.50.

## HURLEMAN TIMER

A sturdy and reliable timer which can be adapted to any make motor, including all model Brown motors and the new Brownie-E. Equipped with adjustable tungsten breaker points. This timer is especially fine as replacement for defective timers. List price, \$2.50.

# HOBBIES!

Fortunate indeed is the boy, youth or man who develops a hobby!

To the boy, it is a source of character training that makes him a better man and a better citizen. To the youth, it is a source of inspiration, often leading to great things. To the man, it is a fascinating, thrilling way of occupying spare time usefully and instructively.

**MISS TINY.** For the Class A modeler who wants beauty, loots, and real airplane design. The perfect aviator's model—and the fastest selling model of its type. Plans only 25c **\$2.95**

**MISS TINY.** For the Class A modeler who wants beauty, tools, and real airplane design, the perfect aviator's model—and the fastest selling model of its type. Plans only 25c **\$2.95**

"Pop-Flapper"

\$5.00

Class 'B' - 42 inch Wington - 300 square inches of wing area - wing loading capacity. 9-1/2 ounces per square foot - 20 ounces - Ready-to-fly weight.....

Racheteer "A"

***For Class A or B Competition***

562

Price Comparison

Span	10 <sup>10</sup>
Overall length	3 <sup>10</sup>
Weight with Motor	18 <sup>10</sup> lb
Area	320 sq in
Wing loading	808.3 g/ft

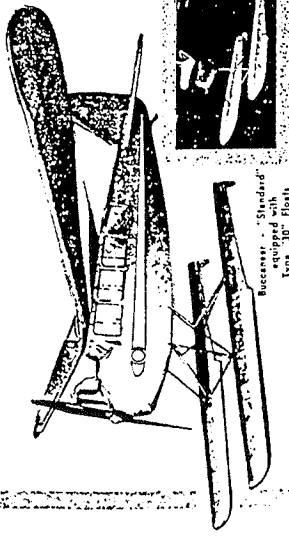
But even complete with weatherproofing required to build this paper airplane, which did 42 minutes of the 1918

calls requested to build this press room  
boots which did 25 minutes of the 1910

104



**GAS MODEL FLOATS**



**"GONDOLIER"**  
SEA PLANE FLOATS

Deluxe Float Kit includes the complete materials to build a set of floats for the "Standard" and "Buccaneer" biplanes. The floats are made of aluminum and are designed to fit the planes perfectly. They are also equipped with a special hinge mechanism for easy attachment and detachment. The kit includes all the necessary hardware and instructions for assembly.

- DELUXE KITS**
- TYPE "20" For models from 48" to 60" wingspan. Overall length—23". Recommended for the "Buccaneer 48". **\$195**
  - TYPE "30" For models from 60" to 100" wingspan. Overall length—30". Recommended for the "Buccaneer 60" and "Standard". **\$295**
  - TYPE "40" For models from 100" to 120" wingspan. Overall length—40". Recommended for the "Buccaneer 100" and "Standard". **\$495**

**G'LINE FLYING**



**HEDGE HOPPING**  
the A-J FIREBALL?

U-Control makes and speed more possible. The A-J Fireball will speed from 0 to 60 m.p.h. and the A-J Speed Racer included with each assembly set enables you to compete with the best in your class. The Fireball is designed for class "B" power, the Fireball "C" motors. For J power, the Fireball will fly and race an A-J Fireball.

**READY TO FLY IN ONE DAY**  
COMPLETE SET  
ASSEMBLY SET  
**\$725**  
LESS MOTOR  
BABY SHARK SUPER SPEEDSTER



COMPLETE SET  
195  
195

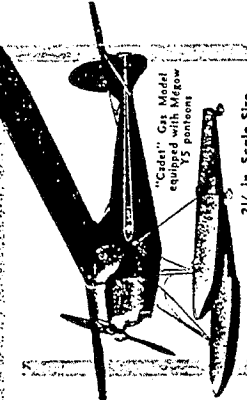


DELUXE  
495  
495

1 1/2 In. Scale Size

For models from 48" to 60" wingspan. The floats are made of aluminum and are designed to fit the planes perfectly. They are also equipped with a special hinge mechanism for easy attachment and detachment. The kit includes all the necessary hardware and instructions for assembly.

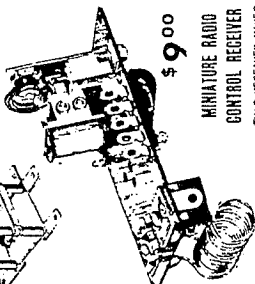
**Kit No. Y5 Complete Kit 50c**



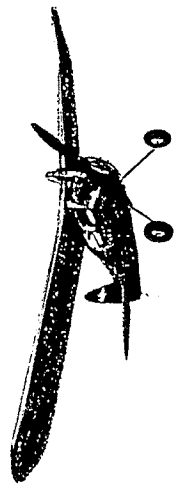
"Cody" Gas Model  
equipped with Meigs  
75 pants

**RADIO CONTROL EQUIPMENT**

NO. 1345 MOTOR AND GEAR  
TRAIN ASSEMBLY COMPLETE  
WITH NO. 1345 TRAVEL  
SWITCH, 1345 CENTRALIZING SWITCH  
PRICE, COMPLETE, \$14.50



**\$9.00**  
MINIATURE RADIO  
CONTROL RECEIVER  
THIS RECEIVER MAKES  
POSSIBLE A COMPLETE  
INSTALLATION WEIGH-  
ING UNDER ONE POUND  
A valuable flying com-  
pact and valuable indoor  
design and a must...



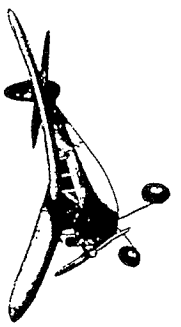
**The "BUCCANEER-48"**  
48" Wingspan

For engines up to 1/4 h.p.  
The newest model for small-bore engines from the Polk's Model Craft line. This model is designed for construction, it has more strength for its weight than any model ever designed. Add to this, the nearly four years and you have the first perfect small-bore model. The kit has the completeness of a full-size model. It includes all the necessary parts, primed wooden parts, cement, colored duraluminum wire and fastener equipment. Everything to build the model as pictured except wheels and motor.

**\$350**

**FLASH!!**

"SHARPE" CHAM-  
BERLAIN. This model is  
designed for construction,  
it has more strength for its  
weight than any model ever  
designed. Add to this, the  
nearly four years and you  
have the first perfect small-  
bore model. The kit has the  
completeness of a full-size  
model. It includes all the  
necessary parts, primed wood-  
en parts, cement, colored du-  
raluminum wire and fastener  
equipment. Everything to build  
the model as pictured except  
wheels and motor.



**Gordon Murray's**  
*Adaptation of his*  
**TOPPER 'A'**

**\$350**

DELUXE KIT  
Buccaneer  
48" wingspan

**BOOKS**

**"BUILDING AND FLYING MODEL AIRPLANES"**  
A handbook covering all phases of model airplane construction, and technique of operation. — 200 pages. **\$2.50**

**"YOUTH IN AVIATION"**  
A program manual for leaders and control di-  
rectors. **\$1.50**

**"MODEL AIRPLANE CONTESTS"**  
Content director guide and official rules. 1.35

**"HOW TO GET A JOB IN AVIATION"**  
By Chas. E. Mallory, Personnel Director of  
Curtis-Wright Corporation, lift pilot and army  
requirements. 96 pages. **25c**

**ENGINE REPLACEMENT PARTS**  
We carry a complete line of engine replace-  
ment parts for all engines which we stock.  
Prices are low and quality is high. Order from  
the parts list included with  
your motor.

**NEW SPRAYER**  
FOR CLEAN, UNIFORM RESULTS!  
**10c**



**SUPPORT**  
**A.M.A. FLY SAFELY**  
**PROGRAM**



# WANTED --- IDEAS

By Albert L. Lewis

**N**OW IS THE TIME FOR ALL GOOD MODELERS TO COME TO THE AID OF THEIR HOBBY.

No, gentlemen, that is not an exercise in typing. It's a call to action. You are familiar with the situation, we are sure. The airplane model industry is faced with some very serious problems these days. If you want to get gloomy, you could say that the manufacturers are hard up. Hard up for business? No, it's never been better. They're hard up for materials. War production plants are using the metals that formerly went into your model motors. Rubber is something to muse about as you remember the skein left behind at that big contest you attended before we became Japcrackers.

Balsa is a light wood which grows in Central and South America. It goes into life rafts; once upon a time it went into model kits. Music or "piano" wire was something found in model-plane construction kits, too; but we're at war and steel of all kinds is an extremely essential item.

What about adhesives (known as cement and dope to Kennett Fly, that ardent aeromodeler)? Getting scarce, son. And Ken's brother, Willet, points out that manufacturers of model kits have difficulty getting pine and basswood.

That's where the model industry stands today. Air-minded young America is demonstrating more interest than ever before in model-making. Individual enthusiasts call for kits and materials. Schools and teachers demand kits with an educational slant. You're asking for kits. I'm asking for kits. Everybody's yelling: "We want kits!"

"So what?" you ask. "What skin off my back is all this? Am I supposed to break down and weep because the manufacturers are hard up for materials or are unable to develop substitutes which are not on the restricted lists of critical materials reserved for America's all-out war effort?"

This situation is of special interest to every modeler. The American model industry belongs to the modeler; the manufacturer bows to his or her every whim. Not only must the manufacturer maintain his own research staff, but he is also obliged to keep up with the progress of hundreds of thousands of individual research leaders (you may call them "contest fliers" if you wish) who get more ideas and try out more gadgets in a single year than all the manufacturers together could dream up

in a thousand years. If you're a dyed-in-the-wool modelmaniac, the problem of the model industry is your problem as well.

Model manufacturers are always intensely appreciative for any suggestion. Many innovations have already been introduced. A few of those mentioned here may start you off on the track to figuring out how bigger and better models can be built from noncritical and inexpensive materials. Don't forget the motors, please! Some means of propulsion is quite necessary. Will the young man who invents a perpetual motion machine please step this way?

Among the first to see the writing on the wall was Paul K. Guillow of Wakefield, Mass. Mr. G.'s kits are known to millions of chain and specialty-store customers throughout North America. Early last summer, Mr. Guillow began to substitute hardwoods and cardboard for balsa; he offered to make his findings and pat-

ents on the substitutes available to other manufacturers through the Academy of Model Aeronautics. Before Mr. Guillow's offer could be publicized, the War Production Board froze the stores of balsawood in this country; the others had to follow his lead.

Joe Ott is another well-known designer and manufacturer who utilized cardboard formers. His formers not only save balsa, but they also aid the builder in lining up the fuselage and are thus of great help to novice modelers.

An interesting development of the solid-model field is the introduction of laminated (ply) wood for fuselage work. The Wright-Dayton concern has popularized this under their "Ply-Wright" name. Other manufacturers are busily working to develop similar conservation and substitution measures and many novel ideas are expected to see the light during the coming months.

But the model builder himself is truly the storehouse of ideas when it comes to improvising, substituting and improving. Watch a good contest flier for evidence. If he cracks up his model, he can generally rebuild it with glue, matchsticks, twigs, newspaper and a few stalks of grass. Knowing this and believing the American aeromodeler to be one of the most ingenious fellows in the world, the editors of Air Trails have determined to open its columns even more than they have heretofore to suggestions from model fliers and leaders concerning new ideas in replacement items for the model industry.

You've undoubtedly heard of the National Inventors' Council—headquarters in Washington, D. C.—which is set up by the government to act as clearinghouse for ideas and inventions which may be of aid to the war effort. The editorial board of this magazine will act as a similar clearinghouse for all your suggestions to "save" the model industry; special mention will be given to those which are of merit. Each worthwhile suggestion will be presented immediately to officials of the Model Industry Association for dissemination to all manufacturers. Perhaps you have just the idea the industry needs; perhaps you know of some material not being utilized properly or at all. If you do, here's a chance to do your part and get public recognition for it, too.

So let's go, guys! Give with the old Yankee ingenuity. Among others, suggestions are needed for: —

**Motive power.** Most metals used for motors are on the can't-be-had-for-love-or-money list. Rubber is unobtainable. What to use? Compressed air? Would such tanks be too heavy? Are air-run motors efficient? Could they be built from castoff materials? How about clockwork? Don't forget the weight factor. What about using tin cans for dry-ice storage tanks? Fly power? Flea power? Rocket power? Get some steam up on this, please.

**Framework materials.** Balsa is out for the duration. Have you tried holly wood? Or hardening corrugated cardboard? Maybe there's some way to strengthen wheat stalks. Soda straws, perhaps? Plaster of Paris—wait a minute, that's going a little too far! Still, it might suggest something to a modeler who will turn up with just the material needed for formers and spars.

**Adhesives.** Parts have to be glued together. Needed is something light,

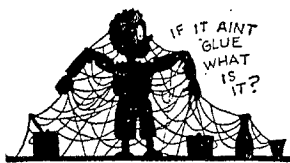
strong, quick-drying if possible. Stir some flour and water with a little magic.

**Cover materials.** Jap (hiss!) tissue is gone for a long, long time, of course, and American tissue isn't flooding any warehouses. The acetate covering materials are no more. What's new in your club along these lines? Some kind of fabric? A new type of microfilm made from cough sirup? Now there's a thought. . . .

Don't think we're joking; desperate times, desperate measures, and all that sort of thing, you know. Just because our imagination runs riot it doesn't mean that we're not working overtime to help our designers and merchandisers. We're racking our brains and we hope you are. You might surprise yourself when you get on the ball. Test ideas first, quickly and thoroughly. Then get them in to the editors of this magazine. And keep an eye in this direction to see what the other fellow has dreamed up.



We're serious! Small motor and batteries could be used.



Covering: old silk stockings, onion skin, rayon, et cetera.



How about rocket power? Ask your physics teacher about it.

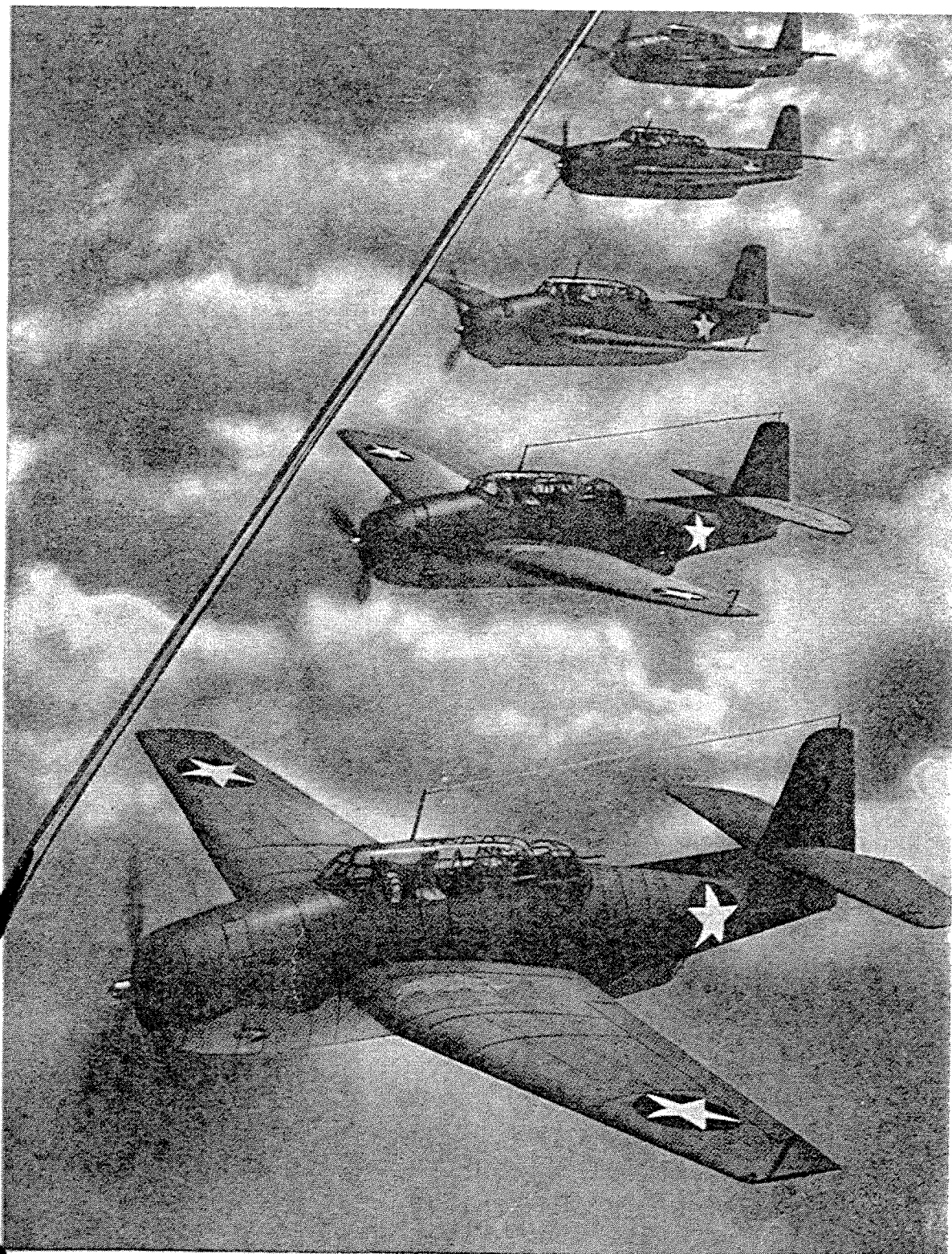


Adhesives: critical! Satisfactory substitutes are badly required.



Ornithopters could be made with scrap-salvaged clockwork.





1943

OFFICIAL U. S. NAVY PHOTOGRAPH

# COMET

MODEL AIRPLANE KITS



PRICE

**5<sup>c</sup>**

CAT. NO. 43A









## May I Introduce Myself— I Am the New Comet Catalog

**W**E'RE going to get to know each other pretty well in the months to come, and so I'd like to tell you something about myself.

First of all, I bring you not only a large group of popular and well-known Comet kits and supplies, but an entirely new series of 25c flying models which feature Comet's revolutionary new Speed-O-Matic construction. You can read all about them on Pages 4 and 5. You will find also a very complete group of Comet Solid Identification Model kits, on Pages 16 and 17—and that brings me to one of my most interesting features.

Up in the corners of various pages you will find authentic 3-view silhouettes of both Allied and enemy planes—the kind of views that you need to study in order to be able to "spot" these planes in the sky. Right below these silhouettes, you will find interesting information about these planes, plus detailed descriptions which further aid you to identify them.

For the full list of the models I contain, turn to the General Index on Page 32. Please remember that present conditions make it difficult to maintain complete stocks at all times, and we may occasionally be out of some of the items. In that case, won't you please be patient?

And now—go through your new Comet Catalog—page by page—and **HAPPY LANDINGS.**

### RETAIL ORDERING INSTRUCTIONS

Go to your Comet dealer *first* or send your order to the nearest Comet Distributor. (See listing of Comet Distributors in Model Airplane News.) If you cannot locate a Comet dealer or distributor send your order direct and *we will forward it to the nearest Comet Distributor.*

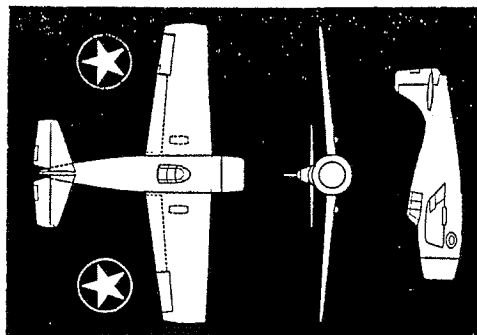
No orders under \$1.00 will be accepted.

## COMET MODEL AIRPLANE & SUPPLY CO.

129 W. 29th St., Dept. 43A, Chicago, Illinois.

559 Sixth Avenue, New York, N. Y.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE.



★★★

#### GRUMMAN WILDCAT F4F-4

This single-place U. S. Navy fighter is built for service with the airplane carriers. It is powered by a radial engine. Span 38', Length 28' 9 1/2" (to tip of prop hub).

#### IDENTIFICATION

Mid-wing monoplane with wings tapered to square-cut tips. Short round-tapering fuselage. Tail pieces have tapered appearance. Small air scoop beneath each wing.

See Pages 9 and 16



**A** BUSINESS is more than just a factory filled with machinery. It's the men and women who produce the merchandise, and the men who direct the policies. Above all, it's the spirit of a business that contributes most to its success. At Comet, it's a spirit that runs through the entire organization from designing department to shipping room, a spirit made up of loyalty, willingness to serve and pride in workmanship.

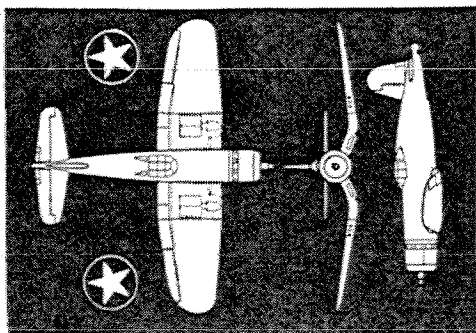
In these war times, that spirit is further enhanced by the thought that much of what we are doing here at Comet aids our country's war effort, and that the model airplane kits we produce today may help to produce the pilots and aeronautical engineers of tomorrow.



COMET

# 10¢ FLYING MODELS

16 AND 20 INCH WING SPANS



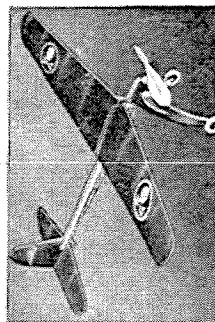
★★★

## VOUGHT CORSAIR F4U-1

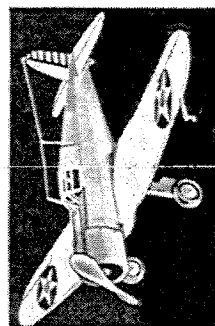
The new U. S. Navy "Corsair" has been called the world's fastest shipboard airplane. It is a single-place fighter powered by a 2000 h.p. double-banked, 18 cylinder, air-cooled radial engine. The wing folds for compact carrier storage. Span 40' 11 1/2". Length 33' 4 1/2".

### IDENTIFICATION

The inverted-gull wing is the outstanding characteristic. Wide chord center section, slightly tapering outer panels, forward-swept rounded tips, large propeller. Slim oval fuselage with cockpit nearly amidship. Fin-rudder is partly forward of the tapered tailplane.



No. A1 Phantom Flash R.O.C.

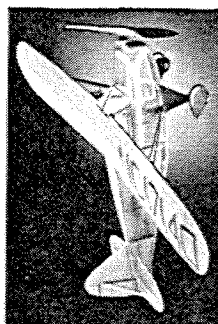


No. A5 Vought Pursuit

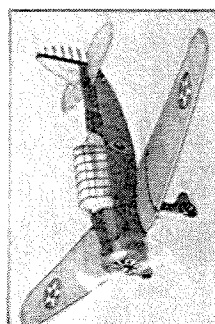
\*30' Wingspan



No. A17 Art Chester Racer



No. A28 Rearwin Speedster



\*No. A32 North American



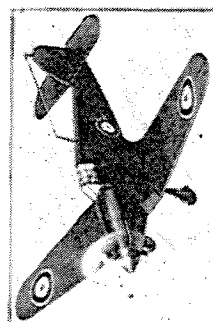
\*No. A33 Taylorcraft



\*No. A34 Spartan Fighter



\*No. A35 Vultee Attack

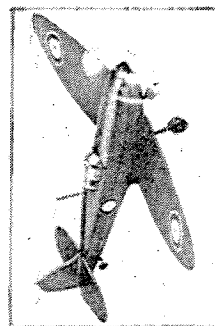


No. A36 Hawker Hurricane

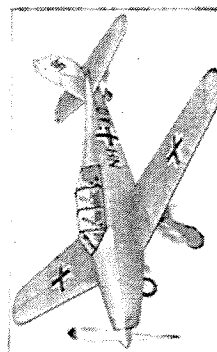


No. A37 Messerschmitt

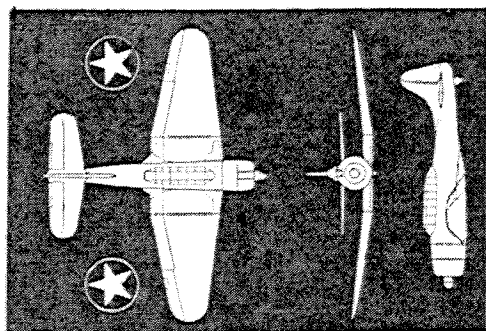
\*20' Wing Span



No. A38 Supermarine Spitfire



No. A39 German Arado



★★★

## DOUGLAS DAUNTLESS SBD-3

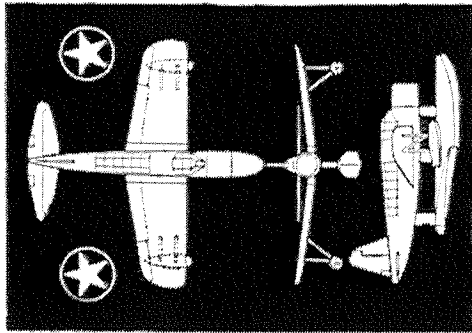
This two-place scout bomber is one of the toughest in the service. Powered by radial "Cyclone" engine. This type has also been adopted by the U. S. Army and is listed as their A-24. Span 41' 6 1/2". Length 32' 1 1/4".

### IDENTIFICATION

Low-wing monoplane with leading and trailing edges tapering to semi-circular tips. Dihedral in outer panels. Fuel tanks much reduced in side elevation aft of wing. Tapered tail pieces, both with rounded tips.

See Page 18





#### KIT NO. E1 VOUGHT KINGFISHER OS2U-1

This is a two-place scout and observation plane equipped with single center pontoon and wing floats or with fixed two-wheel landing gear. Has a "Waagh" engine. Span 35' 10 1/2", Length 33' 7 1/2".

#### IDENTIFICATION

Low mid-wing monoplane with trailing edge of wing swept forward. Large center pontoon on three web struts. Two wing floats on braced "N" struts. Long, interrupted "greenhouse." Tapering tail surfaces with round tips.

See Page 15

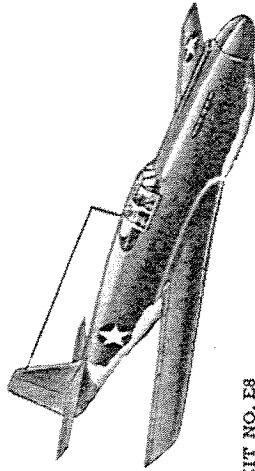
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COMET

## 25¢ FLYING MODELS

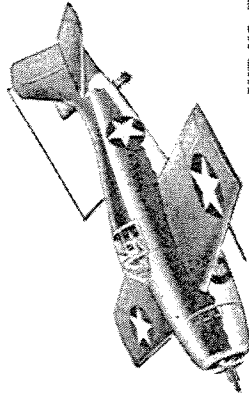
WITH \*SPEED-O-MATIC CONSTRUCTION

18 INCH WING SPAN



#### KIT NO. E8 NORTH AMERICAN MUSTANG P-51

The "Mustang" is a low altitude fighter used for reconnaissance duties and ground strafing. It has been getting high praise notices from the armed forces. Speed in excess of 400 m.p.h. Mounts six .50 caliber machine guns, two in the nose and four in the wings.



#### KIT NO. E2 GRUMMAN WILDCAT F4F-4

The Grumman "Wildcat," called the "Marek" by the British, is a single place all-weather plane—a very effective ship-based fighter. Wings fold back for compact storage on carriers. Armament consists of two .50 caliber machine guns in the wings.

\*\*\*

#### KIT NO. E3 GRUMMAN AVENGER TBF-1

The standard carrier-based torpedo plane of our Navy. It proved its ability at the Battle of Midway where the daps did not recognize it as a torpedo carrier because it carried its "tin fish" inside. Too late the enemy learned that the Avenger justified its name. Span 51' 2", Length 40' 11 1/2".

#### IDENTIFICATION

Mid-low wing with square center section; tapering outer panels at dihedral; squarish tips. Oval-shaped cowl, deep bodied fuselage with pilot riding high and forward in a long greenhouse with aft turret. Gun emplacement below. Wide tail with forward-swept curved tips. High tapering rudder.



#### \*SPEED-O-MATIC FEATURES

COMPLETELY CUT-OUT FUSELAGE BULKHEADS

★

EASY TO BUILD SCALE PROPELLERS

★

NEW METHOD OF FLYING MODEL

★

AERONAUTICAL FACTS PRINTED ON PLAN

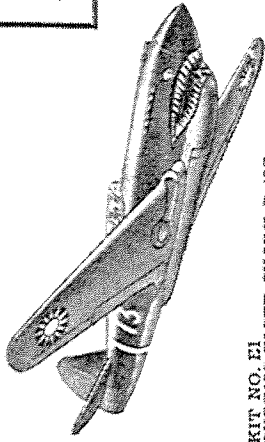


#### \*SPEED-O-MATIC FEATURES

NEW, EASY FUSELAGE CONSTRUCTION

★

POSITIVE WING AND TAIL ALIGNMENT



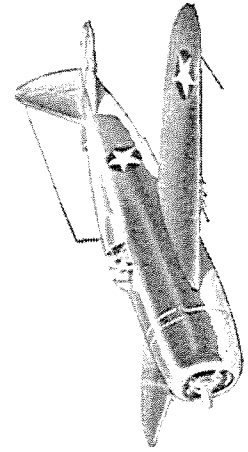
#### KIT NO. E1 CURTISS TIGER SHARK P-40C

The Curtiss "Tiger Shark," known to the British as the Tomahawk, was most of its fame with the A.V.G. (American Volunteer Group), fighting against the Japanese in Burma and China. It is powered with an Allison motor and carries six deadly machine guns.

#### KIT NO. E7 FOCKE WULF Fw-190

The Focke Wulf Fw-190 is one of Germany's latest high altitude fighters. Its engine is a 14 cylinder two-row DMW air-cooled radial. Speed is about 375 m.p.h. at 18,000 feet. Armed with four 20mm. cannon and two 7.92mm. machine guns.

\*Patent applied for. Trade mark reg. U.S. Pat. Off.

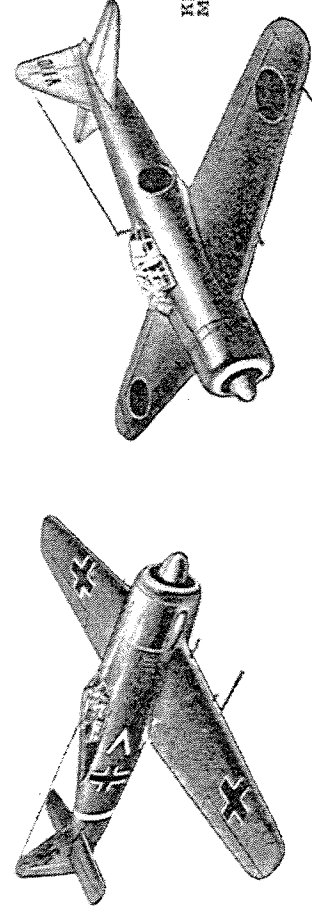


#### KIT NO. E5 REPUBLIC THUNDERBOLT P-47

The Republic "Thunderbolt" is one of the U. S. Army's latest high-altitude fighters. Ample power is supplied by a 2,000 h.p. Pratt and Whitney engine that swings a 12-foot four-bladed propeller.

#### KIT NO. E3 MITSUBISHI ZERO

The "Zero" is that highly maneuverable fighter we've heard so much about. Power is supplied by a 900 h.p. twin-row radial engine. Top speed is about 360 m.p.h. Armament is two 22mm cannons and two 7.7mm machine guns. Our fliers are "kneeling off" the Zero with ridding regularly these days.





# COMET

## 65¢ FLYING MODELS

These Comet 65c Flying Models are outstanding values. They have big wingspans ranging from 30" to 37 1/4". They have been scaled down from the actual planes and have many built-in details which give them an amazingly realistic appearance. The kits contain the finest quality materials, and large, detailed plans which are remarkably easy to follow. Build these models—you'll enjoy the building as well as the results!

★★★

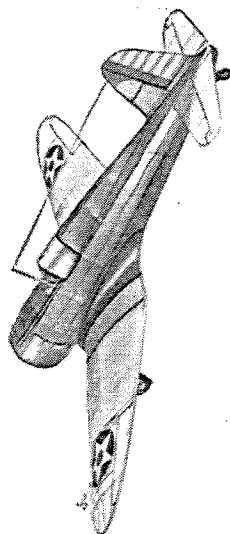
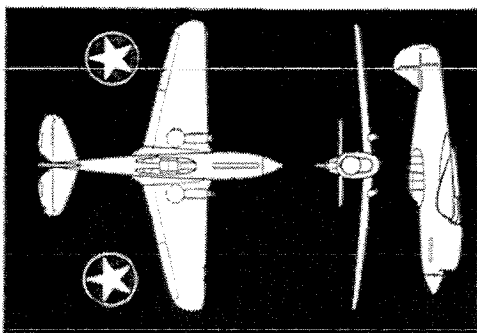
### CURTISS KITTYHAWK P-40E

A single place U. S. Army fighter powered by a liquid-cooled, in-line Allison engine. This is an improved version of the P-40B. Span 37' 4", Length 31' 9".

#### IDENTIFICATION

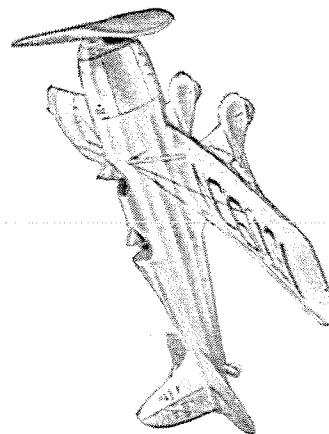
Low-wing monoplane. Very slight sweepback on leading edge of wing, trailing edge swept forward to rounded tips. Small "hines" for housing retractable landing gear struts under wings near fuselage. Long nose with row of exhausts on each side and large radiator below.

See Pages 4 and 16



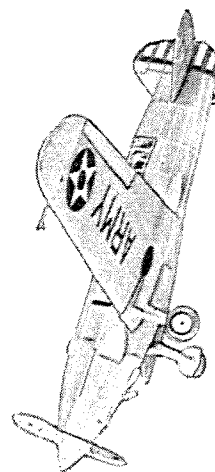
### No. L9 VOGHT FIGHTER 33 1/2 in.

Trim and compact, the Vought Fighter is a well designed plane with plenty of armament. Model has built up motor.



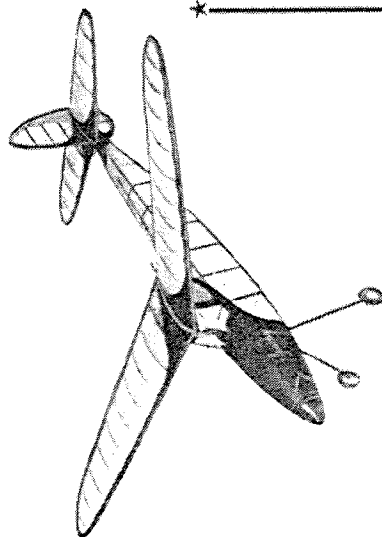
### No. L1 RYAN S-T 30 in.

The Army Air Corps is using these Ryans for primary trainers.



### No. L7 CURTISS PURSUIT 37 1/4 in.

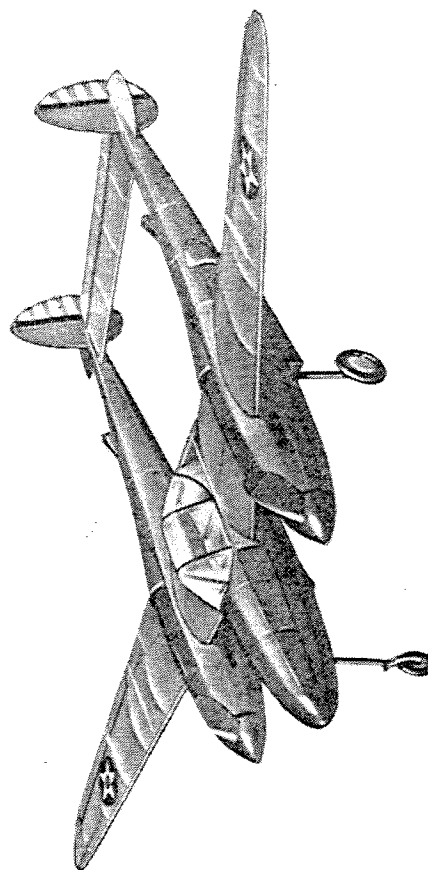
A new type of pursuit ship was introduced to the Army when the Curtiss Pursuit was put in service. Has in-line Allison motor.



### No. L10 SPARKY 32 in.

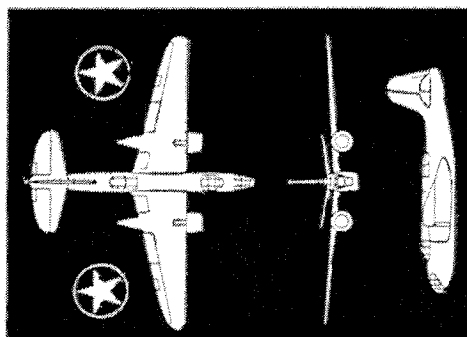
A streamlined high flying winner that combines clean lines with high performance. With careful designing and constant flying, Comet has developed a ship of fundamentally stable proportions that is simple and easy-to-build.

"Sparky" incorporates the latest methods and gadgets used by contest winners.



### No. L8 LOCKHEED LIGHTNING 37 in.

Radical in design and capable of very high speed, the Lockheed Lightning as-tounded the Army Air Corps with its performance. Flew cross-country in 7 1/4 hours.



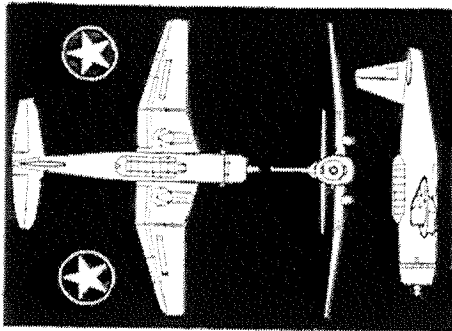
DOUGLAS BOSTON A-20A  
A high speed attack bomber of the U. S. Army with a crew of three. Powered by two "Cyclone" radial air-cooled engines. Has three wheel landing gear, one wheel folds up into rear of fuselage and one into each nacelle. Span 61' 1", Length 47' 7".

#### IDENTIFICATION

High, mid-wing monoplane with leading edges straight and trailing edges swept back to narrow rounded tips. Long fuselage with rounded nose and nacelles mounted in fuselage. Engine extending behind leading edge. Slight dihedral in wing, but no raised dihedral in stabilizer-elevator. High fin-rudder.

See Page 16





VULPEC VENETANCE A-31

A U. S. Army two-place dive-bomber. Many of these planes are in service with the R. A. F. Equipped with flaps on top and bottom of wings for reducing speed when dive-bombing. Bomb load inside of fuselage. Span 48' 0", Length 40' 0".

#### IDENTIFICATION

Low, mid-wing monoplane having wing and tail surfaces with square tips. The retractable landing gear struts house the fuselage with front of "greenhouse" slightly behind trailing edge of wing. Tapered tail surfaces with square-cut tips. High rudder tapering to flat top.

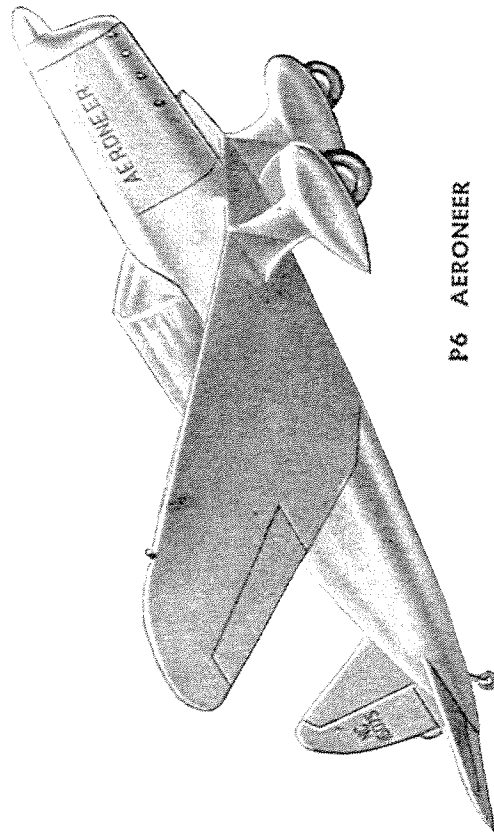
See Page 17

★★★

COMET

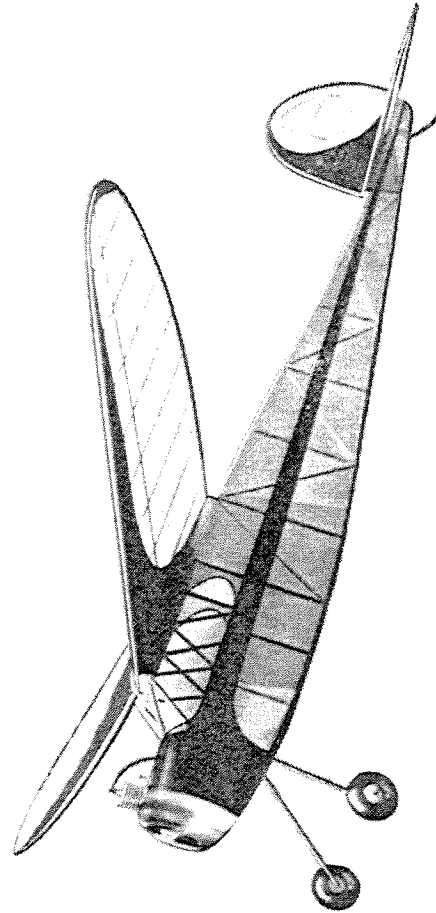
## \$1.25 MODELS

The "Aeroneer" is trim and sleek in design and is an all-metal plane. It is a two-place side-by-side low wing sport plane and is powered by an in-line inverted engine. This model contains many details which give it a realistic appearance. Just a few of these are movable controls and shock-absorbing wheels. The cabin of this model is complete down to the two seats, control stick and rudder pedals. It has a wingspan of 40" and is built on an exact scale of  $1\frac{1}{4}" = 1'0"$ . The plans furnished with this kit are clearly drawn and easy to follow. Top performance and smart appearance make this model an outstanding value.

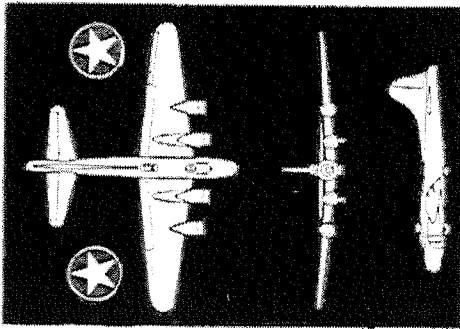


P6 AERONEER

The "Clipper Jr" is an exact scaled down copy of the famous Comet Clipper gas model, designed by Carl Goldberg. It has many outstanding features such as a 36" elliptical wing, which is detachable and comes off in case of a collision thus minimizing the amount of breakage, formed spring wire landing gear, hardwood wheels, cement, genuine decals and parts to build a dummy motor. Building the Clipper Jr. will give you the fundamentals of gas model building. Experts recommend building the Clipper Jr. before starting on your first gas model. A constantly good flyer you'll enjoy building and flying.



P5 CLIPPER JR.



BOEING FORTRESS B-17  
One of the U. S. Army's deadliest long-range heavy bombers is this "Super Flying Fortress." It is powered by four "Cyclone" radial air-cooled engines. Has a gun turret at tail and on top and bottom of fuselage. Span 103' 9 3/4". Length 73' 9 1/2".

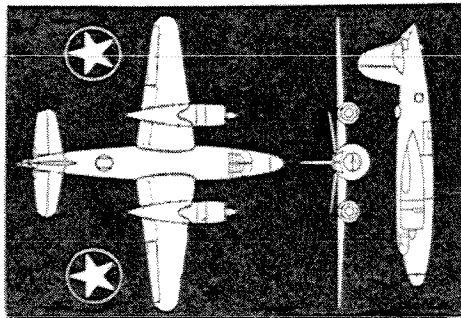
#### IDENTIFICATION

Low-wing monoplane with leading and trailing edges of wings tapered to rounded tips. Stabilizer-elevator has same general shape as wing. Fin has very long tapered leading edge, extending to center of fuselage. Engines mounted in swept-back arrangement, parallel to leading edge of wing. Streamlined fuselage with humpback.

See Page 16

★★★





#### MARTIN MARAUDER B-26

A U. S. Army medium bomber powered by two radial engines. Plane is mightily armed and carries a heavy bomb load inside body. Nose of fuselage is transparent to give bombardier a wide range of vision. Span 65'. Length 68' 2 1/4".

#### IDENTIFICATION

High, mid-wing monoplane with wing placed far back on fuselage and tapered to rounded tips. Long, round-tapering fuselage. Nacelles have tips extending beyond trailing edge of wing. Tapered stabilizer-elevator with dihedral. Large single fin-rudder.

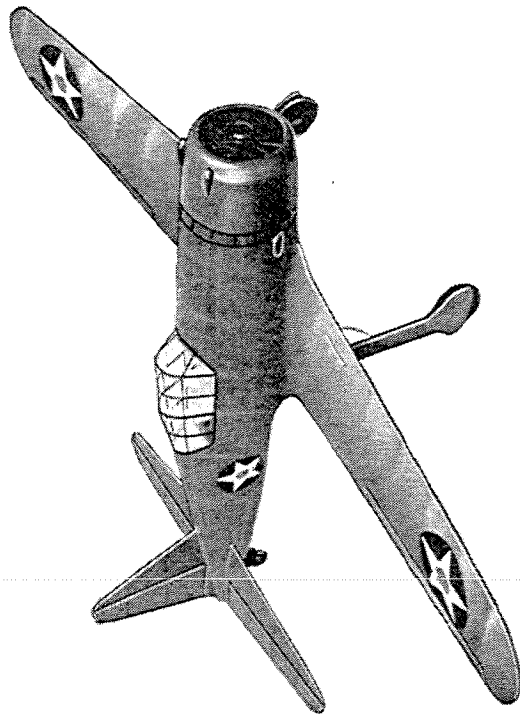
See Page 17

★★★

COMET

## \$1.95 MODEL

The "Vultee Vanguard" is one of the late pursuit-interceptor planes of the U. S. Army, and is also doing an outstanding job for the British. This model is built to exact scale—1 1/4" = 1' 0"—and has a wingspan of 43 3/4". It has a retractable landing gear, movable controls and can be built to drop miniature bombs and a parachute in flight. Kit contains complete insignia and large, easily followed plan. This is an outstanding flying scale model; build it—fly it—you'll enjoy it.

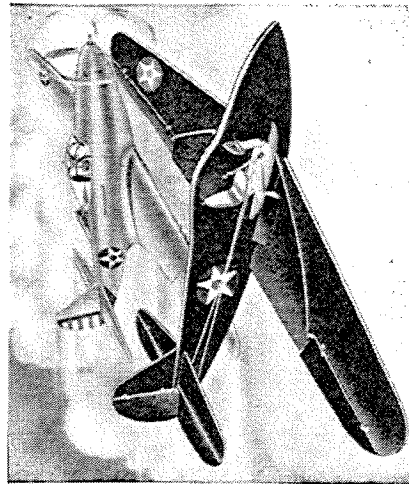


#### T2 VULTEE VANGUARD

COMET

## Air-O-Trainer

TRADE MARK REG. U. S. PAT. OFF. & CANADA



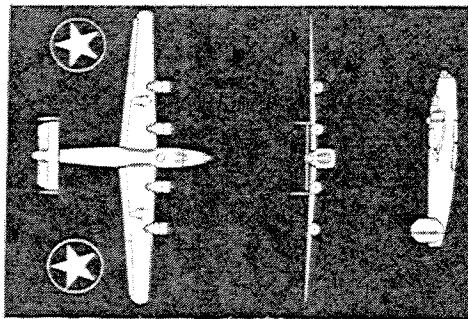
U. S. PAT. NO. D-133942 CANADIAN PAT. NO. 69-13396

What happens when you move the control stick or rudder pedals in a plane? Now you can see the answers in the Comet Air-O-Trainer! The Air-O-Trainer has movable controls that help you learn the fundamentals of flying. All parts in this unique kit are finished, including shaped wood parts, ready-bent wires, rudder pedals, joystick, control horns, etc. Model can be assembled in a short time. On the right is a page from the illustrated ground-course in flying which is supplied at no additional cost with each Air-O-Trainer.

Price complete for kit and course .....\$1.59

Also available: the Air-O-Trainer fully assembled, doped in olive drab and orange with U. S. Army insignia.

Price for assembled Air-O-Trainer and course...\$4.75



★★★

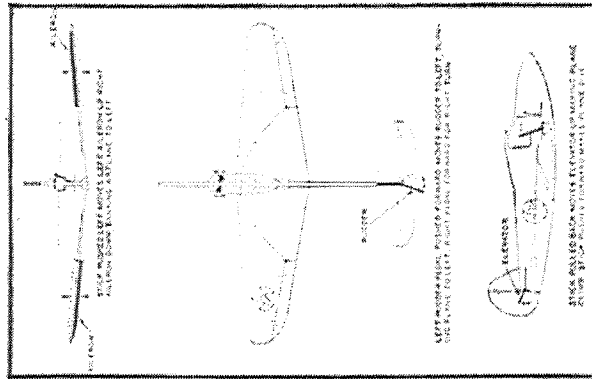
**CONSOLIDATED LIBERATOR B-24**  
One of the U. S. Army's four-engine heavy bombers. It has a high speed, long range and carries a large bomb load internally. Span 110'. Length 66'.

#### IDENTIFICATION

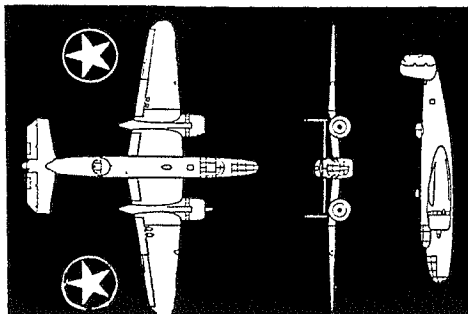
High mid-wing monoplane with narrow wing tapered to rounded tips. Deep, flat-sided fuselage. Rectangular stabilizer-elevator. Large twin fin-rudders with semi-circular tops and bottoms.

See Page 17

TYPICAL PAGE FROM BOOKLET  
FURNISHED WITH AIR-O-TRAINER







**NORTH AMERICAN MITCHELL B-25**  
The air-bombing of Tokyo by a squadron of these medium bombers led by General James Doolittle established the prominence of the B-25 as an effective weapon. Powered by Wright twin-row radial Cyclones. Named for America's great pioneer exponent of air power, General William Mitchell. Span 67' 6 1/2", Length 52' 10 1/2".

#### IDENTIFICATION

Mid-wing, shallow gull monoplane, tapering to rounded tips. Long nosed, slim fuselage with transparent bomber's bay at front, gunner in tail. Nacelles underslung and extended fore and aft. Twin rectangular rudders at ends of tapering tailplane.

★★★

These models, are 1:72 scale, identical to those which are being used by the U. S. Navy to instruct student pilot and gunners in aircraft identification. Kits contain wood, sandpaper, cement, templates and easy-to-follow plans, as well as a three-view scale drawing of the plane and information about it for spotting purposes.

Also available, a complete set of plans, templates and large wall chart of all the planes in this "IA" series. . . . . 75c



Grumman F4F-4  
IA-2 . . . . . 15c



Bell P-39D  
IA-8 . . . . . 15c



Douglas DC-3  
IA-13 . . . . . 35c



Baku Gekki Ki-99  
IA-17 . . . . . 20c



Douglas SBD-3  
IA-3 . . . . . 20c



Curtiss P-40E  
IA-9 . . . . . 15c



Messerschm. Me 109  
IA-14 . . . . . 15c



Mitsubishi-96  
IA-18 . . . . . 35c



Vought Sik. OS2U-1  
IA-4 . . . . . 20c



Northrop A-17A  
IA-10 . . . . . 15c



Heinkel 111  
IA-15 . . . . . 35c



Spitfire  
IA-19 . . . . . 15c



Douglas TBD-1  
IA-5 . . . . . 20c



Douglas A-20A  
IA-11 . . . . . 35c



Sento Ki-001  
IA-16 . . . . . 15c



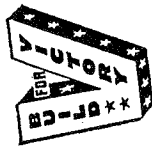
Wellington  
IA-20 . . . . . 35c



Brewster F2A-3  
IA-1 . . . . . 15c

## COMET

### IDENTIFICATION KITS

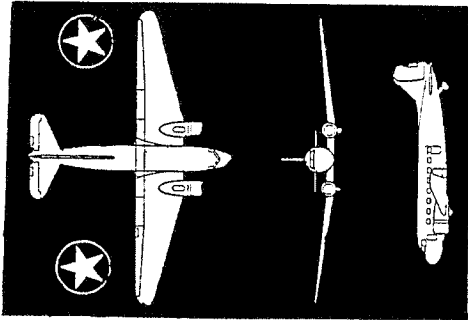


Series IB-IC and ID are complete sets of plans and templates of some of the most popular planes which are writing history in the skies today. Also large wall Chart showing construction procedure. All material in these series has been approved by the U. S. Navy. The Navy needs these identification models—you can aid the war effort by building them. Submit completed models to the Navy through your local high school.



### PLANS AND TEMPLATES

## COMET



**DOUGLAS SKYTRAIN C-47**  
The most widely used commercial transport plane in the United States. Carries 21 passengers and a crew of three. Equipped with either two "Cyclone" or "Wasp" radial air-cooled engines. Span 95', Length 64' 8".

#### IDENTIFICATION

Low-wing monoplane with straight trailing edge. Leading edge is straight to engine nacelles and then has a marked sweep back to rounded tips. Well rounded, fat fuselage with a row of windows on each side. Portion of retracted wheel protrudes from bottom of each nacelle. Leading edge of fin extends far forward on fuselage.

See Page 16

★★★

#### IB SERIES—75c

IB-1 Curtiss SBC-4 . . . . . U. S. Navy  
IB-2 Martin PBM-1 . . . . . U. S. Navy  
IB-3 Brewster SB2A-1 . . . . . U. S. Navy  
IB-4 Grumman G2F-4 . . . . . U. S. Navy  
IB-5 Lockheed P-38E . . . . . U. S. Army  
IB-6 Martin B-26C . . . . . U. S. Army  
IB-7 Republic P-43 . . . . . U. S. Army  
IB-8 Consolidated B-24D . . . . . U. S. Army  
IB-9 Lockheed Lodestar, U. S. Commercial  
IB-10 Messerschmitt Me-110 . . . . . German

IB-11 Junkers JU-87b . . . . . German  
IB-12 Junkers JU-88-A1 . . . . . German  
IB-13 Dornier Do. 18K . . . . . German  
IB-14 Mitsubishi 96 . . . . . Japanese  
IB-15 Nakajima 97 . . . . . Japanese  
IB-16 Nakajima 95 . . . . . Japanese  
IB-17 Hurricane . . . . . British  
IB-18 Bristol Blenheim . . . . . British  
IB-19 L-16 . . . . . Russian  
IB-20 Savoia Marchetti S.M. 82 . . . . . Italian

#### IC SERIES—40c

IC-1 Grumman F3F-2 . . . . . U. S. Navy  
IC-2 Vought Sikorsky SE2U-3 . . . . . U. S. Navy  
IC-3 Stinson L-1A . . . . . U. S. Army  
IC-4 Boeing Clipper . . . . . U. S. Commercial  
IC-5 Heinkel He-113 . . . . . German  
IC-6 Savo Irwicz . . . . . British  
IC-7 Blackburn Skua . . . . . British  
IC-8 Boulton Paul Defiant . . . . . British  
IC-9 Handley Page Hampden . . . . . British  
IC-10 Fokker T-8-W . . . . . Dutch

#### ID SERIES—40c

ID-1 Curtiss SO3C-1 . . . . . U. S. Navy  
ID-2 Curtiss SOC-3 . . . . . U. S. Navy  
ID-3 Vultee A-31 . . . . . U. S. Army  
ID-4 Focke Wolf Fw-190 . . . . . German  
ID-5 Dornier Do-26 . . . . . German  
ID-6 Mitsubishi T97 A. L. B. . . . . Japanese  
ID-7 Mitsubishi T98 A. L. B. . . . . Japanese  
ID-8 Mitsubishi T98 A.L.B.R. . . . . Japanese  
ID-9 Short Stirling . . . . . British  
ID-10 Handley Page Halifax . . . . . British



# THE PENCIL BOMBER

By Peter Franklin

**DUE TO BASIC DESIGN CHANGES, THE REVOLUTIONARY "PENCIL BOMBER" IS MORE THAN A REFINEMENT OF THE ZIPPER-TYPE MODEL.**

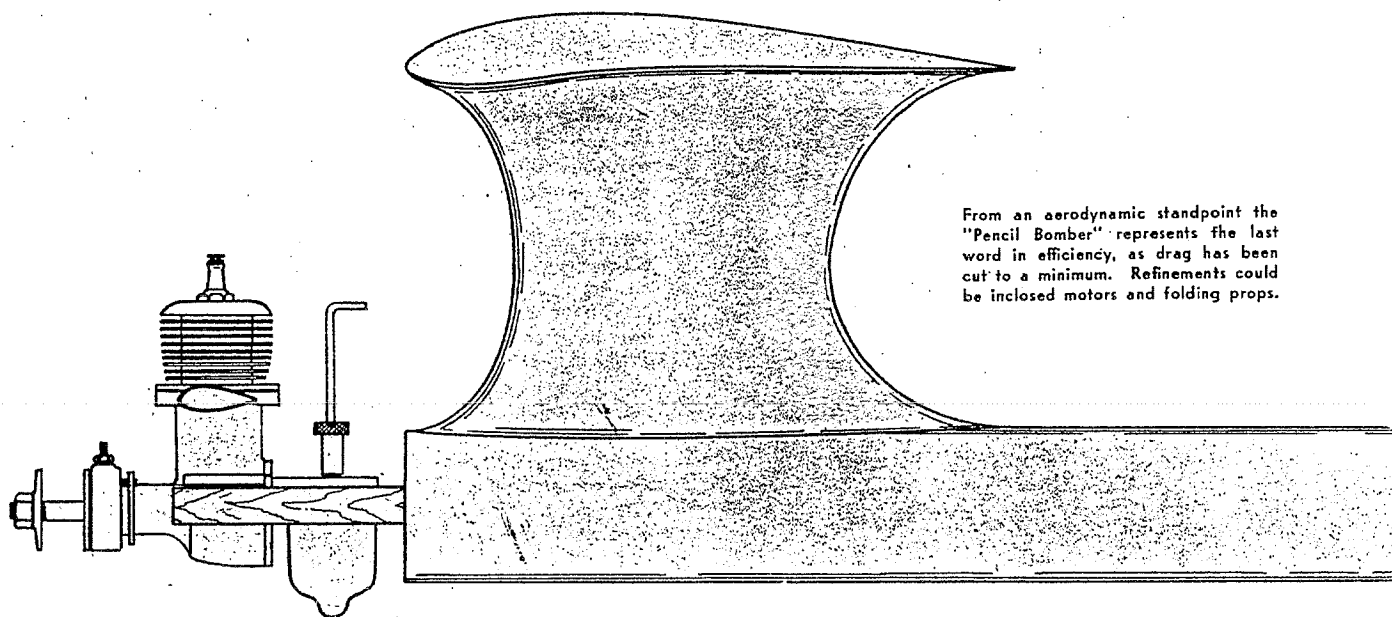
**T**HE boys have out-zipped the Zipper! During the past year the Wartime A. M. A. Contest Rules have had one definite effect on the trend of models. Every modeler, of the contest-going variety, has puzzled over what he could take off his model to cut down the drag and make it more efficient aerodynamically. With no cross-section rule and with landing gears no longer being required, the boys really went to town—and the result was the "Pencil Bomber."

Gordon Light referred in an article, a short time ago, to the single-wheeled high-pylon jobs as "grasshoppers." What can *these* jobs be compared to? Basically, the Pencil Bomber is nothing but an engine, wing and tail connected and held in their proper position by means of as little structure as possible, in order to greatly eliminate drag. The result is a fuselage (?) that looks like a piece of broomstick with the wing held up high by a sheet of wood.

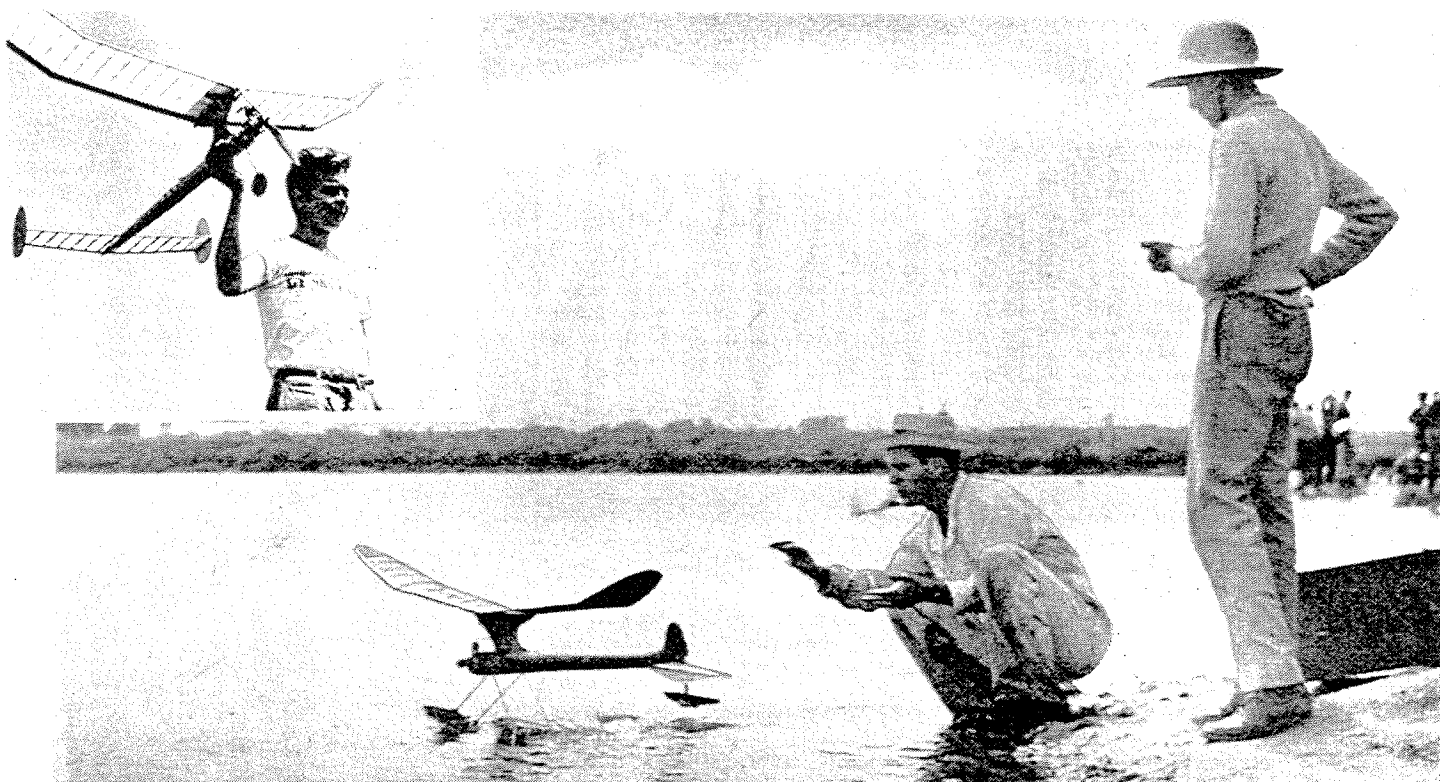
Seriously, the "P. B." is one of the cleanest types of models yet introduced to aero modeling. The only question that keeps haunting the author is, "Why do they shove the engine out in the breeze?" Remove the engine and the ship is clean as a whistle; put the engine back in the ship to make it a gas model again and the wind whistles in all directions around the small cross-section fuselage and a good

portion of that streamlined fin or pylon. The results of tests some time back showed that a streamlined fuselage with a piece of  $\frac{1}{8}$ " flat rubber around it had four times the drag of the bare fuselage. Try to calculate or even approximate the amount of drag that an engine in front of a flat-faced firewall will produce.

To the unobserving, the "P. B." looks like a Zipper; actually there is a definite difference, even in the first of this new line of ships. The longer fuselage results in quite an increase in tail moment arm, with the result that the tail area is more effective. Add to this the increase in stabilizer area (to fifty percent of the wing area) and you have a ship that seems to "fly flat." The ship, when launched in a slight upward angle, seems to fly at that angle for practically the entire engine run. This increase of tail efficiency has resulted in a ship that seems to climb an inclined plane, and you find yourself looking for something that might be guiding it along this constant-angle path. The flight is entirely different from the flight of a Pacer, Zombi or other short-coupled ship. The jobs with tail closer to the wing always have a tendency to go up in a sharp spiral climb, and when the engine cuts they really snap out to a glide. The "P. B." has a climb that doesn't look as if it's going to amount to much, but all of a sud-







Top left: a typical "Pencil Bomber" by Bob Salisbury of Oceanside, N. Y. "Pencils" work as hydros. Dick Everett launches his Class A job.

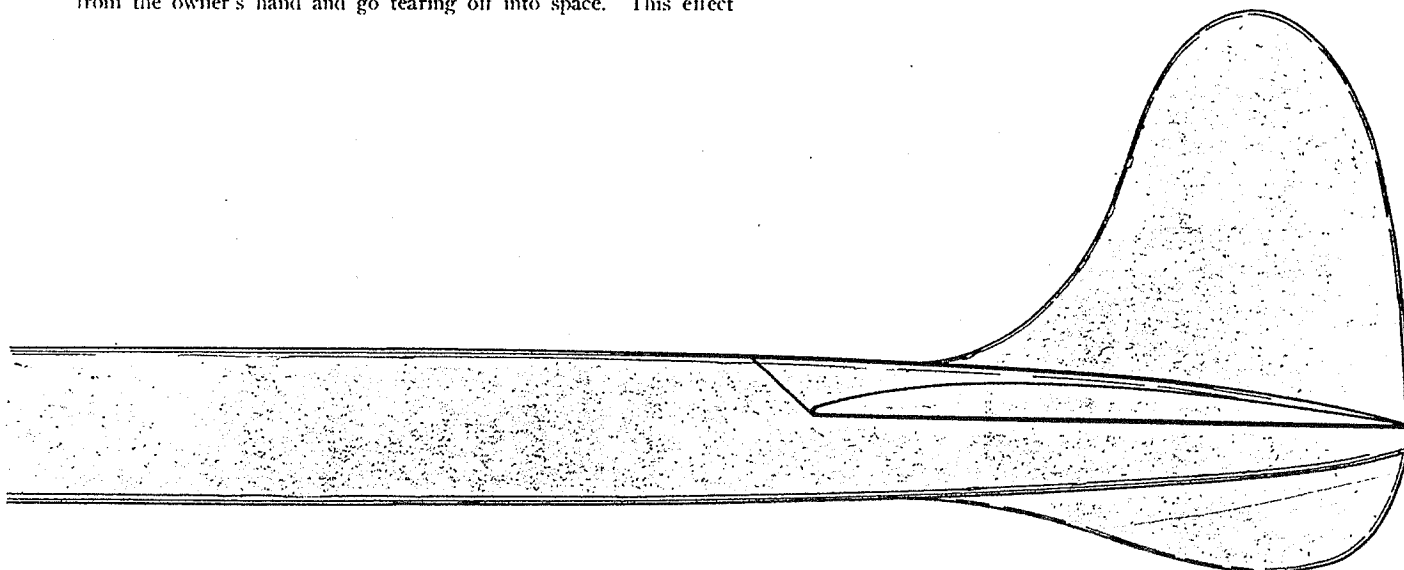
den the observer sees the engine cut, and the ship slide out of the climb and over into a glide; and then he realizes that it really grabbed altitude when under power. The "P. B." doesn't seem to snarl its way up—it's more of a steady drone.

One reason for the sensationally stable glide this type of model has is the higher aspect wing that is being used. Aspect ratios of eight or eight and a half are not uncommon. This, of course, doesn't allow the model to "roll around the prop" the way the shorter-spanned jobs will sometimes do when climbing. The wing, too, contributes to the climb "in the groove."

We believe that the Virginia boys associated with the NACA labs deserve the credit for this type of ship. Of course, others may have thought of the idea of taking the landing gear off a Zipper, but the Virginia bunch added stability through the redesign of the fuselage and tail.

Latest version of the "P. B." is a ship that seems ready to leap from the owner's hand and go tearing off into space. This effect

has been accomplished by means of a pylon (streamlined by silk covering) that leans forward at the top. The latest jobs also have an increased camber on the tail surface, allowing the center of gravity to be moved aft to about fifteen percent behind the trailing edge of the wing. This has quite an effect on a person doing processing at a contest. The bewildered official tries to turn the model upside down on the wing, but it slides off the scales. Then he tries to balance the ship on the round, broomsticklike fuselage. Finally, in desperation, he turns to the contestant and growls, "Whatinell does this thing weigh?" This is quoted from experience at the last Long Island Championships—sorry if anyone took offense, but we didn't have suction cups on the scales. We'll have to suggest that contest directors obtain scales with built-in "grabbers."





## WEST COAST MUTINY —Don Foote.

Until a few years ago, with a few exceptions, there was no AMA on the Pacific coast. Every contest had its own rules and none were run under the auspices of the academy.

Then a few of us banded together and decided to unify the coast under AMA. This action was taken for several reasons: first, we wanted to go after the national records; second, we wanted a standardization of rules for all contests on the coast so that a new ship would not have to be built for each contest; third, we felt that we should support a national organization for the advancement of the hobby.

Two outstanding men were chosen to become leader members and a number of the rest of us joined up to take a crack at the records. Our first AMA contests were poorly attended and we were severely criticized for not allowing non-AMA members to participate. But they began to realize also that the Academy was actually benefiting them and joined in droves. Thus, the Pacific coast went AMA almost to a man.

Soon, however, it became evident that something was wrong with our organization. Although we were practically one hundred percent AMA, we "foreigners" out here in the "Coastal

Colonies" didn't seem to amount to much. As long as we stayed in our own backyard and obeyed the commands of headquarters, everything went fine. But when it came to determining the policies of our organization on the conditions under which we should fly, headquarters didn't even know we existed.

The rules question was first brought up in the middle of 1941. Letters of comment came from all sections of the country and were published in the official publication, *Model Aviation*. Mr. Blank's letter appeared which absolutely laid down the law to the modelers of the country. Protests came from every section of the country. This letter was printed long before our country went to war. Time wore on without any action whatsoever on the rules. Suddenly Mr. Blank's rules were announced by the Academy as the official rules, in spite of the protests of the fliers throughout the entire country. And the war was given as the excuse for the adoption of these rules.

There has not been, to my knowledge, one single contest held on the coast under the 1942 AMA rules and sanction. Many communities have adopted the "Pacific coast rules," but some communities have made their own rules,

and the result has been a complete disorganization with every contest run under a different set of regulations.

Criticism of our then existing rules and suggestions for improvements were made by our fliers and transmitted through our leader members to headquarters. The resulting conflict and final adoption of the 1942 rules showed us what was wrong with the AMA. It was not only the fliers of the Pacific coast who had no voice in making the rules; it was every section of the United States.

Why, for instance, was hand launching allowed to replace R. O. G.? Why was the cross-section rule eliminated? The reason given for the latter is that it will permit the development of the flying wing. Yet, under the old rules, the cross section of the fuselage was determined by the length of the fuselage. A flying wing has no fuselage and therefore would be perfectly legal under the old rules.

A great many fliers on the coast have not renewed their membership in the Academy. Some of us have, with the hope that, by fighting, we can save our organization from the complete destruction that is evidently being planned by the experts.

The foregoing was a prelude to formation of a competitor for A.M.A. on the West Coast in 1948.

Myrtle Coad ('Mom' Robbers), with her first husband had founded the Oakland Cloud Dusters in 1937. 'Mom' took over W.A.M. (Western Associated Modelers) as the Executive Secretary, after she'd won the Womens Championship at the All-Western Open and '48 Olathe Nats ..... doing a great voluntary job well into the '70's ..... and seeing W.A.M. guided back into the A.M.A. fold.

## ROCHESTER GROOMS ENTRY

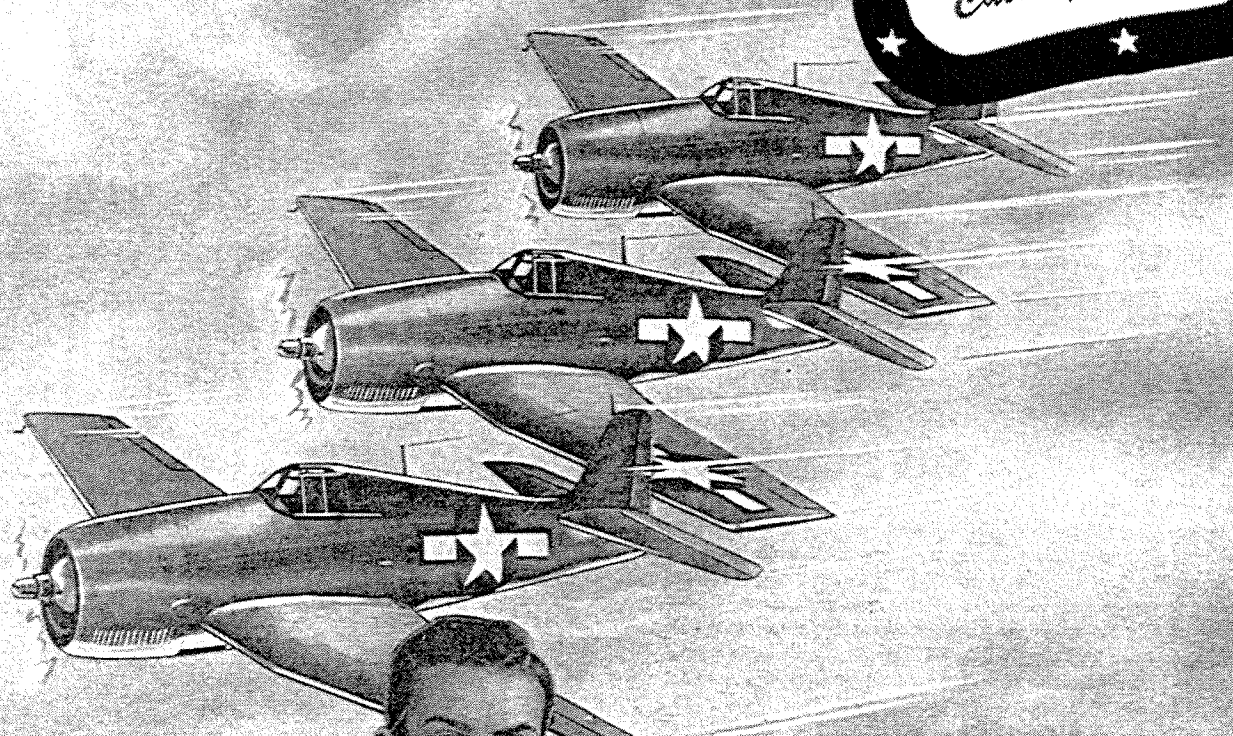


THE semi-annual gas contest of the *Los Angeles Aero Modelers, Inc.* scheduled for June 25th, 1944, may be the scene of a new world's speed record for control line jobs if Rochester, Jack Benny's radio comedian, has anything to say about it. He recently conferred with Boeing aerodynamicists on critical points concerning his entry. Above Rochester gets a few pointers from Jack Harshman who explained the propeller was the important problem. Below Harshman, Bruce Alfson and Phil Dickert figure out best prop for 15,000 rpm 1/2 hp model engine. At right Rochester gets wind tunnel test figures indicating 125 mph record.





NEW  
1944 MODELS  
Pages 4-6-7-8-9-10-15  
Catalog No. 28



"Some day I'll be building the big ones or be upstairs in one myself."

Build With Ott-O-Formers and Get 'Em Flying QUICKER.

Ott-O-Former  
and OTT-O-TUBE  
CONSTRUCTION

EDUCATIONAL ★★★★★★  
AIRPLANE KITS

JOE OTT MANUFACTURING CO., CHICAGO



# ★ Ott-O-Former ★ AIRPLANE KITS

*America's Distinctive Flying Model Airplanes  
with Printed and Ready-Cut Parts*

★ ★ ★  
**BUILD STRONG, STURDY FLYING MODELS WITH ALL THE ADVANTAGES  
OF LIGHT WEIGHT AND THE ALL IMPORTANT CENTER STRENGTH**

★ ★ ★  
**SAVE ONE-HALF BUILDING TIME**

Ott-O-Former and Ott-O-Tube Kits present the newer, better and quicker methods of building model airplanes. All of the "hard" work is done when the kits leave the factory. Only the most interesting and fascinating part of the job and all the fun is left for the model builder to do, who proceeds with the actual building after studying the plans and reading the simple instructions. There is not a lot of preparation and getting ready before construction starts with an Ott-O-Former or Ott-O-Tube Kit. That means less time for building—more time for fun and flying.

#### **A MILESTONE IN MODEL AIRPLANE HISTORY**

While Ott-O-Former and Ott-O-Tube Kits eliminate half the building time—half the assembly time—they also make fine flying models without sacrificing sturdiness and the advantage of light weight. As shown in the illustrations on the opposite page, the fuselage is built on a strong, but light foundation. Both types of construction provide this important center strength which reduces the chances of a "crack-up" and prevents twisting and warping and the control surfaces getting out of line.

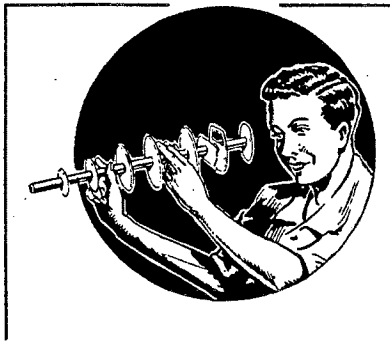
#### **ALL MODELS AND SIZES FOLLOW SAME EASY CONSTRUCTION METHOD**

Thirty-five fine kits are described in the pages of this catalog and they all follow one of the types of construction shown in the illustrations to the right. Regardless of the type or model or the size of the model being built, the builder follows one of these simplified, time-saving methods in which the body formers that come printed and ready-cut to exact size and shape slip onto an

easily made wood foundation frame or a sturdy light weight torque tube. Full scale plans, showing every detail of construction of the particular model to be built accompany each kit.

#### **ALL PARTS PRINTED IN OUTLINE AND READY-CUT FOR QUICK, EASY ASSEMBLY**

Making wing and body formers was once a tiresome, tedious job, but it is fun to make them the Ott-O-Former and Ott-O-Tube way, for in these kits these parts are clearly printed in outline and then ready-cut. All of the old pre-construction preparation has been done away with. Nose and tail parts, landing gear parts, too, are outlined and ready-cut. Propellers, instead of being furnished in block form for carving, are furnished in exact size and shape with accompanying instructions for forming to proper pitch.



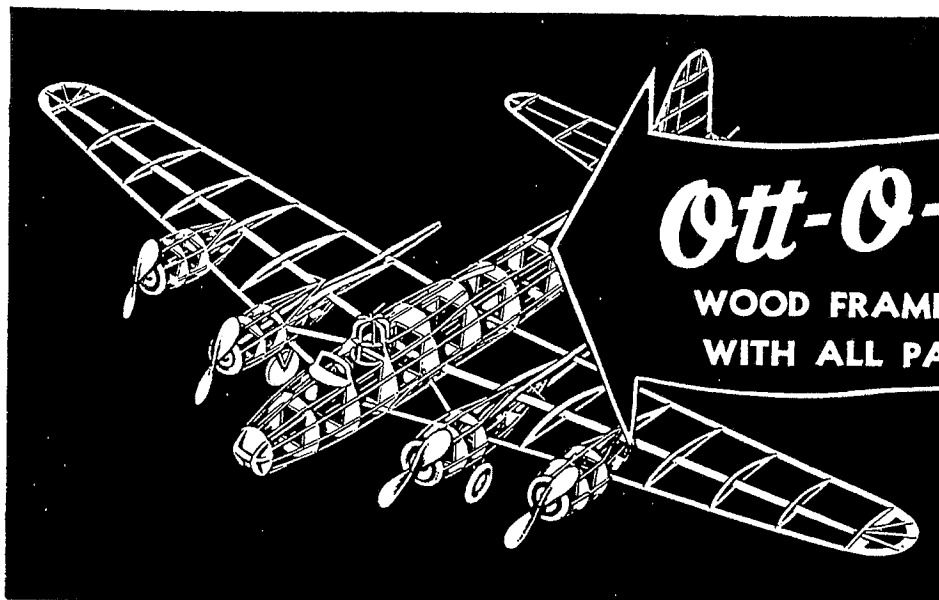
#### **NO OTHER KITS IN THE WORLD LIKE OTT-O-FORMER AND OTT-O-TUBE**

The construction methods used in these kits are protected by U. S. patents issued and pending. No other designer or manufacturer is authorized to use these methods, thus Ott-O-Former and Ott-O-Tube Kits are made only by the Joe Ott Manufacturing Co.

Beginners or experienced model builders will be thrilled with the ease with which they can build the finest flying model planes using either of these construction methods. They will be surprised and pleased, too, with the lightness of their model—its sturdiness—its strength—its ability to take "punishment"—and its remarkable qualities as a flyer, for which Ott-O-Former and Ott-O-Tube models are famous.

## **BUILD WITH OTT-O-FORMER AND OTT-O-TUBE KITS**



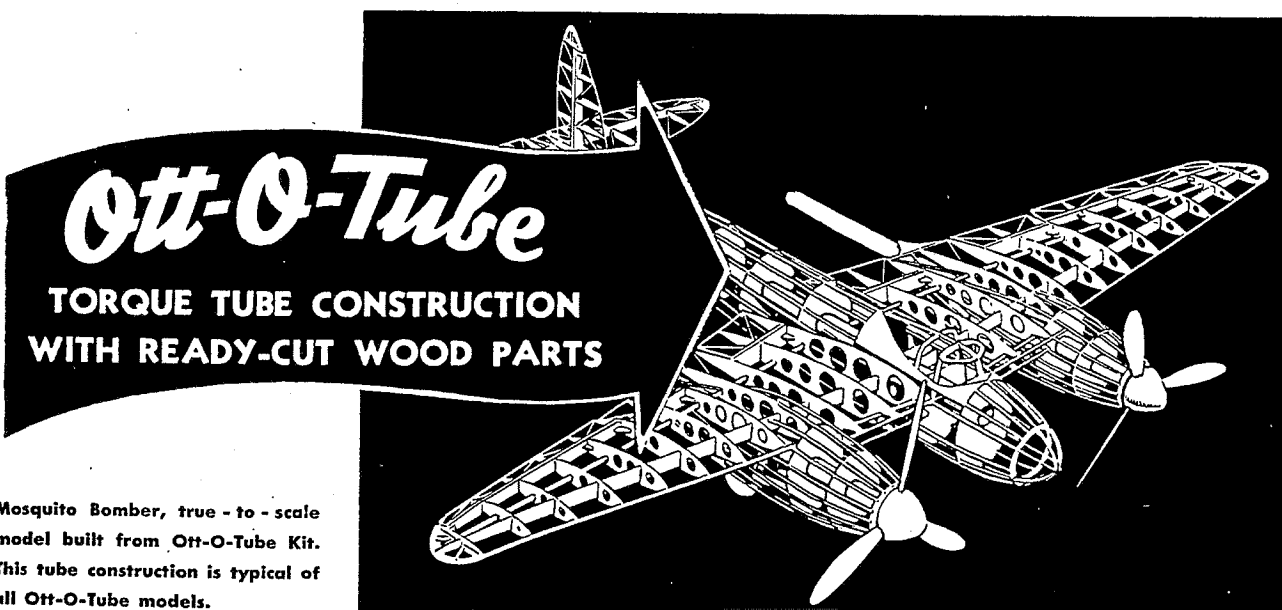


*We are proud of our  
record for delivery!*

## **Ott-O-Former**

**WOOD FRAME CONSTRUCTION  
WITH ALL PARTS READY-CUT**

Showing construction of 32 inch  
Boeing Flying Fortress made from  
Ott-O-Former Kit. All Ott-O-For-  
mer models follow this same con-  
struction.



## **Ott-O-Tube**

**TORQUE TUBE CONSTRUCTION  
WITH READY-CUT WOOD PARTS**

Mosquito Bomber, true - to - scale  
model built from Ott-O-Tube Kit.  
This tube construction is typical of  
all Ott-O-Tube models.

## **WOOD CONSTRUCTION**

All wood parts in Ott-O-Former and Ott-O-Tube kits are made from bass, poplar, and other selected thin cut woods and veneers. The use of any one wood over another is more a matter of market availability than choice, because, of the woods we select, all are equally suitable. Certain models, in which some parts have heretofore been made from spring tag board, jute board or bristol board, may be furnished with all wood parts. Wherever possible wood will be used, the availability of the right kind in the right quality being the determining factor.

## **PACKING INFORMATION**

The standard packing and weights of the various kits are shown in the following pages and it is our intention to maintain this standard whenever possible to do so. However, this is dependent on the supply of cartons and other material and we must reserve the right to change the unit of packing when conditions make it necessary.

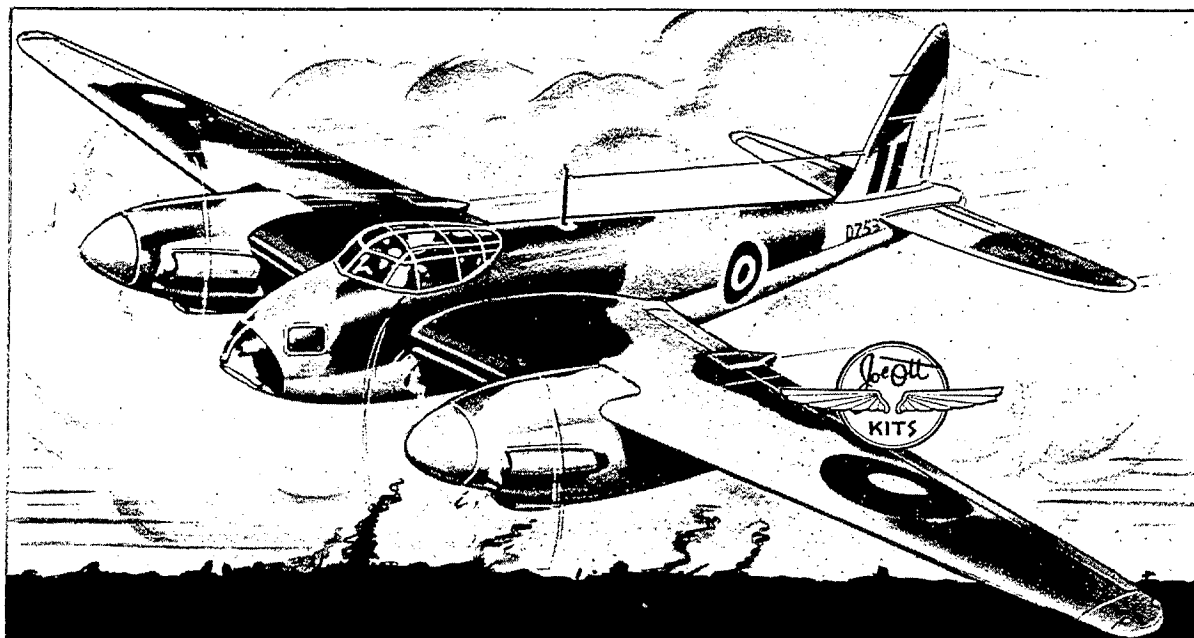
**AND GET 'EM FLYING . . . EASIER . . . QUICKER . . . BETTER**



# DeLuxe True-to-Scale

# BRITISH BOMBER

## (NEW MODEL)



## MOSQUITO—De Havilland DH-98

**Scale Three Quarter Inch to One Foot - Actual Wing Span 40<sup>5</sup>/<sub>8</sub> Inches**

The versatile Mosquito is the British R.A.F. wood constructed long range day and night fighter, intruder and day and night low-level bomber. The fighter version carries four .30 calibre machine guns and four 20 mm. cannon in the nose. The bomber carries a 2,000 pound bomb load and has a range that takes in most of Germany. It is powered by two 1,350 h.p. motors and it is claimed that it will fly faster than any other fighter or bomber in the world. Wing span is 52 feet 2 inches.

This new Ott-O-Tube Kit for this famous plane is the finest kit we have ever built. Retractable landing gear. Movable ailerons and

**\* \* One of the finest and most generously stocked kits ever produced. OTT-O-TUBE Construction on three torque tubes. All other parts of wood —printed—ready-cut.**

wing flaps. A magnificent flying model.

The fuselage and the two engine nacelles are built on strong, sturdy torque tubes — Ott-O-Tubes — with patented ready-cut Ott-O-Formers that slip over the tubes in a jiffy. The whole air frame can be built in less time than a model of this size and type was ever built before.

Kit contains ready-cut wood Ott-O-Formers, ready-made torque tubes, an abundance of all materials —more than is required—of all ready-cut wood parts, strips, tissue, cement, colored and clear dope, tissue cement, etc.

**No. 4802. Retail \$3.00. Packed six to carton.**

**Weight 24 pounds per carton.**

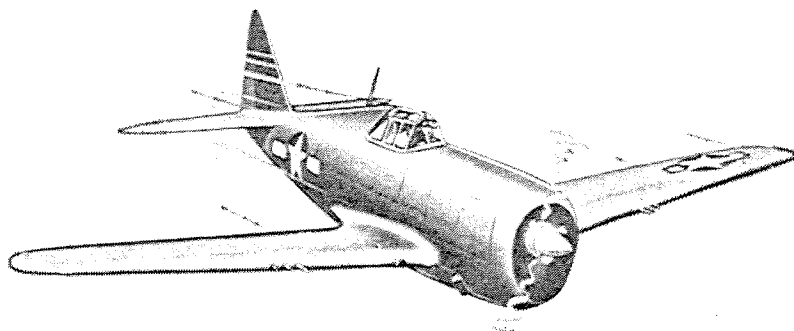


**Ott-O-Former represents the best in design, quality materials, honest workmanship . . . at a fair price.**



Nine Ott-O-Former Kits in Popular Size and Price, all Faithful Reproductions of American and British History-Making Fighting Planes and the Two Best Enemy Planes. Simplified Ott-O-Former or Ott-O-Tube Construction.

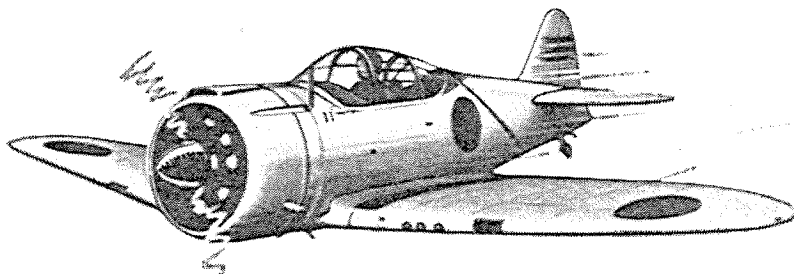
*Retail 29 Cents*



## THUNDERBOLT

REPUBLIC P-47

Said to be the most powerful single-seat fighter plane in the world and is especially noted for its high altitude performance. Top speed in excess of 400 miles per hour. Armed with eight heavy calibre machine guns. Power plant includes a 2,200 h.p. Double Wasp engine, turbo-supercharger and a four-bladed 12 foot propeller. Wing span is 41 feet, length 32 feet 8 inches. The model is scaled 5/8 inch to one foot.



## ZERO—Mitsubishi Sento KI-001

The "Zero" is often referred to by many U. S. pilots as the "Flying Coffin." It is considered a beautiful plane, fairly well armed and maneuverable, but compared with American standards, it is of "egg-shell" construction. It has top speeds ranging from 315 to 355 miles per hour. Wing span is about 40 feet. Model is scaled about 5/8 inch to one foot.

## NEW MODELS

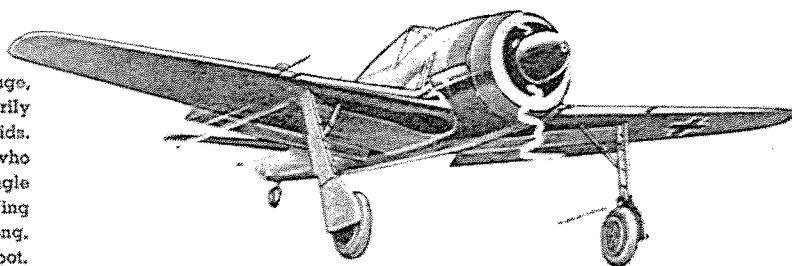


OTT-O-TUBE  
CONSTRUCTION.  
PRINTED AND  
READY-CUT  
WOOD PARTS.

Since the printing of our catalog No. 27 three new models have been added to this series: Thunderbolt - Focke-Wulf - Zero. All Ott-O-Tube Construction.

## FOCKE-WULF—FW-190

The German Focke-Wulf, or FW-190, is a short range, low wing interceptor, having been developed primarily for defense against U. S. and British bombing raids. In the opinion of British pilots and engineers who have inspected the "190" it is one of the finest single seat fighters the Germans have yet produced. Wing span is 34 feet 5 inches and it is 29 feet 4 inches long. The model is scaled approximately 3/4 inch to one foot.



## GUARANTEED COMPLETE CONSTRUCTION KITS

The construction kits shown on these and the following pages are COMPLETE in every detail. They contain all the material needed to build a flying model in the size and of the airplane as indicated, including wood in proper sizes, tissue,

necessary small parts, full scale plans and instructions and the sensational Ott-O-Formers. Ott-O-Formers are copyrighted and fully protected by U. S. Patents covering this type of labor-saving construction.

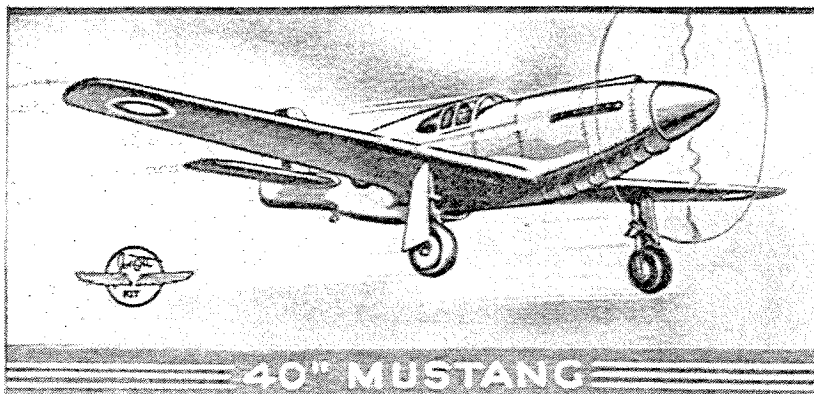
*The construction that saves one-half model building time . . .  
eliminates one-half of usual assembly problems.*





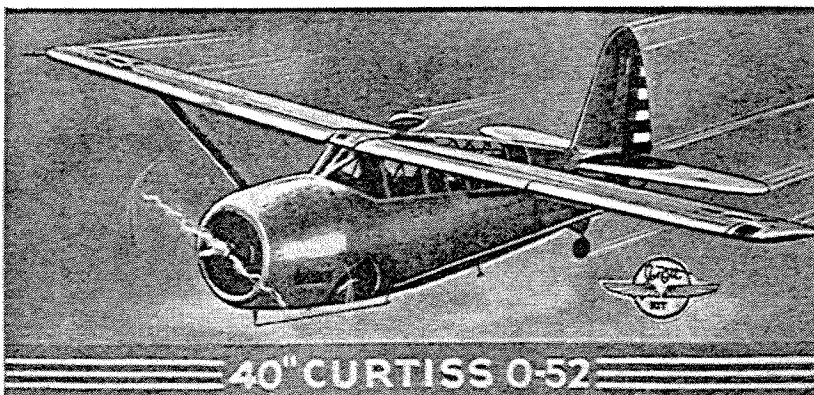
**4000**  
*Series*

# 40-45 Inch Wing Span DOLLAR FLYERS DE LUXE BATTLE PLANES



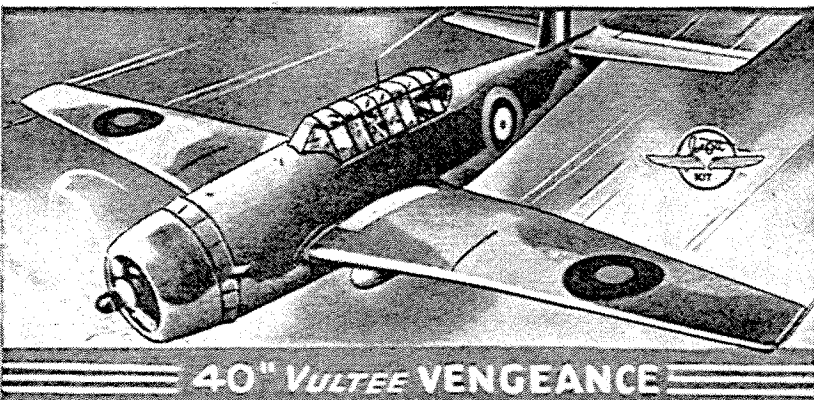
**40" MUSTANG**

The North American P-51, known as both "Mustang" and "Apache" has proved to be one of World War II's fightingest ships. (Wood construction.)



**40" CURTISS O-52**

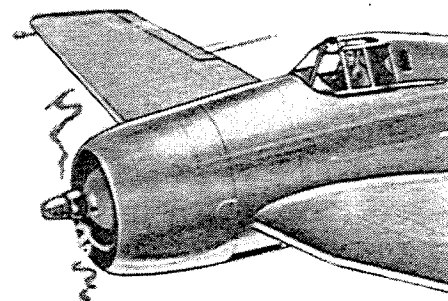
U.S.A.A.F. Observation plane, built especially for "peeking" duty and giving a good account of itself on many fronts. (Wood construction.)



**40" VULTEE VENGEANCE**

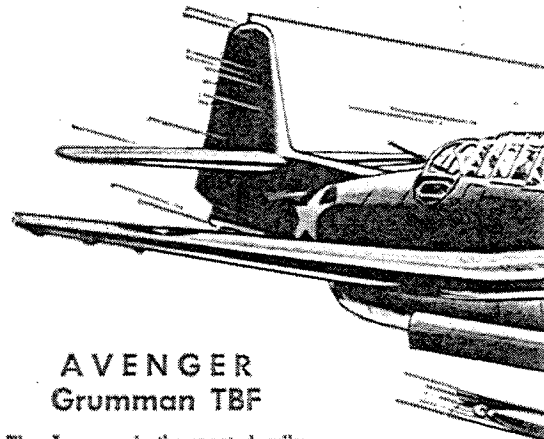
Originally built in U. S. for the R.A.F., but recently adopted by the U.S.A.A.F. for use as a dive bomber. (Wood construction.)

## NEW MODELS AND NOW INCLUDED



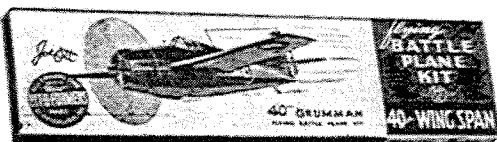
**HELLCAT — Grumman F6F**

Popularly known as the "Hellcat" is the U. S. Navy's terrific shipboard fighter. It is a low wing job, designed in response to recommendations of Navy fighter pilots who have said, "It's got everything we wanted."



**AVENGER  
Grumman TBF**

The Avenger is the most deadly torpedo bomber in the world and is the plane that broke the back of the Japanese Navy at Midway. This model carries a six inch torpedo completely inside the fuselage. Bomb doors, as shown in illustration, open with release of a pre-set trigger while plane is in flight and torpedo is automatically fired in a most realistic way.



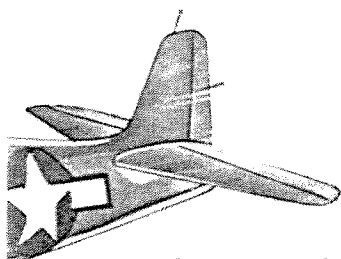
Thirty-five fine kits for making models of the world's best known airplanes.



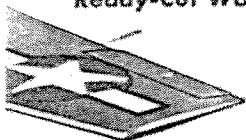
U.S.A.A.F. Fighters and Reconnaissance Planes, the Navy's Deadly Torpedo Bomber and Shipboard Fighter and Britain's Most Famous Fighter in Ott-O-Former and Ott-O-Tube Models. All Wood Construction with Parts Ready-Cut.

*Retail \$1.00*

## 45 INCH KITS THIS SERIES

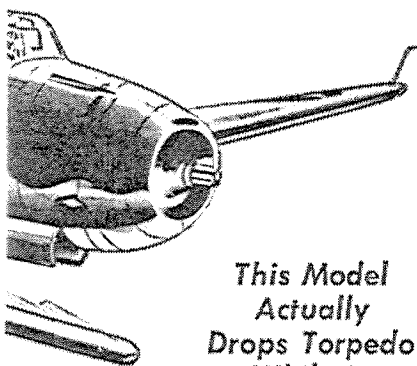


**Ott-O-Tube Construction.  
Ready-Cut Wood Parts.**

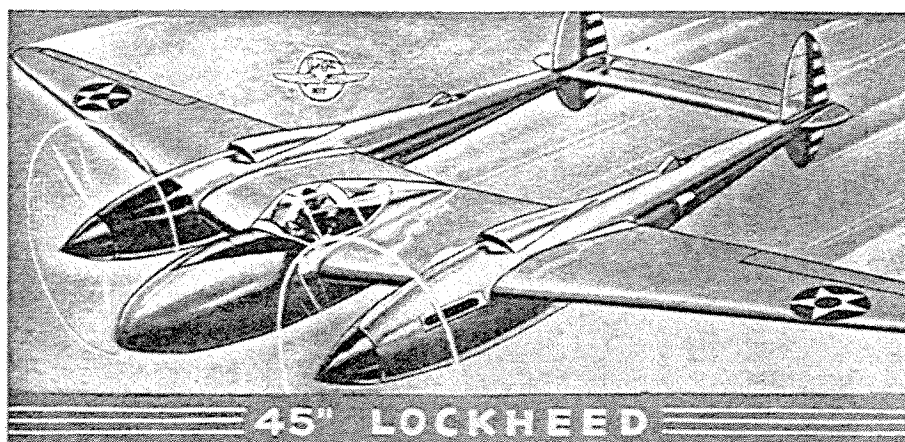


fastest plane that ever boomed from a dark and its heavy calibre armament al maneuverability make it one of adly fighters of all time. The wing approximately 40 feet. Our model is ne inch to one foot.

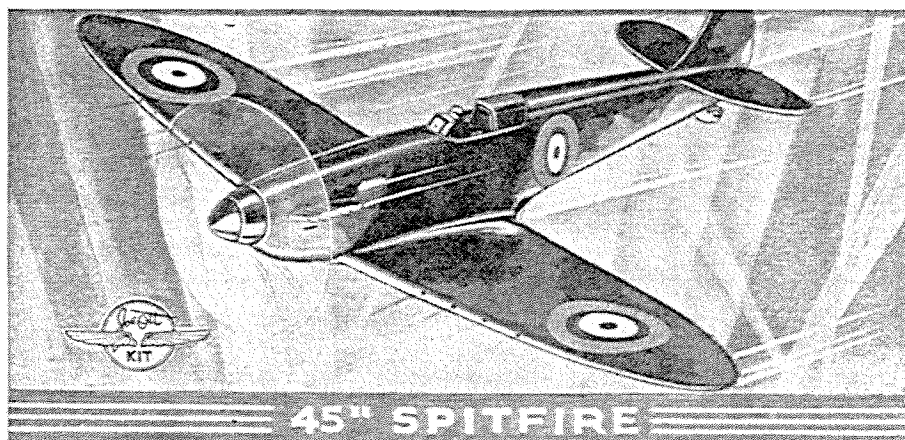
**Now Furnished with  
Ready-Cut Wood Parts.**



**This Model  
Actually  
Drops Torpedo  
While in  
Flight**



Lockheed's Lightning with its terrific speed and magnificent high altitude performance pounds its way into the news almost daily. (Body formers and some other parts of spring tag board.)



The Supermarine Spitfire of the R. A. F. Affectionately known as the "Spit" and "The plane that saved England." (Wood construction.)

## ORDER BY NUMBER

- |                                  |                           |
|----------------------------------|---------------------------|
| **4501—Lockheed Lightning P-38   | 4003—Vultee Vengeance     |
| **4502—Spitfire                  | 4004—Grumman Avenger TBF  |
| 4001—North American Mustang P-51 | *4005—Grumman Hellcat F6F |
| 4002—Curtiss Owl O-52            |                           |

\*\*45 inch Wing Span. Others in this series 40 inch.

\*Ott-O-Tube construction

Series 4000. Retail \$1.00 each kit. Packed one dozen to carton, straight or assorted with other 4000 series, including 45 inch models. Weight, 13½ pounds per dozen.

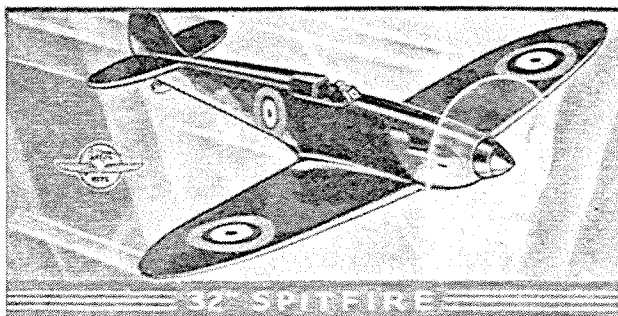
**Ott-O-Former Kits are outstanding values in every price class.  
There is nothing better at the price.**





**3200**  
*Series*

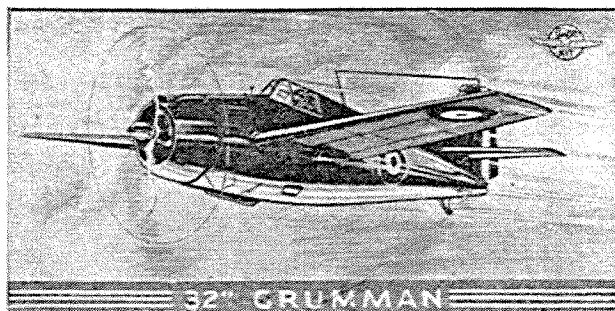
# 32 Inch Wing Span SURE FIRE FLYERS HISTORY MAKING WAR PLANES



The famous fighter of the R. A. F. Said to be Britain's most valuable plane.



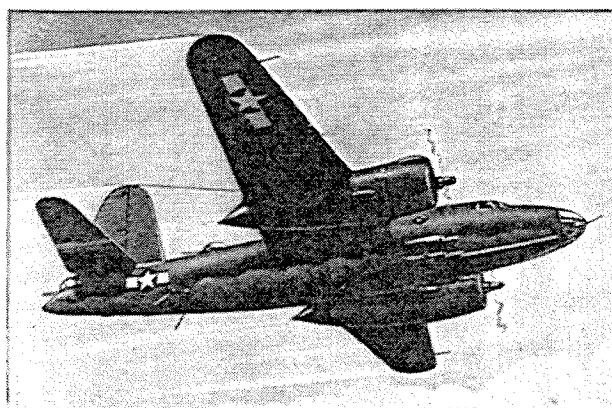
In the news regularly since its debut in 1939. One of the best low and medium altitude fighters.



The Navy's fighter loved by everyone but the pilots of Japanese Zeros.



Long the Navy's number one shipboard fighter. Compares favorably with many land based planes.



*Ready*

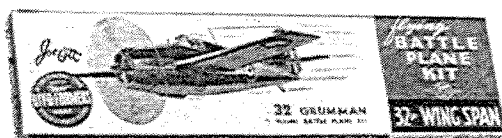
SEPTEMBER 1st

## MARTIN MARAUDER B-26

The Martin Marauder is probably the most powerful, fastest and scrappiest medium bomber ever to bear the U.S.A.A.F. insignia. No. 4803. Martin Marauder. Deluxe true-to-scale model. Scale 5/8 inch to one foot, wing span approximately 40 inches. Ott-O-Tube Deluxe Construction. All wood parts.

No. 4803. Retail \$3.00. Packed six to carton.

Weight 24 pounds per carton.



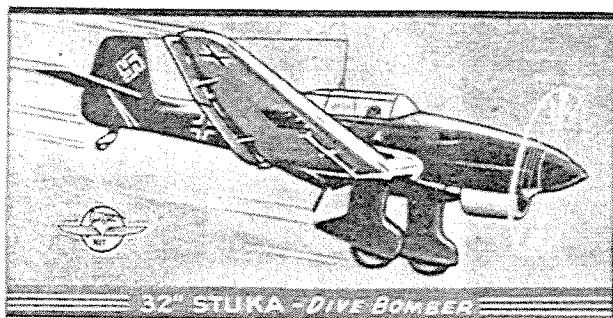
Carefully Designed and Engineered — Manufactured Under  
Careful Supervision—Finest Materials.



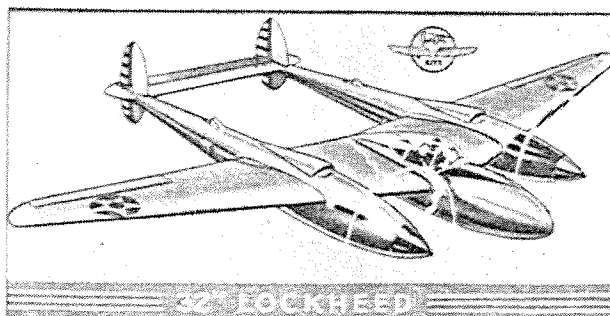
Extra Value and Popularity Combined in These Big 32 Inch Wing Span Models of American, British and German Planes Whose Prototypes are Making History on Both Sides of the World.

[AMERICA'S BIGGEST HALF DOLLAR'S WORTH]

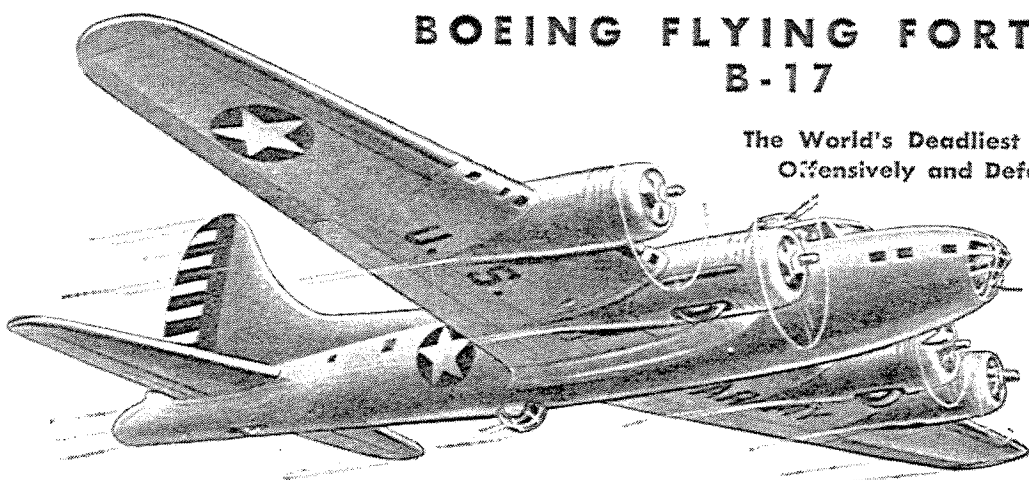
*Retail 50 Cents*



The German Junkers Ju-87 dive bomber. Effective in the early stages of the war.



The famous P-38 pursuit with the magnificent record. The plane everybody knows and admires.



## BOEING FLYING FORTRESS B-17

The World's Deadliest Bomber—  
Offensively and Defensively

There probably is no other war plane so much in the public eye or so much talked about as the magnificent four-motored "Flying Fortress" which has brought about such wide devastation in most European industrial centers. With its high altitude, over

35,000 feet, tremendous bomb load and fire power, heavy armor and speed, it has proved more than a match for anybody's fighters. (See structural photo of our 32 inch model on page 3.)

### ORDER BY NUMBER

3213—Spitfire  
3214—Bell Airacobra P-39  
3215—Stuka  
3216—Lockheed Lightning P-38  
3217—Grumman Wildcat F4F

3218—Vought Corsair F4U  
3219—Boeing Flying Fortress  
B-17  
3220—Hawker Typhoon { Illustrated }  
3221—Curtiss Helldiver, SB2C1 { on page 15 }

Series 3200. Retail 50 cents each kit. Packed two dozen to carton, straight or assorted with other 3200 series. Weight, 7 pounds per dozen.

Every Ott-O-Former and Ott-O-Tube Kit — Regardless of  
Price or Size — is the Tops in Value.

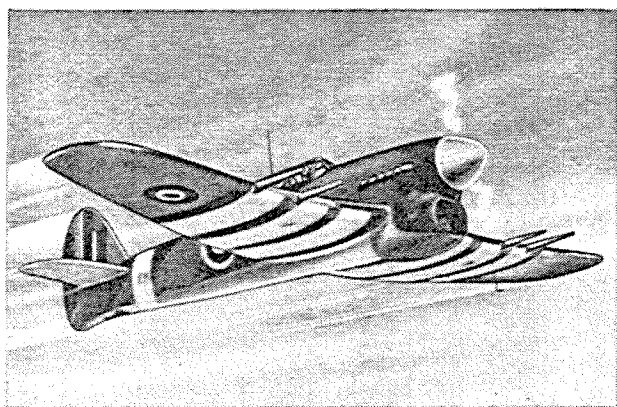




# NOW READY—*Immediate Delivery*

## NEW MODELS

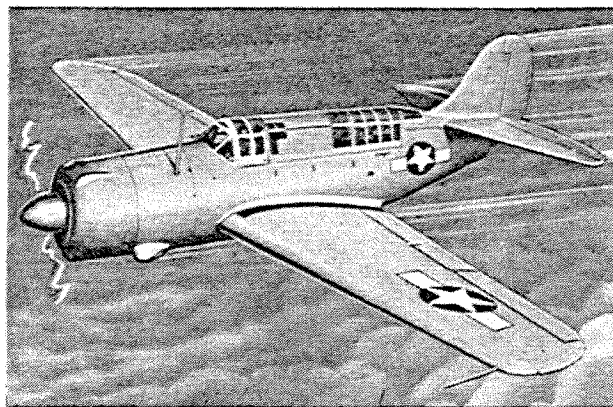
### WAR PLANES THAT ARE FIRST IN THE NEWS!



#### HAWKER TYPHOON

Britain's newest and largest fighter plane and most deadly destroyer of enemy bombers yet to see service. Compares with Spitfire in maneuverability.  
No. 3220. Hawker Typhoon, 32 inch wing span Ott-O-Tube Construction. All wood parts. Kit 50c.

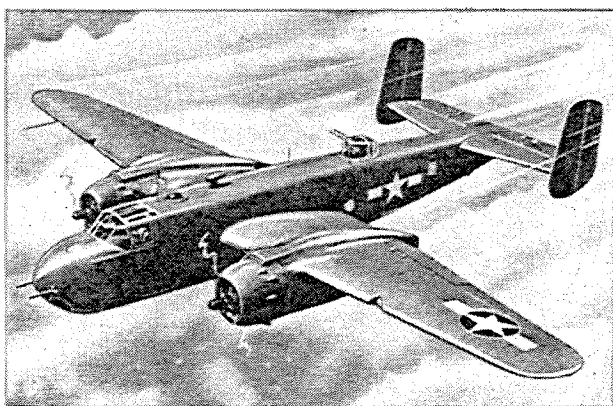
*See Listing on Page 11*



#### CURTISS HELLDIVER SB2C1

This newest plane to bear the Curtiss name is a U. S. Navy dive bomber that ranks tops in dive bombing equipment.  
No. 3221. Curtiss Helldiver, 32 inch wing span Ott-O-Tube Construction. All wood parts. Kit 50c.

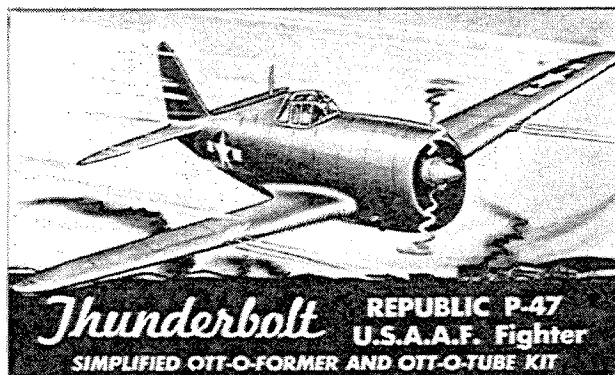
*See Listing on Page 11*



#### NORTH AMERICAN MITCHELL B-25

Referred to as Maj. Gen. James Doolittle's "Tokyo Raider" and now the hand-hitting "cannon-plane" with the 75 mm. gun in the nose, which recently broke into the news.  
No. 4701. North American Mitchell, 40 inch wing span Ott-O-Tube Construction. All wood parts. Kit \$1.50.

Series 4700. Retail \$1.50. Packed one dozen to carton. Straight or two numbers assorted. Weight, 13½ pounds per dozen.



#### THUNDERBOLT P-47

One of the world's most outstanding single seat fighters—fast—hard hitting—tough. This new model is similar to our No. 2707 but much larger.  
No. 4702. Republic Thunderbolt, 40 inch wing span. Ott-O-Tube Construction. All wood parts. Kit \$1.50.

## JOE OTT MANUFACTURING CO.

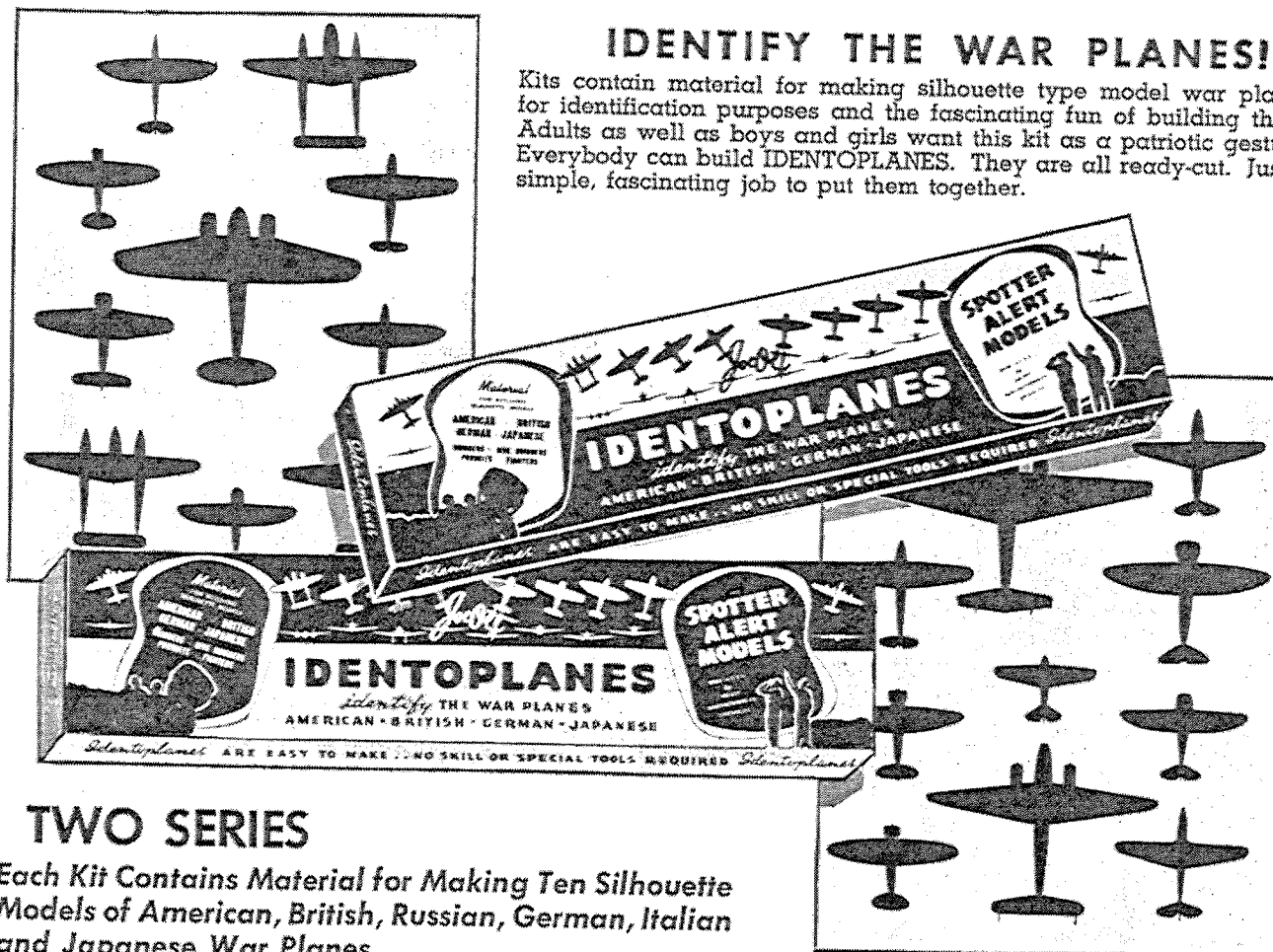
415 WEST SUPERIOR STREET

CHICAGO 10



# World-Wide IDENTOPLANES!

*Spotter Alert Silhouette Models for Real  
Fascinating Fun and Patriotic Services!*



## TWO SERIES

*Each Kit Contains Material for Making Ten Silhouette  
Models of American, British, Russian, German, Italian  
and Japanese War Planes.*

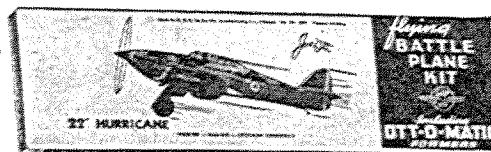
### No. 2508—IDENTOPLANES (Series 2)-----25c

Packed 2 dozen to carton. Weight, 12 pounds per 2 dozen.  
Contains material for making 10 silhouette models, reduced from  
Navy's authentic drawings, as follows: U. S.—Boeing Flying  
Fortress, Consolidated Liberator, Curtiss P-40E, Lockheed Light-  
ning P-38, Grumman Wildcat. British—Spitfire. German—Messers-  
schmitt 109F, Focke-Wulf 190. Japanese—Zero, Mitsubishi 96.

### No. 2509—IDENTOPLANES (Series 3)-----25c

Packed 2 dozen to carton. Weight, 12 pounds per 2 dozen.  
Same as No. 2508 except contains material for 10 entirely differ-  
ent models as follows: United States—Republic Thunderbolt,  
Douglas S-20A, Bell Airacobra P-39. British—Short Sterling, Hur-  
ricane. German—Heinkel 113, Junkers 88 A1. Italian—Macchi  
C-202. Russian—Stormovik IL-2. Japanese—Nakajima G97.

*Every Kit described in this book contains a generous amount  
of materials and full-size, three-view, picture plans.*





# The AIRFOILER for '44

By  
H. de BOLT, AM 3/c



Left—The "Airfoiler" has shown superior soaring qualities . . . the model averaged better than three minutes in dead air.

★

**This Class C gas-powered model plane has been flight-tested. It was designed for Tiger Aero, but similar engines can be used. Has Dethermalizers and Retractable landing-gear.**

★

## TAIL

The stabilizer (Fig. 2) is of the lifting variety, with a thin airfoil section formed with cap strips. It is built by forming the leading and trailing edges and allowing them to dry. The lower cap strips are now cemented in place and the tapered spar laid over them. The upper cap strips are now cemented in place and the leading and trailing edges carved to shape. The rudder outline is laid down next and while drying the post is erected on the stabilizer and cemented. The outline is now put in place and the cap strips installed. After sanding the rudder cover the tail in the same manner as the wing.

## FUSELAGE

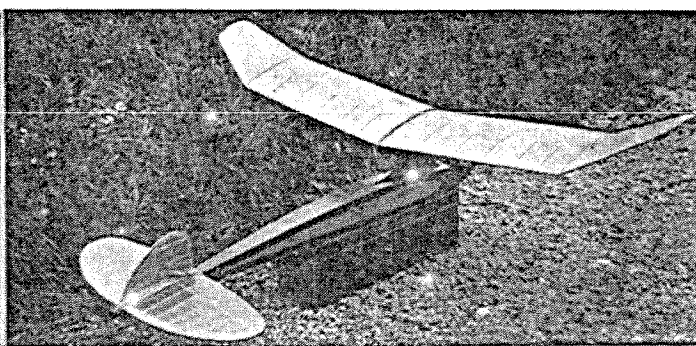
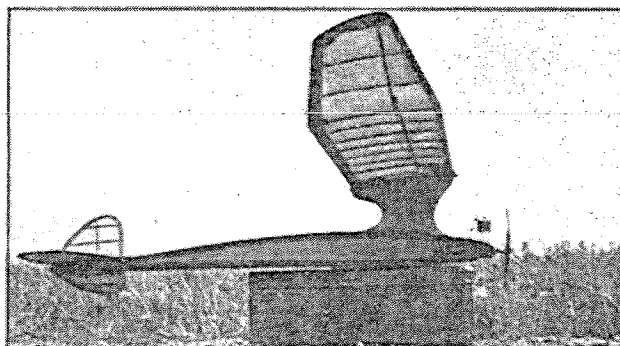
The fuselage is the usual box type (see Fig. 3) except for its shape, and it is built up from 3/16" sq. pine or bass; you will find this to be necessary in order to meet the weight rule, but then too it does yield a much stronger structure. The pylon outline (Fig. 4) is built up from balsa and while drying the pylon platform is installed and the 1/8" x 3/4" pylon post set up. The outline is now cemented in place and the ribs installed. The wing mount is planked from 1/8" x 3/8" on the wing, using wax paper; and when dry remove and trim to shape. It is now cemented on the pylon and al-

*Continued*

## WING

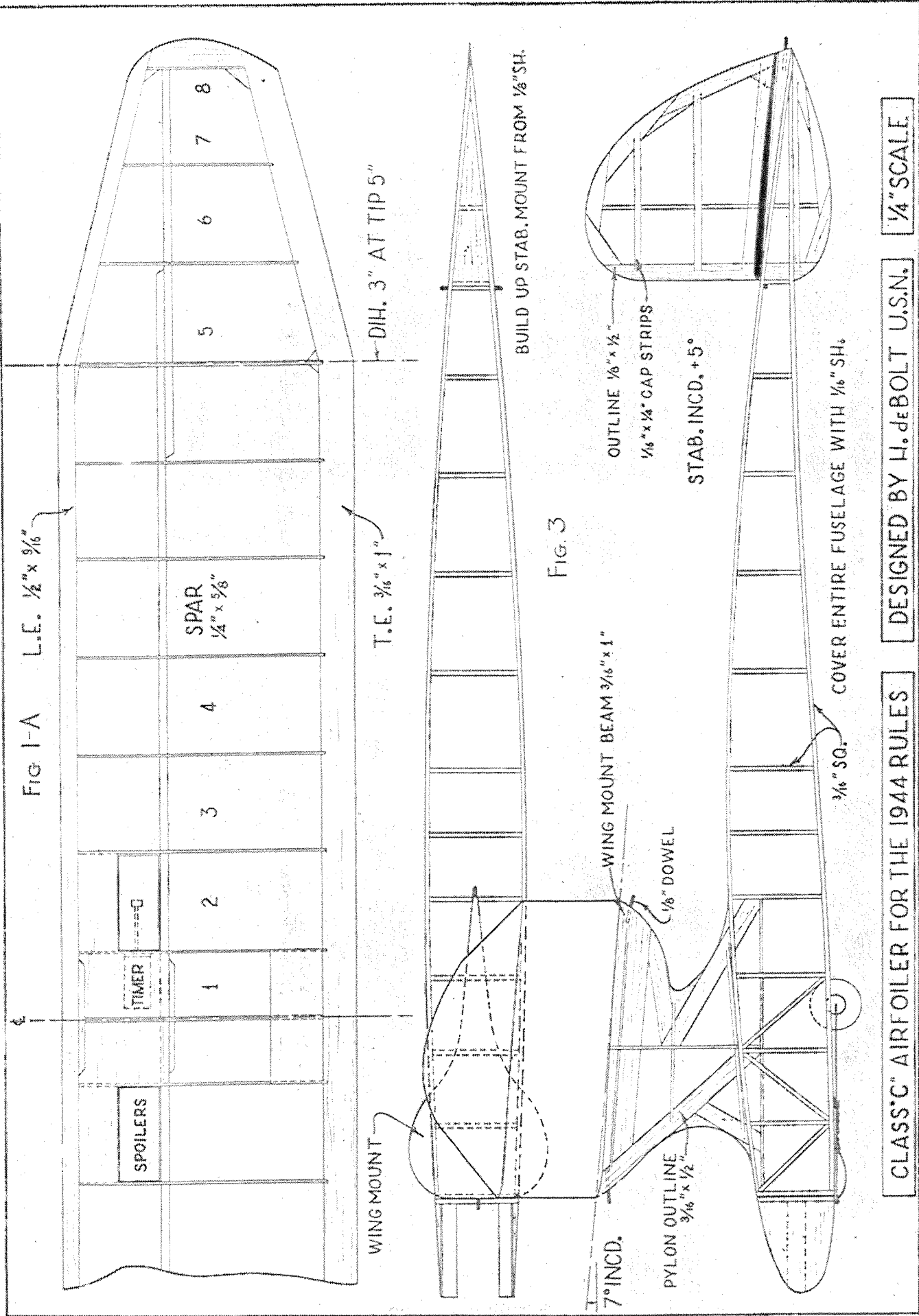
Using the Davis airfoil shown at Fig. 1, cut the ribs from 3/32" sheet and cement them between the leading and trailing edges and when dry remove from the drawings. Insert the spars in place and cement them well (Fig. 1A). When dry, block the panels to the proper dihedral angles and cement, add the necessary gussets and cement well. The 1/16" sheet covering is now added to the center section and the leading and trailing edges carved to shape. The original model used wing spoilers as shown, for dethermalizers and they worked very well when opened to a 45 degree angle. However, too much detail is not shown, as almost everyone has their favorite type by now, or at least a way to operate the release. In any case, some type should be used as she really can "sniff out" the thermals. To finish, the wing is covered with silkspan and given three coats of dope.

WHEN the new rules were announced in January, to me they offered a challenge—a challenge to build a plane that would not only perform as good as the old ones—but better. As one can easily see the only major change outside of cross-section and R.O.G. take-off, is the increase in wing loading. The object for this entire design was to overcome this and improve soaring qualities if possible. This was done by using an airfoil fuselage, a high aspect ratio wing and a Davis airfoil set at 7 degrees, which helps to no little extent. The results were all that was expected, as the model averages better than *three minutes in dead air*. The original model was powered with a Tiger Aero, but any one of the following motors can be used by changing the wing area slightly: O.K. 49, Dennyrite, Cannon 35, Comet 35 or any of the Bunch series. If you have one, dust it off and let's get started on the construction. This design is for Class C.



Two views of the specially designed gas-propelled model plane.

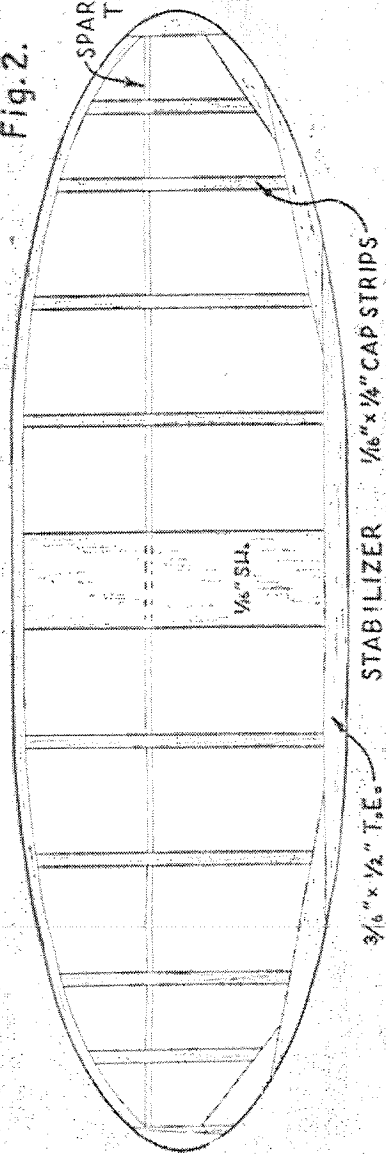






L.E. 1/4" SQ. (SHOWN 1/4 OF FULL SIZE)

Fig. 2.



WING MOUNT PLATFORM — PYLON CONSTRUCTION —

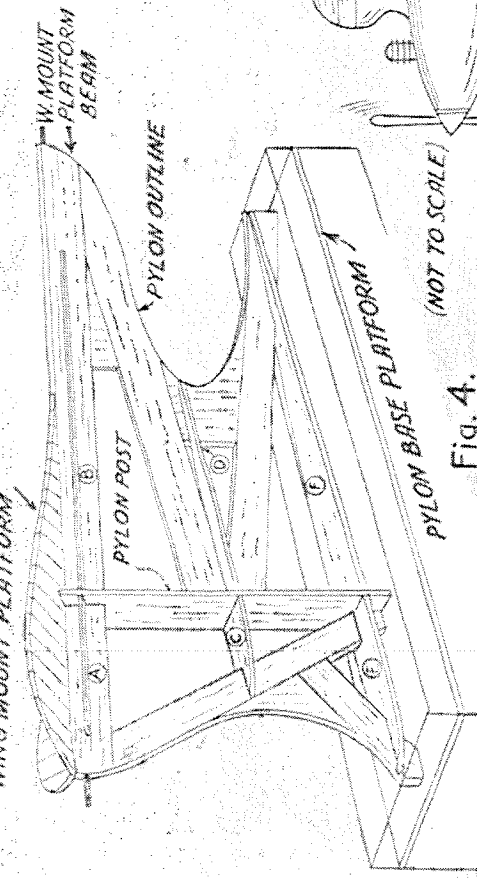
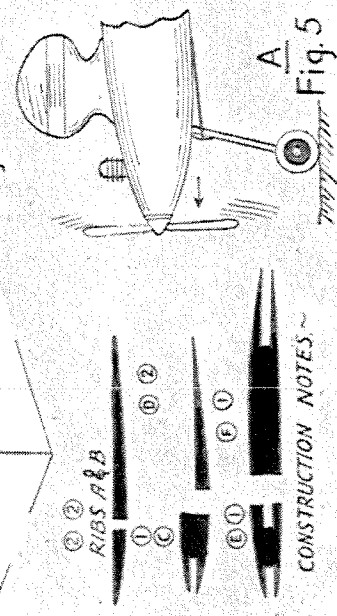


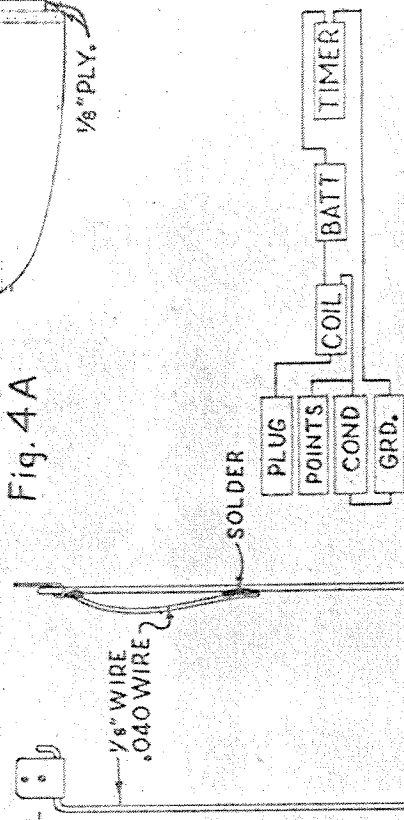
Fig. 4.



STRUT BEING PUSHED BACK AS PLANE LEAVES THE GROUND

THE 1944 AIRFOILER BY H. deBOLT

Fig. 4A



WIRING DIAGRAM

SPECIFICATIONS  
POWER TIGER AERO  
W. SPAN 60"  
W. CHORD 8.6"  
W. AREA 514 SQ. IN.  
W. LOAD 70Z./100"  
REQ. WGT. 360Z.



# The AIRFOILER for '44

lowed to dry. The entire fuselage is planked with 1/16" sheet and covered with silkspan. Three coats of dope are now added to finish the job.

## MOTOR MOUNT AND LANDING GEAR

The *motor mount* (Fig. 4-A) is built up from plywood, etc., as shown on the drawings. The  $\frac{3}{8}$ " x  $\frac{1}{2}$ " pine bearers are installed with the proper spacing for your motor. Balsa is used to fair in the motor bearers and dowels are used to hold it in place. The coil, batteries, and timer are mounted on a  $\frac{1}{8}$ " plywood track and fastened to the firewall with a metal clip, in the position indicated on the drawing.

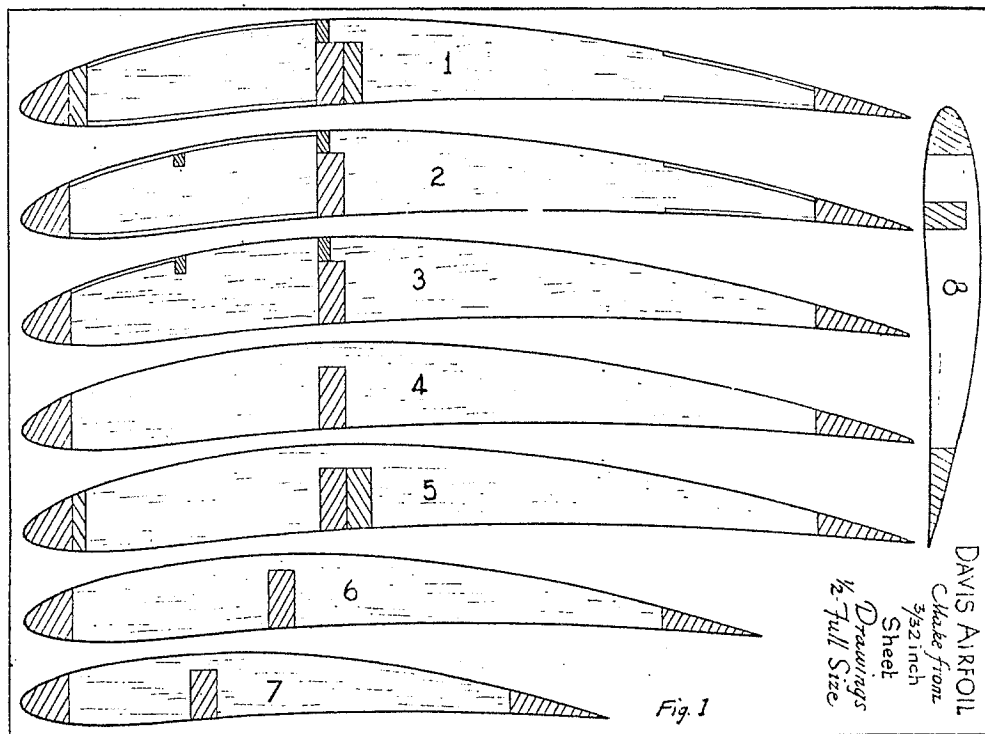
The retractable landing gear (Fig. 5) is simply made as shown, and its operation is equally simple. The landing gear is held down by the weight of the model and retracts when all the weight is taken off, through the action of the rubber bands. This type works very well under practically every circumstance; take-offs have been made from short grass with good results.

## PYLON CONSTRUCTION

The wing mount platform is planked on the bottom side of the wing at the center-line, using wax paper so that it will not stick (cement) to the wing. The pylon outline is next laid out on the drawings and cemented. While drying, the pylon post is cemented in the fuselage in its proper place. When dry, the pylon is assembled by cementing the pylon outline to the base platform and post. The ribs are made from  $\frac{1}{8}$ " sheet of suitable sizes cemented in their positions, and sanded to shape *after* being installed. The wing mount platform is removed from the wing and cemented to the W.M. beam along its center-line. This forms a saddle for the wing to rest in; it is now trimmed to shape. The 1/16" sheet covering is cemented on and sanded down to complete the pylon.

## FLYING

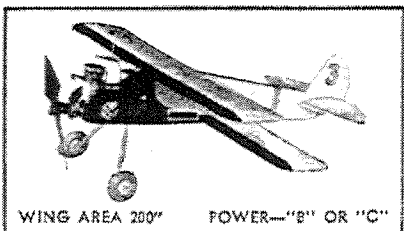
Only one adjustment had to be made to the model during all the test flights, and that was about two degrees of *left* thrust. The model is flown under low power and adjusted to glide in a *right* circle about 100 ft. in diameter. Power is gradually added until you obtain a spiral climb to the *left*, with a roll out into a *right* circle in the glide. The *left* thrust is added a little at a time, with paper matches inserted between the firewall and fuselage, and later secured by off-setting the motor. After your first flight you will probably realize the need for *dethermalizers*.



ONE OF THE EARLIEST DMECO ADS (June '46)


HERE THEY ARE—by "dmeco"

the "BIPE" STUNT TRAINER



WING AREA 280" POWER—"B" OR "C"

the "AIRFOILER"



A "B" AND "C" CONTEST WINNER

Designed by H. deBolt, Holder of Two AMA National Records!

The "Bipe"

*The model any one can fly, a trainer for the beginner, a superior stunt ship for the expert.*

Features a new type simple, rugged construction winner of many contests; it comes to you with grade "A" materials. Price \$3.95.

BEST CONTEST TIME—52 min. 40 sec.  
The "Airfoiler"

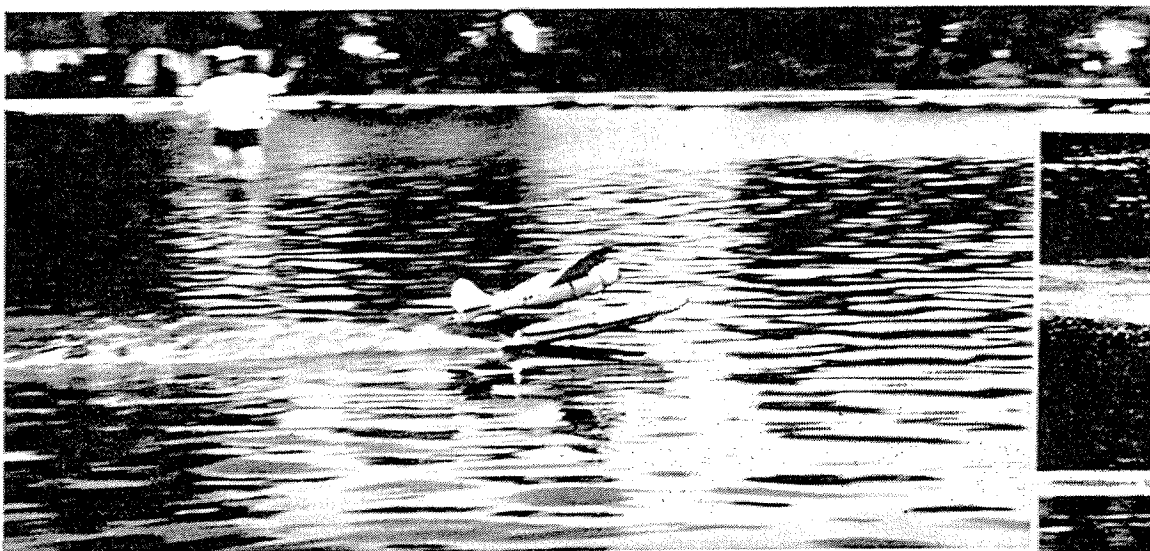
*The only model on which the fuselage and tail also contribute lift.*

It has a precut sheet balsa fuselage and a new monospar wing. A trouble free retractable landing gear and spoilers. With grade "A" materials. Price \$3.95.

The deBolt Model Engineering Co., Williamsville, N. Y.

Hal deBolt .... the consummate modeler .... from free-flight to u-control, speed and aerobatics, and into radio control racing and aerobatics (pattern) where he made the U.S. team for F.A.I. .... always competitive in all areas .... now writes his 'Golden Age of Radio Control' column for Model Airplane News, which we hope to continue enjoying for many more years (Editor/Publisher).





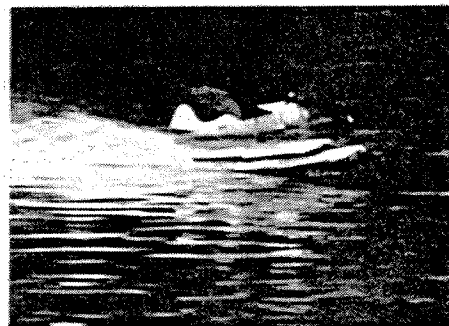
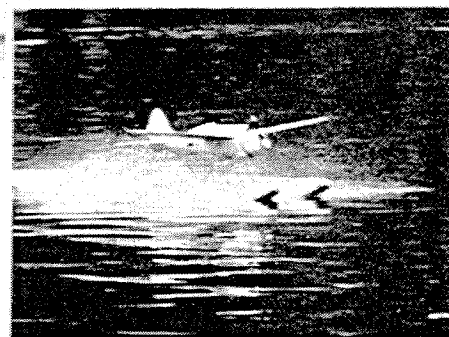
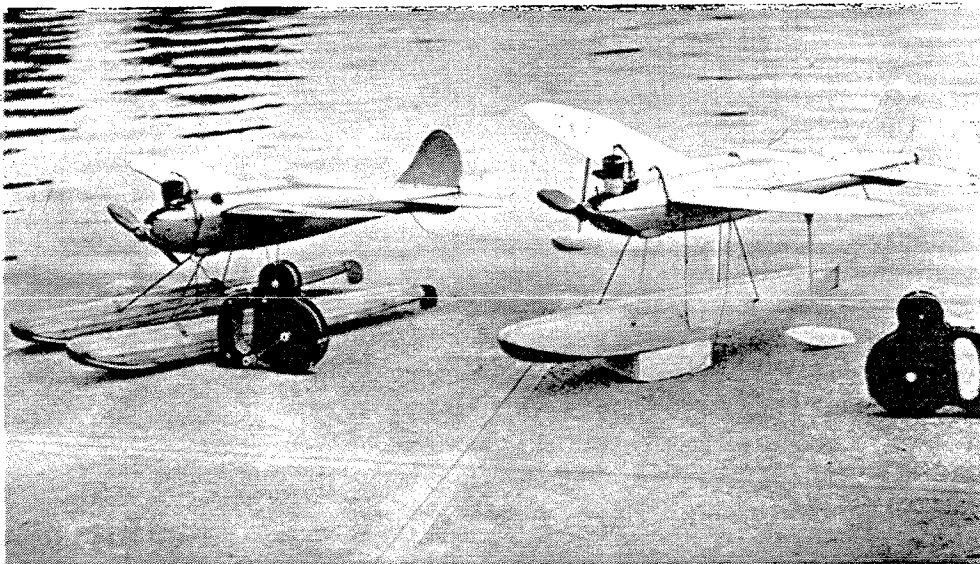
Walker says, "With U-relay control (engine control) I let the plane taxi slowly, with the lines under water. When she gets to a point almost directly opposite me, I give her the gun, and off she goes!"

# 1944 Firewater

**I**N contrast to the majority of control-line builders who are content to fly merely for speed, there is Jim Walker, dean of the sport, whose fun-inspired ingenuity keeps him constantly developing new variations on the theme. Now to add to his repertoire of inverted flight, flying two models at a time, loops, and many other innovations, there is Jim's latest idea—hydro control-lining.

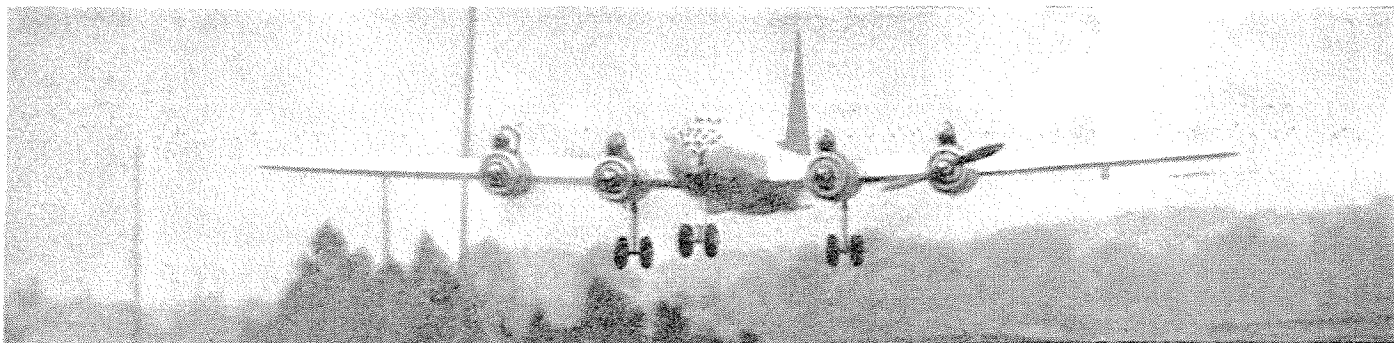
A standard Fireball was used for these tests, but there's no reason why other designs shouldn't be successful. Think of the fun with a Supermarine Racer! (Or how about "Rufe," the Mitsubishi seaplane fighter? You don't necessarily have to be near an ocean or large lake to fly hydros, as a small pond or creek will provide enough take-off area. Even a fairly large outdoor swimming pool could be used, and if the engine should inadvertently cut while over ground, a belly landing wouldn't do much more damage than scratch the finish off the bottom of the floats. P. S. Quick, Henry, my water wings.

The twin-float Fireball proved more successful than the single-float job. At first, trouble was experienced by water's flying into the prop, but that was corrected by moving the center of gravity back.



Realistic, eh? First, taxiing; then, speed increasing, she zooms into the air with water dripping off the floats. Good summer sport!





● The model continues in flight after one of the motors stops. The model has demonstrated complete flight stability with only two engines operating.

# "PISTOL-PACKIN' MAMMA"

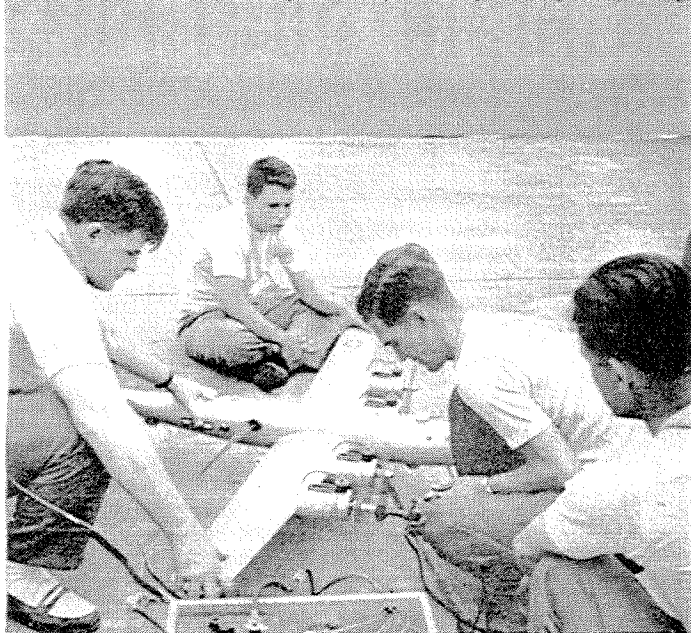
**THIS B-29 CONTROL-LINER WILL BE FLOWN AND DEMONSTRATED  
THROUGHOUT THE COUNTRY IN THE CURRENT BOND SELLING DRIVE**

**N**O MODEL airplane has made a more auspicious flight debut than this control-line B-29. The setting was the Municipal Airport in Birmingham, Alabama. The audience consisted of engineers of the B-29 modification plant in Birmingham. As for the success of this first flight, we quote from the Birmingham News: "Model B-29 actually flies, it looks like a B-29 landing at Municipal Airport, and it is a B-29—only it is a miniature, with a six-foot wing spread." Several trial spins were made and the model took off gracefully and flew at an estimated speed of 40 to 45 miles per hour.

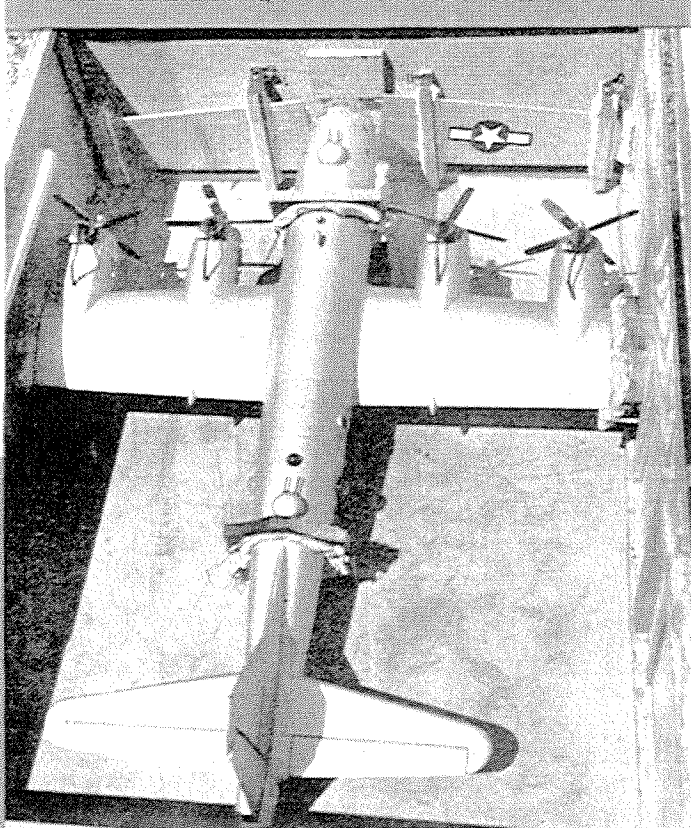
John Matthews of Birmingham spent approximately 1,500 man-hours and \$1,000 to complete this six-foot control-line model. Four Foster "29's" are used to power this exceptionally detailed model and relays are used so that any one motor or all four may be operated at the will of the flyer.

At the present time, arrangements are being made to have a national bottling concern sponsor a nationwide demonstration and bond selling tour.

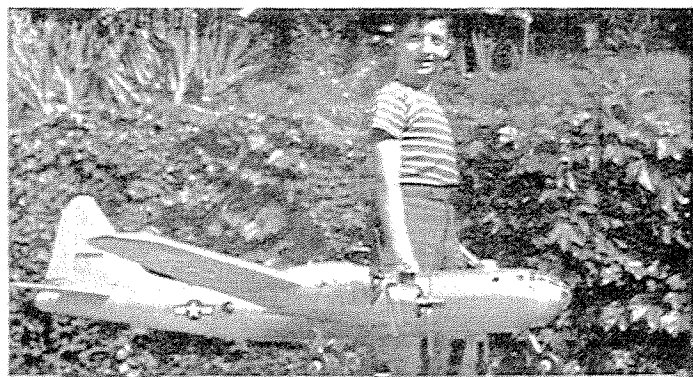
**1945**



● To save knuckles and time, an Austin auto starter is used to start motors.



● This ingenious shipping crate was devised to handle the model on tour.



● H. B. Bloch, Jr., son of the original project sponsor, is shown with the model.



# RADIO-CONTROLLED TARGET CRAFT

● Special parachute is carried by the robots and released when they are fatally hit, bringing them down safely. Fast work with the boats salvages many planes.

**I**F PRACTICAL experience means anything, the training given our ack-ack men and machine gunners down in Panama is insuring a crop of dead-shots, able to shoot anything out of the sky.

The reasons for the development are a number of ingenious, radio-controlled plane models which swoop and dive above the base in simulated strafing and bombing attacks. Casualties are usually heavy among the tiny craft, for, despite the manipulations of the men who sit at remote control stations and direct their antics, the expert gunners manage to down them in short order.

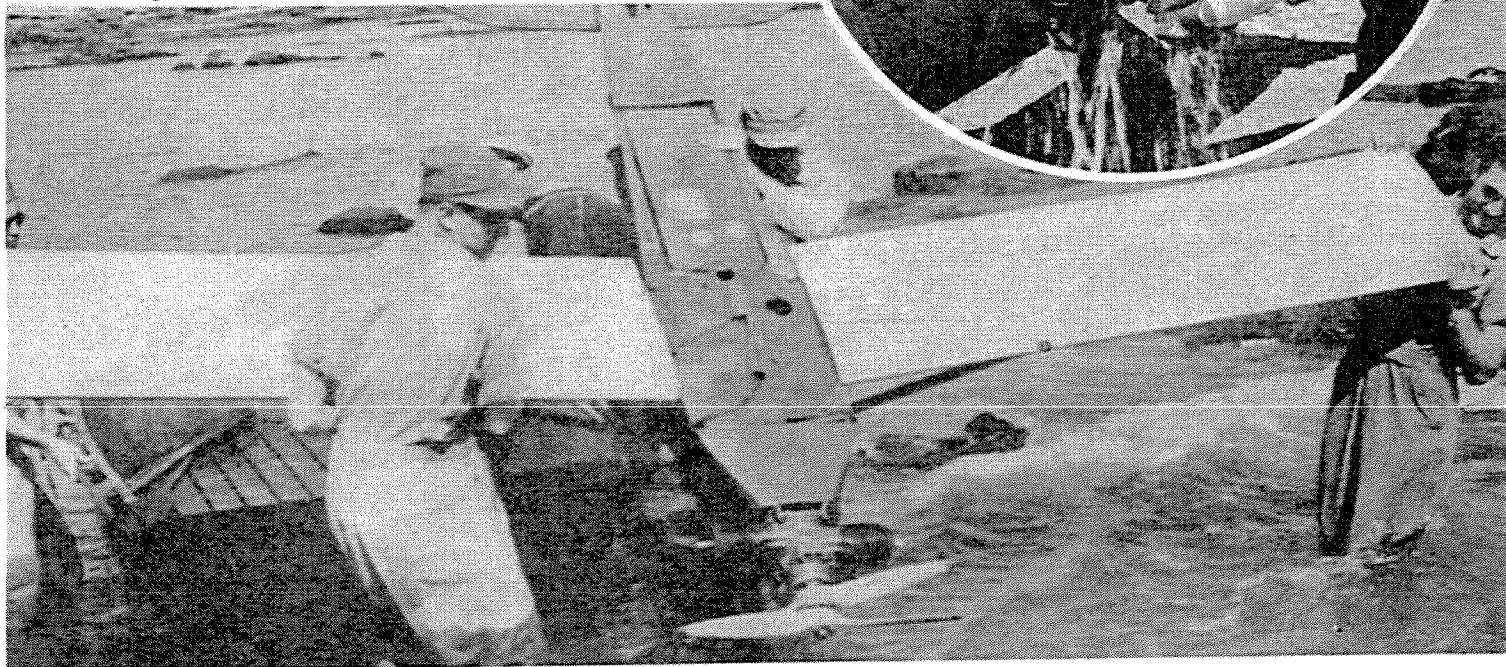
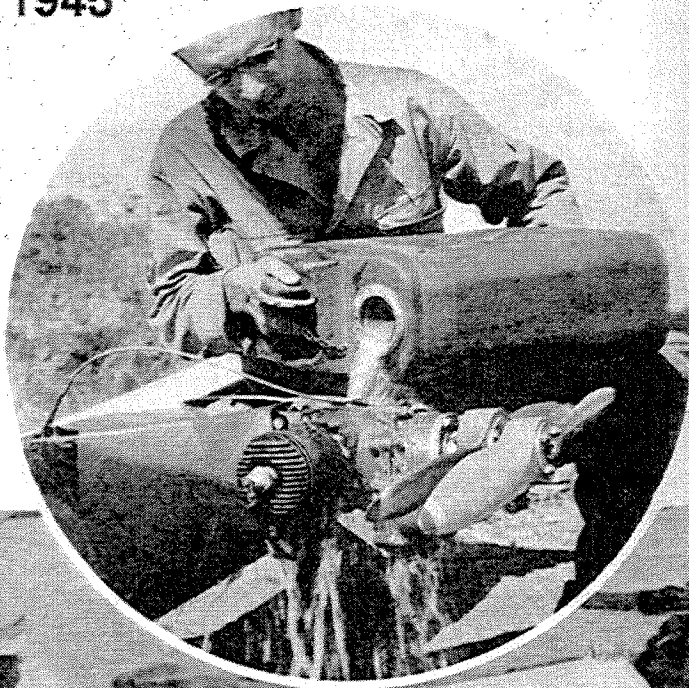
Equipped not only with radio apparatus but also with tiny, powerful gasoline motors, the planes whizz by on their ceaseless flights, pulled along by specially-constructed contra-rotating propellers. As soon as fatal hits are registered, the models tumble out of the blue and into the Pacific, where they are soon picked up by a hardy squad of men who row a small boat across treacherous shoals and reefs to the rescue.

After recovering the aerial zig-zaggers from the briny, the boat crew rush them to a nearby hangar where mechanical first aid is administered. If the robot ship is not hopelessly cut up, it is soon relaunched from its catapult to brave the ack-ack fire once more.

● Below: Fuselage battered, but wings and motor intact, disabled robot begins its trip to a Panama Coast Artillery Command hangar for immediate repairs. Inset picture at right shows Air Forces Cpl. drenching powerplant of downed target craft in gasoline to reduce the possibility of salt-water corrosion.

**IT'S MAINLY A ONE-SIDED BATTLE AT THIS PANAMA BASE WHERE OUR MACHINE GUNNERS AND ACK-ACK MEN TRIM THEIR GUNS FOR FLEETS OF ODD, BUT HARMLESS, ROBOT PLANES**

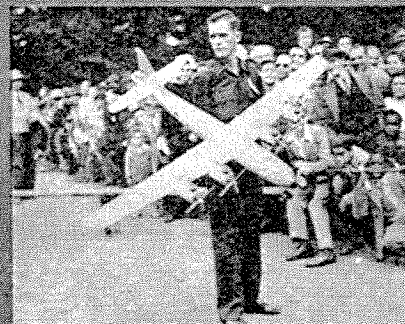
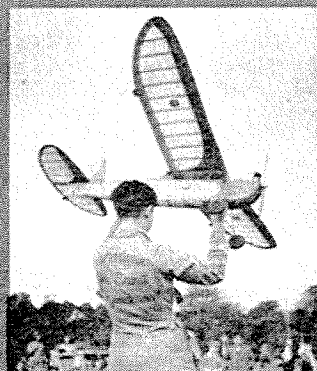
1945





The First Post War Major  
Meet October 6, 1945.

# PHILADELPHIA FLYING CIRCUS



● John Matthews, above, came all the way from Birmingham, Ala., to fly his Foster-powered B-29. At the left, we have Howard Graves, of Wilmington, Del., and his Berkely Super Buccaneer. Howard is a member of the Firestone Airscout Sq'n., Akron, Ohio.



## The inimitable Hal DeBolt won the Grand Championship Award

**W**E can truthfully report that "it was a flying circus." Not even the Hollywood copy and caption writers, in their traditionally stupendous style, could have done justice to this show.

To best visualize the affair, imagine yourself in your local park mall, or common. Of course the mall would have to be surrounded with your town's tallest and stateliest trees. On one side it would have to have a large river set down in a beautiful valley, and on the other the community reservoir. Of course, the community would have to be as large as Philadelphia to get the proper size of reservoir.

Now imagine that on the mall, on the side facing the wind, there are ten or twelve runways for free-flight gas and rubber, two baseball backstops, three control-line flying circles. We must not forget the towline flyers or the hand-launch gliders.

In the center of the mall, you must place an army jeep with loud speakers for the public address system. Never lose sight of the processing tables and all

● The helicopter above put on quite a show for the crowd. Below, we have another contest first: Russ Nichols, Secy. of the AMA, set up shop right on the field. Here he tells Walt Schröder of the day's results.



## Flying Circus

those test flights so necessary to a good contest. Now that you have all the ingredients, you must mix them up with 35,000 spectators and a full-size Kellet helicopter putting on a show at midday and you have the finished product, the "Philadelphia Flying Circus."

We must report that Everett Anguss, the contest director, had to go all out to make this a contest partially for the model builder, and there were a world of prizes to make up for all the inconveniences of the contest locale. Sponsored by The Philadelphia Record and put on by the Philadelphia Model Dealers' association, this contest was purely a test show to find out what should be eliminated before putting in a bid for the Nationals; they would like to put on their yearly show in such fashion as to dwarf all the other contests in the country. The model industry bent over backwards to cooperate with the contest directors and The Philadelphia Record must be complimented for its generous sponsorship; they spent liberally and donated handsomely to make this the really worthwhile spectator show that it was.

Other sponsors and contest operating groups might be wise to note the trials and tribulations attendant on operating a show as large as this where the spectator is more important than the contestant. From a personal standpoint this contest was as stimulating as any Nationals we have ever attended. Shades of old times at the hotel! Here we had Goldberg, Lanzo, Shulman, Shereshaw, Garami, Warner, Kania, Bieberman, Casburn (from Texas), and many other old-timers, wandering all over the scene. We still haven't recovered completely. Doesn't that make it a good show?



## NATIONALS REMINISCING

**O**LD-TIMERS, to whom the National Model Airplane Competition needs no introduction, have a decided advantage over newcomers not fortunate enough to have attended one or more of those flying classics. We will attempt to balance this advantage with a brief history of past National Competitions and then describe some of the scenes and incidents of the past which will without doubt be repeated in the future in one form or another.

The modern Nationals competition really started in 1932 when the NAA backed it with its intensive support. This marked a stepping stone in model plane history and introduced a new era not only in competition but in design, construction, and types of planes flown. That year the Nationals was held in Atlantic City on September 9th and 10th and was directed by Messrs. Irwin and Nathan Polk of the Bamberger Aero Club of Newark, New Jersey. Several outstanding incidents occurred at that contest. First of all it was the first National contest in which tractors played an important part, thus beginning the era in which tractors superseded pushers. Another outstanding event which probably was more responsible for changing the type of model flying than anything else was Maxwell Bassett's flight with the first gas engine-powered model to enter a large competition. Outdoor contests were held at the Atlantic City Airport at the edge of the city and the indoor events were held at the municipal auditorium.

The 1933 Nationals was held at New York with the Hotel Pennsylvania as headquarters. Outdoor events were flown at Roosevelt Field while the indoor models soared to the ninety-foot ceiling of one of New York's large armories. Here again Maxwell Bassett put on a real show with his gas model and captured duration events over other types. It was this that brought about a reclassification of models in the rules, gas models being placed in a separate class from rubber jobs because the latter were under a great handicap when competing with gas engine-powered planes.

By 1934, model aviation had expanded tremendously and the National Committee accepted the invitation of the city of Akron to hold their contest at the large dirigible airship field there. The indoor events were held at one of the large arenas in the city. The growth of interest in model flying could be measured by the increase in the number of successful gas models flown. At this contest gas-powered flights really began to take hold both with the contestants and the public.

In 1935, St. Louis was the focal point upon which modelers from all over the country converged. Here many new tractor, stick, and fuselage jobs made their debut and Leo Weiss of New York flew his gas model for slightly over sixty-three minutes.

In 1936, Detroit was the headquarters for the Nationals and all sorts of jalopies from rebuilt Fords to glistening Cadillacs pulled up in front of the doors of the swanky Book-Cadillac Hotel, headquarters for the contest. Detroit itself helped to put on a real show that year because many of the city's air-minded adults connected with mechanical industries in that area participated in many of the events. Like other meets, it was directed by the Polk brothers, assisted by prominent leaders in the model field.

For the three following years, 1937, 1938, and 1939, the Nationals were held in Detroit and generally were a repetition of the first contest held in that city in 1936; but each succeeding year saw a considerable growth in the number of contestants, number of models and the quality of design flown. In 1936, there were approximately two hundred and fifty entrants, and in 1939 there were seven hundred and fifty.

*Continued*

In 1940, Chicago, being more central and more easily reached by West coast modelers, was chosen as the site for the Nationals.

The Hotel Sherman was Nationals headquarters. The outdoor contests were flown at a large field just south of the Chicago Airport and the indoor events at one of the large arenas.

In 1941, a return engagement was staged at Chicago, the last one to take place before the war, when competitions were discontinued. This was really a gala event with a contestant enrollment of twelve hundred eighty-six.

That year the contestants were so numerous that the meet was unwieldy. It was more like a lot of smaller meets being run in the same location without the contestants contacting anyone outside of their immediate sphere of activity. The lesson learned here was to keep enrollments of Nationals contests below one thousand, and preferably below six hundred. Many came to the contests hoping to see old friends but

*Continued -*

## CLUB CHATTER

1945

Conducted By:

CHARLES HAMPSON GRANT





went away disappointed because they were unable to contact them. One of the outstanding features of this meet, however, was the radio control event, which boasted of approximately twelve entries. In previous years, these ships were in the experimental stage, with the Good brothers doing most of the performing, but 1941 saw many new successful jobs. One of extreme merit was Jim Walker's who won the contest.

Contestants who wish to fly in the Nationals have a wide range of model types from which to choose. You need not worry about your age. If you are under sixteen you can fly in the junior class. If sixteen or over and under twenty-one you enroll in the senior events. Adults (over twenty-one) are given a chance in the open events to carry home one of the prizes.

Outdoors, in any of the classes, you can fly stick models, hand-launched ROG fuselage models, gas models of various sizes, designated by Classes A, B, or C, hand-launched gliders, tow-launched gliders, flying scale models, or radio-control models. There are special events, such as the Stout Trophy Event for fuselage models and the International Wakefield Competition, in which modelers from various countries compete with ROG fuselage planes of special specifications.

Now let us suppose that you have been preparing for six months to take the long trek to Chicago. You have carefully designed your planes, lost many hours of sleep working into the wee hours of the morning to have them finished before the contest date. You have never been to a Nationals contest but you have scanned the magazines for helpful information and have plied your friends with questions until their patience was nearly at an end. Special boxes have been made for your models, and they are neatly packed in them. You have even found time to scout around and purchase a second-hand "jalopy," whose many faults and lines of old age have been covered with a neat coat of paint. Even your model club insignia has been inscribed upon its back. As the great day approaches, you give the engine a final check-up and pack your equipment so that it will withstand the ruts and bumps between your home and Chicago. Then, with a little extra cash, a hope and a prayer stirring within your breast, you hit the high road a day or two before the contest. Probably you have rounded up two or three other model builders who wish to get in the mix-up and who travel with you as ballast and welcome company.

Finally, a little tired and dusty, you pull up in front of contest headquarters, the Hotel Sherman. The place is a mad-house—every door oozing model builders with planes of every conceivable design. Warily, a little dazed, you and a couple of your helpers stagger through the doorway loaded with your equipment, while another companion parks your car in a nearby lot. Inside you are directed to the contest registration desk which you finally reach after forcing your way through the milling crowd of contestants from all parts of

the country. If you are lucky and arrive at a slack time you may be able to register within ten minutes, but more often you patiently wait while a hundred or more other contestants give their names and addresses and receive their data, such as contest badges, instructions, assignment to room and miscellaneous information that will prove useful.

Perhaps some of your models have been broken during transit, so at the first opportunity, you turn your steps toward contest shop headquarters. Here space has been provided for building and repairing. If you are an old hand at modeling, even though you have not flown in the Nationals previously, you will probably run into one or more old friends here.

The first day is spent in getting acquainted with your surroundings, the contestants, and leaders. No instructions can be given for this procedure because you are swept along by the tide of events more rapidly than you can plan, and no circus or Mardi gras ever provided more thrills and excitement.

The following day you are to fly in the outdoor events, so being uninitiated to the peculiarities of old-time modelers you turn in early, but usually your efforts to sleep are in vain. From all parts of the hotel come a varied assortment of noises—human and mechanical. Perhaps it is the Fourth of July and somebody has thrown a cannon cracker into the hotel court, as one or two modelers did at the Ft. Shelby Hotel in Detroit. Then at the other end of the corridor a Foster gas job starts popping, wheezing, back-firing and producing a varied assortment of sleep-dispelling noises. There is always a chorus of such sounds. So you lie awake until the wee hours of the morning.

Nevertheless, when you rise the next day the excitement of the occasion pulls you together and with the feeling of butterflies in your stomach you hop into the bus that takes you to the flying field. Upon your arrival you go to the headquarters tent and find out to what flying group you are assigned, the number of the group and the name of the leader, and obtain a set of contest rules, badges, and miscellaneous equipment (including a box lunch). After searching doggedly through the milling crowd of contestants, spectators, and vehicles you arrive at your group location on the flying lot.

The flying area is roped off, with the spectators, automobiles, etc., on the far side. Down the field stretch the individual flying groups, each centered around a timer's table. An under-current of excitement and activity fills the air, with modelers preparing for flight and planes buzzing around in every direction on preliminary test flights.

First you test your rubber jobs, and when satisfied with the test performance you place them carefully away for your official flights. Perhaps you have a gas job, so you busy yourself tuning up the engines. This is most important in gas model flying, therefore care is taken to see that it starts quickly and without undue cranking.

Finally, official flights start and you hesitate to make your first trial because you feel the wind is too strong and thermal currents have not begun to rise. You wait a while, hoping conditions will improve. Finally giving up in disgust you make your first flight and, if you're lucky, you retrieve your model in good order, make necessary adjustments, and fly again until all three flights are completed. If you fly a gas model, it is well to have a car available and ready with a driver.

Perhaps you have some new design innovation on your rubber job and it has won first place for you in your event. This happened to Gordon Light at the competition in 1933. Gordon had never entered a Nationals event and he had to start from scratch, so instead of following the trend of flying twin pushers he built a tractor of original design, using many of the hints and aerodynamic features from an article by a prominent authority in one of the model publications.

During the contest you manage to find a few lax periods when you are either unable to fly or have completed your flights. These can be put to good advantage if you roam the field and study the models and technique of other contestants. Of great interest are the radio control planes. Flying these planes is a highly scientific operation requiring great preparation, both of plane and radio mechanism.

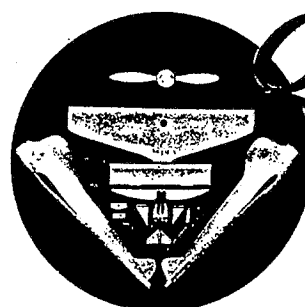
If the air is still you may enjoy a thrill such as Jim Walker provided with his radio-control plane at the 1941 Nationals. Jim went to the side of the flying area, with his plane about thirty feet away ready for the take-off, and pressed a little button on the box. The motor speeded up and off she went. As

Jim pushed back gradually on the miniature stick attached to the box in front of him the plane climbed steadily and surely. Finally it leveled off when the stick was pushed forward. After traveling about a quarter of a mile, Jim hanked it to the left by moving the stick to the left. It circled gracefully and then with a movement of the stick to the right it turned to the right. After many turns and a few figure eights the plane headed back to the starting point. It glided in gently and came to rest at the exact spot from which it had left the ground.

By this time you are so saturated with new experiences, are so in need of sleep, that the speeches of praise delivered by prominent personalities at the final victory dinner register with difficulty. The dinner is held in the big ballroom of the Hotel Sherman, and although it is a stirring event, the modelers are not in a frame of mind to retain their dignity during long-winded talks from well meaning sponsors and prize donors.

The greatest excitement of that evening is the publication of the "Blurb." In this is given the story of the contest, and its editors work night and day to compile the text and have it ready for the victory dinner. It seldom is passed around to the contestants before the dinner and often makes its debut about the time the speeches begin. On a number of occasions the speechmakers might as well have gone home because as soon as the announcement came that the "Blurb" was out, a near riot took place.

The victory dinner is concluded with donation of the prizes and, if you are lucky, as many contestants are, you will be taking home a considerable amount of silverware in the form of cups, medals, trophies, etc.

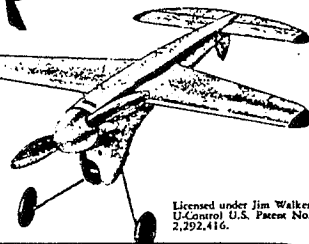


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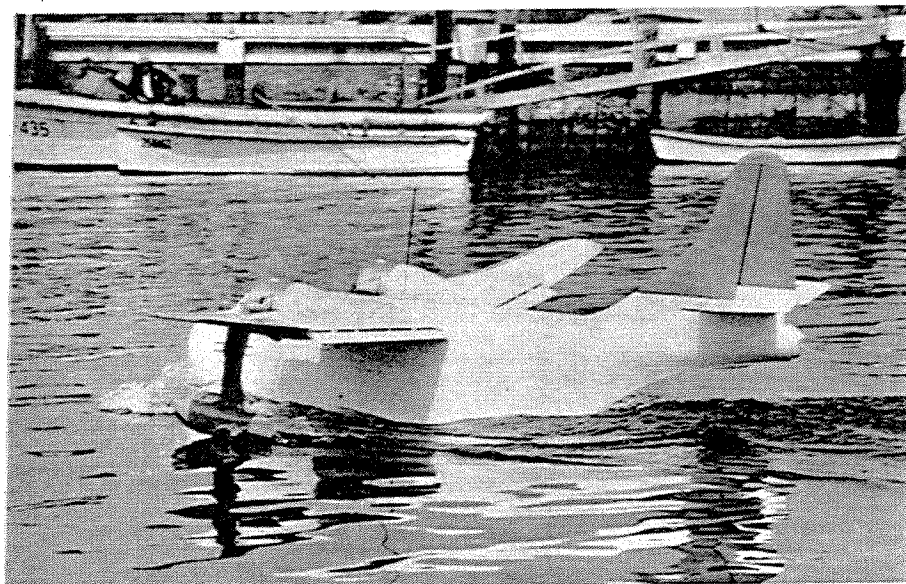
This flashy, aluminum control-line plane for "B" and "C" engines sets the pace in quick assembly because all sections come completely finished.

For example, the wing is one-piece—needs only the installation of U-control wires... the fuselage is a vertical-split shell with adaptable motor mount that allows easy installation of almost any engine. Photographic instructions show you exactly how.

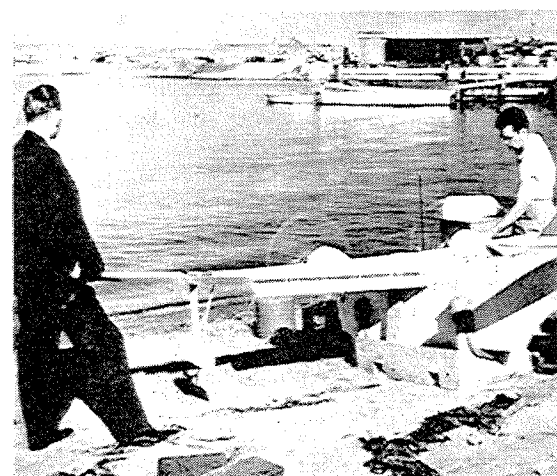


# RADIO-CONTROLLED FREE-FLIGHT MODELS

1946



● Dynamically similar model of XP4Y-1, above, under towing test, gives hull characteristics. Note man of control console in background.



● Waterside warm-up test of free-flight model preparatory to launching for taxiing and aerodynamic tests.

**ENABLING FAST TESTING, RAPID ENGINEERING CHANGES,  
THESE MODELS DRASTICALLY CUT TIME FROM CON-  
CEPTION TO PRODUCTION OF FULL-SIZED CRAFT**

**Q**UARTER-SCALE man-carrying models to determine flight and other characteristics of projected aircraft have been used on several occasions both here and abroad. The latest wrinkle, however, is the use of dynamically-similar radio-controlled free-flight models of 1/8th to 1/10th scale for the same purpose. These models are not only identical in configuration with the full-scale aircraft they represent but their weights and performance, as well as the dynamic forces acting on them, are to scale. In other words, a dynamically-similar model can predict with sufficient accuracy how the proposed airplane will act. Any bugs that may turn up during tests of these models can, therefore, be nipped before much time and large sums of money are spent in building the prototype. Considerable reduction in time from conception to production of full-scale aircraft is achieved by this method. In some ways, the development of a dynamically-similar free-flight model represents as complex an engineering problem as the design of a full-scale airplane.

One of the pioneers of this type of testing is the Consolidated Vultee Aircraft Corp., whose Hydrodynamic Group, under the leadership of E. G. Stout, has been, for several years, experimenting with the method, beginning with partially restrained, dynamically-similar models. Advances in radio control of aircraft led eventually to further development of this project into radio-controlled free flight. This permitted the study of hydrodynamic hull and float design under different water surface conditions and the study of acceleration and its effect on spray without recourse to the NACA towing basin which was crowded with projects during the war. The main object of this project was (1) the development of a dependable and accurate method to determine all dynamic functions of aircraft in motion, (2) to obtain tow basin and wind tunnel data, and (3) to obtain such information as could not be supplied by these methods.

The experimental model built for this purpose was a dynamically-similar model of the twin-engine Navy patrol bomber, the XP4Y-1. Sufficient wind tunnel and towing basin data on this aircraft were at hand so that accurate comparison between them and free-flight results could be made. Construction of this model is entirely of wood, the hull, wings and tail surfaces being planked with balsa. It is identical in every respect with the full-scale airplane, with the exception that, in order to compensate for the scale effect due to the small Reynolds Number of the model, full span leading edge slots were incorporated.

Changes in the value of the Reynolds Number (a nondimensional coefficient used as a dynamic scale of air flow which depends on density, velocity, linear chord dimension, and kinematic viscosity of the air) affect any force coefficient, such as lift coefficient, of the wing. This is known as the scale effect, and it had to be corrected by complicated mathematical formulae for wind tunnel tests. However, it has been found that with properly designed leading edge slots, full-scale lift slope of the lift curve and maximum lift coefficient could be duplicated.

The other departure from geometric similarity of the full-scale airplane is the added dihedral in the outboard wing panels, giving the model a polyhedral effect. This was done to make the model inherently stable and allow for piloting errors of inexperienced operators during the early stages of radio-controlled flying.

The engines which power this and other dynamically-similar models are two-cylinder opposed, two-cycle plants designed to specifications of the Consolidated-Vultee Hydrodynamic Group by Ohlsson and Rice, well-known model airplane engine manufacturers. Rated at 1.6 b.h.p. at 4,200 r.p.m., they produce scale horsepower and r.p.m. of the 2,000-hp R-3350 engines. When equipped with 1/8th scale propellers identical to the three-bladed Curtiss-Electrics 16-ft. diameter, these engines actually produced static scale thrust at scale RPM. The interesting feature of these miniature powerplants are the large external intake manifolds which carry the mixture from the crankcase to the cylinder contrary to general model engine procedure of drawing the mixture through an internal by-pass located in the cylinder wall. Gas tanks on the XP4Y-1 model are located in the engine nacelles behind the fire wall. Another model, a four-engine flying boat, has the powerplants completely buried in the leading edge of the wing, with only propeller shaft fairings extending outward. This model is equipped with a pressurized fuel system.

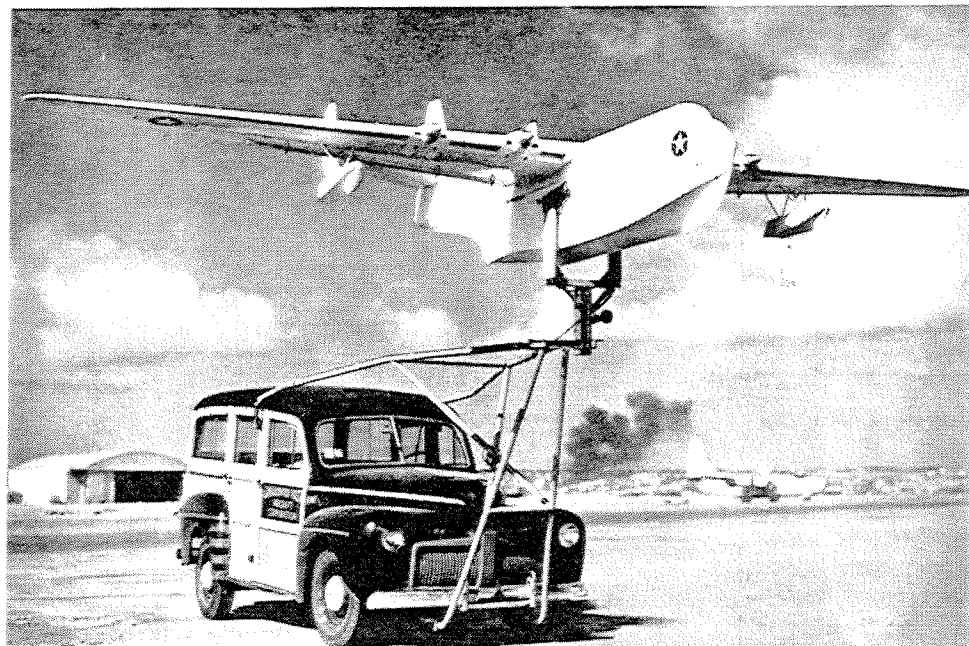
The radio system for controlling the models was developed entirely by Consolidated-Vultee. Although at the time the project started such systems were already in existence, and remotely controlled flight has been achieved on numerous occasions by model builders, no known successful system suitable for the flying of dynamically-similar models has been developed. All army experiments in this direction were, of necessity, of secret nature, and information on them was not available. Consequently, Consolidated-Vultee was forced to develop its own system, entirely independent from any other in existence. Added to this was the fact that scale gross weight of the first experimental model allowed only 15 lbs. for radio receiver and battery, which eliminated the large elaborate systems known to be in use.

Choice fell on a system using seven frequencies with amplitude modulation for positioning which permitted simultaneous and independent control of two throttles, flaps, ailerons, elevators, rudder, and ignition. The position of any one control can be determined by the amplitude (strength) of corresponding frequency. The transmitter (ground station) represents a typical cockpit and is equipped with a wheel control column, rudder pedals, and two throttle-control levels. The instrument board, besides various radio instruments, contains an elapsed-time clock, flap and ignition switches, and control surface trim adjustment knobs. An adjustable seat is provided for the operator.

The positioning circuit in the receiver is so arranged that during the operation of the transmitter it corresponds to a mechanical linkage between the control station and the controls of the model, enabling the



This photograph shows actual test setup of scale model and model's designation of theory flight characteristics without actual flight. (See also driven into wind)



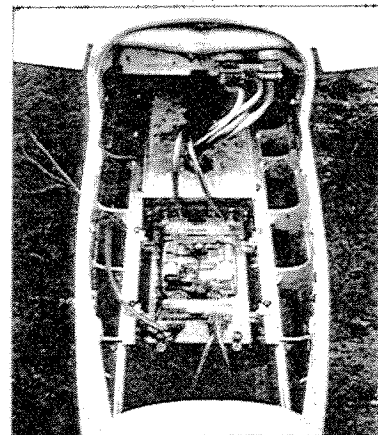
operator to know at all times the exact position of the model's controls. Actuation of controls is achieved by small three-pole electric motors located in the hull which are geared to a jack-screw. Homing devices are provided on all controls. These cut the throttle to idling and position all flight controls to a predetermined glide attitude as soon as the transmitter switch is cut off. By switching on the transmitter the operator can resume control of the model. In case of emergency, cutting the ignition switch releases a parachute from the dorsal compartment of the model.

A photo recorder consisting of a motion picture camera is installed in the hull. It photographs the reading of instruments which indicate the water speed, air speed and trim of the models under test. Under development at the present time is also a miniature automatic pilot, with the help of which, not only rolling and pitching characteristics of models in flight, but also hydrodynamic e.g. limits of stability, take-off, and landing characteristics, as well as all dynamic flight characteristics, will be determined.

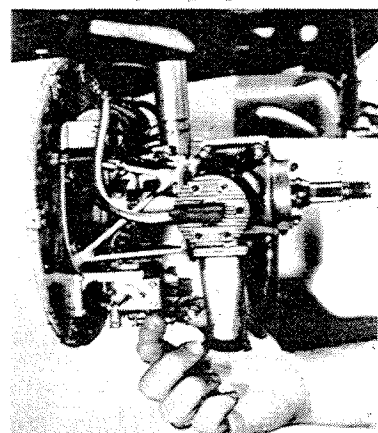
In order to facilitate keeping track of the models while in flight, the rudders and port wing tips are painted a brilliant orange. The same color scheme is applied to the corresponding controls on the ground transmitting station, namely to the left segment of the control wheel, left rudder pedal, and left throttle. This helps the operator to determine immediately the direction of flight of the model and eliminates the necessity of his orientating himself in order to execute a given maneuver.

Judging from photographs, preliminary tests to determine aerodynamic qualities of models are conducted by mounting the models on a frame fixed to an automobile in such a manner that they can rotate about the pitching axis. Remote control connections between the model and the automobile permits actuation of controls. When driving the rig across the field at varying speeds, much useful data is obtained on the model's characteristics without endangering it by test flying before balance, stability, controls response, etc., have become a known factor. Hydrodynamic and trim stability of the hull are tested by radio-control taxiing the model in the water.

Model's receiving set uses 7 frequencies which individually operate controls.

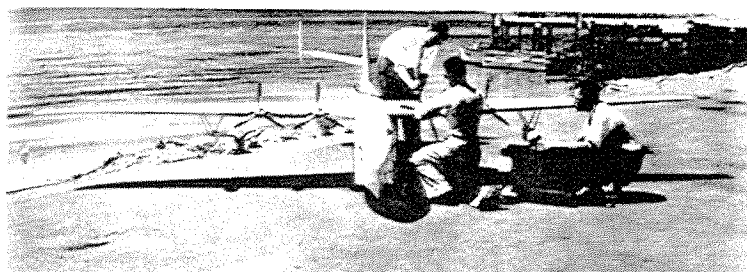
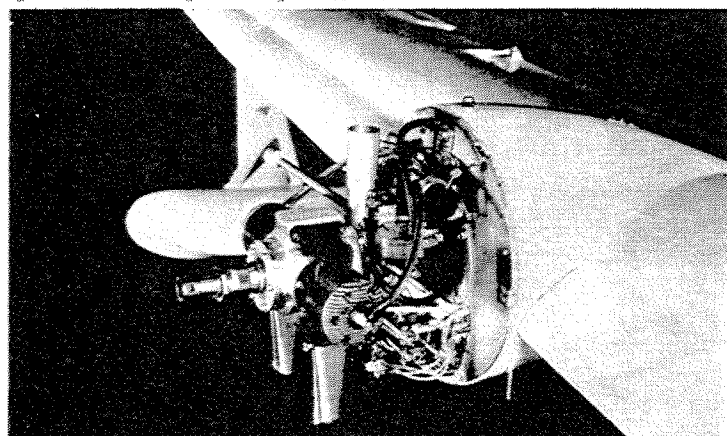


Hand indicates radio-controlled electric motor operating engine throttle.



In July, 1946 these 1/4 scale radio controlled models preceded our current R/C giant models by more than 50 years !!

Below. Close-up shows installation of Ohlsson-Rice engine in nacelle on wing of free-flight model of XP4Y-1



Variation of engine mounting on this one-tenth-scale dynamically-similar model has powerplants buried in wing.



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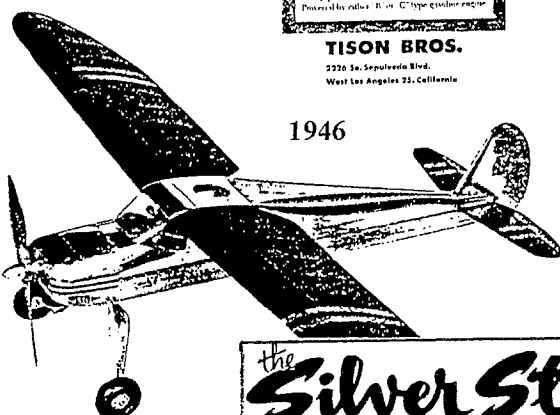
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**Description and Specifications**  
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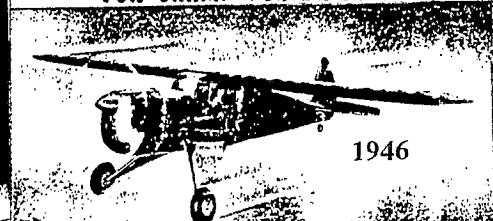
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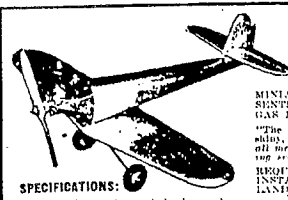
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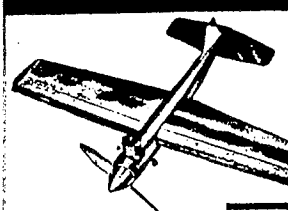
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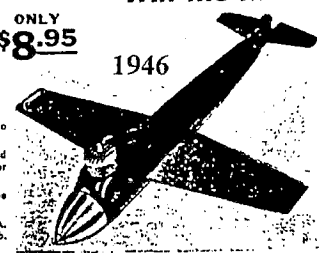
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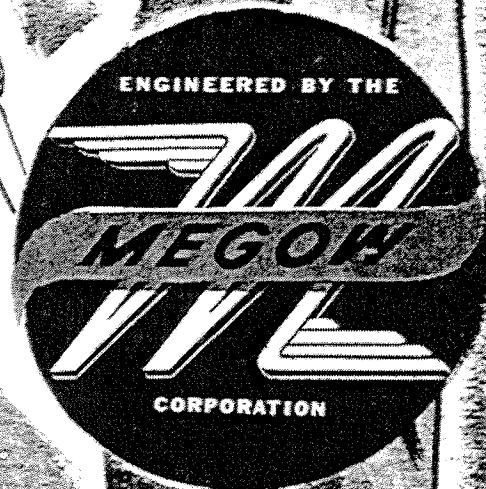


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No. 14

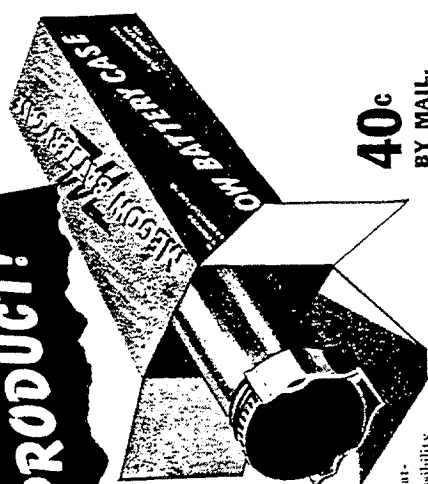


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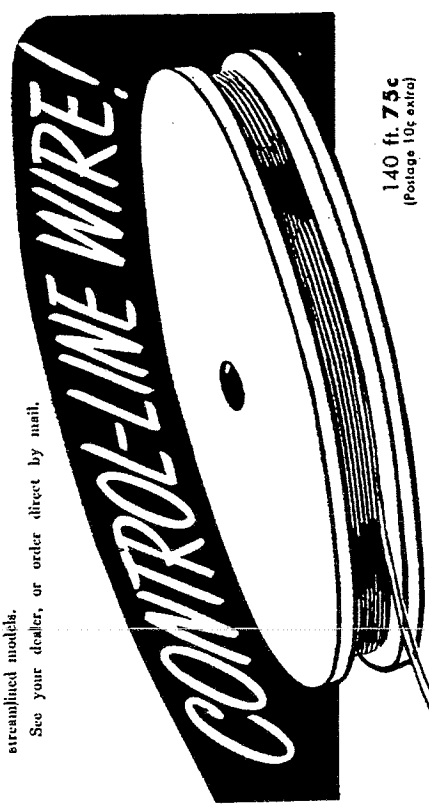


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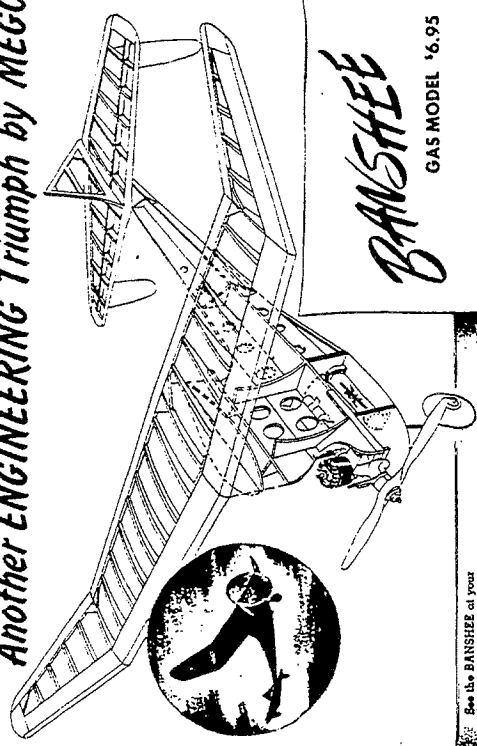


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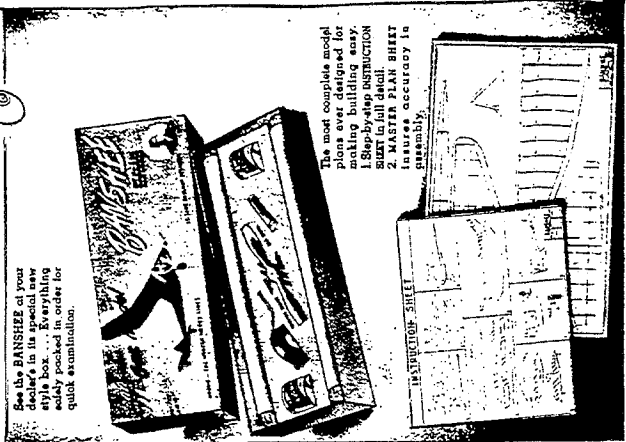
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See the BANSHEE at your dealer's. If he cannot supply you, send us your order and dealer's name.



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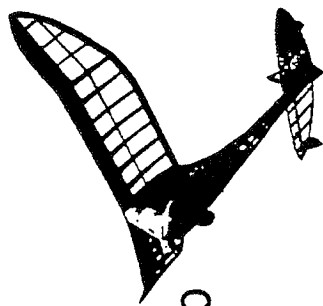


See the BANSHEE at your dealer's in its special new style box. Inspecting easily packed in order for quick examination.

The most complete model plans ever designed for making building easy. 1 Step-by-step INSTRUCTION SHEET in full detail. 2. PARTS PLAIN SHEET for necessary in assembly.



# MEGOW Gas Models



**Zomby**

Class "B"

**\$3 00**

Kit No. E-24

**Aero**

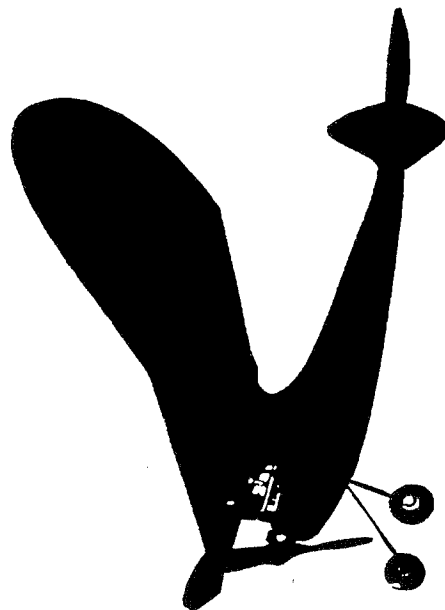
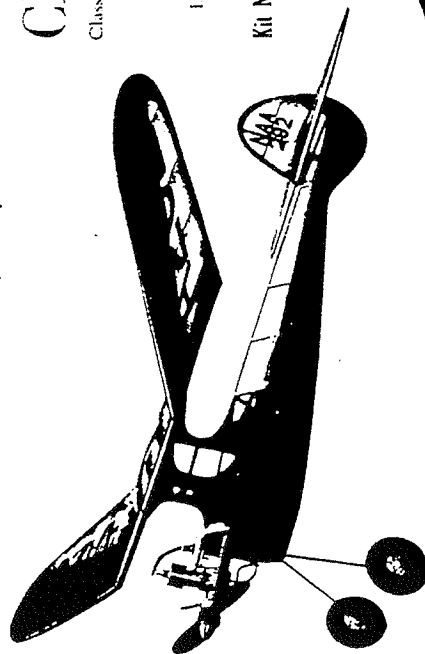
**Champ**

Class "A"

**\$2 50**

Less wheels, liquids  
and propeller

Kit No. E-21



**Ranger**

Class "A" or "B"

**\$3 00**

Kit No. E-22

**MEGOW**

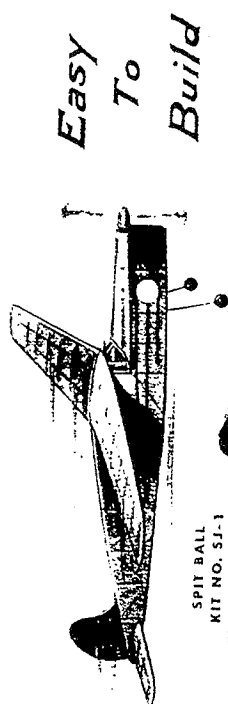
S-J Series



**Flying Contest Models**

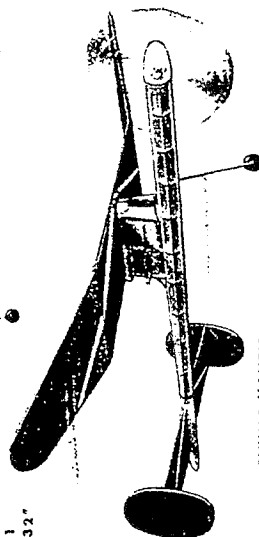
**50¢**

ALL BALSA WOOD

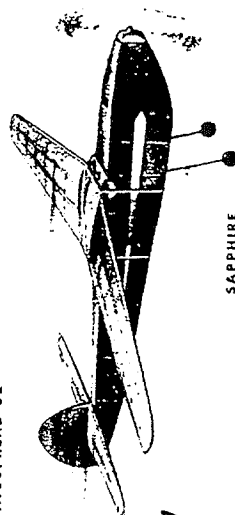


SPIT BALL  
KIT NO. SJ-1  
WINGSPREAD 32"

*Easy  
To  
Build*



FLYING MANTIS  
KIT NO. SJ-2  
WINGSPREAD 32"



SAPPHIRE  
KIT NO. SJ-3  
WINGSPREAD 32"

*Sensational  
Flyers*

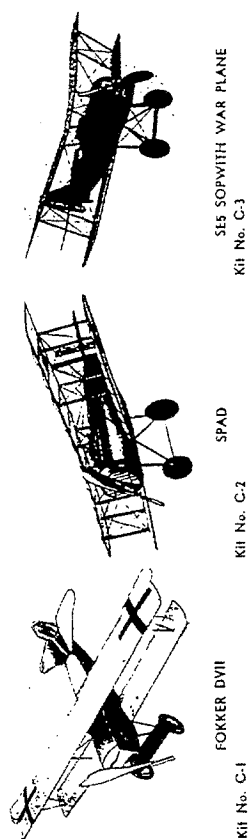


# MEGOW 25<sup>c</sup>

"C" Series

ALL BALSA WOOD

## Flying Models



FOKKER DVII  
KIT No. C-1

SPAD  
KIT No. C-2

SE5 SOPWITH WAR PLANE  
KIT No. C-3



NIEUPORT  
KIT No. C-4

STINSON  
KIT No. C-5

CORBEN ACE  
KIT No. C-6



MONOCOUE  
KIT No. C-8

SENIOR R.O.G. ENDURANCE  
KIT No. C-11

FAIRCHILD  
KIT No. C-12



TAYLOR CUB  
KIT No. C-16

SENIOR R.O.G.  
KIT No. C-29

JUNIOR COMMERCIAL  
KIT No. C-30

# MEGOW 15<sup>c</sup>

"N" Series

ALL BALSA WOOD

## Flying Scale Models



KIT No. N-1

SWIFT GC-1 A

KIT No. N-48

CURTISS X500C1



NORTH AMERICAN  
P-51 MUSTANG

KIT No. N-2

KIT No. N-30

PRIMARY GLIDER

KIT No. N-60

TAYLOR CRAFT SEA PLANE



REPUBLIC  
GUARDSMAN

KIT No. N-3

KIT No. N-38

NEW GULFHAWK JR.

SHIPPLINE

KIT NO. N-52



GRUMMAN  
SKY ROCKET

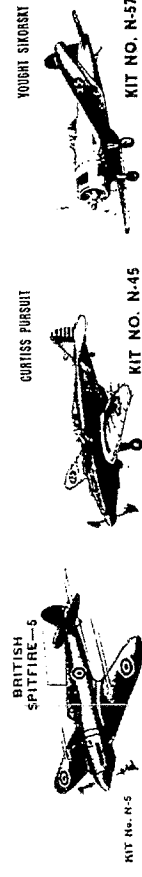
KIT No. N-4

AIRACOBRA

KIT NO. N-42

DOUGLAS B-15

KIT NO. N-56



BRITISH  
SPITFIRE-6

KIT No. N-5

CURTISS PURSUIT

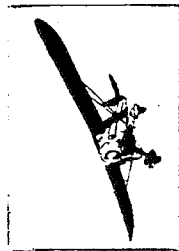
KIT NO. N-45

YOUNG SIROCKIT

KIT NO. N-57



# MEGOW "J" Series Flying Models 59<sup>c</sup> ALL Balsa Wood



J1 LAMBERT MONOCOUPÉ



J4 AERONCA K



J6 FAIREY BATTLE



J7 FAIRCHILD RANGER



J9 REARWIN SPEEDSTER



J10 MESSERSCHMITT M-29



J11 CESSNA C-34



J12 HOWARD DG-8



J13 "TOPPER"



J14 NEW GUILFAYV JR



J16 CONTEST COMMERCIAL



J17 "STUKA"

# MEGOW "X" Series ALL Balsa Wood Flying Models 95<sup>c</sup>



X1  
SPITFIRE



X4  
DOUGLAS B-4



X7  
GRUMMAN SKYROCKET



X2  
REPUBLIC GUARDSMAN



X5  
YOUGHIT SIKORSKY X-401



X8  
GRUMMAN "HARTLET"



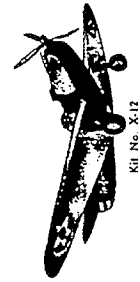
X9  
WESTLAND LYSANDER



X10  
FOCKE-WULF



X11  
HENSCHIEL



X12  
FAIRCHILD



X13  
MUSTANG



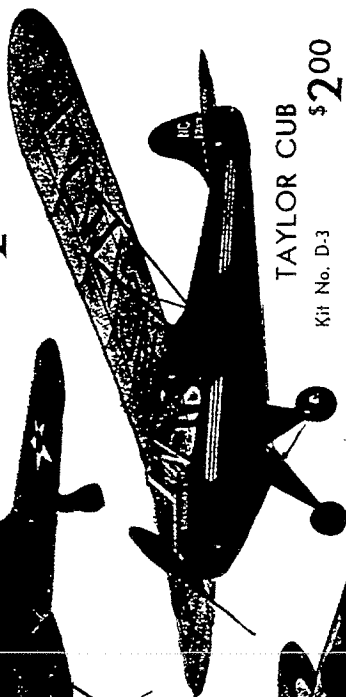
# MEGOW

## "D" SERIES Flying Models

ALL BALSA WOOD



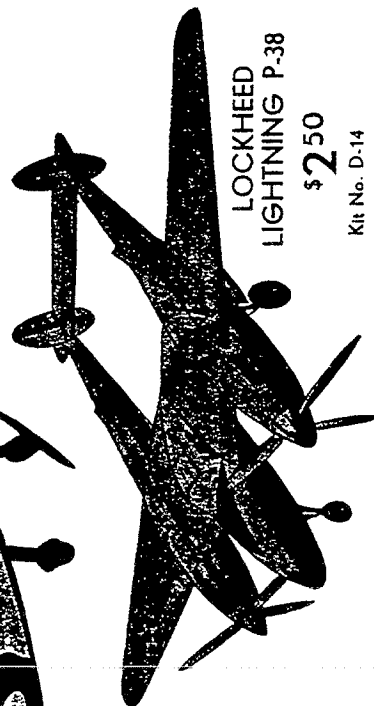
AIRACOBRA P-39  
Kit No. D-11 \$2.50



TAYLOR CUB  
Kit No. D-3 \$2.00



BRITISH SPITFIRE  
\$2.50  
Kit No. D-12



LOCKHEED LIGHTNING P-38  
\$2.50  
Kit No. D-14

Tomorrow... in the Air!



# MEGOW FLYING WING

KIT SX-1  
FLYING WING - Wingspan  
34 in. Length 17 in. Wt. \$1.25  
3 1/2 oz.

Recognized by experts as an ideal design for greater stability, control and efficiency, the Flying Wing may be the transportation marvel of the future. Now is the time for all model builders to construct, fly and study this revolutionary type and learn what it will do. Besides, think of the amazement of your friends when you show them "the airplane of tomorrow!"

This radically new model is without fuselage or tail planes, triangular in shape with controls at the wing tips. The design is perfectly balanced, easily controlled and although broad in span, weighs less than 4 ounces, making it an ideal rubber-powered flying model.

Megow now offers Kit SX-1, containing not only the necessary select balsa and other necessary materials, but easy-to-follow, illustrated plans for a real flying wing that's tops for novelty and excitement!

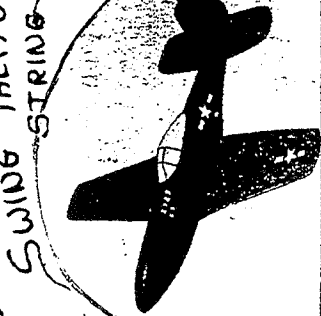
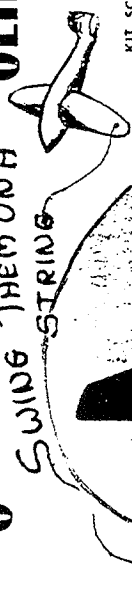
See Megow's Flying Wing at your dealer's today!



**PROFILE** **35¢ EACH**

**6 OF FAMOUS WAR PLANES**

**GLIDERS**



**KIT SC-1. North American P-51 MUSTANG**  
Fighter-bomber famous for high altitude fighting and terrific dive-bombing.  
Model Wingspan 11 3/4 in.  
Length 11 in.



**KIT SC-2. F6F Grumman HELLCAT**  
Heavily armored Navy fighter used for mowing down the Jap "Zeros."  
Model Wingspan 12 in.  
Length 10 in.



**KIT SC-3. Republic P-47 D THUNDERBOLT**  
High speed, high altitude "umbrella" fighter for big bombing missions.  
Model Wingspan 11 1/2 in.  
Length 11 1/4 in.



**KIT SC-4. F4U Vought CORSAIR**  
Pride of the Navy, gull-wing fighter at home on the "flat-top."  
Model Wingspan 11 1/4 in.  
Length 10 1/2 in.



**KIT SC-5. Jap "ZERO"**  
Authentic model of Japan's fastest climbing, most wily fighter.  
Model Wingspan 11 3/4 in.  
Length 9 1/4 in.



**KIT SC-6. Focke-Wulf 190**  
Most dangerous enemy of the Allied bombers over Europe during the war.  
Model Wingspan 11 1/2 in.  
Length 9 1/4 in.

THE BEST—ALWAYS

*A New Thrill!*

54" Wing Span

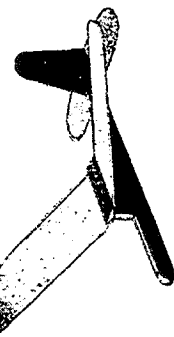


Kit No. Z4

**BUILD and FLY this TOWLINE Sailplane**

Enjoy the thrills of motorless "bird" flight! This new Megaw Towline Sailplane is scientifically designed after the highly efficient "soaring" used by record sailplane pilots. The initial start for flight is obtained by use of a "towline." When the sailplane reaches a determined height, it disengages from this towline and stays aloft for several minutes to an hour or more.  
The study of sailplane flight is a wonderful stepping stone to gas powered model airplane work, as a full knowledge of the action of air currents and "thermals" is essential in advanced contest model flying.  
A complete kit to build this superb sailplane model, only:

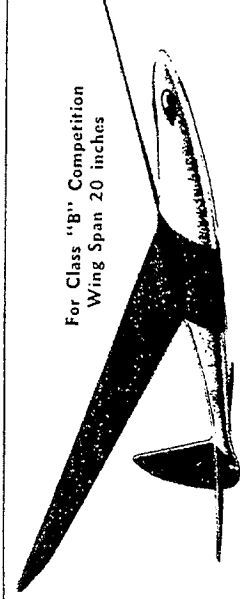
**\$2.00**



**HAND LAUNCHED GLIDER**

The first elementary step in building model airplanes is the construction of the simple glider. In this model, the beginner learns the functions of the fuselage, wings, stabilizer, rudder, and "balance weight." By following the complete instructions which are included in this Air Youth kit, the novice is quickly able to grasp all the fundamental aeronautic principles involved, and then can advance to rubber powered models.

Wing Span 12 inches **KIT No. F40 15c**



For Class "B" Competition  
Wing Span 20 inches

**50¢**

**BUILD and FLY this CONTEST GLIDER Kit No. Z3**

THE BEST—ALWAYS



# The Story Behind MEGOW BALSA WOOD

By OTTO EGER

**Editor's Introduction:** Thousands of model airplane builders have for years used balsa wood with infinite skill and cleverness! Yet few know any more about it, other than it comes from South America. Therefore, we have asked Mr. Eger, our tropical wood expert to write the article which follows:

Well, to start with, up to this date, as far as I know, there are no balsa trees in the United States, and the balsa tree is not native to this country. Regarding it, we have in many instances contradictory. It has been my privilege to observe and study the form of the tropics for a quarter of a century, and the balsa tree, due to its peculiarities, has attracted my attention especially. Thanks to these special studies, I have been called upon, to manage a balsa plantation, the only plantation of this kind of tree in the world, where I had the opportunity of planting, cultivating and logging the balsa tree for a number of years.

In the following I give to our readers a condensed description of this wonderful tree, which I know will be of great interest to builders of Megow models.

The Balsa Tree belongs to the Bonacene (Linné), and its Latin name is *Ochroma*. There exist many species of *Ochroma*, of which the following are known to me:

*Ochroma limonensis*, found in Costa Rica and Panama.

*Ochroma ligopus*, found in Cuba, Jamaica and the other Antilles.

*Ochroma concolor*, found in Guatemala and Honduras.

*Ochroma velutina*, found on the Pacific coast of Central America.

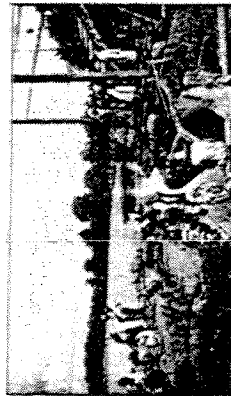
*Ochroma tomentosa*, found on the upper Magdalena River, Colombia.

*Ochroma obtusa*, found on the lower Magdalena River, Colombia, and finally

*Ochroma grandifolia*, found in the Republic of Ecuador.

This last mentioned species interests us most, as almost 100 percent of all balsa shipped to the United States is exported from Ecuador. The reason for the predilection of Ecuadorian balsa is found in its finer texture, white color and extreme lightness of weight.

*Ochroma grandifolia*, or Ecuadorian balsa, is a tree reaching a height of about a hundred feet with a period of 10 short years. From this fact



Cacao loaded on balsa rafts



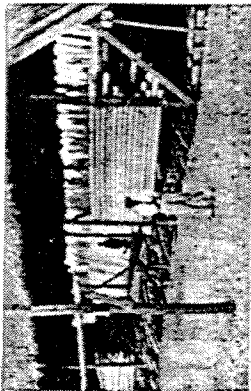
A young Balsa tree less than a year old

it is obvious, that the balsa tree grows very rapidly, that it is of spontaneous origin, which means, that it is a second growth tree, appearing in places, where there has been already some kind of cultivation before, or where there has been a break of other vegetation in the virgin forest. Due to the rapid growth, the young balsa tree soon leaves the surrounding vegetation behind and reaches in the first year already a height of about 15 feet. It develops into a tall and slim tree with leaves of tremendous size. The surrounding vegetation drives the balsa tree higher and higher, until, at last, he has reached a height leaving all other trees behind, and now the crown of the tree develops with the natural consequence, that it increases in thickness.

The Balsa tree develops flowers in its fifth year of growth, around the middle of the dry season, the sexes being separate, but on the same tree.



Balsa rafts used by natives



Balsa wood piled in shed

The staminate or male flower forms a long call, of six to eight inches in length, of a pinkish-brown color, which turns later into dark brown. The pistils are developed within 45 days. The pistils on female flowers are developed at the same time as the male flowers. The color of the pollen is ready to be disseminated. Its color is green, therefore almost invisible. This later fact has led the natives and many foreigners to believe, that the reddish flower, well to be distinguished from the ground, is the only flower of the tree, which is erroneous, as this red flower contains only the male organs of the tree. After fertilization has taken place, which occurs through wind, insects and small birds, the male flower withers and drops to the ground, whilst the female flower now develops the seed. The seeds are enclosed in a long pod of about 8 to 10 inches in length, which is covered with a thick, waxy, and a half. After a period of about two months, the seed has ripened, and the pod splits into six equal sections, breaks open and reveals a golden-brown fibre like cotton, light and fluffy, used by the natives to stuff mattresses and pillows. Exposed now to the hot tropical sun, this cotton dries within a few hours, and the wind carries it in small flakes, to which the seed is highly fastened, over the countryside to find a suitable place for germination. The seed is very small, not unlike mustard seed, about 24,000 of them making a pound.

The balsa tree grows only in the lowlands of the tropics up to an altitude of 800 to 1,000 feet. It is common in the countries South of the Rio Grande from Mexico to Bolivia. For a proper development, the tree needs light and sandy soil. In clay soil the growth is retarded, and the tree develops a red heart, making it useless for commercial purposes. Although the balsa tree is extremely light, there is an abundance of difference in the grade of hardness and weight. This peculiarity is known to the natives, of course, also, and so they have classified balsa in two groups, macho and hembra, which means male and female. This classification has nothing to do with the sex of the flowers, as might be supposed, but with the weight of the wood. The machos are rejected in many local markets, whilst the hembras are sold often at a premium.

*Ochroma grandifolia* or Ecuadorian Balsa is known by the following special marks: The tree is taller than usually found in other countries, with a mottled gray bark, also the wood is lighter than ordinarily. The leaves on the mature trees are nearly entire orbicular, about 10 to 16 inches in diameter. On young trees the leaves are lobed very large, up to 40 inches. The leaves are very abundant and are covered with many flowers, as already mentioned, they are very large, the calyx tube up to 7 inches in length, spreading at the end up to four inches in width. Inside, the stamens are large and showy. Ecuadorian balsa also is whiter than the wood from other territories, the best grade coming from the provinces of Esmeraldas and Manabí, both of them in the Northwestern part of Ecuador.



Part of Esmeraldas one of the largest balsa export centers in Ecuador

Balsa wood is extensively used by the natives, especially for making rafts to bring the produce of the interior parts of the country to the ports. In the Indian days, and still today in a few places, the balsa is not exported up to now, after making use of the sea, they were abandoned and left to float into the sea, where they were commercial value than the other agricultural products brought down on them. But in most parts of Ecuador people are now wide awake as to the value of this tree. In many places, due to cutting the trees before maturity, the natural stands of balsa are on the decline, but now on all lands, that have been used for the so-called three months' crops, and where balsa springs



Balsa boards, set up for drying

forth abundantly after the harvest, the young trees are cultivated for future logging. The wood is also used for making canoes, and for other purposes. All kinds of toys are made by the natives from balsa and offered for sale in all ports to the tourists.

The best export market for balsa is the United States, where more than 90% of all balsa is sold. Other countries that have found use for it are England, France, Germany and Japan.

Balsa wood, properly dried, weighs about 6 lbs. per cubic foot, the strength is approximately one-half of that of spruce.

For those of our readers, who are more interested in the properties and particularities of balsa wood, I give the following data and information:

Modulus of Rupture (strength in bending) 2100 lbs. per sq. inch

Crushing strength (load parallel to grain) 3500 lbs. per sq. inch

Compressive strength (load perpendicular) 110 lbs. per sq. inch

Shrinkage at length—200 lbs. per sq. inch

Tensile strength—3500 lbs. per sq. inch

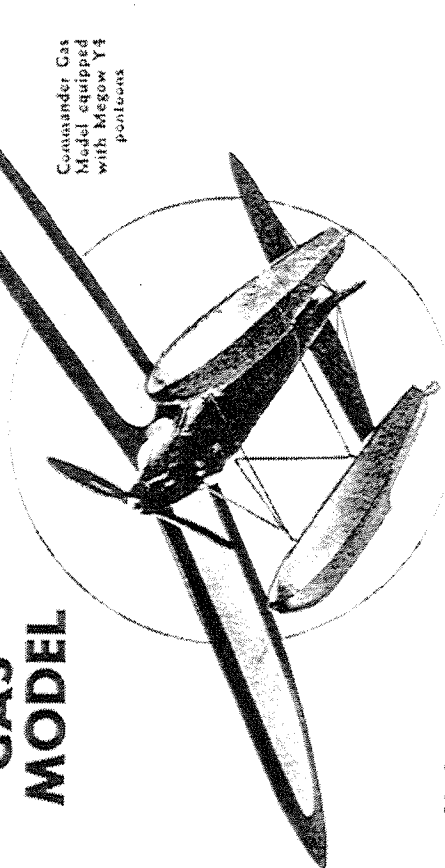
The Thermal Conductivity, in comparison with corkboard is

Balsa wood—31 B.T.U.  
Corkboard—32 B.T.U.



# FLOATS

for your  
GAS  
MODEL



1 1/2 in. Scale Size

These floats have been scientifically designed for model use from information supplied by the U.S. Aircraft Corporation. The floats can be easily and quickly built if the plan is followed exactly and finished the complete assembly will weigh only 1 1/2 oz. The floats are made of balsa wood and the wings are made of spruce. They are built strong enough to withstand the shocks encountered in a second landing.

Kit No. Y5

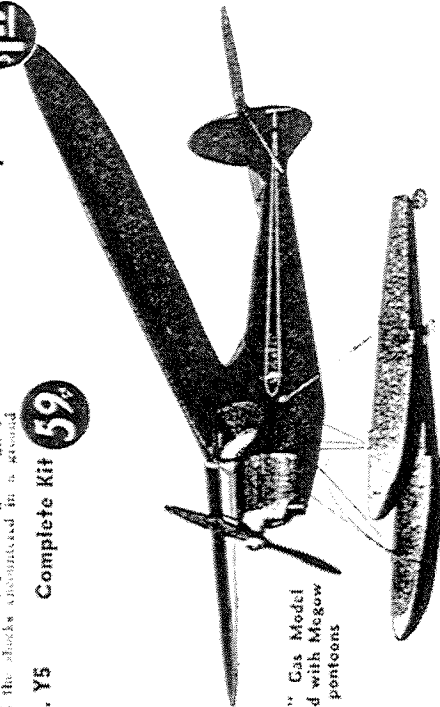
Complete Kit \$59.00

2 1/4 in. Scale Size

These floats have been scientifically designed to give models as much the same 4 1/2" scale size. The large floats embody the same form of construction, and the complete assembly weighs about 1 1/2 oz. They are made of balsa wood and they displace enough water to support any model weighing between 2 and 4 pounds.

Kit No. Y4

Complete Kit \$125.00



"Cadet" Gas Model equipped with Megow Y5 pontoons

THE BEST—ALWAYS

Under heavy machinery, or fragile instruments, balsawood removes sound and vibration. Compression at 100 lbs. per square inch—3.3% After 10 minutes rest, returns to .62% Percentage of noise transmitted through balsawood, at 1000 cycles—4.6%

For commercial purposes, balsawood, or better the balsa tree, must have at least a diameter of 18 inches, which the tree reaches within 5 to 6 years. Trees of over 48 inches in thickness do not render a profitable commercial use any more, due to the large heart or pith. Such trees are already over 10 years old, and at this age the slow decaying process commences, turning the wood ash gray in color, and the tensile strength is greatly diminished.

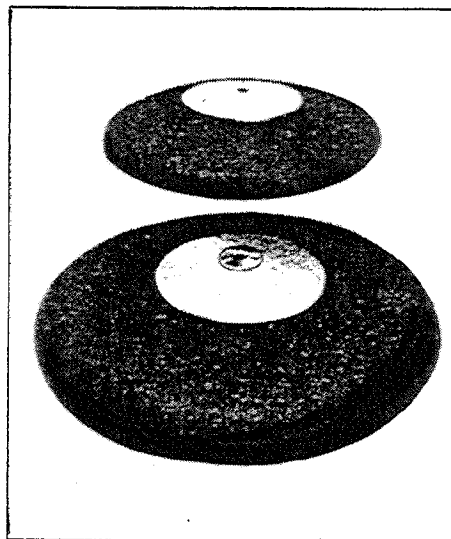
The balsa tree, as most other soft woods, are subject to the attack of many beetles and other insects. By far the greatest damage is done by the conifer (pronounced connyling), a species of termites, who make their nests in the root of the tree, destroying the capillary of the tree with the consequence, that the tree starves to death.

I trust, the foregoing will be found of interest by many of the perusers of our catalog, giving them a more than casual knowledge of the balsa tree, whose wood is used to so large extent in the manufacture of Model Airplanes by

Megow

Otto Eger

## MODEL WHEELS



## MEGOW Gas Model Wheels

Newly Developed!

Sponge Rubber! Lighter and better than air wheels! Do not puncture!

Developed specifically for gas model use. These wheels have certain advantages not found in pneumatic air wheels. Made of special sponge rubber, they eliminate the bothersome punctures, and deflation attending the air wheels.

Special Low Prices Per Pair

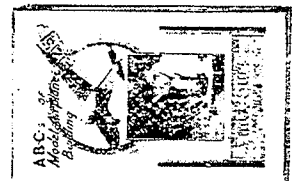
2 1/2" Dia. ....45¢



Balloon Tires for model planes ARE BACK!!!

TREXLES—the most popular model-plane wheel—back for your flying pleasure! Indefatigable, detachable and demountable! Seals air in securely! Takes the bumps for easy landings!

2 1/2" (darker) per pair 60¢  
2 3/4" (Gas) per pair \$1.50  
3 1/2" (Gas) per pair \$1.50



BEGINNER'S HAND BOOK

"A B C's of Model Building"

A beginner's hand book dealing with the fundamental phases of model airplane construction and flying. Also includes the theory of flight, Canase and complete. Price.....5¢

ALUMINUM TUBING, PRICE PER FOOT	
1 1/8" Outside Dia. .014" Wall.....	15¢
1 1/8" " " .013" " .....	15¢
1 1/8" " " .013" " .....	15¢
1 1/8" " " .013" " .....	18¢
1 1/8" " " .013" " .....	20¢
1 1/8" " " .028" " .....	25¢
1 1/8" " " .032" " .....	30¢

THE BEST—ALWAYS





1946

# THE NATIONALS REBORN

by CHARLES H. GRANT

**O**N Monday, August 26th, we passed through the welcome doors of the Hotel Allis, Wichita, Kansas, to start our great adventure at the 15th National Model Airplane Contest. The Allis was one of three hotels assigned to contestants, leaders, and representatives of the model events; the Lassen Hotel was five blocks away, the Broadview about ten.

Early the following morning, contest officials greeted us warmly at the Wichita Forum, headquarters for the National Contest. They were rushing to complete the final organization details. Quiet, but efficient, Al Hummel, had managed the organization of the contest in record time. In less than six weeks he, with an efficient group of helpers, had completed and gotten together the thousands of details necessary to stage this great classic. Jim McClelland, director of the contest, was responsible for the technical details. The members of the two sponsoring organizations, the Wichita Y.M.C.A. and the Kiwanis Club, had worked under this leadership with zeal.

Besides the hotels, a tourist camp was made available for housing contestants. Work shops were established in the spacious Wichita Forum building and at the nearby Y.M.C.A. The Y.M.C.A. also provided recreation facilities, and, for those who had time, interesting tours of the city were made available. Contest officials met for a final briefing at the Y.M.C.A. on Tuesday evening. A gadget which they developed for measuring the wing area of models was unique. It consisted of a long rod with a knife blade at one end and a long, sharpened wire at the other. A special room at another branch of the Y.M.C.A. housed the prizes, and resembled the store-room of some large hardware company, what with gleaming, bright columns, globes, triangles, figures, airplanes, and other gilded fantasies on every hand. No other national contest ever offered so many awards (there were over five hundred).

On Wednesday, contestants, leaders, and industry members arrived in ever increasing numbers. It was a great moment for many who had not seen their buddies since the previous Nationals in 1941. In fact, the 1946 Nationals proved to be not only a contest but a great convention of the whole model field as well.

At noon, Thursday, the line of registrants extended through the

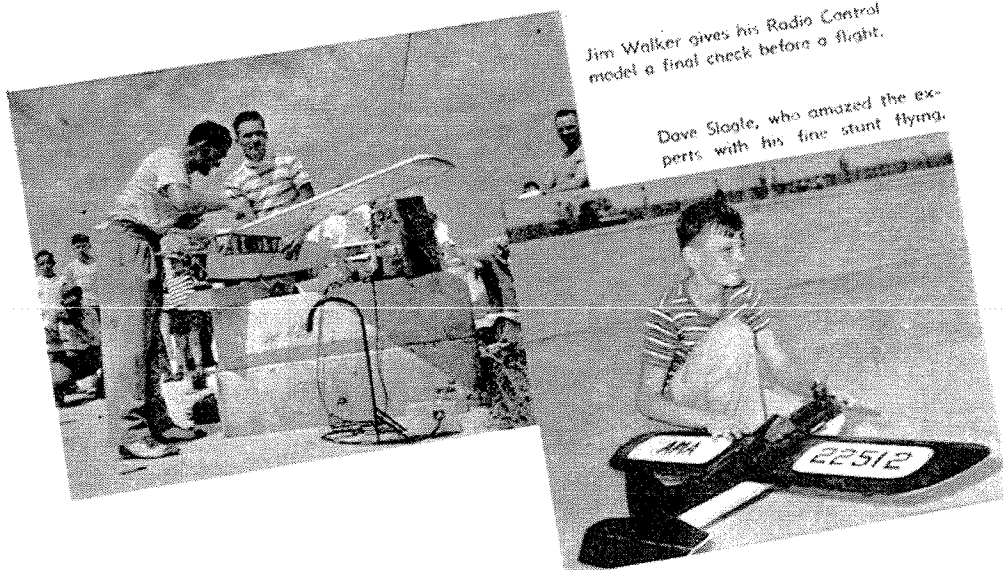
Forum doors and far down the street, while volunteer workers recorded contestants' names, the events, the types of models, and other details. In the evening, contestants were briefed for their coming ordeals—in the Forum Arena where indoor ships were to compete; at Rawdon Field, seven miles east of Wichita, where the outdoor events were to take place; or at Boeing Ramp, a broad stretch of concrete nearly half a mile long, if they were flying control-line or radio control planes.

On Friday, indoor events started at 8:00 a.m. Ships were processed at the Arena and hand-launch gliders of every imaginable design filled the air for about three hours, which then were replaced by the hand-launch stick ROG, cabin and ROW cabin events. There was also an event for new types of aircraft: autogiros, helicopters, and ornithopters—or combinations of these.

On Friday afternoon, we "rattled" to the ROW contest in a hired car and finally arrived at the contest site, Crestview Lake, about five miles out of town. Crowds lined the shore; whining motors gave the impression that a swarm of bees was descending for "the kill." Various designs were tuning up for flights. A twin-float "Zipper" was the first to leave the water after several unsuccessful trials by other contestants. Lack of experience in ROW flying was evident, but persistence on the part of the contestants, combined with power dives into the water, cartwheels, and low flights over the crowd, provided a show equal to any previously staged. Planes with short floats and ample planing area were the most successful. Planes tripped by Father Neptune before taking off the water were retrieved by two Boy Scout helpers in a row boat. Flights continued until dark. Those who flew early were fortunate because later the air cooled and thermals died, resulting in much shorter flights.

On this same afternoon the control-line stunt, control-line speed, and radio control events started at the Boeing Ramp. These were scheduled for the four days of the contest.

Friday evening, the contest board of the A.M.A. held a rules committee meeting at the Y.M.C.A., while contestants repaired and prepared their models for the next day's events. The class "A" Gas Free Flights started early at Rawdon Field, Saturday morning, in brilliant



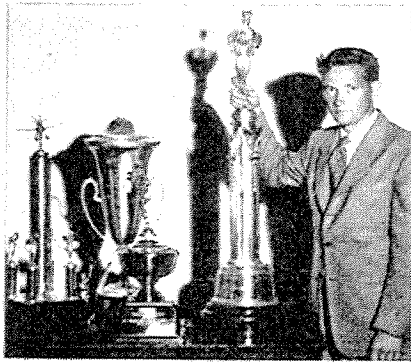
Jim Walker gives his Radio Control model a final check before a flight.

Dave Stagle, who amazed the experts with his fine stunt flying.

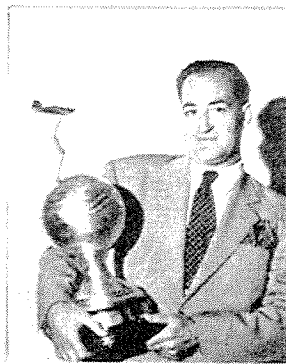


Berryloid Trophy went to Tex Russell. His model was as beautiful as it was different.





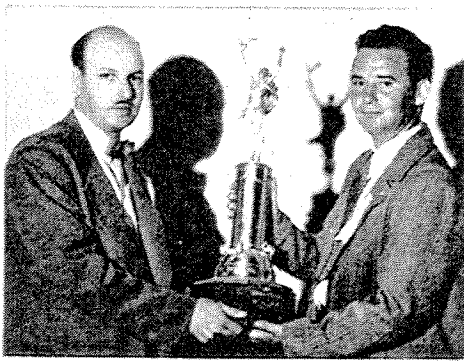
Milton Hugelot,  
National champion.



Jim Walker, winner of  
Radio Control Trophy.



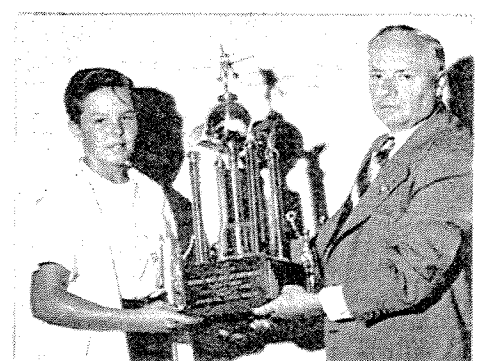
May, Dave, and H. Slagle. Dave was  
Flying Champ in all stunt classes.



Al Orthof presents Air Trails Pictorial Trophy to  
"Wally" Wollick, winner of Class VI Speed, Open.



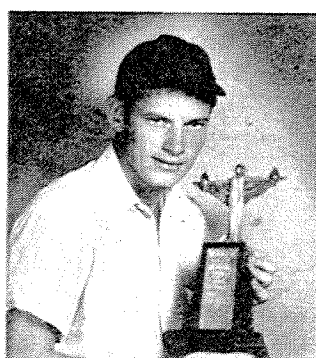
Bill Atwood, manufacturer of At-  
wood Engine, wins indoor trophy



David Wade receives Herkimer  
Trophy from Chas. Brebeck.



Dick Korda (holding trophy) and Walt Schroder.



J. H. Brown holds Air Trails Pictorial-  
sponsored Kulick Memorial Trophy.



Bop Tagle presents Micro  
Bilt Trophy to Frank Davis.

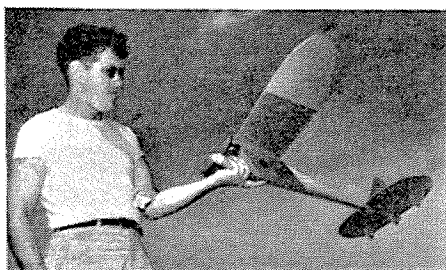
sunshine, while a strong wind blew models into the dim distance as fast as they were launched. Fortunately, in spite of the wind many thermals carried these little ships to considerable altitude. ROG rubber-powered models also provided an excellent show for the spectators and other contestants who lined the restraining ropes. An outstanding flight was made by a plane of unique design—a Canard pusher. This little plane outflow nearly every other cabin job on the field. The field was laid out in the usual manner. In the gas event, pylon types predominated but didn't necessarily excel in flight. The steadiest flights were made by non-pylon original designs, the Canard pusher being an outstanding example. At 7:30 that evening, contestants flocked to the Berryloid finish and flying scale events at the Forum. The Berryloid event was won by Tex Russell with a model notable not only for its finish but for its unusual shape. It was a "tailless" control-line ship with tapered wings swept forward. Its glass-like finish and polished metal trimmings gave it the appearance of some brilliant jewel. It was selected as winner without question, even though many other models of fine workmanship

competed. The flying scale models appeared to be larger than usual with light delicate construction.

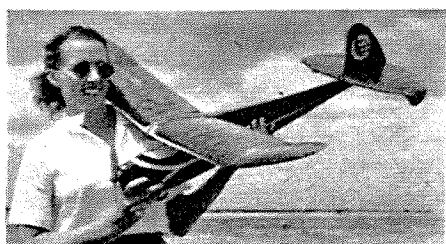
Sunday, at Rawdon Airport, Class "B" free-flight planes were chasing thermals all over the sky. Many stiff necks were caused by following one model which persisted in remaining aloft for over thirty minutes. Rubber-powered stick models also put on a show, and of the two classes the rubber jobs were much more stable and turned in better flights. Pylon gas models predominated, but there were a few original designs of interest. Pat Massey's plane with Vee-tail and gull wings pleased the crowd with its consistently steady flying. Autogiro, helicopter, and ornithopter events brought further fantastic designs which flew well. Kansas had voted dry, but the weatherman apparently objected to this decision because about 1:00 o'clock dark clouds appeared on the horizon and chased the sunshine to parts unknown. Almost before the model builders could get the models under cover and close their tool boxes the rain descended. We usually think of rain as dropping, but Kansas rain is different; it attacks from all directions—down, up, and sideways. The flying



## THE NATIONALS REBORN



Dick Korda and his record-holding Class "B" ship.



Mrs. Oldershaw holds friend hubby's dependable Class B.



Chuck Hollinger and his consistent Class "C" R.O.W.

## NATIONALS WINNERS

(Due to insufficient space, only a partial list of first and second place winners is given here—Ed.)

<b>INDOOR AUTOGIRO-HELICOPTER-ORNI-THOPTER—SR.</b>		
C. M. Goldsteir	2:32.2	
Chicago, Ill.		
Geo. Haroutunian	1:32.0.	
Chelsea, Mass.		
<b>INDOOR AUTOGIRO-HELICOPTER-ORNI-THOPTER—OPEN</b>		
Carl Goldberg	4:06.2	
Chicago, Ill.		
Carl Goldberg	3:18.2	
Chicago, Ill.		
<b>RADIO CONTROL</b>		
Jim Walker	51.84 pts.	
Portland, Ore.		
W. G. Siegfried	43.17 pts.	
Wichita, Kans.		
<b>BEST FINISH</b>		
V. W. Russell (Vampire)		
Ft. Worth, Tex.		
Jack Armstrong, 1165		
Wichita, Kans. (Rearwin)		
<b>OUTDOOR RUBBER STICK—OVERALL HIGH TIME</b>		
Mark Heller	26:50.3	
Chicago, Ill.		
<b>OUTDOOR RUBBER STICK—JR.</b>		
Thad Taft	19:25.0	
Los Angeles, Calif.		
R. P. Wykes	15:38.6	
Medford, Mass.		
<b>OUTDOOR RUBBER STICK—SR.</b>		
G. T. Flesher	12:56.03	
Rockford, Ill.		
Herbert Kothe	12:27.07	
Omaha, Nebr.		

<b>OUTDOOR RUBBER STICK—OPEN</b>	
Mark Heller	26:50.3
Chicago, Ill.	
Geo. Reich	25:55.8
Cleveland, Ohio	
<b>OUTDOOR RUBBER CABIN—OVERALL HIGH TIME</b>	
Geo. Wright	7:26.5
Cleveland, Ohio	
<b>OUTDOOR RUBBER CABIN—JR.</b>	
J. K. Clemens	3:00.2
Naperville, Ill.	
Robert Wykes	2:54.4
Medford, Mass.	
<b>OUTDOOR RUBBER CABIN—SR.</b>	
R. L. Denton	6:28.8
Kenosha, Wisc.	
D. D. Miner	5:02.8
Wichita, Kans.	
<b>OUTDOOR RUBBER CABIN—OPEN</b>	
Geo. Wright	7:26.5
Cleveland, Ohio	
H. A. Cole	7:04.4
Seattle, Wash.	
<b>FLYING SCALE—OUTDOOR</b>	
Henry Struck	77.6 pts
Old Lyme, Conn.	
C. D. Lanze	63
Cleveland, Ohio	
<b>AUTOGIRO-HELICOPTER-ORNITHOPTER OUTDOOR—SR. (NO. JR.)</b>	
Geo. Haroutunian	1:56.3
Chelsea, Mass.	
Wm. Ehrlich	0:02.1
Chicago, Ill.	

field was dry and sunbaked one minute; the next it was appropriate for row boats. Models were soaked, timers' tents leveled, and cars hopelessly mired in three inches of water. Fortunately, most of the contestants had cars at the field into which they ducked for cover. Believe it or not, one-half hour later the sun came out and models were in the air again. Many of the best times of the day were made later in the afternoon. At Boeing Ramp, after the storm, control-line ships tore through the air from 90 to 116 mph. One of the outstanding contestants was Dave Slagle—a thirteen-year-old lad from Burbank, Calif. He put to shame all other contestants, some of whom were experts. In the stunt event he whipped his plane through every possible maneuver—dives, loops, rolls, and upside-down flights. His performance was largely due to graceful footwork and a sense of rhythm.

The Air Trails Pictorial Trophy went to C. H. Wallick, of California, for winning the greatest number of points in the U-control speed events.

Monday, September 2nd, produced fine weather for class "C" jobs during the morning. Spectators saw many ships fly out of sight; others disappeared in puffy clouds. Hand-launch and tow-line gliders provided fine shows. About noon, however, a strong, cool wind blew up that made flying difficult and hazardous. This continued until late in the day. Times were naturally low because models flew out of sight quickly.

Early in the morning, Jim Walker won the radio control event by putting his entry through some complex maneuvers, including take-offs, circles, figure eights, and spot landings.

The Victory Buffet supper at the Forum, contributed by the

Wichita Women's Aeronautic Association, crowded the five days of activity. It was attended by contestants, officials, and others connected with the meet. Immediately afterward, everyone adjourned to the Forum Arena for the presentation of prizes and a few short talks by A.M.A. officials and contest sponsors. Before prizes were distributed, honors, including fellowships in the A.M.A., were bestowed upon several leaders and model flyers whose contributions have been outstanding to model aviation. They were Carl Goldberg, Dr. Walter Good; William Good, Irving Levy, Jim Walker, and Charles Grant.

After this, more than five hundred prizes were distributed. One junior flyer won so many trophies he required two assistants to carry them. At this final meeting, leaders and contestants had a chance to get together on a friendly basis and discuss their problems. Some of the old-timers present were Leo Rutledge; Frank Nekimken, director of former Nationals; Carl Goldberg; Walt Schroder; Ed Lidgard; Lewis Casale; Dick Korda; Milton Huguelet, who won the National Championship for the second time; Alan Orthof, Editor of Air Trails Pictorial, and other famous modelers. Mr. Al Lewis, Director of the A.M.A., directed the meeting with his usual grace and humor, without which no National competition would be complete. In attendance, was the only woman official, Miss Marjorie Thacker, who served as timer for three days. Her talents were made available through the courtesy of the Beech Aircraft Company for whom she serves as aerodynamist. The contest was enjoyed by everyone, in spite of the short time allowed for its preparation, and the sponsors are to be complimented on their untiring efforts in organizing and running it.



# Wind-Up On The Nationals

Photographs by H. A. Thomas

<b>OUTDOOR TOWLINE GLIDER—OPEN</b>	
Dick Kerda	2:15.5
Cleveland, Ohio	
M. D. Andrade	1:45.5
Oakland, Calif.	
<b>OUTDOOR H. L. GLIDER—JR.</b>	
B. R. Brewer	0:59.1
Rockford, Ill.	
Geo. Patrick	0:32.8
Houston, Tex.	
<b>OUTDOOR H. L. GLIDER—SR</b>	
O. Irish	2:42.0
Tulsa, Okla.	
D. A. North	1:51.5
Venice, Calif.	
<b>OUTDOOR OPEN H. L. GLIDER</b>	
A. G. Peterson	3:44.8
Oakland, Calif.	
C. J. Mather	1:20.3
Naperville, Ill.	
<b>JUNIOR A GAS—</b>	
W. D. Leaf	5:05.9
Oklahoma City, Okla.	
J. W. Cordell	3:39.1
Bartlesville, Okla.	
<b>SENIOR A GAS</b>	
Herbert Kothe	7:44.2
Omaha, Neb.	
Al Milana	7:36.0
Omaha, Neb.	
<b>OPEN A GAS</b>	
Bill Burks	10:21.5
Birmingham, Ala.	
C. O. Wright	8:26.7
Topeka, Kans.	
<b>JUNIOR B GAS</b>	
D. N. Wade	20:25.4
Los Angeles, Calif.	
B. Weber	3:45.1
Houston, Tex.	
<b>SENIOR B GAS</b>	
M. K. Mather	23:19.0
Cleveland, Ohio	
R. R. D'Onofrio	18:48.2
Watertown, Mass.	
<b>JUNIOR C GAS</b>	
D. N. Wade	14:35.0
Los Angeles, Calif.	
P. One	4:39.5
Denver, Colo.	
<b>SENIOR C GAS</b>	
D. L. Benson	12:44.6
Washington, D. C.	
C. B. Blumen	9:49.1
Minneapolis, Minn.	
<b>OPEN B GAS</b>	
Herman Weber	28:57.7
Houston, Tex.	
James Niler	25:39.4
Ames, Iowa	
<b>OPEN C GAS</b>	
F. A. Davis	37:57.9
San Diego, Calif.	
G. N. McClure	37:39.2
R.O.W. GAS	
Ted Gillett	392.7 sec.
Hollywood, Calif.	
Lew Mahieu	237.6 sec.
Long Beach, Calif.	

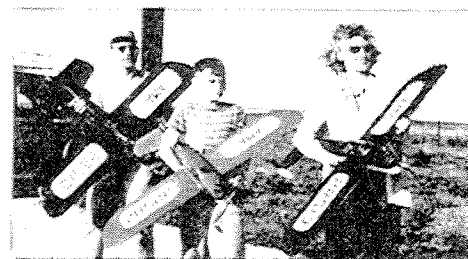
<b>CONTROL LINE—TOP SPEED</b>	
C. H. Wallick	116.12 mph
Long Beach, Calif.	
<b>CONTROL LINE I AND II—JR.</b>	
E. J. Schwartz	45.23 mph
Little Rock, Ark.	
Dave Webb	36.00 mph
Dallas, Tex.	
<b>CONTROL LINE I AND II—SR.</b>	
Jack Morris	77.58 mph
Lakeland, Ohio	
M. K. Mather	57.69 mph
Cleveland, Ohio	
<b>CONTROL LINE III—JR.</b>	
Leon Shelton	83.72 mph
Salina, Kans.	
Paul White	83.13 mph
Akron, Ohio	
<b>CONTROL LINE III—OPEN</b>	
Geo. Sugichi	84.90 mph
Cleveland, Ohio	
R. W. Shuefke	78.94 mph
Wichita, Kans.	
<b>CONTROL LINE IV AND V—SR.</b>	
G. R. Pate	75.31 mph
Fort Worth, Tex.	
Kenneth Flaglor	58.44 mph
Des Plaines, Ill.	
<b>CONTROL LINES IV AND V—OPEN</b>	
D. W. Newberger	98.90 mph
Long Beach, Calif.	
C. W. Mumaw	97.92 mph
Kansas City, Mo.	

<b>HIGH POINT WINNERS—ALL GAS EVENTS</b>	
Frank Davis	
San Diego, Calif.	
<b>NATIONAL CHAMPION</b>	
M. L. Huguelet	220 pts
Chicago, Ill.	

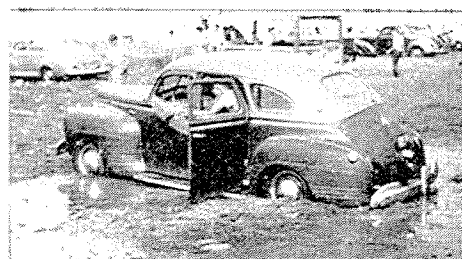
<b>INDOOR H. L. RUBBER STICK—OPEN</b>	
C. D. Janks	15:31.6
Shaboygan, Wisc.	
W. E. Atwood	14:36.4
Pasadena, Calif.	
<b>RUBBER CABIN—INDOOR—OVERALL HIGH TIME</b>	
M. L. Huguelet	14:12.0
Chicago, Ill.	
<b>INDOOR RUBBER CABIN—JR.</b>	
Robert Wykes	6:29.8
Medford, Mass.	
<b>INDOOR RUBBER CABIN—SR.</b>	
D. E. Weiler	5:27.8
Chicago, Ill.	
Geo. Haroutanian	0:31.0
Chelsea, Mass.	
<b>INDOOR RUBBER CABIN—OPEN</b>	
M. L. Huguelet	14:12.0
Chicago, Ill.	
M. S. Andrews	12:28.4
Forest Hills, N. Y.	
<b>ROW INDOOR</b>	
Merrick Andrews	6:00.0
New York, N. Y.	
<b>H. L. GLIDER—OVERALL HIGH TIME INDOOR</b>	
M. L. Huguelet	0:39.4
Chicago, Ill.	
<b>H. L. GLIDER—INDOOR—JR.</b>	
Robert Wykes	0:30.3
Medford, Mass.	
R. E. Piper	0:26.5
Chicago, Ill.	
<b>INDOOR H. L. GLIDER—SR.</b>	
William Morez	0:34.0
Chicago, Ill.	
C. J. Banks	0:31.2
Kenosha, Wisc.	
<b>INDOOR H. L. GLIDER—OPEN</b>	
M. L. Huguelet	0:39.4
Chicago, Ill.	
C. E. Hellinger	0:39.2
Seattle, Wash.	
<b>AUTOGIRO—HELICOPTER—ORNITHOPTER</b>	
<b>—JR.</b>	
Robert Wykes	2:04.0
Medford, Mass.	
<b>AUTOGIRO—HELICOPTER—ORNITHOPTER</b>	
<b>OUTDOOR</b>	
<b>—OPEN</b>	
H. P. Shoenky	3:03.1
Kirkwood, Mo.	
Carl Goldberg	2:04.6
Chicago, Ill.	

<b>CONTROL LINE VI—SR.</b>	
C. B. Blumer	103.15 mph
Minneapolis, Minn.	
A. L. Strickland	100.55 mph
Birmingham, Ala.	
<b>CONTROL LINE VI—OPEN</b>	
C. H. Wallick	116.12 mph
Long Beach, Calif.	
M. A. Tension	105.14 mph
Dallas, Tex.	

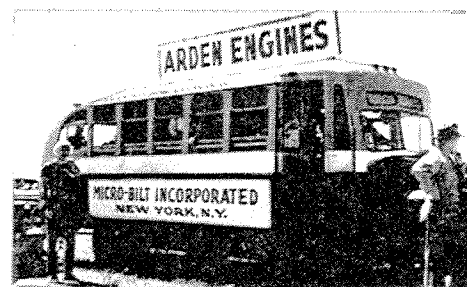
<b>CONTROL LINE STUNT—JR.</b>	
Dave Slagle	102 pts.
Burbank, Calif.	
Dave R. Webb	86 pts.
Dallas, Tex.	
<b>CONTROL LINE STUNT—SR.</b>	
M. A. Cummins	40 pts.
Los Angeles, Calif.	
W. E. Pascoe	22 pts.
Great Bend, Kans.	
<b>CONTROL LINE STUNT—OPEN</b>	
R. H. Roof	56 pts.
Tulsa, Okla.	
John Casburen	44 pts.
Fort Worth, Tex.	



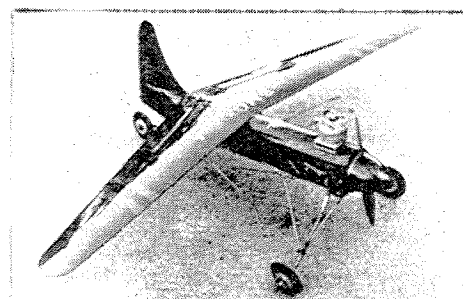
● The Slagle family with their fine collection of stunt models. Dave won the stunt event hands down.



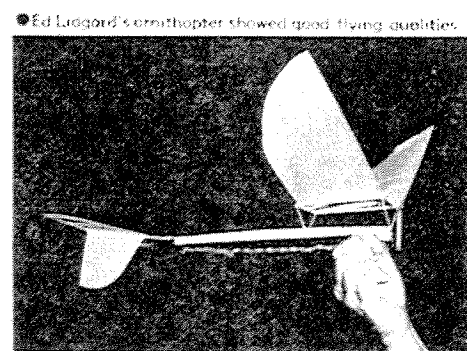
● When it rains in Wichita it really rains. Photo was taken one hour after the "drizzle" started.



● The Micro Belt bus was of great service to many builders; engines were repaired and adjusted gratis.



● Tex Russell's "Smokey." Note unusual design and fine finish. Model was clocked at 94 miles per hour.



● Ed Lugard's ornithopter showed good flying qualities.



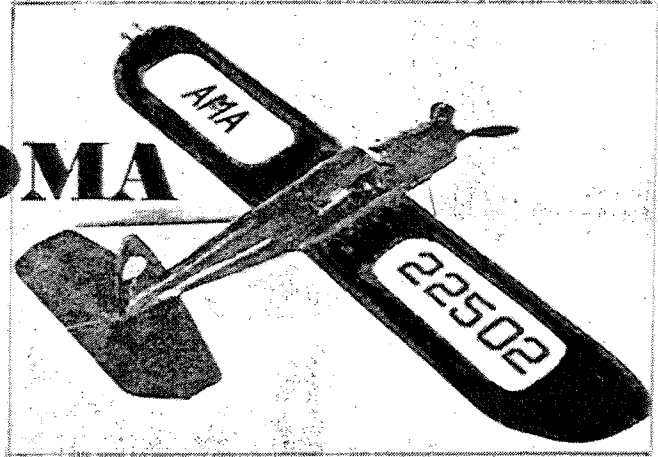
● Checkala Roma's large wing area and tail surfaces account for much of its "hardware"-getting performances.

# CHECKALA ROMA

by DAVIS AND MAY SLAGLE

Member A.M.A.

1946 NATIONAL STUNT CHAMPION AND WINNER  
OF A MOST IMPRESSIVE ARRAY OF TROPHIES



**D**AVE SLAGLE got into model plane flying by the same means that seems to capture the interest of most other newcomers, that is, by hanging around the flying field watching the activities, and asking innumerable questions of anyone who could be badgered into answering them. His first ship was a big, old Skybaby built by Bob Palmer, which Dave's Dad and Mother acquired for him in October, 1944, along with a small stunt job which speedily proved to be practically useless.

Dave got the big ship off for his first flight like a real veteran and brought it in for a perfect landing on the very first try. The flight itself was not too smooth, but it was a good beginning.

But such luck without practice was too good to last, and on the second flight he must have given it "down" instead of "up," for it plowed majestically into the cement. The ship itself was not damaged much, but the cylinder of the old Dennykite was broken completely across the bottom. However, Dad came through in the clutch with a friend who silver-soldered the pieces so well that the engine was hotter than ever!

Dave was soon flying again, to such good purpose that he entered an LERC (Lockheed Employees Recreation Club) sponsored meet and captured the first trophy for his collection, a Tiger Shark kit. Bobby Thomas, another eleven-year-old, was the only other junior present, and he, too, carried off a prize. Shortly after this meet Dave was invited to join the Burbank Model Club, where the lower age limit of fourteen years had to be relaxed considerably to allow eleven-year-old Dave to enter. Most of the older fellows were great at encouraging and helping the younger members, and Dave gave up the Cub Scouts in order to attend the Tuesday night meetings of the Model Club. Pretty soon the Skybaby had acquired the name of "Bulldozer," and had most of the local model flyers shuddering in their sleep at the close shaves it got while performing some of the antics Dave demanded of it.

On his twelfth birthday the elder Slagles came through with an Ercoupe, which Dave proceeded to power with a Cyclone bought with money acquired from the sacrifice of a treasured electric train.

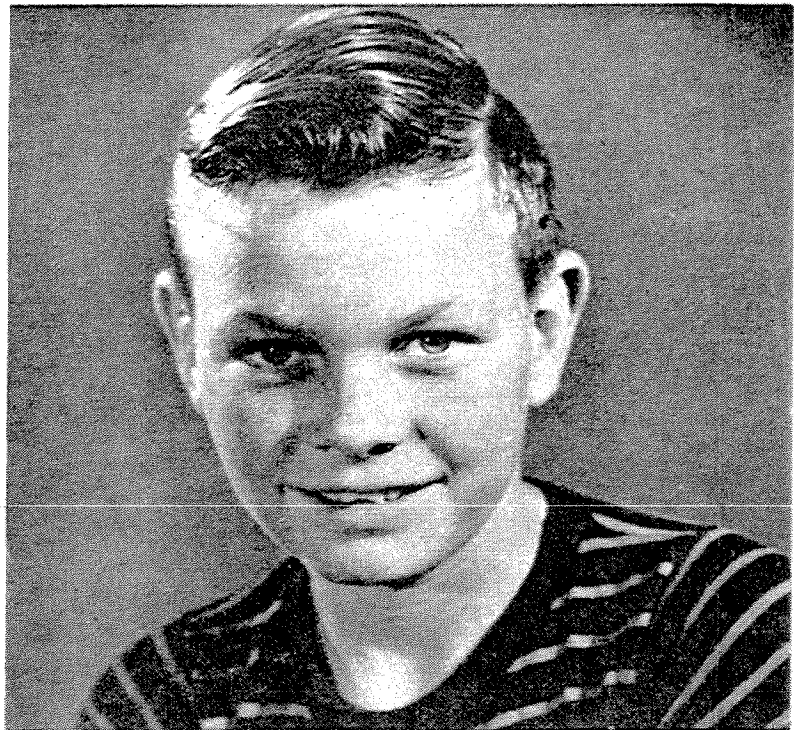
Unfortunately, however, the Ercoupe came to grief in its first contest, breaking the wing in an inverted dive. Later it was discovered that the control rod was bending because of the lack of fair leads in the bulkheads, but for this contest Dave had to fall back on old Bulldozer, which performed in storybook fashion to save the day.

From then on Bulldozer went to every contest, regardless of what newer ships might be in flying commission!

One day, Reginald Denny saw Dave fly at Santa Monica and was so impressed that he promised the youthful modeler the very first engine to come off the production line after the war, a promise which was fully kept. Dave is very proud of this little powerplant.

About this time Dave began dreaming of a ship for inverted flight, and after much consultation, study, and burning of midnight oil "Chickery Chick" resulted. The first flight was again a big success, but the second ended in one of those really superior-type crackups in which the engine gets relocated in the rear of the fuselage. Nevertheless, inverted flying was soon resumed, with dozens of experiments with gas tanks and engine mounts of weird and wonderful design. Chickery Chick began to show signs of wear and tear, so "Chala Chala" (wonder *where* these names come from?) was cooked up as a successor, but an overly thin rib section which made the ship fast but tricky on control was unsatisfactory to the piloting member of the family.

Dave soon started the "Checkala Roma," with thicker, wider ribs and a wider elevator. The small rudder excited



● Davis Slagle, of Burbank, California—the boy who amazed the experts with his superb stunt flying



## Checkala Roma

some perverse comment, but a later ship with a larger rudder, the "Ina Banan-ika," didn't perform quite so well (coincidence?).

Checkala Roma proceeded to win high point spot in the precision competition in the Western Open, and anybody who saw the results of the Nationals knows how well the little ship fulfilled the Slagle family hopes.

Like most other enthusiastic modelers, Dave is looking forward to new exploits and experiments, and is hoping to be able to compete in several of the big meets. And, of course, like most young fellows, Dave finds a lot of other things interesting as well. His grandparents have built a summer cottage on White River which they firmly insist has chipmunks in the basement and a snake on the steps. Dave has written insisting that the snake be left strictly alone until he can get there to catch it, and in the meantime is saving every loose dime to finance the trip. Nevertheless, Dave says if he can't get to both the Nationals and White River (his Dad has only one vacation), the snake will have to wait!

### Steps in Construction

1. The crutch is made of balsa  $\frac{1}{2}$ " x  $\frac{3}{16}$ ". The upper formers, #5 to #8, are glued in place on the crutch and this area is planked with  $\frac{1}{8}$ " balsa.

2. The tail surfaces are made of  $\frac{1}{4}$ " balsa—the stabilizer 4" wide, and the elevator 3" wide. The elevator is sanded equally on both sides. Use cloth hinges and then cover the entire surface with silkspan, put on with dope. This stabilizer and elevator is now glued on the crutch. The rudder is cut out (the hinge cutouts are optional of course). The vertical fin is then glued into place, leaving the rudder to be set on after the tail blocks are in place. These are pinned tightly to the base of the rudder to strengthen it, and then cemented.

3. In constructing the wing, the spars were made first—could not get 48" spars, so had to splice them in the center. Use  $\frac{1}{16}$ " plywood splices (on both sides of each spar) and clamp them tightly until the glue is dry. (This plywood is cut at an angle to avoid stress concentration.) Extend this beyond the second rib; however, it would make the wing stronger to extend it about two ribs more. The ribs are cut out and placed together on two pieces of spar material for sanding. After sanding mark with crayon across the bottom of the bunch so they can be placed the same way on the wing (any slight difference made in the contours in sanding will show up if this is not done.) The ribs are slipped into place from each end. (Except the ones which go over the plywood splices; these were cut down from one side and the hole for the spar enlarged—a small piece of balsa was then fitted in the space.) The leading edge ( $\frac{3}{16}$ " sq.) is then glued in place, and also the trailing edge. The trailing edge is made from balsa 2" x  $\frac{1}{16}$ " glued together along one edge. When dry, this is slipped over the ends of the ribs and placed so that it is even top and bottom. Pin to each rib (both sides) and glue. The wing tips are then cut out and glued into place. After drying, fasten the wing to the crutch by cementing and wrapping cord around the wing spars and cross sections of crutch. (The wing is under the crutch.) The wing spars are also wrapped with stout cord

as far as the plywood splices extend, and this cord is then covered with cement.

4. The engine mounts are cemented in position in lower bulkheads #1 to #4, and, when dry, this unit is glued securely to lower side of crutch and wing spars. The other lower formers, #5 to #9, can also be glued in position.

5. The landing gear and gas tank should be installed next—the gear is cemented and tied to the under side of engine mounts and the gas tank is placed on top of the engine mounts between bulkheads #1 and #2. Cement and tie this to the engine mounts. Then the area over this can be planked.

6. Construct the cockpit next—the amount of plexiglass used is optional. Quite a large window space was used, but the  $\frac{1}{8}$ " planking overhead serves as protection in case of an accidental inverted landing.

7. The quadrant is installed between the spars, running the wire leads out the wing tips by means of  $\frac{3}{16}$ " dural tubing. This tubing is held in place by cloth tape cemented across them and also cemented to the wing tips. (A furrow is sanded to hold the tubes after their position is marked—a handi-tool was used for this, but a small round file would do as well.) At each fuselage bulkhead place fair leads around the control rod, to keep it from bending. The crosspieces in the crutch will serve for the top; the hole in the lower piece should be just large enough to allow movement without rubbing.

8. Steam  $\frac{1}{16}$ " x 2" balsa to get the desired curve, and glue over the leading edge (both sides), pinning in place about every  $\frac{1}{4}$ " inch along the leading edge and also on each rib until cement is dry. Finish covering each wing tip (and also the part of wing adjoining fuselage) with  $\frac{1}{16}$ " sheet balsa. Then cap the remaining five center ribs with  $\frac{1}{16}$ " balsa (both sides).

9. Pin the fuselage stringers in place and mark the position. Cut notches for these and glue in place. Fill in the spaces between stringers and bulkheads with  $\frac{1}{8}$ " balsa, back to the trailing edge of the wing. The area between formers No. 8 and No. 9 will also have to be reinforced with  $\frac{1}{8}$ " balsa between stringers to support the tail wheel, which can be installed now.

10. The entire ship is now sanded thoroughly. Use a filler for the cracks and sand this down. The back part of the fuselage and the entire wing surface is covered with silk—the rest with silkspan (doped to the balsa). Use about three coats of dope over the entire ship, sanding with fine sandpaper. Apply one coat of lacquer primer and allow ample time for drying, then wet-sand with #400 sandpaper. Colored lacquer should be used for the final paint job.

Model should balance just back of the front wing spar.

Good luck and Happy Landings.



Little Davis Slagle, Burbank, won trophies bigger than himself

## EXPERTS BOW TO YOUTH

"I MIGHT as well pack up my planes and go home now," exclaimed the West coast U-Control Champion as he watched the graceful maneuvers of a roaring plane and a small thirteen-year-old boy who was apparently winning the U-control stunt event at the 1946 Nationals. Other contenders also guided their speeding planes through their paces over adjacent areas of Boeing's huge concrete ramp at Wichita, Kansas. However, the majority of the spectators, with obvious admiration, craned their necks to catch a glimpse of the show being staged by this red-haired youngster.

There, at the center of his flight circle, he danced and glided with the rhythmic motion of a master of the ballet. With seventy-foot control lines held tightly in his grasp he restrained his cavorting plane within the bounds of the crowd. Round and round it went at 80 miles per hour, guided by the graceful coordinated motion of the boy's dancing feet and flexing wrist.

At one moment it skimmed the ground in apparent preparation to land, only to be suddenly whipped into a screaming climb. And then, with an imperceptible twist of the boy's wrist, the plane flipped on its back, reversed its course, and zipped around the four-hundred-twenty-one-foot circle with its belly skyward. Another deft movement of the wrist flipped the plane back into its original counter-clockwise course, right side up. The crowd watched spellbound, with heads twisting rhythmically from side to side in an attempt to follow the gyrating model. Finally, cutting the motor, the youthful pilot whipped his plane into a flat glide and gently skipped it to rest on the concrete ramp. Applause arose from old-time experts and novices alike. It was obvious why the West coast champion was ready to call it quits.

His flights completed, the young pilot made his way to his stall at the side of the field where his mother and father awaited him with that "I-knew-you-would-do-it" look. Apparently, to them, such a performance was an everyday occurrence. A group of admiring fans, news photo men, publisher's representatives, and model experts followed. Standing beside his parked car, amidst his five or six models that displayed perfection of construction and finish that belied his thirteen years, the lad replied modestly to a barrage of questions.

"My name is Dave Slagle. My mother and dad drove me and my models here from our home in Burbank, California. No, I have not been flying long, only about eighteen months. Do my parents build my models? No, they buy me material and pay traveling expenses. I do all the building myself; it's easy. I have no shop, just a table. How did I learn to stunt my planes? I just learned to make straight flights first and then I tried simple maneuvers like steep climbs and dives. When these were perfected it was easy to zoom the plane over on its back by adding an extra twist of the wrist, like this." He demonstrated the wrist motion casually but with such dexterity that the eye could not follow. "Of course, I cracked up a few models while working out these maneuvers, but I rebuilt them," he added.

"Do you design your own planes," someone asked? "Yes, I figure out the kind of plane I want and then make working drawings. I like mid-wings because all flight forces are centered. This makes them easy to maneuver and they will fly on their backs as well as right side up. The wings have a span of 48 inches and a uniform section; the same camber top and bottom. They have a balsa frame covered with sheet, with cutouts covered with silk. The fuselage is built up, with balsa frame and covering, and is shaped to the desired outside form. Batteries, coil, and other parts are enclosed within the fuselage. Power is supplied by a Super-Cyclone engine mounted in the nose. This drives an eleven-inch-diameter, eight-inch-pitch propeller. The whole job weighs between three and four pounds.

All my contest planes are of one design because this is the design that I have found easiest to handle; also, it is easier and quicker to make all planes alike."

"Have you won all the contests you have entered?" "Yes," came the reply, "but I have entered only a few before this one." Then, with freckled face unperturbed by flashing photo bulbs and admiring throng, he beamed with open frankness and turned to the business of packing his models for his return trip. One realized that in this small lad were the makings of a man with brains, courage, perseverance, and inherent honesty; the kind that makes good in aviation. He made good at his first National Contest. He won the U-Control Stunt Flying Event, though competing with more experienced experts from every part of the country.

by CHARLES H. GRANT  
Fellow A.M.A.

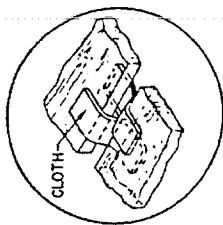


Davy considered 'Checkala Roma' to be the best of his four designs 'Chickory Chick' .... 'Chala Chala' .... 'Checkala Roma' .... and 'In A Bananica' .... Today we remember Davy better than we can remember the song !!

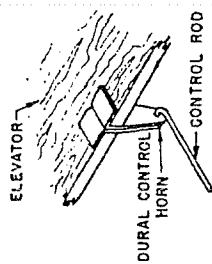
GRAPH SCALE: 1/2" = □

NOTE: THERE IS NO DIHEDRAL IN THE WING.

U-CONTROL CONNECTING ROD-1/8" WIRE (TOP AND SIDE VIEWS)



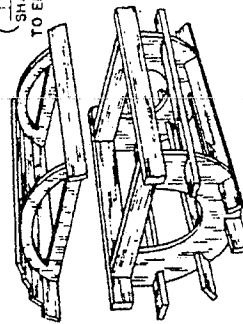
ELEVATOR HINGE DETAIL



ELEVATOR CONTROL DETAIL

USE 12" DIA. PROPELLER

BULKHEADS 6 & 7



TO SPARK PLUG

TO GROUND

TO POINTS

GASOLINE TANK

BATTERIES

COIL

CONDENSER

TO SPARK PLUG

TO GROUND

TO POINTS

GASOLINE TANK

BATTERIES

COIL

CONDENSER

TO SPARK PLUG

TO GROUND

SMALL CABLE TO QUADRANT

3/16" DURAL TUBES TIE CEMENT TO SPARK PLUG

BLACK TO PUT TUBES CEMENT & COVER WITH FABRIC

ENGINE MOUNTS 5/8" X 1/2"

SHAPE COWLING TO ENGINE USED

WHEELS 2 1/4" DIA.

OS DURAL QUADRANT DETAIL

5/32" 2PLY Balsa

3/32" WIRE 1/8 WIRE

3/32" PLYWOOD

1/4" Balsa

5/32" 2PLY Balsa

3/32" PLYWOOD

3/32" PLYWOOD

3/32" PLYWOOD

3/32" PLYWOOD

3/32" PLYWOOD

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3/32" PLYWOOD

FRONT SPAR 24" REAR SPAR 23 7/8"

3/16" X 1/2" Balsa SPAR (HARD)

LEADING EDGE 1/4" Balsa (HARD)

1/16" SHEET Balsa BOTTOM & TOP TO MATCH

1/8" PLANKING

PLANK TO HERE

PLANK TO HERE

1/2" X 3/16"

1/8" X 1/4"

LOCATION OF WING SPAR

6-32 SCREW & NUT

SOLDER WASHER & FILE SIDE FLAT

ENGINE MOUNTS 5/8" X 1/2"

SHAPE COWLING TO ENGINE USED

WHEELS 2 1/4" DIA.

OS DURAL QUADRANT DETAIL

5/32" 2PLY Balsa

3/32" WIRE 1/8 WIRE

3/32" PLYWOOD

1/4" Balsa

5/32" 2PLY Balsa

3/32" PLYWOOD

3/32" PLYWOOD

3/32" PLYWOOD

3/32" PLYWOOD

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3/32" PLYWOOD

3/32" PLYWOOD

3/32" PLYWOOD

1/8" SPRING WIRE

Balsa BLOCKS CUT TO FIT BETWEEN RIBS CEMENT TO BULKHEAD 8

CROSS SECTION OF LEADING EDGE

1/16" PLYWOOD SPLICE FRONT & REAR SPAR WRAP & CEMENT

CAP STRIPS FOR CENTER RIBS

WING RIBS 3/32" Balsa

40°

30°

9 ROUTE OUT BLOCK FOR ELEVATOR CONTROL ROD

TAIL SURFACES 1/4" PLYWOOD

5/32" 2PLY Balsa

5/32" 2PLY Balsa

5/32" 2PLY Balsa

5/32" 2PLY Balsa

5/32" 2PLY Balsa

5/32" 2PLY Balsa

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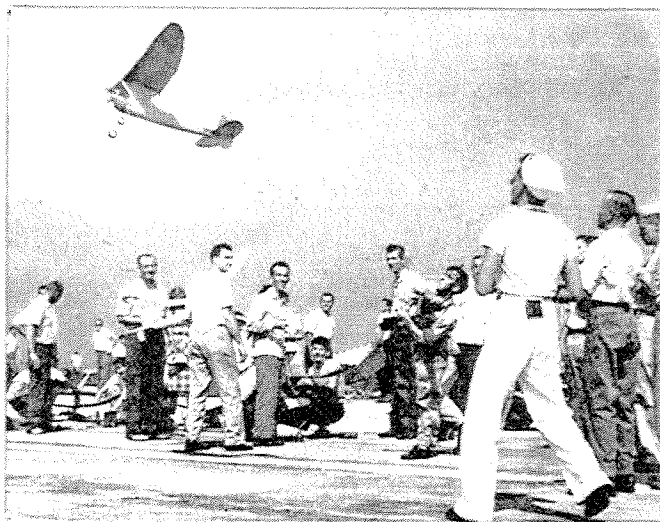
5/32" 2PLY Balsa

5/32" 2PLY Balsa

5/32" 2PLY Balsa

5/32" 2PLY Balsa





● A prop, a push, and a prayer! A free flight entrant gets his ship under way. Even with 200 acres of flying field to work from, some models got away.



● One of the huge 4,000-foot runways set aside for free-flight competition. Here entrants test the wind currents before sending their ships aloft.

# The Philadelphia Story

by Walter Schroder

WITHOUT fear of repeating ourselves (remember in 1945 we said that the Philadelphia Record flying circus was the biggest thing yet), we'd like to say that the 1946 Philadelphia flying circus was the largest single-day show in the history of model aerobatics. All the advance ballyhoo would have done old Barnum credit, but the results put the press agents to shame. Here we have one of the Navy's largest airfields completely at our service, not a 3' x 5' plywood runway, but concrete and 200' x 6,000'. There was no shifting of plywood runways with wind changes; they just turned into the wind and there was a ready-made runway as long as time itself. The Navy went all out in being the perfect host indeed.

Just imagine a dozen F4U's, Corsairs, and a dozen Helldivers putting on high- and low-altitude attacks of the field. At one time six of the F4U's were only about ten feet off the ground tearing along about 300 mph. Then the pièce de résistance, a single P8F Bearcat putting on a show. Oh, brother, if you think your super dooper can climb, you should see this baby stand on its tail and go upstairs. On one zooming climb we timed the P8 five seconds up out of sight and the ceiling was about 800 to a thousand feet. *Continued*



● Ernie Bobcock, Jr., receives high point trophy from Gilbert J. Kraus. Ernie also won the grand prize, a \$3,450 Ercoupe. Bobcock, Sr., looks proudly on.

● Jack Norris, of Lakewood, Ohio, flashes a happy grin as he poses with the first place trophy he captured in the senior Class B free flight event.



## Philadelphia Story

This latest Navy job is about the fastest reciprocating engine job today. At one time they announced that it was doing better than 400 mph on a pass at the field. Other familiar sights about the field were Navy jeeps tearing around transporting timers, officials, and contestants wherever they wanted to go. Top bad the Navy didn't combine this show with a regular recruiting campaign; they really had their best foot forward.

Conservative reports put the attendance at better than 1,800 contestants and 60,000 spectators. Ordinarily, an audience of this size would have the average contest tied up in knots, but the field and main ramp were so large that there was never any congestion. Efficient Navy policing, plus alert contest officials, eliminated any possibility of the crowd's getting out of hand. However, the mighty whoosh of Keith Goodwin's control-line jet job gave them a few bad moments. Boy! When those jet engines give out with the roar, even the boys with lead in their shoes come running to see what gives. Keith has really been putting Minijet on the map; each show is getting better and he certainly draws the crowd wherever he goes.

Even with three control-line speed circles going constantly it was difficult to handle all the contestants in these events. Every man had to be on the ball, or it was just too bad. Don't look now, but the old Maestros of speed, Pop and Son Babcock, really cleaned up in the speed events: a first, second, and third—that's all. Merely good enough to take home an "Ecoupe." That was one prize they couldn't stuff into the back of the car. They tell me young Ernie did all right in the stunt event also—just a fourth. Here's a combination that will be in the winner's saddle for a long while.

Free flight was just out of this world; at one time there were 62 models in the air at once. We know—we counted them. Twenty-minute flights were common. We even heard one young guy say "Aw nuts only fourteen minutes." That, brothers, sums it all up—just fourteen minutes! The Kordas, Ehrlings, McElwees, Lanzos, et al., were on hand to guarantee the best in the business. Good old reliable Lanzo racked up a twenty-minute stick flight, this old Record Holder is still knocking them over and, of all things, Korda cleaned up with that record-holding towliner of his. Incidentally, fellows, it's a treat to watch the old rubber man (Korda) trim those classy-looking gassies of his—the same design in all three classes.

Something new has been added! In the beauty event, the boys had to fly their models before they could accumulate enough points to win this event, and don't think the winner didn't sweat out his control-line Hall racer. His motor was pretty sick and it really took a slick job of handling to get it airborne and flying.

The entire contest was summed up very thoroughly by Sue Schroder (Walt's wife), who stated very simply that it was the best contest she had ever attended. Off the record, she spent the entire day in the air-conditioned control tower on a nice sheet, right beside the water cooler and had a bird's-eye view of the whole works. Won't Everett Angus, contest director, step forward and receive the thanks of both contestants and spectators. Ey, it was your best job! And finally, the Philadelphia Record deserves great credit for again sponsoring this huge gathering of the country's foremost model makers.



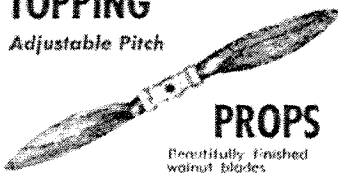
★ SMALL ENOUGH For Class B  
★ Can be Installed in  
CONTROL LINE Models

The last word in scientific plane control by radar! Equipment furnished includes transmitter in black enameled finished metal case size 4 x 4 x 6", range approximately 2 miles; receiver size 4 x 3 x 3 1/2" x 2 1/2" high, weight 5 ounces, operates on 4 Pen-light batteries (2 openers); 3-45V. "B" Battery (8 1/2 x 1 1/2 x 1 1/2 inches); and escapement unit size 2 1/4 x 1 1/2 x 1 1/2 high, weight 1 ounce (not shown). Also useful in model railroading for radio train control.

Retailing at approximately \$59.50 at your dealers

## TOPPING

Adjustable Pitch



## PROPS

Beautifully finished  
walnut blades

Diam.	Pitch Range	Complete	Extra Blade
10"	8-10-12"	\$1.50	45c ea.
12"	6-8-10"	1.75	55c ea.

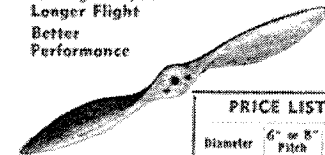


## TOPPING PLASTIC SPINNER

2" size, complete with screws  
and 80-ings as shown. 75c

## HI-THRUST PROPS

for Higher Speeds—  
Longer Flight  
Better  
Performance



Perfect airfoil section  
Sharp, clean edges.

### PRICE LIST

Diameter	6" or 8" Pitch	10" Pitch
8" or 9"	35c	45c
10"	40c	45c
11"	40c	50c
12" or 13"	45c	60c
14"	50c	65c

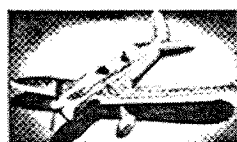
ASK FOR "HI-THRUST"  
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## SILVER STREAK FLYING MODEL



Most sensational flying plane on the market. Great speed and sport model. Kit comes complete with motor, mount wheels, gears. Wing span 40" for control, 56" for free flight. All metal parts stamped and gun-drilled, can be assembled in two hours. Wings are conventional wood and balsa construction.

\$15



## RYAN "ST" Control Line Plane

37 1/2" span kit includes precision sawed body blocks, tail service, wing rib, rubber wheels, hardware.

\$8.50



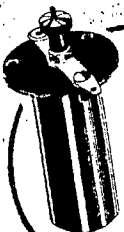
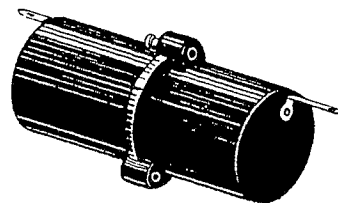
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## AUSTIN-Craft ACCESSORY CORNER

### AUSTIN-CRAFT'S FAMOUS

## "Hotscha" COIL

"Hotscha" ... that's the word for this ignition coil with the HOT spark and long life. Made by AUSTIN-Craft to exacting standards of efficiency, it'll give your motor the zip and go that'll put you in the winner's circle. Operates on standard 3-volt current. Easy to mount. Complete with H-T lead. \$2.50



### A-C FLIGHT TIMER

Only one moving part ... can't jam. Airbrake operation makes it the new of accuracy. Choice of contest flyers the world over. Standard or midjet.

\$1.50

### POSITIVE CONTACT!



### DURAL A-C BATTERY BOX

Here's the battery box that holds 'em with a firm, vibration-free grip. Neat, well-made for long life and efficiency. For Penlite, 1" and 1 1/4" batteries. 40c

Prices quoted are plus postage. See your dealer first. We can handle only a limited number of mail orders.

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BURBANK, CALIFORNIA

## AUSTIN-CRAFT VALUES

### FLEX-SHAFT NEEDLE VALVE

Adjusts to any position. Cyclone type. Precision! \$1.25

### RED PLASTIC SPINNER

Two-piece construction. Dials up your model. 50c

### IGNITION POINTS

Tighten with screws & soldering lugs. Each. 35c

### H-I-O GAS TANK

For hot fuels. Won't crack or melt. All metal. 50c

### WHEEL COLLARS

3 3/4" or 1 1/2" hole. Give size wanted. Pair. 10c

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Lathe turned wood hubs, rubber tires. 7" 10c

### A-C TIMERS

Airbrake operation. Accurate, positive. \$1.50

### U.S. ARMY TRUCKS

1 1/2 or 2 1/2 tonner. Die cut plywood parts. \$1.50

### A-C JEEP

Accurate 1/4" scale model. Die cut parts. 75c

### STAGE COACH

Replica of Famous Wells Fargo. Scale Kit \$1.50

### NEOPRENE TUBING

Holds the hot fuels. Won't melt. Per ft. 35c

### SMALL MOTOR MOUNT

Dural metal. Size 1 1/2" x 3 1/2" with mounting holes. 30c

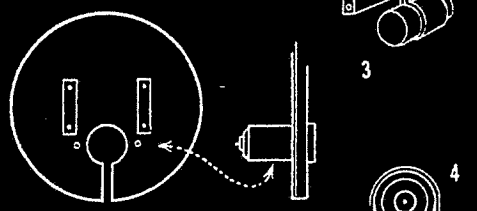
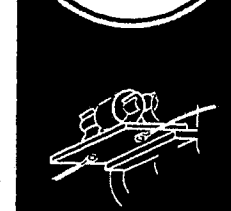
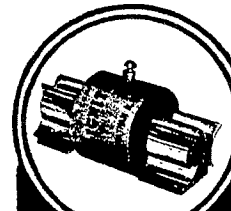
### LARGE MOTOR MOUNT

Dural metal. Size 2 1/2" x 3 1/2" with mounting holes. 45c

### AIR-PUMP

Light, sturdy dural. For pumping air. \$1.25

## APPROVED METHODS for Mounting Coils



● (Fig. 1) Smith Competitor mounted on fibre-board block.

(Fig. 2) Smith Firecracker mounted thru firewall with slot. (Fig. 3)

Fibre strap used to mount coil on metal. (Fig. 4) Firecracker filed flat and mounted on fuselage wall or floor. (Do not use metal straps.) Any of these methods will give your coil a firm vibration-free anchorage ... the foundation for good ignition.

### SMITH COMPETITOR

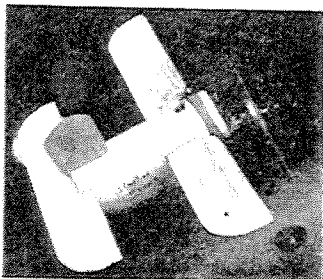
Equipped with spring clips for mounting. Requires no soldering. Can be removed at will for testing ... \$1.95

Second in a series of advertisements on better ignition. Write for folder of complete details.

**SMITH COILS**  
FIRST—BECAUSE THEY LAST!

NATHAN R. SMITH MFG. CO. • 105 PASADENA AVE. • SOUTH PASADENA, CALIF.





● Ed St. John claims anything will fly with enough power. Here's proof.

# THE MIRROR'S 1st 1946 AERIAL CIRCUS

**T**HE New York *Daily Mirror* Flying Fair got under way Sunday morning, September 29th, at the Grumman Airfield, Bethpage, Long Island. Thanks to ample advance publicity and promotion, model builders and spectators began arriving early by car, bus, and train at the grounds made available by the Grumman Aircraft Engineering Corporation, which also loaned a portion of the plant facilities and personnel to assist other agencies in handling the huge crowd expected.

The affair was divided into three parts: the Navy air show, Major Al Williams' stunt flying demonstration, and the model meet proper, which went on throughout the day, with breaks for the other events. Despite lowering skies, a record turnout was on hand by noon, with

an estimated 150,000 spectators crowding even the ample Grumman facilities and taxing the efforts of Civil Air Patrol personnel and special police details assigned to control the crowd. A total of 1,454 contestants made something over 10,000 flights in competing for the approximately \$10,000 in prizes and awards, and officials toiled until October 1 to complete tabulation of all statistics.

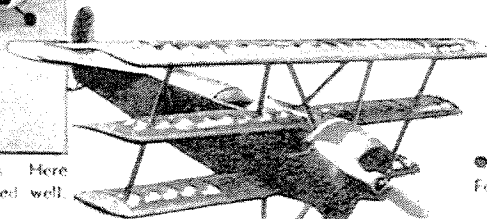
In spite of an overcast day with rain threatening, some fine performances were registered in both Free-Flight and Control-Line events. Frank Ehling carried off first place in the Class "A" Free-Flight event with a total time of 14 min. 57 sec. Stan Sultan, of Brooklyn, topped the list in Class "B" with a fine 34 min. 20 sec. for a new world mark, and Thomas Carlo, of Port Chester, N. Y., won the Air Trails trophy in Class "C" with a 26 min. 12 sec. total, and also racked up the best single flight time of the day with 18 min. 45 sec.

In the Control-Line events, Ernest Babcock, Jr., crashed through with consistently brilliant performances to carry off the coveted Ercoupe donated by the *Mirror*, despite sterling opposition from many other contestants. This makes two Ercoupes the Babcock father-and-son combination has captured within a three-week period. What a way for a modeler to make a living. A 75-mph mark was established jointly by Babcock and Jack Norris in the Class "A" event. The 92 mph knocked off by Stanley Suminski, of Cleveland, in capturing the Class "B" competition goes up as a new world record.

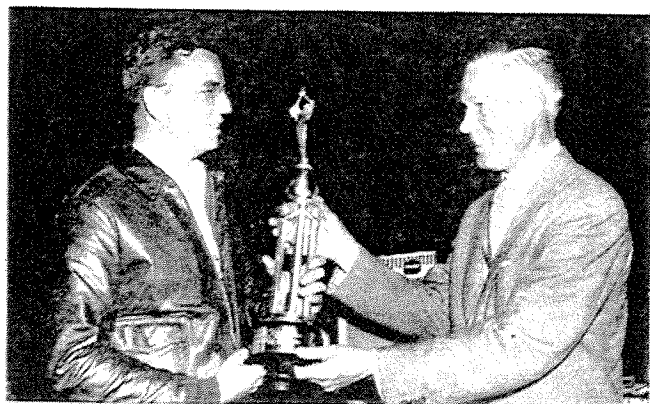
In Class "C" it was Babcock again, with a speed of 112½ mph—not a record, but plenty good in competition. The *Continued* —



● Mett Sullivan, on hand with several experimental jobs. Here are three successful control-line models, which performed well.



● J. Warren Kohler built this fine Fokker Type from Air Trails plans.



● Thomas Carlo receives Air Trails Trophy from Al Wilder, of Grumman Aircraft Engineering Corp. Tom took first in the Class "C" free-flight event.



● Leon Schulman and the Ernest Babcocks, Jr. and Sr., looking over young Babcock's models. Ercoupe in background was later added to this collection.



## Aerial Circus

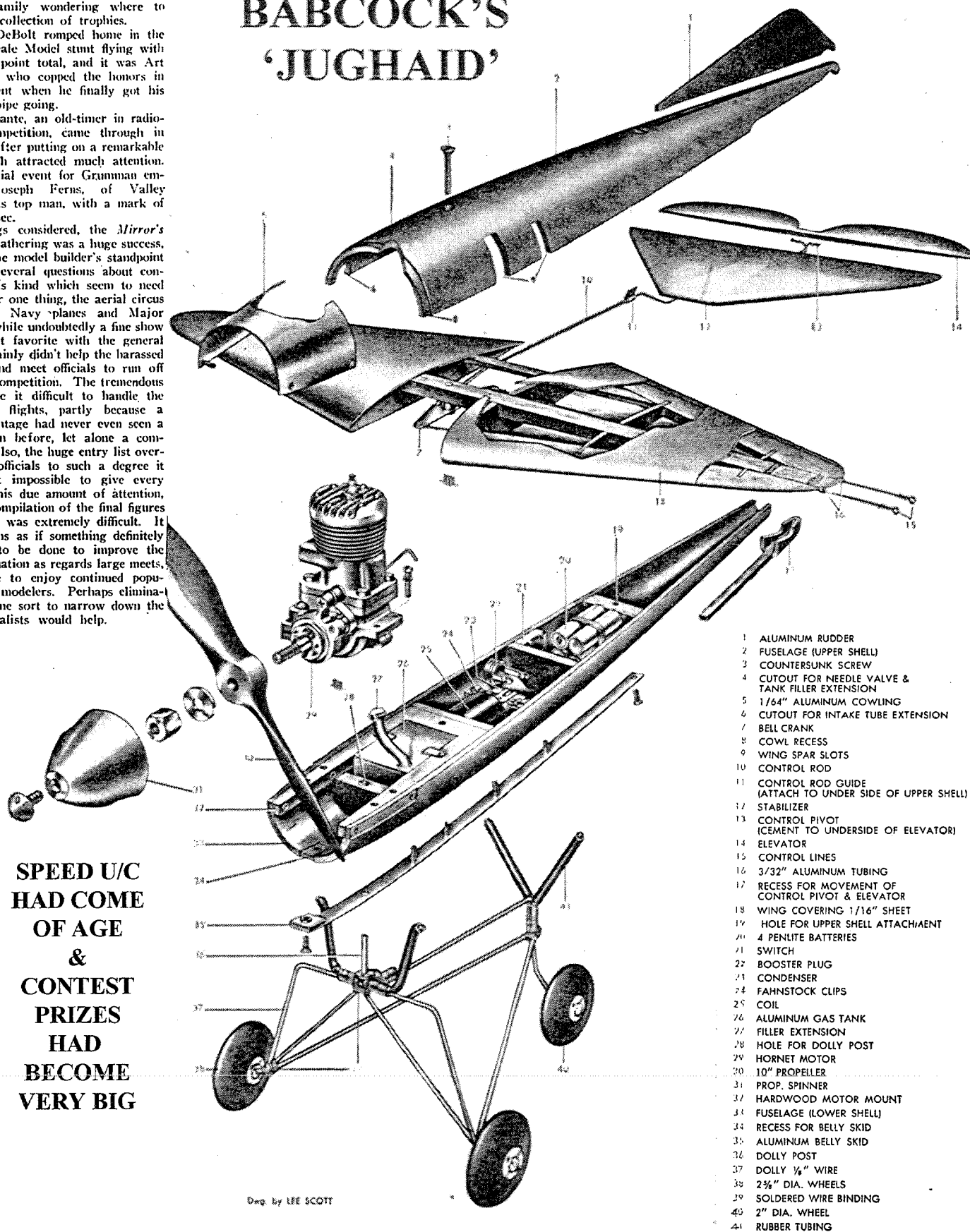
stunt event was another Babcock oyster to the tune of 103 points, enough to knock over the hardware and set the Babcock family wondering where to keep their collection of trophies.

Harold DeBolt romped home in the lead for Scale Model stunt flying with a fine 110 point total, and it was Art Hasselbach who copped the honors in the jet event when he finally got his flying gas pipe going.

Joe Raspante, an old-timer in radio-control competition, came through in this event after putting on a remarkable show, which attracted much attention. In the special event for Grumman employees, Joseph Ferns, of Valley Stream, was top man, with a mark of 4 min. 52 sec.

All things considered, the *Mirror's* mammoth gathering was a huge success, yet from the model builder's standpoint there are several questions about contests of this kind which seem to need airing. For one thing, the aerial circus put on by Navy planes and Major Williams, while undoubtedly a fine show and a great favorite with the general public, certainly didn't help the harassed modelers and meet officials to run off the actual competition. The tremendous crowd made it difficult to handle the competitive flights, partly because a large percentage had never even seen a model flown before, let alone a competition. Also, the huge entry list overtaxed the officials to such a degree it was almost impossible to give every contestant his due amount of attention, and even compilation of the final figures for winners was extremely difficult. It almost seems as if something definitely will have to be done to improve the over-all situation as regards large meets, if they are to enjoy continued popularity with modelers. Perhaps eliminations of some sort to narrow down the field of finalists would help.

## BABCOCK'S 'JUGHAID'



**SPEED U/C  
HAD COME  
OF AGE  
&  
CONTEST  
PRIZES  
HAD  
BECOME  
VERY BIG**

- 1 ALUMINUM RUDDER
- 2 FUSELAGE (UPPER SHELL)
- 3 COUNTERSUNK SCREW
- 4 CUTOUT FOR NEEDLE VALVE & TANK FILLER EXTENSION
- 5 1/64" ALUMINUM COWLING
- 6 CUTOUT FOR INTAKE TUBE EXTENSION
- 7 BELL CRANK
- 8 COWL RECESS
- 9 WING SPAR SLOTS
- 10 CONTROL ROD
- 11 CONTROL ROD GUIDE (ATTACH TO UNDER SIDE OF UPPER SHELL)
- 12 STABILIZER
- 13 CONTROL PIVOT (CEMENT TO UNDERSIDE OF ELEVATOR)
- 14 ELEVATOR
- 15 CONTROL LINES
- 16 3/32" ALUMINUM TUBING
- 17 RECESS FOR MOVEMENT OF CONTROL PIVOT & ELEVATOR
- 18 WING COVERING 1/16" SHEET
- 19 HOLE FOR UPPER SHELL ATTACHMENT
- 20 4 PENLITE BATTERIES
- 21 SWITCH
- 22 BOOSTER PLUG
- 23 CONDENSER
- 24 FAHNSOCK CLIPS
- 25 COIL
- 26 ALUMINUM GAS TANK
- 27 FILLER EXTENSION
- 28 HOLE FOR DOLLY POST
- 29 HORNET MOTOR
- 30 10" PROPELLER
- 31 PROP. SPINNER
- 32 HARDWOOD MOTOR MOUNT
- 33 FUSELAGE (LOWER SHELL)
- 34 RECESS FOR BELLY SKID
- 35 ALUMINUM BELLY SKID
- 36 DOLLY POST
- 37 DOLLY 1/8" WIRE
- 38 2 1/2" DIA. WHEELS
- 39 SOLDERED WIRE BINDING
- 40 2" DIA. WHEEL
- 41 RUBBER TUBING

Des. by LEE SCOTT



★ ★ **Two New Stars Are Born: The Veteran Twins!** ★ ★

★ ★ **ROGER** Class A & B **WILCO** ★ ★

★ **PERFORMANCE** ★ **GENEROUSLY FITTED KIT** ★ **INTERCHANGEABLE WING, TAIL & ENGINE UNIT** ★

★ **DOUBLE YOUR VALUE** ★ **3 PIECE SPEED PLANS** ★ **DURABILITY PLUS** ★

★ **Two models—One low price** ★ **REMOVABLE CRASHPROOF ENGINE UNIT** ★ **DIE-CUT BALSA RIBS** ★

★ **Headquarters for -- MOTORS** ★ **CLASS A or B FLYING** ★ **FREE MODEL KNIFE** ★

New Arden .009.....\$19.50 Shipped postpaid & insured. All guaranteed.  
 Cannon 306.....19.50 complete with coil and  
 Cannon 338.....21.50 condenser hookup wire  
 Merlin Super B.....21.50 and hardware.  
 O.K. Super 60.....21.00

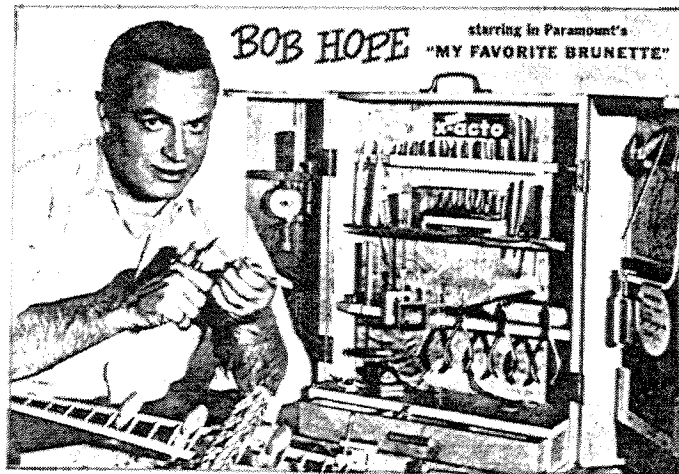
★ **The TWINS—Both in one kit with many extras for your money. Includes rubber wheels.....\$5.95pp.**

★ **Complete Gas Model Catalog—10c**

★ **VETERAN MODEL ENGINEERING CO., P. O. Box 161, New Dorp, S. I., N. Y.** Dealers—Jobbers Write

**MOST INTERESTING POST WAR MODEL AIRPLANE AD**

**BOB HOPE** starring in Paramount's "MY FAVORITE BRUNETTE"



"I'll never grow up  
...I Hope...I Hope!"

Hardest working guy in Hollywood, they call Bob Hope. He'll wear himself out, they say, as he dashes from radio to films to benefit performances.

But Hope says "nope" ... that his hobbies will keep him young!

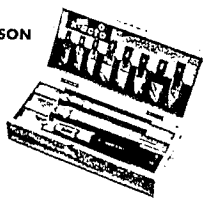
First, comes his happy family ... a charming wife and four children. And one of these, aged seven, is the reason for Bob's number-two hobby: turning out model planes and things with his X-acto "Toolmaster" Chest.

Bob is x-uberant about this x-traordinary hobby chest. "I'm no master craftsman," he says, "but X-acto sure makes me feel like one. It takes a slick job to get top rating with my son, but thanks to X-acto I haven't missed yet. Believe me, it's no gag when I say I love that X-acto!"

**BOB HOPE'S "TOOL-MASTER" No. 89 X-acto Chest** (shown in photograph) includes the works in a super-de luxe job—knives, blades, tools, to keep you hobby-happy for years and years. Complete in a handsome wooden chest that keeps everything within easy sight and reach. \$50

**AND FOR YOUR SON**

(or daughter), here's the No. 82 X-acto Knife Chest, with 3 firm-grip knives and a complete assortment of scalpel-sharp surgical steel blades. Complete in handy wooden chest ... \$3.50



**x-acto**  
HANDICRAFT KNIVES & TOOLS

X-acto Knives, Tools and Chests from 50c to \$50  
(Prices slightly higher in Canada)

Buy where you see this sign. At better hardware, hobby and gift shops or if not available write direct to X-acto Crescent Products Co., Inc., 440 Fourth Avenue, New York 16, N. Y. in Canada: Handicraft Tool Ltd., Montreal Bldg., Toronto

\*Reg. U. S. Pat. Off.

**✓ CHECK**  
YOUR ENGINE EFFICIENCY WITH  
**FOWLER**  
**Vibra-Tak**  
PRECISION TACHOMETER

THE NEW Tachometer everyone's talking about! Here's the pocket size precision "tooth" that records your engine's R.P.M. exactly like expensive fifty and sixty dollar indicators. NOW at last you can KNOW—not guess—just how your engine is revving up—whether you're getting the performance you need for pleasure and contest flying.

**DURABLE—ACCURATE**  
VIBRA-TAK is built on jeweler's type lathes of high stress aluminum with steel indicator read. Functionally designed for greatest efficiency and ease of use. A permanent addition to your model equipment.

Instant reading from 2000 to 15,000 r.p.m.

DEALERS: Vibra-Tak may be secured through your regular purser.

**YOUR P.M.** Maybe your engine sounds "hot," but is it? Only Vibra-Tak tells.

**YOUR COIL** Check the REAL performance of your coils with Vibra-Tak.

**YOUR SPARK PLUG** Dirty, leaky plugs stealing B.M.H.P.? Find out with Vibra-Tak.

**YOUR WIRING** Don't let worn insulation impair the performance. Test with Vibra-Tak.

**YOUR FUEL** Tell how many more R.P.M.'s it "ho!" and giving you? Use Vibra-Tak.

**YOUR PROP** Built prop? Check your replacement with Vibra-Tak.

**\$2.00**  
AMAZING LOW PRICE

**Verdell Instrument Sales Co.**  
NATIONAL DISTRIBUTORS—FOWLER VIBRA-TAK  
P. O. BOX 312, BURBANK, CALIFORNIA

**Brian Donlevy**  
Co-starring in Paramount's "THE TROUBLE WITH WOMEN"



The trouble with most men is...

...they don't have a hobby to unkink their nerves after the day's work.

Says film star Brian Donlevy, for instance: "Don't know what I'd do without my home workshop, where I can relax and be myself."

"Don't know what I'd do without my trusty X-acto tool chest, either. That's the slickest line-up of knives and tools any hobbyist could ask for."

Donlevy's an expert at anything from small scale models to life-size furniture. But amateur or expert, there's no getting around it ... get yourself a hobby, and an X-acto tool chest, and you'll have a sweet, sweet disposition and plenty fun!



**No. 84 X-acto HOBBY CHEST**—3 firm grip knives, complete assortment of w/alpel sharp blades and hobbycraft tools. Complete in wooden chest, \$10. Other X-acto knives, tools, sets, 50c to \$50. (Prices slightly higher in Canada.)

**x-acto**  
KNIVES & TOOLS  
At hobby, gift and hardware shops

X-acto Crescent Products Co., Inc., 440 Fourth Ave., N.Y. 16, U.S.A. Canada: Handicraft Tool Ltd., Montreal Bldg., Toronto

**BOB HOPE AND BRIAN DONLEVY ADVERTISE X-ACTO NOW IN USE FOR OVER 50 YEARS!**  
**'VIBRA-TAK' ANOTHER USEFUL TOOL ALSO USED FOR OVER 50 YEARS!**



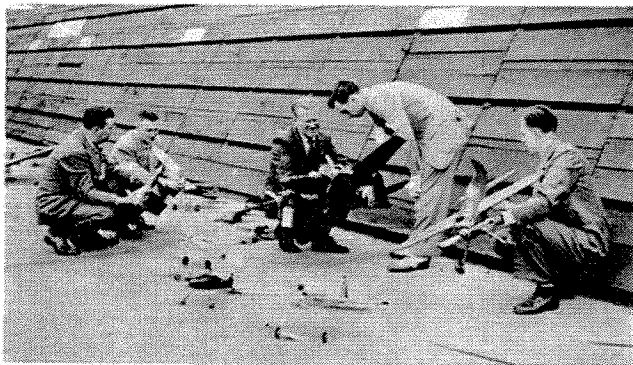
# LONG ISLAND'S MMEFF

## 2nd 1947

Photos from Daily Mirror



● Disregarding heavy fog and occasional downpours, activity was high. Spectators were kept out of flying area, much to the joy of all contestants.



● Grumman engineers judging the Beauty event. Models entered were of every description, and some who placed in this event also placed in others.



● Many attending clubs roped off areas and kept all their equipment within bounds. One member was always present, to guard against loss or damage.

Mirror Meet.

**W**HEN the second largest paper in America goes in for model meet sponsorship, you might expect a reasonably large affair. But when it puts on the largest contest in the world with its initial attempt, and just about the best organized one in the world as its second try—well, modelers and activity leaders will want to give more than just passing attention to the air-minded New York *Mirror* and its Model Flying Fair.

This is a report on the recent *Mirror* meet as well as flashbacks to the 1946 Flying Fair. It presents not only the listing of winners and highlights of the May 25 competition, but includes considerable background information which may be of aid to contest directors everywhere. It is hoped newspapers in various sections of the country follow the lead of the *Mirror* and go and do likewise—sponsor model aero meets!

Interest by the New York *Daily Mirror* in model aeronautics goes back to the days of the Hearst Junior Birdmen organization. When that nation-wide chain of newspaper-sponsored model aero clubs was active, its New York city chapter was backed by the *Mirror*.

Came the end of World War II and the paper began to look around to see how it could help continue wartime aviation interest and keep the public conscious of the important part airpower plays in the lives of everyone. Model airplane building and flying seemed like a good starter, so to ace feature writer Sid Panzer was assigned the task of scouting around and finding out what the postwar aero-modeling picture looked like.

One of the first individuals Mr. Panzer contacted was Irwin S. Polk, former director of the Junior Birdmen's testing institute. Mr. Polk brought his brother, Nathan, into the discussions and in subsequent talks between the latter and writer Panzer the "super meet" idea developed which was translated into an "all gas" competition by the paper's top executives.

Around April, last year, the *Mirror's* publisher, Charles B. McCabe, alerted the extension department which handles all manner of special promotions and public gatherings and that section began to learn something about model aviation—but fast. Mr. McCabe, no newcomer to aero-modeling, had promoted model building and flying in Denver, Colo., while associated with a Scripps-Howard newspaper.

Heading up the special events extension department was H. A. Calahan, an experienced promotion man, ably assisted by Ted Clodius and Charles Schoen. This trio, plus a staff of 15 men and women, worked from April to September 29 when the competition was held.

On the editorial side, Hinson Stiles, managing editor, gave the meet his personal attention. Mr. Panzer was assigned to the job of reporting the meet—before, during, and after. As a "picture newspaper," the *Mirror* also called upon its staff photographers for complete pictorial coverage.

Thus it was that the New York *Daily Mirror* became the largest paper in the world backing aeromodeling. Its first Flying Fair broke all records for number of spectators (150,000) and number of entrants (1544). More flights were made in one day than at any previous competition. Leon Shulman directed the first "Fair" as academy of Model Aeronautics representative. He was assisted by Bernard Schoenfeld and Tom Herbert. This year, Mr. Shulman, busy with the production of a diesel engine, was succeeded in the contest director's position by Mr. Herbert.

Tom Herbert was called into the picture this year in March, more than 2½ months before the Fair was to take place. Tom, working with both the editorial and promotion departments, drew up plans for handling the contestants, drawing upon the experiences of the previous year and suggestions from various individuals who wanted to be helpful.

The same personnel at the paper was utilized



# Long Island's MMFF

as the previous fall. Perhaps it might be wise to pause and mnd out why a tabloid size newspaper, already rationing its advertisers because of the general newsprint shortage, considered aeromodeling of sufficient importance to sponsor.

The reason the *Mirror* put on its Flying Fair was twofold: to make new friends and please its old ones, to help develop public interest in aviation by the encouragement of model building and flying. The paper points out that its promotion of aeromodeling was entirely without profit. It could not increase its circulation since it already was using every bit of newsprint it could get; it could not develop any new advertising since it already was turning away its old clients in that respect.

No, the *Mirror* had no self-interest in the deal. Its directors felt that America's future is tied up with aviation and the future of aviation depends on the young model building enthusiast of today.

Somewheres between \$10,000 and \$14,000 was spent on each of the Flying Fairs by the *Mirror*. This is exclusive of salaries for the paper's personnel. A very conservative estimate of the worth of the editorial space devoted to the meet this year is \$20,000. What that amounts to is \$20,000 worth of advertising for model airplane building and flying.

Considering those sums it is not hard to see that the Model Fair ranks first as the biggest annual promotion of the newspaper. In the matter of numbers of persons actively involved, it leads by far any other *Mirror* activity. In a year 'round program of youth activity, the paper sponsors a youth forum at the Hotel Astor, basketball and marble tournaments, swimming, softball, tennis and golf matches, and winds the entire thing up in a youth festival in Central Park each fall. But none of these require the hard work, concentrated effort, large staff, and expenditures which go into the Flying Fair.

When the *Mirror* says a model meet is a big promotion, don't dismiss the statement lightly. They know whereof they speak, for it was the *Mirror* which once took over the entire World's Fair for a day charging only a nickel for admittance plus a copy of the paper. And it was the *Mirror* that took over both banks of the Harlem River for a 2-mile stretch some years back and produced a record breaking audience to see Gar Wood do a bit of motor boat racing.

Yessir, when the *Mirror* says "big," it means big. Why, when you win a prize at the Model Fair your names appear in 2,165,000 copies of the Sunday edition and 1,040,000 copies of the following day's paper. Which, while it isn't hay, represents a terrific amount of newsprint.

Like all its activities, the *Mirror* runs its model meets on a business-like basis. Of course, it's hard to keep a business-like look on your face when you find yourself between a free fighter and a control-line hound arguing about which sport is the more scientific!

Although advertising space was still rationed this year at the time of the meet, the paper was able to give more editorial coverage this year since the amount of available paper rose a little and there was no stifling truck strike as in '46. Some 800 posters appeared on the sides of *Mirror* trucks between May 2 and 23 proclaiming the contest. These posters, roughly 2 x 4 ft. and 4 x 8 ft., were seen by several million New Yorkers each day. Little wonder the city became model aviation conscious.

The biggest feat according to the *Mirror* was not so much the size of the meet as the considerable distance the crowds had to go to see the contest—26 miles from New York City to Bethpage, L.I., home of the Grumman Aircraft concern and site of the competition. The round trip rail fare was \$1.52—quite a sum to nickel-minded New York subway riders.

Yet all the way to Bethpage they went—by auto, bus, train, and plane. The train deal was the big one. Both years the Long Island railroad ran special trains all day from its New York City Pennsylvania station and from Brooklyn Flatbush Avenue station. In 1946, the onslaught of contestants and early morning contest-goers caused one of the biggest tie-ups in the history of the Pennsylvania station. It was soon straightened out.

Trains were scheduled to get entrants out to the contest early for registration and then late morning trains brought spectators in time for the full scale air show. All trainmen were briefed in advance to give special consideration to modelers carrying planes and loaded down with meeting equipment. So great was the rail traffic that the Long Island road had to borrow rolling stock from its big brother, the Pennsylvania, in order to handle all the crowd.

As trains pulled into Grumman station and spectators moved toward the Grumman gates it appeared from the air that the field was being run over by a coating of molasses—so many were the spectators.

This first turnout came as a great surprise, to put it mildly, genial Roy Grumman and Jake Swirbul, president of the Grumman organization. In 1947 they were prepared for the throng. More than 150 special police and trained company employees worked on arrangements for the meet and helped control the crowds. The first year between 20,000 and 50,000 autos were parked on or near Grumman property. Count was lost after 20,000 since drivers started using nearby fields and police tabulations went out the window.

Poor weather cut down the number this year, but Nassau county police and special Grumman police were ready to cope with between 200,000 and 300,000 attendance. As a small example of intensive preparations, more than 200 "No Parking" signs were erected in '47 to help divert the flow of traffic into the proper parking areas. A unique parking system was devised to enable contestants and officials to reach special parking sites with their cars and not get jammed in with the spectating public.

To each entrant was issued a black-on-white gummed mudguard sticker with instructions to place it on the lower left mudguard. The front windshield could not be used because of

state laws against pasting anything on that glass. A red-on-white label was used by officials. All Grumman and Nassau county police were schooled to direct such cars to the special parking areas. Contestants had their own large section near the free flight events and officials were parked near the administration hangar.

The greatest number of cars, naturally, were those driven by spectators and these filled one parking area after another. To enable both spectator and contestant to get to Bethpage with minimum trouble—and remember it was 35 miles out from New York City on Long Island—the *Mirror* published a map of the main highways and parkways of the city and the island showing readers the location of the field and best routes from New England, New York City, and the south.

In addition, route direction signs were posted on the highways in the vicinity of Bethpage. Unfortunately, these were not permitted on the parkways because of state laws, but the excellent map helped most folks in hitting Grumman field on the nose.

The *Mirror* Model Flying Fair drew the largest crowd in county history according to the Nassau police. Like Grumman, they were surprised the first year, but well prepared the second. There were more than 200 county police, assigned to the May meet. Thirty-four policemen were at the flying site itself, along with 12 plainclothes men and 12 deputy sheriffs. Chief Inspector Allen mustered his men at 7 a.m. and they did not leave until the last spectator had pulled out homeward bound. It is difficult for one individual to report on the policing operation since, like a battle, it was so vast and so spread out.

However, it is interesting to note that the policing force was divided into two sections: an interior group on Grumman airport under the command of Captain Kirk, and an exterior company outside on the highways directed by Captain Schneider.

All police had been briefed on the competition and the attitude of the contestant which is usually to get back his far-flying free flight model regardless of fences, traffic, and water barriers. Officers were most cooperative and cruising cars were quick to check on everyone seen in the vicinity of Bethpage with a model to make certain the model belonged to that individual and had not been "swiped." (A good reason another time to be certain full identification is on each of your ships.) This "checking" procedure is recommended to all contest directors who have police aid.

At the conclusion of the contest, all main roads leading from Bethpage were turned into one-way streets and drivers directed by the shortest routes to the Long Island parkways and main highways. Jericho Turnpike, the main highway passing close to Grumman field, was closed to regular Sunday traffic and used only for meet-goers during peak hours.

Three representatives of the Long Island railroad were on tap at contest's end to check on the homeward movement of the crowd and "call up" special trains like an hotel doorman "whistles up" a taxicab. Stationed on top one of the hangars, the officials would phone a temporary dispatcher's office

for a special train as soon as "X" number of people had passed out the main gate. Like a strawberry soda in a drug store, the dispatcher would acknowledge with "one train coming up!" and a waiting empty section would pull into Bethpage station. All regular Long Island trains made a special stop at Bethpage on the day of the competition. These were in addition to the many special sections run. Model railroad fans would have gotten a big kick from the complicated schedule maintained by the "Long Island"—perhaps at future meets they can be induced to attend if only to observe the train arrangements!

Just why any aircraft concern in its right mind would enjoy seeing a hundred or more thousand strangers overrunning its facilities baffles us, but too much cannot be said for the magnificent cooperation and understanding of the modelers' point of view by Grumman personnel—from gatekeepers to the managing staff.

Of course, as one of the Navy's prime contractors, the aircraft firm can use plenty of good publicity, but its participation in the contest goes much deeper than that. Like the *Mirror*, Grumman officials feel that the model builders of today are the designers, engineers, and air crews of tomorrow. So to them the task of setting up the field and providing for the comfort and safety of several hundred thousand spectators and modelers is well worth the end result: giving the aeromodeler a helping hand and assuring him that America's full scale aviation industry is interested in his building and flying activities.

Jack Rettaliata and "Peanuts" Barbetta of Grumman's public relations department, who worked long and hard on the Model Fair, point out that Grumman couldn't help but be interested in modelers—a considerable number of employees are builders and flyers on a miniature as well as a full scale! Acknowledging this, the *Mirror* sponsored special events for Grumman personnel. As a cooperating organization, officials of the newspaper asked that no Grummanite enter the regular events since it is an inflexible rule that no employees of the *Mirror* or assisting groups can participate in any contest run by the paper. Thus, the special events for the aircraft concern's own folks. These were hotly contested—as much so as the standard categories.

To house the many out-of-staters who arrived a day early for the meet, arrangements were completed with the Army Air Forces whereby accommodations were provided at nearby Mitchell field. Several barracks were assigned to the modelers and regular bedding issued. Only stipulation by the Air Force was that no engines be run on the post and no flying be attempted. It was assumed the flyers would act like gentlemen, which they did.

Among the 150 entrants availing themselves of this excellent arrangement was the Cleveland, Ohio, gang which included International Lork Wakefield champ and national record holder Dick Korda. Modelers ate at the post cafeteria at the usual low rates, attended post movies and on Sunday morning were invited to attend the various denomination chapels. There was no "check-in" hour on

Continued —



Saturday night and to many ex-GI modelers—it was strictly dream stuff.

On Sunday morning, all modelers lacking transportation were driven to Grumman in Army vehicles—courtesy of Uncle Sam. In return for this splendid cooperation, the AAF was invited to exhibit planes and ground displays at the meet. Among the interesting items it showed was a German V-1 buzz bomb. A recruiting truck was at the field all during the meet and did a brisk business acquainting air-minded spectators with the latest efforts of the Air Force.

AAF officials, like Grumman and the *Mirror*, saw the Model Flying Fair as a training ground for future Air Force personnel. High ranking brass stated that aeromodeling is definitely encouraged now by the air arm and from the ranks of the model flyers is expected to come the top technicians of the AAF.

Another branch of the Army was drawn into the meet picture, too. The Signal Corps provided a network of field phones which connected the registration booth, flying sites and crowd control points with operations headquarters in the main control tower.

Some of the other arrangements for the contest will indicate its size and may give other contest directors an idea or two for their own meets. As soon as snow fences were removed from the county highways last spring, the *Mirror* started borrowing sections and storing them. On the day of the contest found 5½ miles of snow fence erected which served perfectly to hold the crowds in check and keep the flying areas from being overrun by enthusiastic but heavy footed non-modelers.

More than 20 tables, each 12 feet long, were constructed for the meet. These were used as prize tables, registration stands, processing and recording tables. The '47 prize table itself was 96 feet long and fairly groaned under its load of 92 awards which included trophies, Gorham sterling silver bowls (a mere \$55 each without the engraving costs figured in!), a shower of certificates for clothing, flight training-through-solo, and tickets to Broadway shows.

Prizes "in the flesh" included a television set, aluminum canoe made by Grumman, light-weight rowboat (perfect for ROW flights!), trophies galore, model merchandise of all kinds (props, batteries, fuel, accessories), engines, motor tools, hand tools, kits, books, radio control units, records and even a complete set of 4 white sidewall tires. In addition, a Benrus chronograph went to any contestant breaking a national record.

Changing from its previous year's policy of a top grand award for the meet champ (in '46 an Ercoupe light-plane), the *Mirror* decided on plenty of good prizes in each event and no championship award. This seemed to meet with almost universal approval and this observer recommends the practice to all meet managers.

The *Mirror* admitted quite frankly that its intention this year was to have the best meet from the standpoint of quality. Last year it ran the biggest competition, in '47 it was interested in the best. To accomplish this and give every entrant an equal chance registration was limited to 700. Entry

blanks were mailed to all '46 participants. The first 700 entries were received within one week. From then on the *Mirror* and its contest director, Tom Herbert, were besieged from all sides to open up the lists or add "just one more name." So many hard-luck stories came in the *Mirror* prepared a special letter explaining that it was determined to treat everyone alike and show no favoritism. Threats and bribes were made—some of the money offered was of the larger folding variety—but all to no avail.

Those clamoring to get into the competition were advised to register as "late entries" since arrangements were made and all interested parties advised that the first 700 flyers would have to check in by 10 a.m. on the day of the meet. At 10 those who failed to appear were "scratched" and entries were accepted from among "late entries" present in the order of their late entry. In other words, contestant 701 was called and if not present, 702, and so on down the line until a full field of 700 flyers was registered. At the full 700 mark, the registration booth closed down, its job done for another year.

One of the fastest registration jobs ever observed was accomplished at the meet. The 'contestants' line moved very rapidly since credentials were already assembled in large envelopes. Each flyer received a 10-inch diameter white circular card on which his number was imprinted in big black numerals. This he attached to his back as the only necessary identification. Each contestant received a "helper" armband for his flying aide as well as a map of the flying area, complete instructions for both U-control and free flight operation.

Meet officials were easily distinguished by bright orange and blue baseball caps bearing the letters "MMFF." And just to show you how well prepared the directing officials were, a case of orange and blue "beanie" caps, also bearing the "MMFF" designation (it became as well known as "LS/MFT"! ) were handed out to all those who felt they should be so honored. But the catch was that the police and field marshals were instructed to give short shift to wearers of such hats and not permit them to roam on the flying fields.

However, a lot of folks were made happy by having a hat and a quick check proved that not one "baseball type" headaddress was worn by other than designated meet officials. Among the technical officials were Bob Tagle, who conducted the radio control event, and Ed Yulke, who did an excellent job running contestants through the free flight procedure.

As an experiment sanctioned by the A.M.A. and using the wide, smooth concrete runways, the free fliers were required to R.O.G. (rise-off-ground, or maybe we should say, "rise-off-cement") all gas jobs. A novel wrinkle was the inclusion of dollys if flyers wished to utilize them. Not many did, but it did produce a lot of pre-contest daydreaming which included the threat of one entrant to use roller skates and launch his craft by hand. This chap pointed out that the meet rules did not state the dolly had to be inanimate!

About the only protest registered by contestants was over the matter of no testing by anyone. Free fliers contended this worked a handicap to them since it is a great deal more difficult to pre-adjust a free flight ship and bring it to the contest than a smaller, less fragile control-line job. A petition was circulated by members of the Hampton, Va., Brain Busters club and signed by a majority of the free flight entrants. We never did learn whether it resulted in any changes in the meet procedure, but director Herbert went into a huddle with the free flight representatives explaining the "no-testing" regulation was instituted to protect them as well as speed up the meet. The previous year produced an over-abundance of "test flights" which confused the contest picture somewhat.

This much can be said, even without test flights and despite horrid weather conditions, a lot of good free flying was observed. Take-offs were for the most part very good, although some sad ones indicated that during the "hand-launched" era a lot of modelers had forgotten how to construct a good landing gear. For our money, give us r.o.g. every time. Tight corkscrew or straight climbs were the rule rather than the exception. And under a misty ceiling ranging from 10 to 300 feet, flights of more than 4 minutes were recorded. As the mist would clear there would be a great demand for timers, then it would slacken off as the famed Long Island fog rolled in.

This foul weather resulted in a small spectator turnout this year (a mere 100,000 according to the *Mirror*!) and only 4,000 official flights by entrants. Last year they took over 10,000. The full scale airshow scheduled from 1:30 to 3 p.m. had to be called off and the only full-size ship to get into the air all day was a Sikorsky helicopter. Daylight fireworks which produced 30-foot cows and horses of paper floating down from on high were undaunted by the weather as was the 100 piece Freeport, L.I., high school band. This outfit, incidentally, has five of the prettiest drum majorettes these tired old eyes have seen in many a day. But play as well and as loudly as it could, the band was no match for the control-line ships—particularly the Class "C" jobs—as they whipped around the nearby speed rings.

What the crowd missed in the way of full-scale flying because of an uncooperative weather man were stunt flights by Major Al Williams in his Gulfhawk biplane, and appearance of the Navy's record-breaking distance champ, the "Truculent Turtle." Various Army and Navy stunt and jet flights were scheduled, plus a formation of bombers from Mitchell Field. Let's hope the weather bureau does better by the *Mirror* next time.

An innovation of the second Flying Fair was the inclusion of marshalls in the technical staff. There were model leaders who were assigned to the difficult task of making certain no modeler was roaming around the flying area unless he or she was actually flying at that particular time. The *Mirror* figured that if there was discipline among the flyers, there would be discipline among the spectators. Obviously the county and Grumman police couldn't differentiate between an "active" flyer and one just cruising around

shooting the breeze. Hence the creation of marshalls who were authorized to impound the models of any uncooperative entrant.

So well did the system work no flyer was penalized and the only ship impounded for the duration of the contest belonged to a non-entrant who insisted on flying it around the models entered in the beauty event.

Tom Herbert had 43 men and women on his technical staff who attended a full dress rehearsal on the 24th as well as several preliminary meetings. All technical help was paid by the *Mirror* who discovered the previous year that pre-contest promises do not always produce volunteer officers where and when expected. Herbert's staff was probably one of the most skilled ever assembled for a model meet since each member was either an experienced modeler or leader and many had run contests themselves.

On the day of the meet, the first contestant arrived at 2:40 a.m. and was somewhat surprised to find out that he could not set up shop right then and there and do a little control-line test flying. What he did not know was Grumman is under contract to the Navy and the flying field is practically government property. But by 6 a.m. hundreds of contestants were on the field, tuning up engines and tinkering with control-line fittings and free-flight retractable landing gears.

Registration got under way shortly afterwards under the direction of Mr. Clodius while Mr. Schoen began setting up the prize table amid many an "oh" and "ah." The Academy of Model Aeronautics crew arrived early from Washington, D.C., and were soon busily engaged issuing A.M.A. licenses and acting as general information center for out-of-town leader members. The A.M.A.'ers included Russ Nichols, executive director; Val Luce, technical advisor; Shirley Rapee, Doris Edwards and Marjorie Heflin from the credentials division.

To handle last minute requests for fuel, props, and spark plugs broken in transit or testing, and similar items, an emergency supplies section was operating full blast under the genial direction of Irv and Nat Polk, Marvin and Charles Binder. It is hard to describe the joy expressed by one "hot rock" controliner when he discovered he could get a replacement for his broken McCoy crankshaft after his lines twisted and his model dove in. Most of the entrants crowded around the emergency supplies booth had forgotten some vital part or come without fuel proving that a check list of necessary parts and supplies should be kept by all contest-goers.

All in all, rain or no rain, it was quite an affair and one that will be difficult to top. Officials later calculated top attendance might have reached 300,000 given a good day with sunny skies. From a vantage point atop the control tower it appeared to us that all of New York City (7,000,000 plus) had turned out anyway. Something like 6 square miles was turned over to the Model Flying Fair and about all we could see were spectators, contestants, cars, bands, and more spectators almost everywhere on that field except in the fenced off flight areas.



1947



NATIONALS

○ Davis Slagle demonstrates his two-plane technique to his mother and father. Davie won this Jim Walker stunt trophy for the second time .

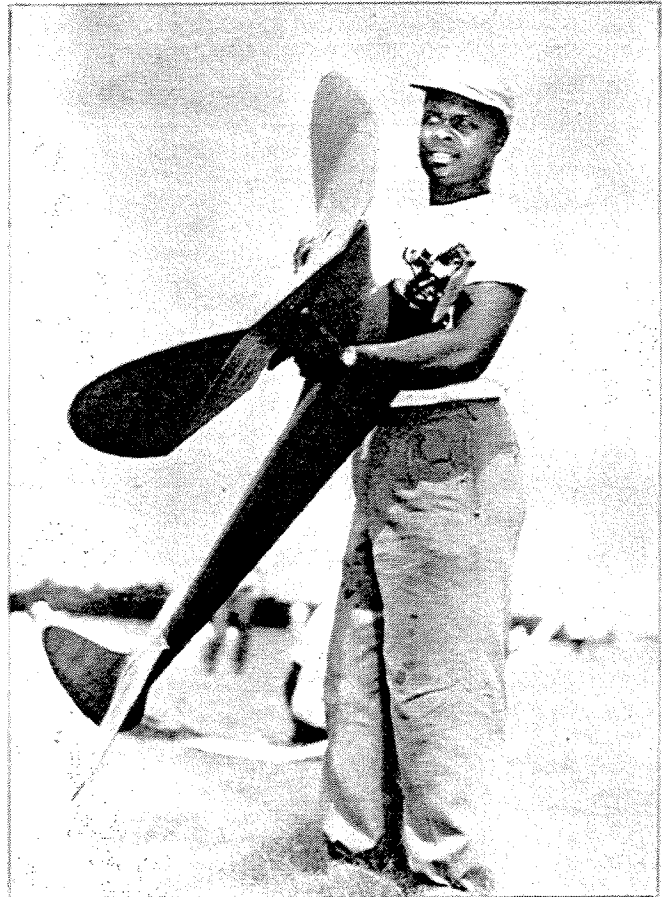




● Dick Korda's getting older and his planes are getting smaller. Here he is with his CO 2 Powerhouse.



● Jim Walker, a believer in the phrase "the pause that refreshes," takes time out from his radio-control work.



● Frank Cummings and his Atwood-powered sailplane. Frank was outstanding in the indoor and outdoor rubber events.



● With the help of all the old-timers he could muster, Ed Lidgard prepares his "Push Pull-Quick Quick" model for flight.



## '47 Nationals

**A**FTER a hectic five days, the 1947 Nationals has gone down in history as one of the largest ever held. For once there were no serious complaints against the weatherman, although the middle west was in the scorching grip of a record breaking heat wave that kept everyone sticky and uncomfortable. However, every day had good flying weather and the entrants surely made the most of it. The heat provided the free flight boys with plenty of potent thermals, and the sight of models climbing higher and higher as they drifted out of sight became commonplace.

The good weather even held out right through Friday when the indoor events were held at University of Minnesota field house, and all those who endured the steaming heat of that large building could have little doubt that Old Sol was still doing his recordbreaking best.

As is usually the case, many records were set during the meet, particularly in the control line speed division where practically every record on the books was toppled. Thus, top speed in the combined Classes I and II was made in the Senior division by William Thomas of Daytona Beach, Fla. who hit 92.3 mph. Keith Storey of Pasadena, Cal. topped Class III with 112.8 mph, and also walked off with Class IV and V (combined) honors with 125.5 mph. The team of C. H. Allan and Joe Kitchens made top speed of the meet with a new record of 133.3 mph in Class VI. Yes, the speed boys definitely liked the weather!

The control line stunt event continues to gain in popularity and to win converts from other branches of the sport. This appears to be one branch of the game where a newcomer can break into the ranks of the experts with a fine chance of carrying off honors. Proof of this is the fact that Bob Tucker of Elizabeth, N.J. won top speed in the Open class over such seasoned fliers as John Clemens of Texas and J. C. Yates of Calif. Davy Slagle, last year's Junior champ and High Point Winner, repeated his winning efforts and staggered out of the banquet hall carrying a huge trophy. Davy was seen paying close attention to the activities of the radio control boys—maybe looking for fresh fields to conquer?

A new event in the control field was the jet-powered speed contest, won by George Sweet of Beloit, Wis. with a speed of 110.3 mph.

Many interesting designs were entered, including a beautiful all-metal model of the Bell XS-1. As might be expected, this event was of great interest to the spectators, most of whom had never seen (or heard!) a jet motor.

The flying field at Monticello is really big, and fortunately the breezes almost always blew along the length of it; thus the great majority of models in the free flight events came down right on the field. The site was made available by Clarence W. Hinck, who is Chairman of the Aeronautics Committee of the Minnesota American Legion and was also Chairman of the National Model Contest Committee. In less hectic days the field is the site of Hinck's Flying Service; during the Nationals, of course, all regular flying at the field was suspended.

Those whose models hooked a thermal were greatly aided in retrieving their ships by the Jeeps, provided by the meet management. Further invaluable assistance was rendered by several lightplanes, manned by experienced fliers and observers, who tracked down lost planes. At the last count we heard, these fliers had spotted over 40 lost models and were still going strong. Their operation was made even more valuable by the Minneapolis Radio Club which provided radio equipment and operators for use on the field, in the planes, and in several retrieving cars. Many model fliers weren't even aware that anyone was after their planes until they heard the announcement over the field loudspeakers that the models had been found.

All the free flight events, including gas, rubber power and towline glider, were well represented.

As mentioned above, most of the models in the free flight events landed right on the airport, the short and rather sparse grass permitting them to make beautiful smooth landings to the delight of the many spectators.

The Radio Control Event marked the re-entrance into competition of several old time experts in this field, including the Good Brothers and Chester Lanzo. This event was a disappointment to many who expected a much larger group of entrants. Those who flew provided a fine show, however, even in the face of serious equipment troubles experienced by such veterans in the field as Jim Walker and W. G. Siegfried. Both of these radio control enthusiasts have very complex equipment, allowing control of several elements in the plane and they were beset

by all sorts of difficulties. Walker's last official flight ended in a crash that damaged his model beyond hope of immediate repair, although he had gained sufficient points on this flight to reach top place in the scoring. The next day when flying was resumed, Bill and Walt Good made their last two official flights and amassed just enough additional points to tie Walker. Since Jim's plane was out of the running, the Goods had only to make one more flight for a few extra points; they did this and thus emerged the Radio Control Champs for 1947.

The flying scale model contest, which was a combined event (that is, rubber and gas models competing together) was won by the beautiful Ryan Fireball model which was pictured in "Air Ways" August M.A.N. The judging of the scale models was held Tuesday night, and on Wednesday the winners had to prove to the satisfaction of the judges that the models could actually fly. Models could be flown either control or free flight at the discretion of the builder.

In addition to the flying activities, several important A.M.A. meetings were held. An open Contest Board Meeting produced a good turnout, mostly of Leader Members. Discussion on rules was lively, with many diverse opinions aired.

Friday night, of course, was the date for the big Victory Banquet at Hotel Radisson in Minneapolis. After a dinner limited only by the size of the participants' plates (and stomachs), Frank Nekimken took over as Master of Ceremonies and introduced many of the Minnesota Legionnaires and others who labored long and hard to make the Nationals a success. Following this the lengthy job of distributing the impressive array of trophies was started.

The inevitable protests were filed after the announcement of the prize winners. This year the protests were more serious than usual, however, since some of them affected the standing of the Grand Champion who was to be awarded a Piper Cub. As matters stood on Friday night, Frank Cummings of Los Angeles was on top, followed by Mark Heller, Keith Storey and Chet Lanzo.

The meet sponsors—the American Legion and the Forty and Eight of Minnesota—came in for much praise and also for the usual brickbats, but any way you look at it the 1947 Nationals was a very large five days and will long be remembered in model aviation history.

## 1947 NATIONALS WINNERS

### INDOOR STICK; HAND LAUNCHED

Junior—1. Richard Tarjany; 2. Raymond Wykes.  
Senior—1. Robert Bienenstein; 2. Donald Roberts; 3. Edmond Morosky.  
Open—1. Michael Demos; 2. James Cahill; 3. Milton Huguelet.

### INDOOR CABIN; RISE OFF GROUND

Junior—1. Richard Tarjany; 2. Raymond Wykes; 3. Jack Cook.  
Senior—1. Roger Bienenstein; 2. Bill E. Tharp; 3. Robert L. Denton.  
Open—1. Merrick Andrews; 2. F. L. Cummings; 3. James Cahill.

### INDOOR GLIDER; HAND LAUNCHED

Junior—1. Jack Cook; 2. Bob Clemmens; 3. Barre J. Bodenlos.  
Senior—1. R. Bienenstein; 2. C. D. Rushing; 3. Richard Geist.  
Open—1. Bob DeBatty; 2. Milton Huguelet; 3. Manuel Andrade.

### OUTDOOR RUBBER; MULVIHILL STICK

Junior—1. Raymond Vargo; 2. Jack Cook; 3. Barre Bodenlos.  
Senior—1. Robert Bienenstein; 2. Andrew Tagliafico; 3. Frank Garcher.  
Open—1. Mark Heller; 2. Bernard Green; 3. Austin Leftwich.

### OUTDOOR RUBBER; STOUT CABIN

Junior—1. Jack Cook; 2. Bill Kempton; 3. Michael Onofrey.  
Senior—1. Bill Tharp; 2. Richard Geist; 3. Allan Trainer.  
Open—1. F. L. Cummings; 2. Robert Champine; 3. R. J. Dunham.

### OUTDOOR WAKEFIELD CABIN TYPE; RUBBER POWERED

Junior—1. Marvin Fromm; 2. Michael Onofrey.  
Senior—1. Ed X. Morosky; 2. George Matsumoto; 3. Wheelon Schonenky.  
Open—1. Frank Cummings; 2. F. L. Parmenter; 3. Henry Cole Jr.

### TOWLINE GLIDER; OUTDOOR

Junior—1. R. L. Clemens; 2. Richard Ehm; 3. Barre Bodenlos.  
Senior—1. Herbert Breiting; 2. Donald Holmes; 3. James R. Jones.  
Open—1. Robert Holland; 2. Chester Lanzo; 3. G. X. Perryman.

### GAS FREE FLIGHT CLASS A

Junior—1. William V. Trumble; 2. Roger Barron; 3. Ronnie Sharpston.  
Senior—1. Fred D. Whiting III; 2. Larry Stockstad; 3. Nicholas Sinder.  
Open—1. Wm. Fletcher; 2. Jerry Kolb; 3. Paul E. Gilliam.

### GAS FREE FLIGHT CLASS B

Junior—1. Jerry James; 2. William Trumble Jr.; 3. J. L. Horton.  
Senior—1. Fred Whiting III; 2. C. P. Hall; 3. Gene Treuter.

### GAS FREE FLIGHT CLASS C

Junior—1. Edward Mate; 2. Melvyn Levy; 3. Donald Cline.  
Senior—1. George B. Goff; 2. Russell Booth; 3. Jack Greenspan.  
Open—1. Jerry Brofman; other places pending final decision of AMA.

### CONTROL LINE SPEED; CLASS I & II

Junior—1. J. J. Singleton; 2. Wayne Rinehart; 3. C. F. Jones.  
Senior—1. William Thomas; 2. Jack Norris; 3. Bob Thor.  
Open—1. J. R. Robinson; 2. Henry C. Cole Jr.; 3. Robert McCarthy.

### CONTROL LINE SPEED; CLASS III

Junior—1. F. N. Proust Jr.; 2. Wayne A. Rinehart; 3. Watson Jilks.  
Senior—1. William Thomas Jr.; 2. Bob Thor; 3. Jim Whitlatch.  
Open—1. Keith H. Storey; 2. Donald Newberger; 3. Les McBrayer.

### CONTROL LINE SPEED; CLASS IV & V

Junior—1. F. N. Proust Jr.; 2. Al Wadleigh; 3. J. J. Singleton.  
Senior—1. Sam Beasley; 2. Alfred Stegens; 3. Richard C. Fall.  
Open—1. Keith H. Storey; 2. Allan & Kitchens; 3. Donald W. Newberger.

### CONTROL LINE SPEED; CLASS VI

Junior—1. P. F. Hubert Jr.; 2. B. J. Krider; 3. Fritz Probst Jr.  
Senior—1. Bob Thor; 2. Leslie H. Gerhardt; 3. L. H. Mahieu.  
Open—1. Allan & Kitchens; 2. R. H. Thomas; 3. J. D. Curry.

### CONTROL LINE STUNT

Junior—1. Davd Slagle; 2. Jack Hudspeth; 3. Jack Gilroy.  
Senior—1. Don Gulotta; 2. Bud Jamison; 3. Frank Stanton Jr.  
Open—1. Robert Tucker; 2. J. C. Yates; 3. John E. Clemens.

### FLYING SCALE; RUBBER POWERED

1. Chester Lanzo; 2. D. C. McKercher.

### FLYING SCALE; GAS POWERED

1. R. M. Kirm; 2. Dale Kirm.

### CONTROL LINE SPEED JET POWERED

All Age Classes  
1. George Sweet; 2. Merle Koebnick; 3. Howard Lundquist.

### RADIO CONTROL

1. Dr. Walter Good & Dr. Wm. Good; 2. Jim Walker; 3. L. Victor Brown.

### NATIONAL CHAMPION

Frank L. Cummings Jr., Los Angeles, Calif.

### CLUB NATIONAL CHAMPION

Thermal Thumbers Model Airplane Club, Los Angeles, Calif.

### SENIOR NATIONAL CHAMPION

Robert Bienenstein, Detroit, Mich.

### JUNIOR NATIONAL CHAMPION

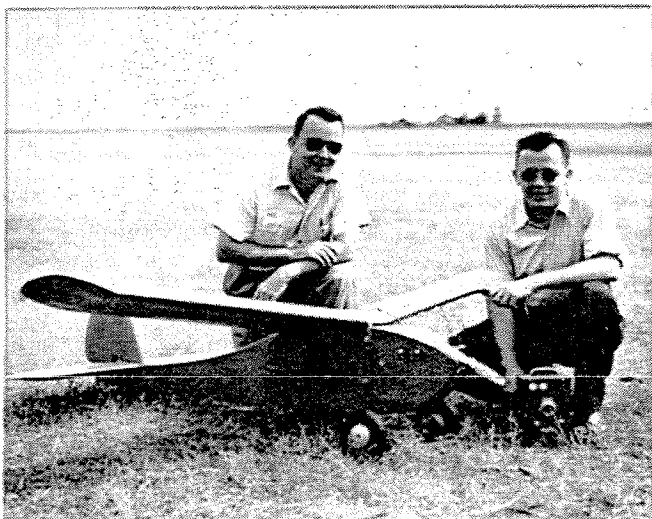
Jack Cook, Chicago, Ill.

**RAY ARDEN HANDED OUT SAMPLES OF HIS NEW GLOW PLUG AND CHANGED MODELING FOREVER! \*SPECIALLY SPEED AT '47 NATS.**

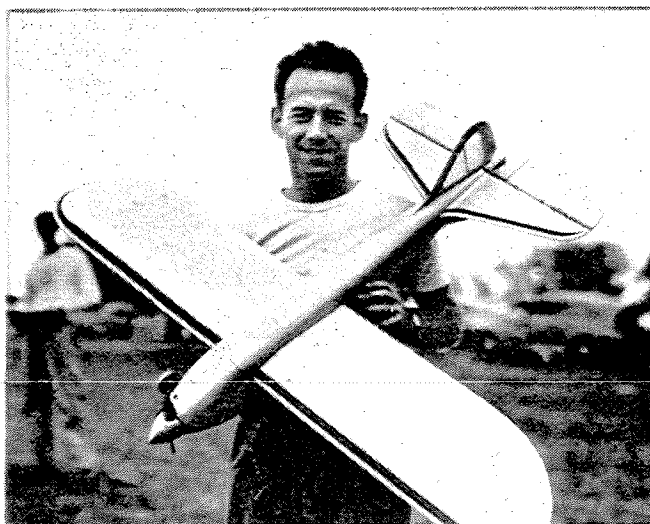




● No Nationals would be complete without Charlie Siegfried (at the control) and his beautiful Forster "99"-powered radio-control entry.

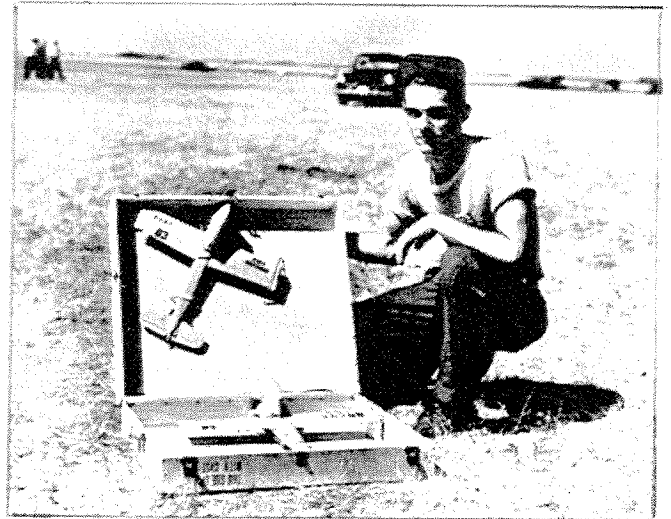


● Perennial winners, Walt and Jim Good, and their Ohlsson "60"-powered Guff. This same ship won Radio-Control event in 1939, 1940, and 1947.

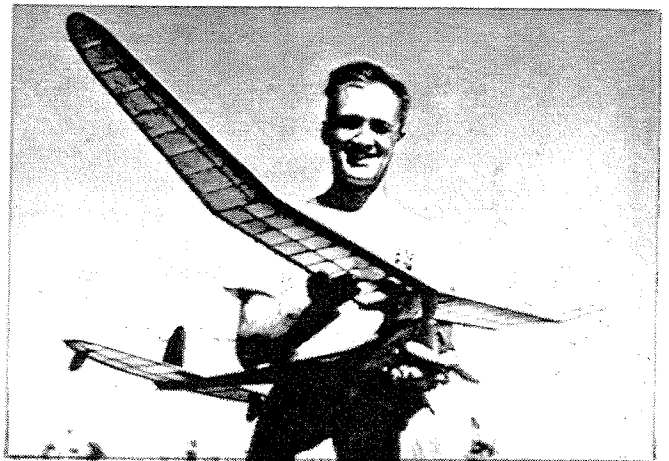


● Johnny Clemens and his irresistible smile from deep in the heart of Texas. Johnny put on a swell show with his beautiful stunt job.





● Keith Storey, a consistent winner at all control-line contests, opens his Pandora box of McCoy-powered speed ships.



● Here is a really high aspect ratio job by Carl Goldberg. This pylon job incorporates many of the Goldberg features.



● Tex Russel modified his Vampire (Air Trails—May, 1947) and placed high in the open control-line speed events.



● An old-timer becomes a newcomer in Radio Control, Chester Lanzo and his Ohlsson "60"-powered radio control entry.



## Announcing SWEEPING

# PERMANENT PRICE REDUCTIONS ON OHLSSON & RICE ENGINES

EVER since the beginning it has been the ambition of Ohlsson & Rice to produce a quality engine for each class of model flying at prices every model builder could afford.

Up to the present, Ohlsson & Rice prices have remained substantially unchanged through the years. To reduce quality in the slightest degree would have been detrimental to the best interests of the model sport. Our price structure was therefore maintained to permit highest quality, while developing the special automatic machines that would still further improve quality and rate of production.

During this period of more than ten years, Ohlsson & Rice has grown to be the largest factor in the model engine industry. Year after year, we have added special high speed automatic equipment, much of it developed in our own shop,

and much of it not duplicated in any other plant.

Now—at last—we are able to give back to gas modelers—at important savings—the finest miniature gasoline engines ever produce.

The new low prices shown on this page are not a price "cut," or a clearing out of unwanted merchandise. They are the new permanent price structure for the Ohlsson & Rice 19, 23, and 60 Special—the "standard of the model world" engines that have sold for years at much higher prices.

Your dealer has all three engines at the new low prices now. Here is the opportunity for all those modelers who have been waiting for lower prices to get the reliable power plants they have long wanted—at prices every model builder can afford.

If your dealer cannot supply you, or ders may be sent direct to the factory.

**O & R 19 formerly \$14.50 \$9.95**  
**O & R 23 formerly \$16.50 \$9.95**  
**O & R 60 SPECIAL formerly \$18.50 \$11.95**

**OHLSSON & RICE, Inc.**

*Standard of the Model World*

EMERY AT GRANDE VISTA • LOS ANGELES 23, CALIFORNIA

Ohlsson & Rice's price drops had been rumored at the Nats .... now advertised in August with most dealers holding inventory at the old prices. .... This began the slide into oblivion of other engine manufacturers who couldn't compete.

MID - LATE 1947

# MORE SPEED

## BETTER CONTROL AND MANEUVERABILITY

### NEW RECORDS

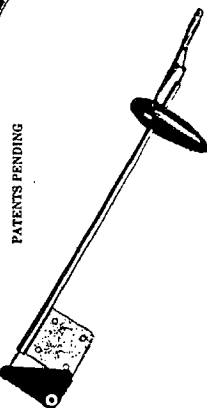
#### Now Made Possible By The Sensational New CONTROL-IT AND THUM-IT



**Twisted Control Lines Fly As One Cuts Line Drag 25% Increases Speed 10-15%**

The New CONTROL-IT and THUM-IT. Because of Their Unique Side by Side Control Line Arrangement, permit you to twist your control lines from 4 to 8 turns and fly them as one line. Actually Cut Line Drag by 25% and increase speed 10-15%. Your Model From 10% to 15%. Control of the model is greatly improved and more of the engine's power is available for aerobatic maneuvers. Install a CONTROL-IT in your present control line model or design your new job around a CONTROL-IT. Then, with the aid of a THUM-IT, Thumb Control Handle, you are set for new records in Speed or Aerobatic Flying.

PATENTS PENDING



**CONTROL-IT**

A Completely Finished, Ready To Install, Elevator Control Unit for your Control Line Model. Precision Built for Precision Flying. Responds to the slightest touch of your thumb. It's simple, precise and foolproof. The unit is made of stainless steel and is fitted with stainless steel aircraft control cable. It's up in mid-wing low-wing or high-wing models, clockwise or counter-clockwise. Complete With Elevator Control Horn, Push-pull Rods and Mounting Hardware. Only \$1.95



**THUM-IT**

100% Finger Tip Control. You'll Like The Way Your Model Responds to the Slightest Touch of Your Thumb. It's simple, precise and foolproof. The unit is made of stainless steel and is fitted with stainless steel aircraft control cable. It's up in mid-wing low-wing or high-wing models, clockwise or counter-clockwise. Complete With Safety Strap. Only \$1.95

PATENTS PENDING



**SHADK G-3**  
ENGINE CLASS BAC WING SPAN 30"  
A Sensational New Control Line Model. Designed for the new Control-IT and Thum-IT. Construction features complete function of the model. Includes a prop spinner, cut to outline shape, cowling, fin, rudder, stabilizer, elevator, printed out fuselage sides, etc. Kit Complete - cost \$3.95



**SHADKADEI**  
ENGINE CLASS BAC WING SPAN 30"  
A Beautiful Twin Engine Control Line Trainer designed for the new Control-IT and Thum-IT. The Construction features complete function of the model. Includes a prop spinner, cut to outline shape, cowling, fin, rudder, stabilizer, elevator, printed out fuselage sides, etc. Kit Complete - cost \$3.95

DESCRIPTIVE LITERATURE UPON REQUEST

**VICTOR STANZEL & COMPANY**

*Specialists in Control Line Flying*

SCHULENBURG, TEXAS

DEALERS  
This New Merchandise is now available at all leading Distributors. Send in your order today.

GET THEM AT YOUR DEALER  
If your dealer cannot supply you, do not accept substitutes. Write direct to the factory.

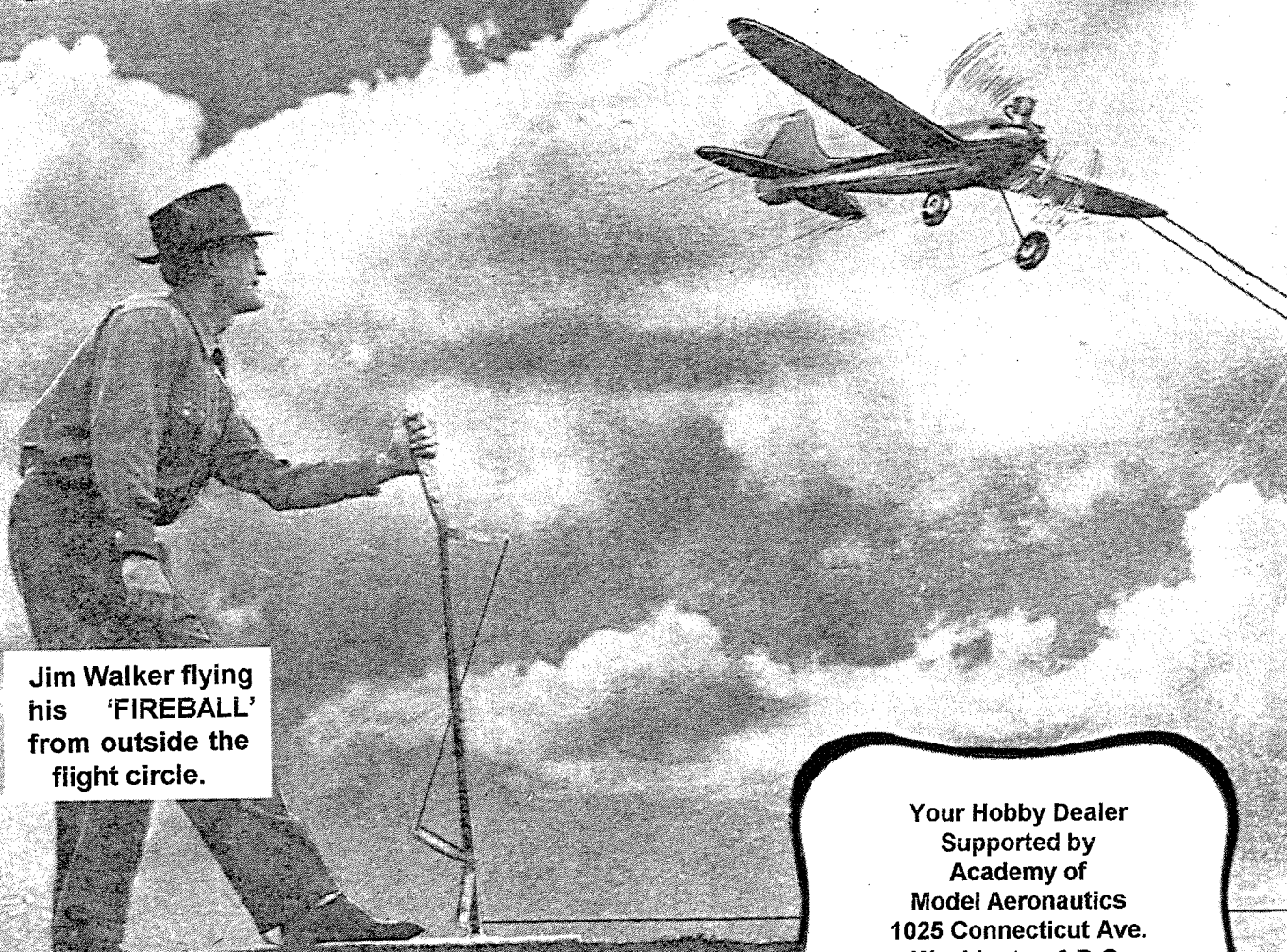
This Ad introduced the latest Stanzel controls which later developed into the Monoline Systems used by virtually all Speed U-Control fliers in later years.



Complete  
CATALOG-MANUAL  
of all the leading  
CONTROL LINE KITS

# CONTROLOG

plus HISTORY of  
U-CONTROL, FLYING  
INSTRUCTIONS,  
and other valuable  
data of interest and  
help to the control  
line flyer.



Jim Walker flying  
his 'FIREBALL'  
from outside the  
flight circle.

Your Hobby Dealer  
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1947

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## U-CONTROL HISTORY AND HINTS

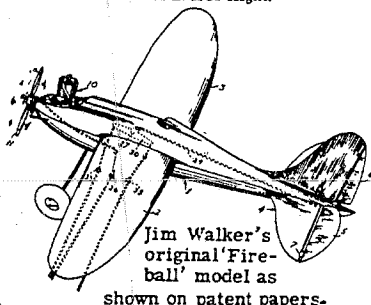
*By Jim Walker*



It is with a deep sense of appreciation for what he has done for the model airplane builder and flyer that this Controlog, the first collection of its type presenting all kinds of control line model airplanes, is respectfully dedicated to Nevilles E. (Jim) Walker, president of the American Junior Aircraft Company.

Jim Walker has never stopped being a model builder; his every thought and act is calculated to bring fun and education to the world's aeromodelers. Although he heads one of America's oldest and largest model aero manufacturing concerns, Jim is always ready to drop the role of businessman and get out with a gang of model builders to put on demonstration flights.

His contributions to the hobby-sport include more than just the invention and development of U-control flying. He excels in radio control work and won the national championships in 1941 and 1946. He is currently experimenting with sonic control and hopes to develop inexpensive sound control systems so every modeler can control a model in free flight.



Jim Walker's original 'Fireball' model as shown on patent papers.

The beginning of U-Control dates back to the 1920's when I demonstrated rubber powered models in department stores. Due to restriction against free flight indoors, I developed a tether flight that successfully demonstrated the take-off and climbing ability of the model by attaching a line to the wing in the correct position to assure lateral and longitudinal stability.

The other end of the line was attached to a small ring that encircled a metal rod eight feet high. The plane was released from the floor and after take-off would climb in circles until the ring was at the top of the rod where the plane would fly until the power was exhausted. By varying the fore and aft point of attachment to the wing, a slow or fast climb could be obtained at will.

With the advent of gasoline powered flight, I experimented with many types of control and became convinced that the average modeler would like to fly his model from the ground in a limited area. Also the fun of running the motor continuously would have a very strong appeal. Many systems of control were developed and tested. Some used a single line; others as many as five lines.

In addition, experiments were made towards automatic stability in all directions. This included variable rudder and ailerons, the setting of which was determined by line tension. Also, neutralizing elevator control was perfected and abandoned since its disadvantages far outweighed its advantages. For instance, in long distance flying the necessary force to overcome neutralizing springs could not be obtained because of bow in control lines. Also at the top of loops when lines were liable to become slack, neutral was not desirable since it would result in vertical dive into the ground. All these experimental arrangements were finally resolved into the well known U-Control method now used almost universally. The soundness of design is proven by the fact that no major improvement has been demonstrated yet.

After designing and producing a U-Control model, however, it still seemed almost hopeless to convince the average modeler that U-Control was really a lot of fun and was bound to develop into a major sport. I made many trips to all parts of the country demonstrating U-Control, and for quite some time was derided for my belief that flying planes on a wire would appeal to the model airplane fan. The great popularity of U-Control now, however, completely vindicates this belief.

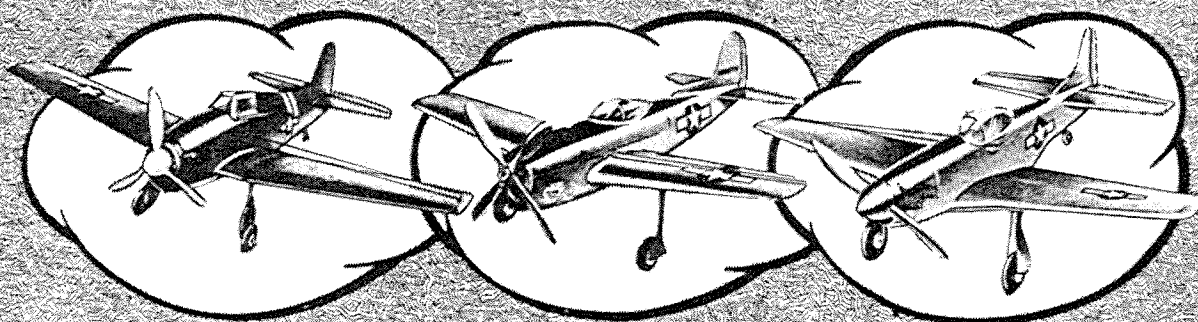
Here are a few suggestions that would be helpful to the average U-Control flyer. Now that the performance and popularity of U-Control are assured, we must concentrate on safety. We all lose if careless flying results in accidents that in turn cause a ban on flying. The following hints will minimize this danger and save you many crack-ups.

1. Before flight, check all lines and fittings for wear or kinks.
2. Always give speed models at least 20G pull test before each flight; 10G pull test for other models.
3. Wipe grease or oil from flying hand before take-off to prevent loss of control.
4. Immediately after take-off, move quickly away from any spectators.
5. Never dive towards spectators. Always fly plane high as it comes near any bystanders. If they crowd close, cease flying until they are at least 75 feet from edge of flying circle.
6. To prevent slack lines and loss of control always climb downwind and dive against the wind. Practice this constantly since it should be done automatically whether or not it seems necessary.

The Hobby Dealer Service Bureau assumes no responsibility for data or prices found in this catalog. All available information has been checked carefully, but changes may be made without notice.



## SOME NIFTY CLASS "A" SPEEDSTERS AND LARGE FLYING SCALERS



### HELLCAT F6F4

Wingspan: 40 inches Length: 26½ inches

The most remarkable of all Navy fighters scaled 1 in. to 1 ft. This model lives up to its big brother in both flyability and appearance. A fast maneuverable ship.

~~\$4.95~~

**NOW \$3.50**

### P-47 THUNDERBOLT

Wingspan: 40 inches Length: 29 inches

Authentic scale model of the famous "Battle ship of the Air." This beautiful replica is scaled 1 inch to 1 foot. Kit is complete in every detail plus clear Photo-Viz drawings.

~~\$4.95~~

**NOW \$3.50**

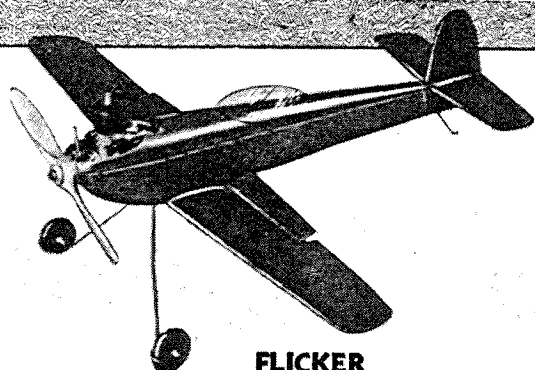
### P-51 MUSTANG

Wingspan: 31 inches Length: 25 inches

A true scale replica of the famous escort fighter, designed to approx. 1 in. to 1 ft. scale. Kit is complete in every respect with the exception of the power plant.

~~\$4.95~~

**NOW \$3.50**

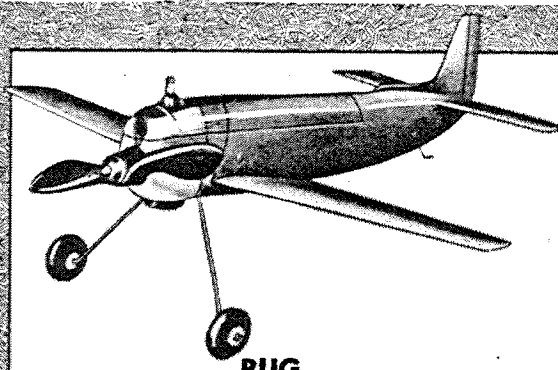


### FLICKER

Wingspan: 24 inches Length: 19 1/2 inches

A low priced kit with all the features found in the more expensive model. Just the ship for the beginner, a high performing stunt ship for the expert. Features Louis Garami's flap control.

**\$3.95**

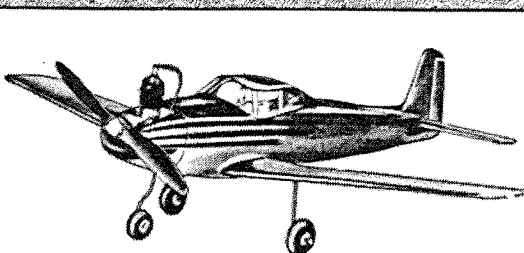


### BUG

Wingspan: 17 1/2 inches Length: 17 inches

Features one line Autotrol. Flashes through the air like a lightning bug. Easy to build and fun to fly. Pre-formed all balsa laminar flow type wing, formed landing gear, streamlined rubber wheels.

**\$2.95**

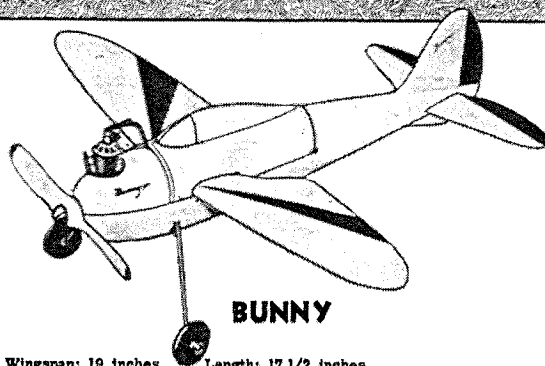


### NAVION

Wingspan: 25 1/4 inches Length: 21 1/2 inches

Features the single line "Autotrol". One of the most beautiful and realistic models to build and fly. Incorporates a removable engine track for accessibility to the entire power unit.

**\$3.95**



### BUNNY

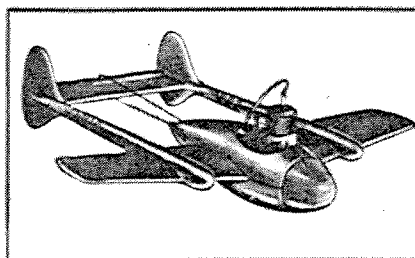
Wingspan: 19 inches Length: 17 1/2 inches

Revolutionary new idea in kits. You purchase full size plans, printed balsa sheets and fire-wall - make up the remaining bill of materials from supplies already on hand. Big 35 X 45 plan.

**\$1.25**



## SPEED JOBS, BIPLANES, SCALE — A THRILL A MINUTE WITH EVERY ONE!

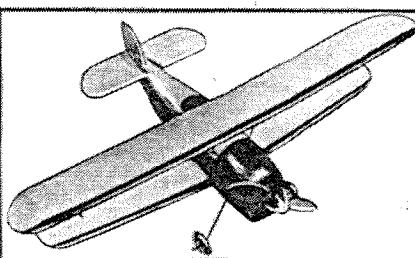


### DREAMER

Wingspan: 19 inches Length: 19 inches

This completely new and different model offers a new thrill to every enthusiast from beginner to the experienced builder and flyer. Designed for speed and precision flying thru use of the "Flight Controller!"

NOW \$4.50 ~~\$7.50~~

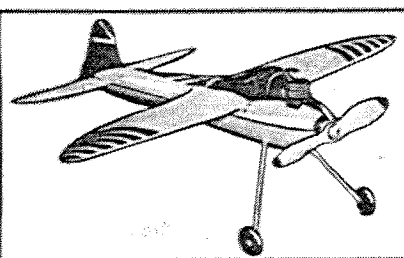


### SNUFFY

Wingspan: 30 inches Length: 24 inches

For the beginner who has built a rubber band model, this is one gas model that he can build and fly with ease. A maximum of quality with a minimum of cost.

\$3.95

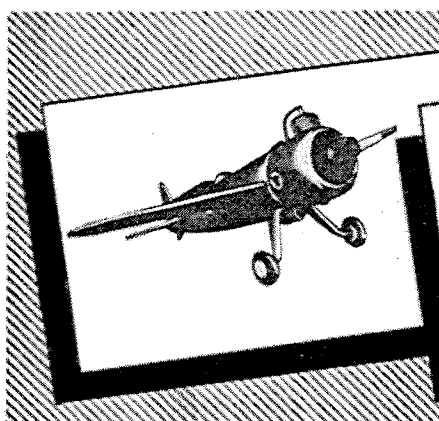


### AERO PUPPET

Wingspan: 24 inches Length: 21 inches

The only kit with plans for 4 U-Control flyers. Basic trainer - Advanced trainer - Stunt plane - Speed ship. Featuring Redi-Carved and Redi-Hollowed fuselage, all necessary hardware make this a remarkably complete kit.

\$5.95

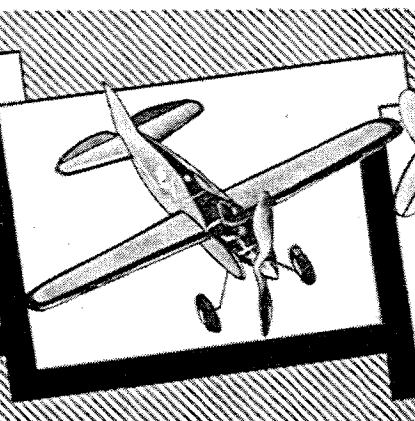


### LAIRD RACER

Wingspan: 18 inches Length: 16 inches

Roscoe Turner's famous "Meteor" Laird Racer - one of America's most famous entries in the National Air Races - in an exact scale complete kit containing everything necessary to build a super-detailed, super flying model.

\$1.95

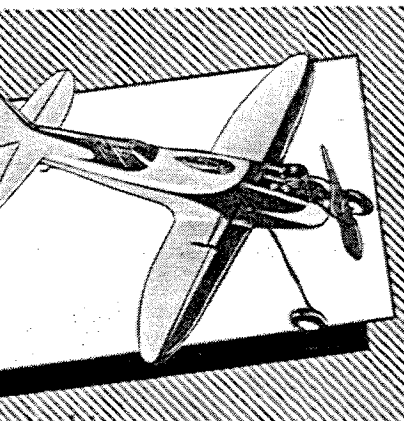


### STRATO KITTIN

Wingspan: 24 inches Length: 21 inches

An economically priced model that can perform with the best in its class. A fast little ship that will get the most out of any A or B engine.

\$2.95

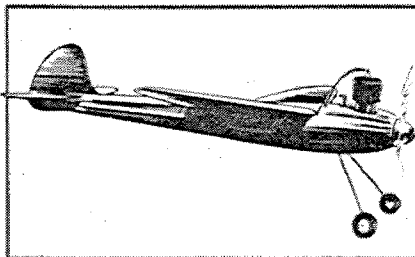


### BABY "V" SHARK

Wingspan: 20 inches Length: 20 1/2 inches

Features the simple improved Roller Control Device. Its simple design, durable construction and unusual flying stability makes it ideal for the beginner in control-line flying.

\$2.95

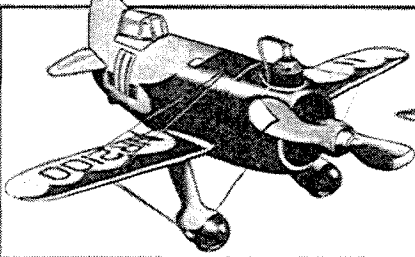


### TETHER SHARPIE

Wingspan: 18 inches Length: 21 inches

A little "Flying Fool" that will turn in a flashing performance with any class motor. This neat little streamlined job is of the most simple construction practical to use in control line models.

\$2.00

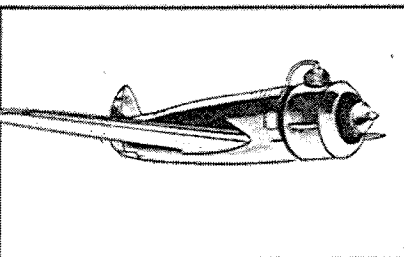


### GEE-BEE RACER

Wingspan: 15 inches Length: 10 inches

Smallest scale flying control model ever produced. Designed for speed flying, featuring the exclusive slide controller. A challenge to speed flyers in an easy-to-assemble kit. Easy to follow step-by-step plans included in every kit.

\$2.95



### TIME FLIES

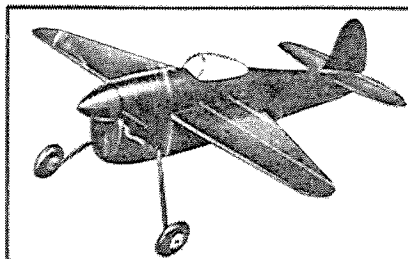
Wingspan: 22 inches Length: 17 1/2 inches

Frank Hawks' fastest ship and the one which set coast to coast and inter-city speed records. Admirably suited to detailed scale control line flying. Kit is complete with all hardware accessories and features "Slide-Controller" Mechanism for easy operation.

\$1.95



## CLASS "B" JOBS ADAPTABLE TO LARGE "A" AND SMALL "C" ENGINES

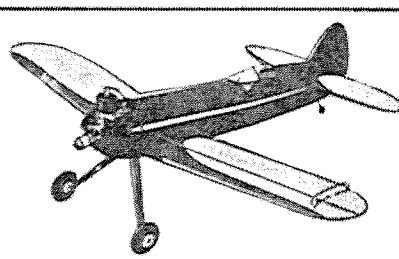


**ATOMIC**

Wingspan: 14 1/2 inches  
Length: 17 inches

**\$3.50**

Designed by National Champion Leon Shulman, plus Scientifics sound engineering gives the Atomic unparalleled rocket like speed. A complete kit incl. rubber wheels.

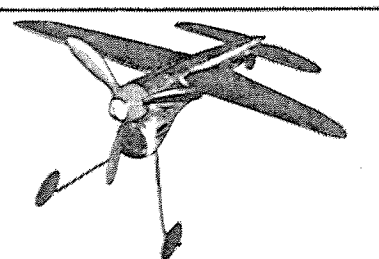


**CYCLONE**

Wingspan: 36 inches  
Length: 28 1/2 inches

**\$4.95**

Real plane appearance. A U-Control model that is actually so easy to build that even a beginner will experience little or no difficulty. A thriller in stunt flying.

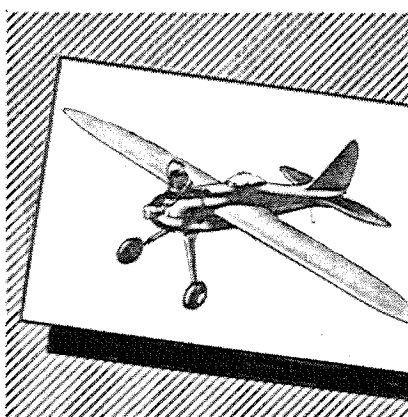


**TOPPING "100"**

Wingspan: 20 inches  
Length: 21 inches

**\$10.00**

Prefabricated aluminum control-line plane. A real job in prefabrication with one piece finished sections. Easy for anyone to assemble. Two screws secure the whole fuselage assembly.

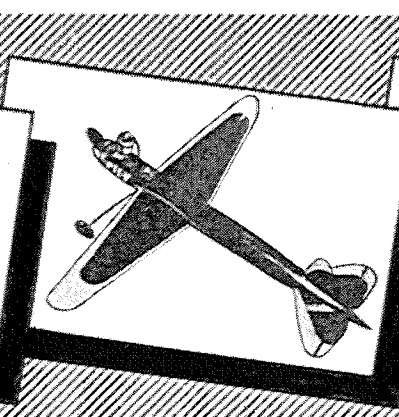


**FIREBALL**

Wingspan: 36 inches  
Length: 24 1/2 inches

**\$7.95**

A prize winning model designed by Jim Walker. Complete kit including a completely carved balsa fuselage. Designed for easy access to motor and batteries. Wings of sheet balsa over high speed ribs. All fittings including wire and plastic canopy.

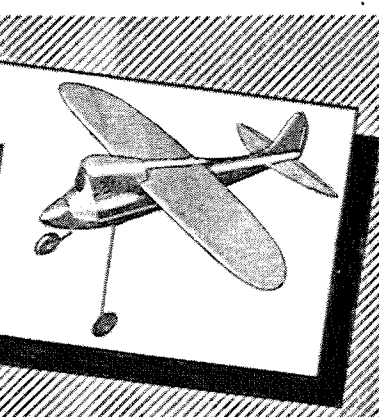


**BUZZ**

Wingspan: 30 inches  
Length: 31 inches

**\$8.95**

The Buzz has been a consistent contest winner with speeds well over 100 mph. The kit comes complete with ready turned balsa fuselage completely hollowed-out. Ready cut tail surfaces, Laminar style speed wing.

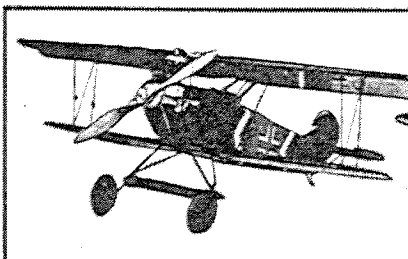


**DURALYTE**

Wingspan: 26 inches  
Length: 20 inches

**\$14.95**

A completely fabricated plastic flying model. A model plane that can be assembled, less motor installation, in less than 15 minutes. Finished wing; fuselage in two complete halves ready for assembly.

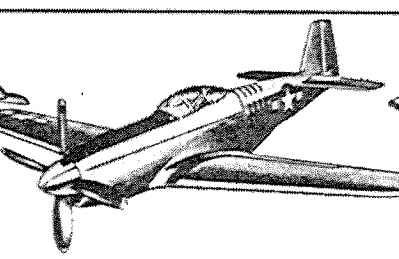


**FOKKER D-7**

Wingspan: 30 inches  
Length: 22 1/2 inches

**\$7.50**

A fine flying version of the famous World War I fighter. Complete kit includes finest selected balsa, steel landing gear, sponge rubber wheels, authentic plans, die-cut airfoil sections, bell crank and numerous other features.

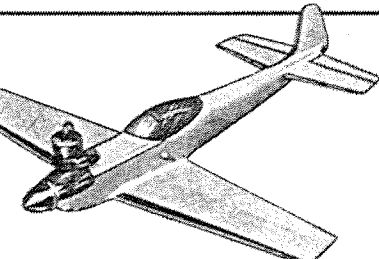


**P-51 MUSTANG**

Wingspan: 37 inches  
Length: 32 inches

**\$7.95**

For precision flying, with Three-line Autotrol. The first and last word in controlled gas models. You operate trim tabs, landing gear, throttle and flaps while in flight. Automatic elevator, rudder and flap operation-laminar flow wing without interference from control lines.



**ZING!**

Wingspan: 24 inches  
Length: 21 inches

**\$4.95**

Carl Goldberg's latest and most sensational model. It has the looks, the speed, the snap that holds a gallery breathless. Ingenious one-piece balsa fuselage completed shaped and hollowed. Wings fully shaped and sanded to high-speed airfoil section.



TRY THESE SHIPS WITH YOUR CLASS "B" ENGINE

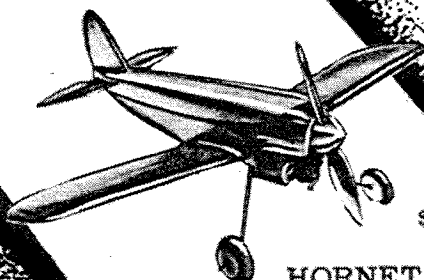


\$7.50

### SKYCYCLE

Wingspan: 30 inches Length: 23 inches

An exact scale replica, complete in every detail even to Piper decals includes die-cut plywood parts, plastic canopy, hardware, control wire & rubber wheels.



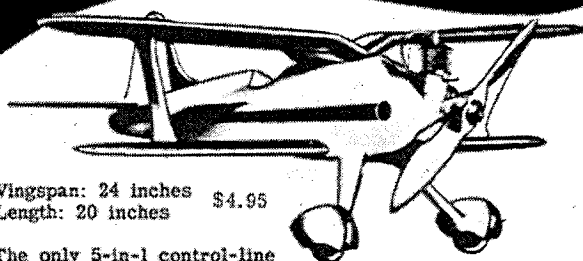
\$7.50

### HORNET

Wingspan: 23 1/2 inches Length: 22 inches

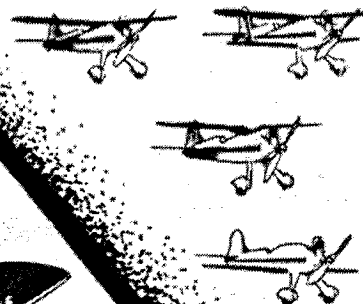
A snappy little ship, sturdily built to stand up under the strain of speed flying and intricate flight patterns. Simple to build with all parts semi-finished

## MITE-BEE

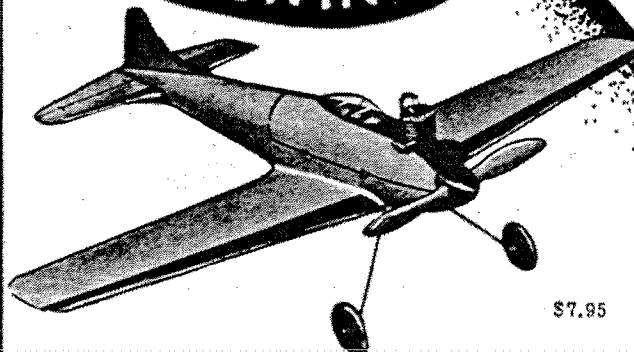


Wingspan: 24 inches \$4.95  
Length: 20 inches

The only 5-in-1 control-line kit. A high performance, eye appealing design to suit every taste for speed, stunt, or just plain ordinary Sunday afternoon flying. Also uses class A and small C engines. Choice of five proven versions: low wing speedster, gull wing stunt biplane, straight hi-wing racing monoplane, straight wing biplane, gull wing sport monoplane. Expertly engineered 3 dimensional plan features all 5 designs with photos and construction aids.



## WHIRLWIND

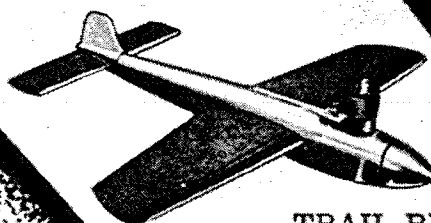


\$7.95

Wingspan: 30 inches

Length: 24 inches

Plenty of flying thrills with the Whirlwind. Engineered to give everything wanted in a magnificent control line flyer. Completely finished balsa body, wings shaped to airfoil section. Plastic canopy and spinner, landing gear bent to shape and wheels plus many other features.

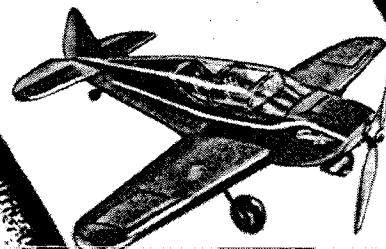


### TRAIL BLAZER

Wingspan: 24 inches Length: 22 inches

A grand job for speed, stunt or sport flying. Also performs well with Class A and C motors. Formed aluminum removable fuselage top, "backbone" plywood framing.

\$2.95



### SWIFT

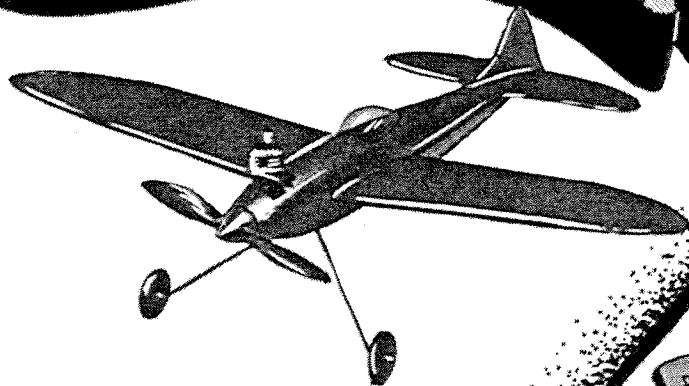
Wingspan: 34 inches Length: 25 inches  
A miniature version of the very popular sport plane designed with plenty of eye appeal and stressed for all around performance.

\$7.50



# SCALE, SPEED AND STUNT JOBS — TAKE YOUR PICK

## WHIZZER



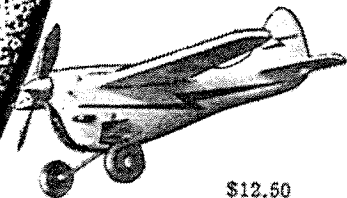
Wingspan: 30 inches

Length: 24 inches

A beautifully streamlined model designed by Carl Goldberg and featuring Louis Garami's Flap Control. Wherever it has been flown, it has been acclaimed for its outstanding performance. Responds quickly and smoothly to the controls; easily flown by beginners, yet has the performance to satisfy the expert. Deluxe kit includes semi-finished wings and fuselage all necessary hardware, formed plastic bubble and simplified step by step instruction booklet.

Standard Kit, \$7.50

De Luxe Kit, \$9.95



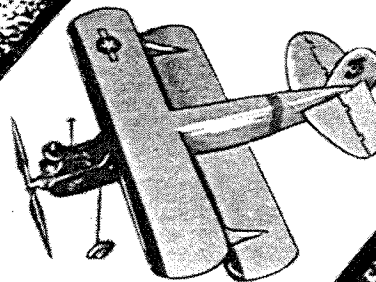
\$12.50

## DURA-PLANE

Wingspan: 25 inches

Length 20 inches

Completely fabricated plastic model. Can be assembled with screwdriver in less than 15 minutes. Metal motor mount, complete landing gear with wheels. Batteries, accessories and motor mount on quickly removed bracket.



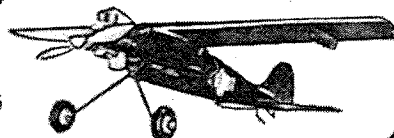
\$3.95

## BIPE

Wingspan: 22 1/2 inches

Length: 26 inches

The BiPe acclaimed by model builders as the finest stunt trainer ever developed. As a trainer it will fly by itself, as a stunt ship it is spectacular.



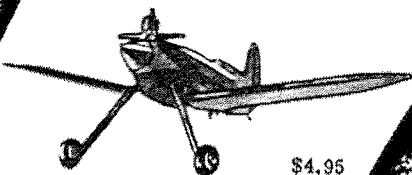
\$3.95

## STRATO TRAINER

Wingspan: 35 inches

Length: 26 inches

A model for beginners. Designed especially for testing and experimenting. All balsa construction makes it possible for you to build it in one evening.



\$4.95

## TIGER SHARK

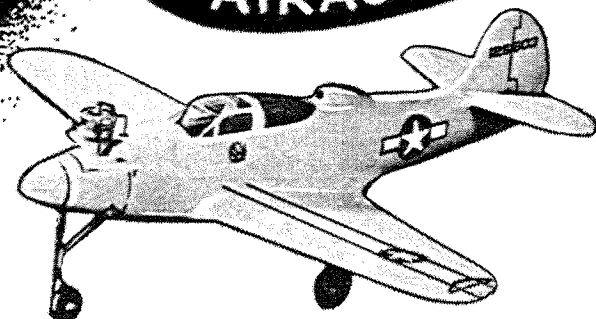
Wingspan: 26 inches

Length: 31 1/2 inches

A beautifully streamlined popular old favorite in a specially designed single line G-Liner. Simple, easy to construct and fly.

## P-39

## AIRACOBRA



Wingspan: 29 1/2 inches

Length: 26 inches

Tough — Durable — Resilient Perfectly formed detail fillets, aircoop, and spinner, all ingeniously molded as integral part of fuselage.

NO TEDIOUS RIB CONSTRUCTION

Landing gears, wheels, hardware and formed transparent canopy included.

Standard Kit, \$8.75

De Luxe Kit, \$12.50



## A ROUND-UP OF BEAUTIES — ALL EXCELLENT FLYERS

### WILDCAT

Wingspan: 32 inches

Navy's FM-1 "Super Wildcat" in a true scale stunt version on 7/8 inch to 1 ft. scale. Formed plastic cowl and canopy. All necessary parts including wheels. \$6.95

### CASALAIRE

Wingspan: 45 inches Length: 30 inches

An aluminum control line model amazingly easy to assemble. All metal sections are pre-formed to precision tolerances by big plane engineers \$18.50

### SUPER STRATO-CAT

Wingspan: 24, 30 or 35 inches

Only triple purpose control liner in the model field. Furnished so you may build choice of 3 wings. Holds the unofficial world's record of 144.6 mph \$5.95

### TARPON

Wingspan: 24 inches Length: 22½ inches

Gives you everything in control line flying—speed, stability, maneuverability. A tailor made design needing no carving, no hollowing. Two piece fuselage needs sanding only. \$10.75

### AIR CAR

Wingspan: 35 inches Length: 26 inches

A different controllable model. True to scale. Tricycle landing gear for safe easy take offs. Pre-formed shock absorbing springs for smoother landings. \$7.95

### WHIPPET

Wingspan: 20½ inches Length: 18 inches

Shaped, hollowed 2-piece balsa fuselage. Solid balsa shaped wing and tail assembly. Rubber wheels, plywood motor mount. \$3.95 With unique new 'Pilot Control' system.

### ERCOUPE

Wingspan: 45 inches

Deluxe kit, also for C motors. Quick, easy construction employing die-cut 3-ply bulkheads on a keel. One of the series of famous 'Hollywood' models. \$12.50

### CADET

Wingspan: 33 inches Length: 24 inches

A champion sport and stunt plane designed by Frank Greene. The Cadet is engineered to get the utmost performance from \$5.45 small motors of 19 to .35 displ

### STREAMLINER

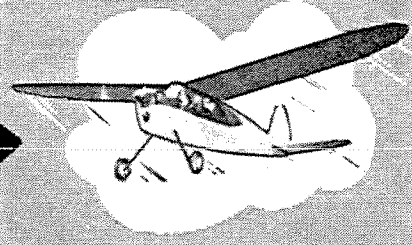
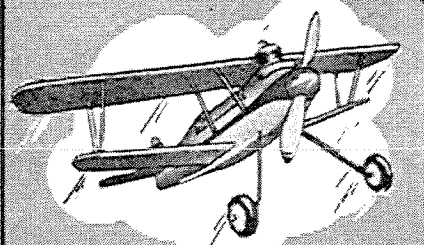
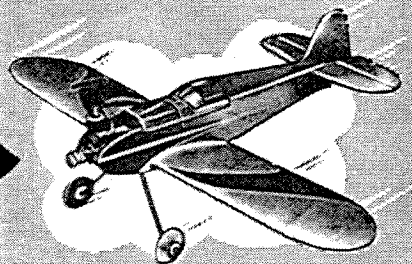
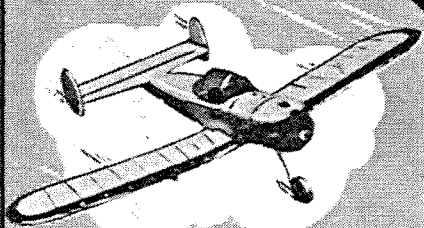
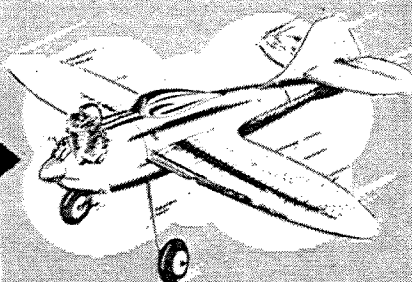
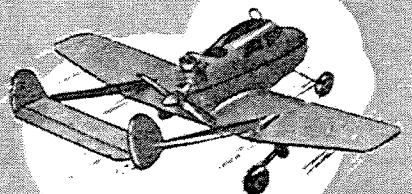
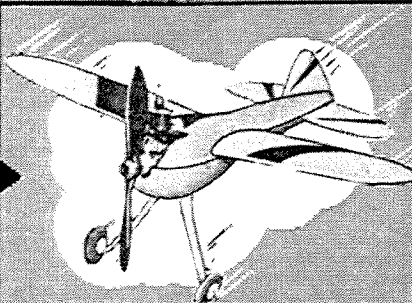
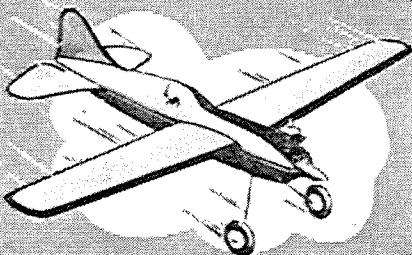
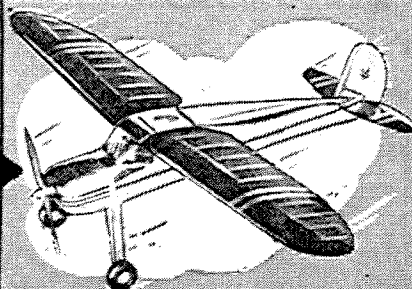
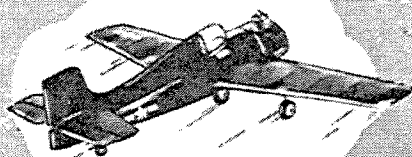
Wingspan: 28 or 31 inches

Builds either a Monoplane or Biplane. Low wing for maximum speed or Biplane for stability and stunting. Complete kit builds either version \$4.95

### GOOD NEWS

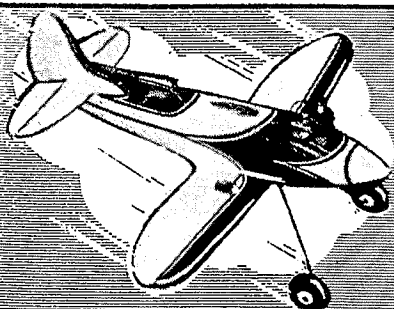
Wingspan: 50 inches

A real beauty and top notch flyer. Fine transition model, can also be flown free flight. Complete kit includes rubber wheels. \$3.95 A top notch value.





YOU CAN'T GO WRONG WITH THESE — EVERYONE A WINNER!



### SUPER 'V' SHARK

Wingspan: 24 inches Length: 24 1/2 inches

Incorporates the latest, improved Roller-Control Device. Beautifully streamlined and racy in appearance, it is especially adapted for stunt and speed. \$4.95

### AUTO GIRO

Rotor Blades: 26 inches Length: 27 inches

A true rotating wing aircraft, extremely easy to assemble from prefabricated parts. No more crash landings — descends gently to earth when engine cuts \$7.50

### F-8-F

Wingspan: 35 1/2 inches Length:

Features automatic rudder control with ground-operated U-Control elevators, making possible many new stunt aerobatics and flight patterns \$5.95

### FOKKER D-8

Wingspan: 34 inches Length: 25 inches

A beautiful scale model authentically designed to make it tops in any flying scale event. Easy to follow plans, plenty of finest quality balsa \$3.95

### BERLINER JOYCE

Wingspan: 36 inches Length: 29 inches

The finished model is a beauty and is certain to be the center of attraction on any flying field. Bent to shape gear, rubber wheels and plenty of balsa. \$4.95

### PDQ SENIOR

Wingspan: 24 inches Length: 22 inches

Features the crutch and block type of construction. A truly complete kit incl. rubber wheels, battery box, plastic bubble, control wire and hardware. \$7.50

PDQ JUNIOR.....\$5.00

### G-13

Wingspan: 30 inches Length: 25 inches

A model that looks and flies like the real thing. Extremely maneuverable. Features ready cut airfoils with many parts pre-cut to shape \$7.95

### CORSAIR F4U-4

Wingspan: 27 inches Length: 21 1/2 inches

This model duplicates the hard hitting Navy and Marine fighter at a scale of 2/3 in. equals one foot. The completed model is one of outstanding beauty. \$6.95

### NAVION

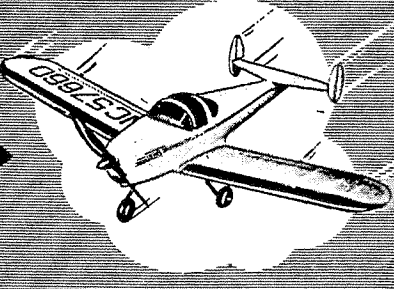
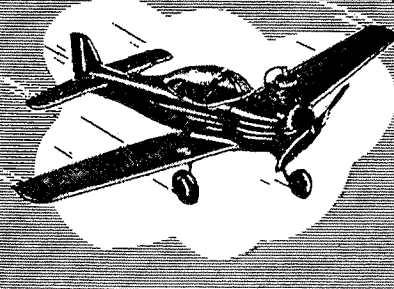
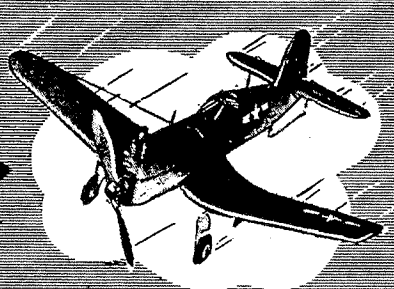
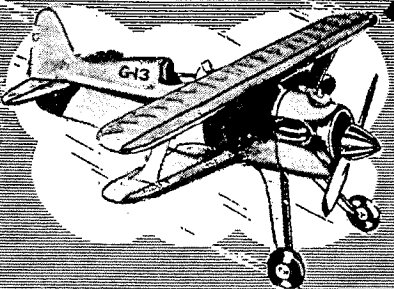
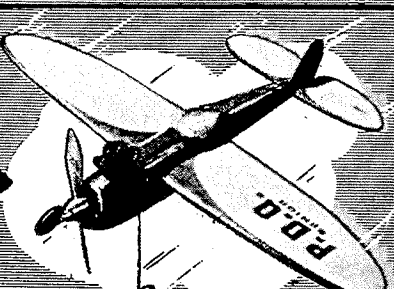
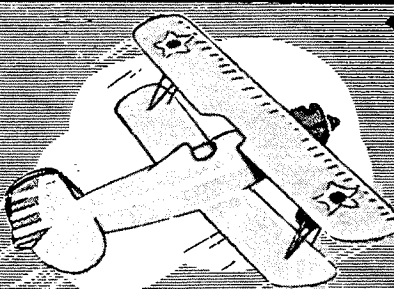
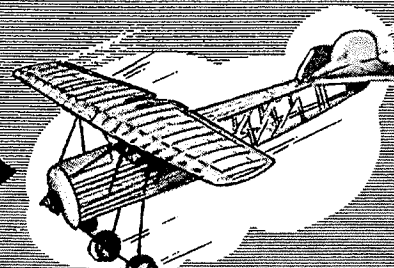
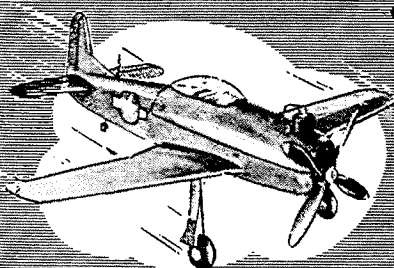
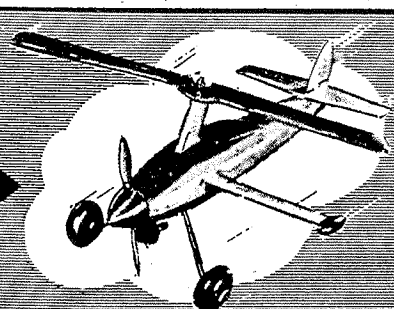
Wingspan: 32 inches Length: 27 inches

Actual scale flying control line model of one of America's smartest sport planes. Prefabrication of wing ribs and all other difficult parts. Plastic canopy \$5.95

### ERCOUPE

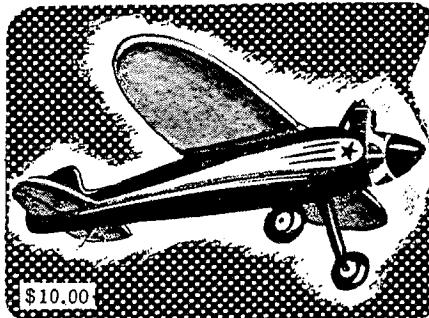
Wingspan: 40 inches Length: 27 inches

A true scale miniature of its full size prototype, retaining all the inherent stability qualities that earned it the title of "The Spin Proof Plane." \$7.50





## AN OUTSTANDING COLLECTION FOR VARIOUS SIZE ENGINES

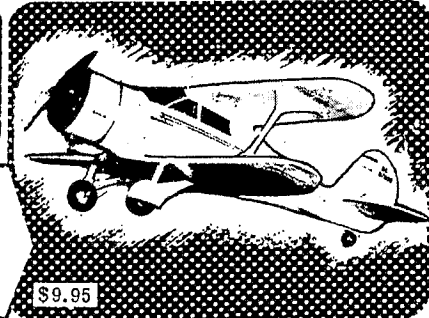


\$10.00

### STARDUST

Wingspan: 26 inches

Engineered for speed and stunt flying. Only 16 construction steps. 16-page booklet with every kit. Completely carved fuselage, shaped parts and formed wire fittings. Everything but engine.

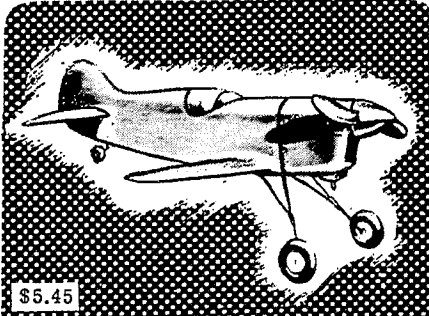


\$9.95

### BEECHCRAFT

Wingspan: 40 inches Length: 32½ inches

Acclaimed as the greatest model ever designed. Breathtaking in beauty and performance. With complete decals, die cut plywood, rubber wheels, formed gear, and de luxe extras

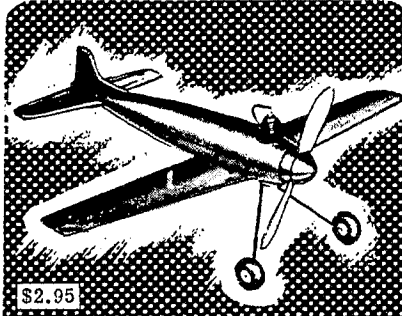


\$5.45

### SPEEDSTER

Wingspan: 25 inches Length: 22 1/2 inches

An aerodynamic honey. Built for Speed with a Capitol S The Speedster is easy to construct from complete super detailed plans.

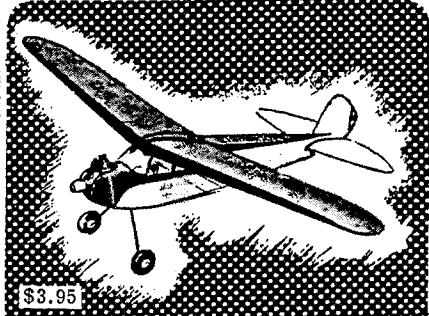


\$2.95

### JUNIOR WHIRLWIND

Wingspan: 19 inches Length: 17 inches

Designed for small gas engines and diesels up to .25 displacement. Wing panels completely finished to airfoil section, fuselage fully shaped both outside and in, formed gear, rubber wheels.

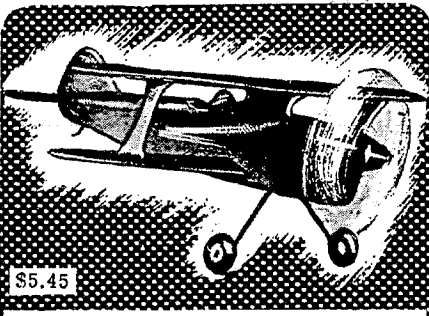


\$3.95

### MERCURY

Wingspan: 50 inches Length: 36 inches

Can be flown as a free flight or control line "goat." Good stunting possibilities. Rubber wheels, selected balsa, easy to read plans.

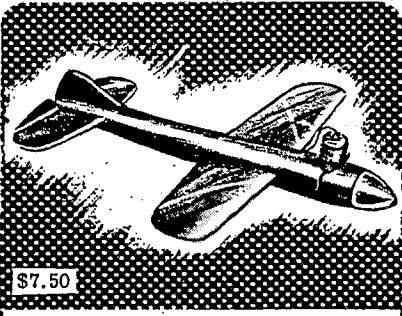


\$5.45

### DOODLE-BUG

Wingspan: 28 inches

This model can be changed from stunt to speed in three minutes. Easy to construct, a honey to fly as either a low wing monoplane or a sporty looking biplane that everyone has been asking for.

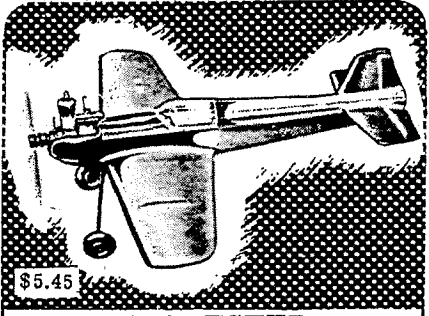


\$7.50

### SCAT

Wingspan: 26 inches Length: 23 inches

Scientifically developed streamlining on both cowl and fuselage. Kit contains ready-turned and hollowed-out fuselage. Ready-made balsa wing (air-foil cut) cowl and wing mount. Rubber wheels.

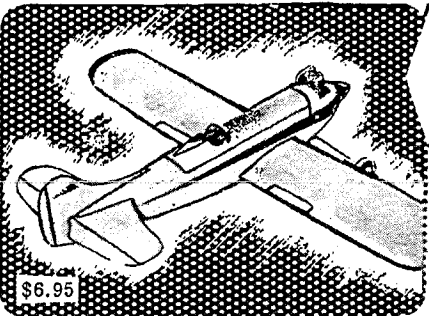


\$5.45

### SPORTSTER

Wingspan: 37 inches Length: 26 inches

Developed for top performance and rugged construction to resist crack-ups. Everything needed to build a complete ship including 100 ft. .012 control line.



\$6.95

### SMART ALECK

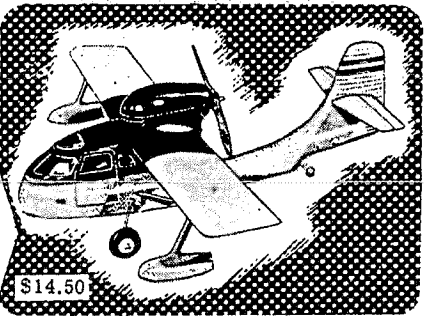
Wingspan: 45 inches

"The looping fool" is a model that is really fun to fly because she dives, loops and glides as easily for beginners as she does for old hands. Designed and stressed for stunt flying.

### SEABEE

Wingspan: 38 inches

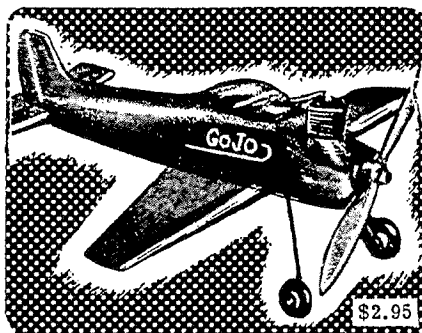
A beautifully scaled model that takes but a few hours to build. Fuselage and wings are made of pre-formed and pre-shaped Phenopex, a tough, durable plastic. Internal formers of aluminum.



\$14.50



## PLENTY OF SPEED AND STUNT POINTS WITH THESE MODELS



### GOJO

Wingspan: 14 1/2 inches Length: 16 inches

A snappy little beauty and a real flying partner for your class A engine. Kit is absolutely complete, and features the new shade-coded plans for easier, quicker, more simplified building.

\$2.95

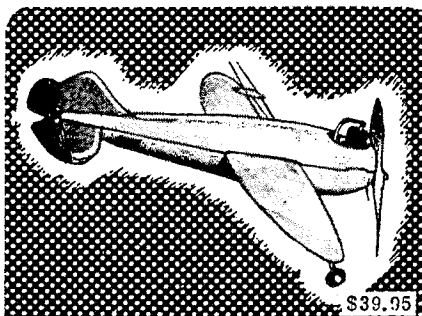


### CURTIS HAWK

Wingspan: 28 inches Length: 26 inches

Here is a scale model of a real plane that will really perform. You'll find this plane easy to build—a sturdy model in the air—handles with ease and it's a scale model of the Hawk P-6E.

\$8.95

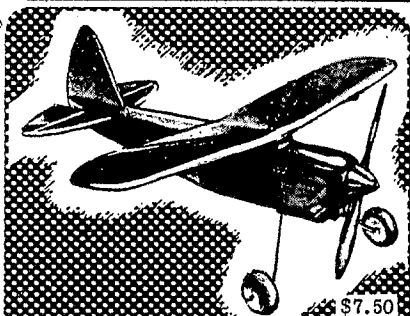


\$39.95

### Ready To Fly CHAMPION

Wingspan: 21 inches Length: 20 inches

Solid balsa construction throughout, equipped with an Ohlsson 23 engine, coil, condenser, plug - in lead, and switch, nothing to install, assemble or build. Complete and ready to fly.

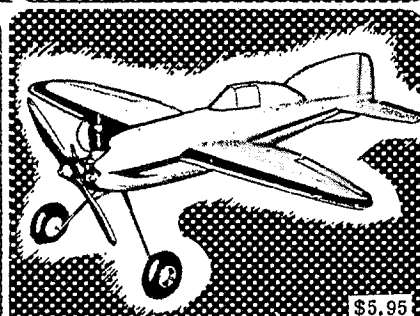


\$7.50

### WASP

Wingspan: 24 inches Length: 20 inches

Sleek, high wind ship designed along the lines of the famous Captain Page racer. Built up, slab-type balsa fuselage. Wheels, spinner, tail surfaces cut to shape.

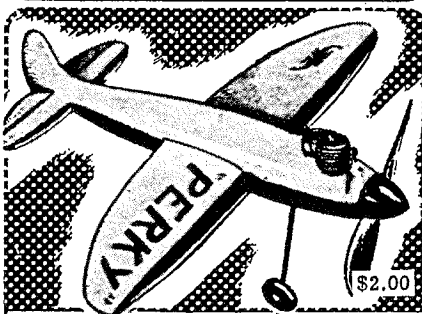


\$5.95

### LANCER

Wingspan: 22 1/2 inches Length: 18 inches

Designed for speed and stunt flying. For beginners or well established model builders. All parts accurately shaped and finished ready for final assembly. Features "Slide-Controller"

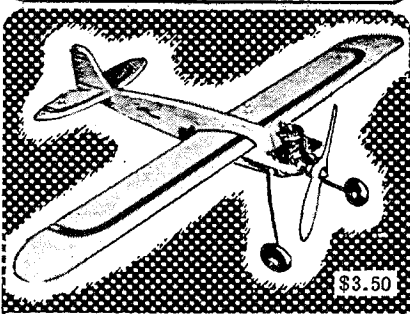


\$2.00

### "PERKY"

Wingspan: 18 inches Length: 18 1/2 inches

Super sturdy and speedy with a flying weight of 16 oz. Kit contains shaped leading edge, die cut plywood firewall and rudder. Printed sheets and sheet balsa covering, hardware and wheels.

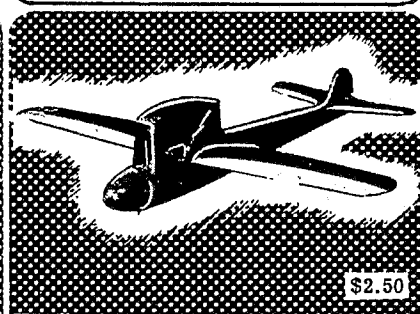


\$3.50

### ROOKIE TRAINER

Wingspan: 35 1/2 inches Length: 27 1/4 inches

Suitable for either the beginner who has not built any models before, or for an experienced builder. Shaped fuselage parts, wing, stabilizer, shaped and drilled motor mount, all hardware.

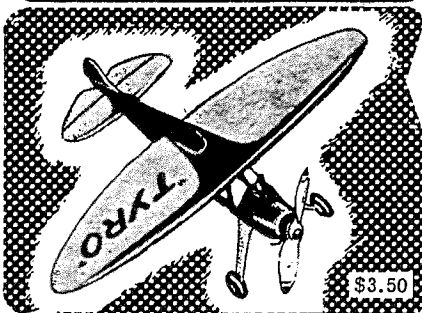


\$2.50

### WILDFIRE

Wingspan: 23 inches Length: 22 inches

Designed especially for contest competition. Shaped rudder and elevator, streamlined block for housing interior, die cut plywood, metal parts, nuts, bolts, hinges, control arm and horn.



\$3.50

### TYRO

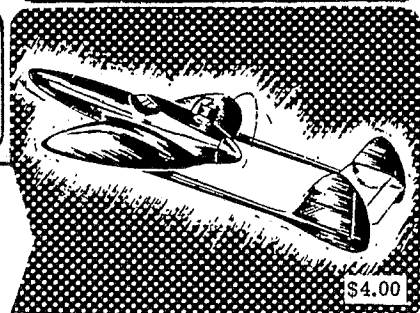
Wingspan: 26 inches

Designed for the gas model beginner. Takes any motor from .20 to .40 cu.in. displacement. Bare weight of model 16 oz. Kit is complete and incl. formed leading edge, die-cut formers.

### STREAMLINER

Wingspan: 25 inches

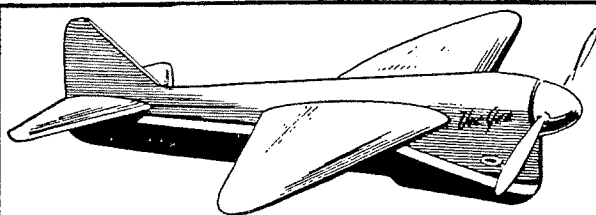
Easily converted to the conventional tractor type this model can be made to fit your own conception of a sleek, sturdy ship. All difficult to shape parts cut to outline—sheet balsa wing construction.



\$4.00



## PLENTY OF ZIP IN THESE SHIPS WITH CLASS "C" ENGINES



### VEE GEE

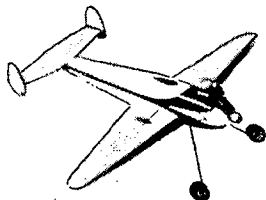
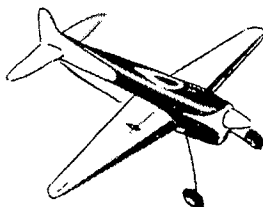
Wingspan: 15 1/2 inches Length: 22 inches \$10.00

Designed by Williams and Clark, America's line model champions. A strictly speed job and one that has been clocked at speeds in excess of 135 mph. A beautifully streamlined model surprisingly easy to build with many parts roughed out for easy finishing.

### SHARK G-5

Wingspan: 30 inches Length: 29-3/4 inches \$4.95

Flashy new super streamliner entirely different in design and construction. May be powered with either class B or C engine.



### SHARKADET

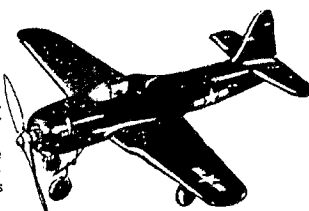
Wingspan: 30 inches Length: 27 inches \$3.95

Special new trainer for control line flying. Sleek all balsa covering, tapered wings and twin rudders, place it in a class all of its own.

### RYAN FR-1

Wingspan: 30 inches Length: 22 1/2 inches \$8.00

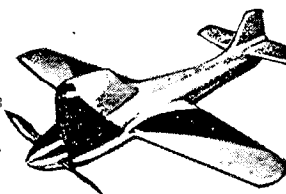
Perfect 3/4 inch scale replica of famous Navy jet & propeller powered "Fireball." Designed for precision flying, has same tricycle gear as prototype insuring safe, smooth take offs and landings.



### METEOR

Wingspan: 25 inches Length: 29 inches \$8.95

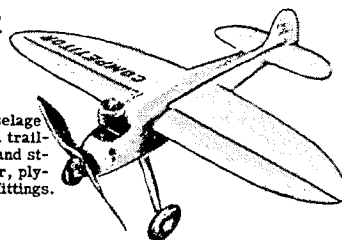
Fuselage preformed to finished scale. All necessary integral parts included. Can be completed ready to fly in 6 hours. Landing gear can be fixed or droppable. Features Speed-Snap for easy access to engine and ignition system.



### COMPETITOR

\$5.50

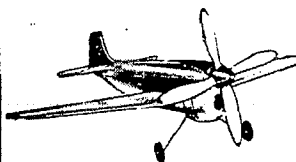
Kit contains best carved fuselage obtainable, shaped leading and trailing edges, wing tips, rudder and stabilizer. Formed landing gear, plywood bulkhead and all metal fittings.



### BAT

Wingspan: 32 inches Length: 30 1/2 inches \$4.95

Features 1 or 2 line Autotrol for 49 to 65 engines Upright or inverted engine installation. Laminar flow type wing, sheer pin motor mount, aluminum spinner, formed landing gear, solid rubber wheels, elevator trim control.

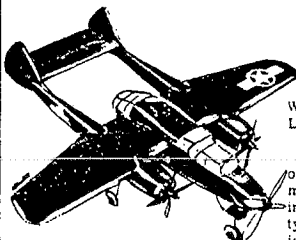
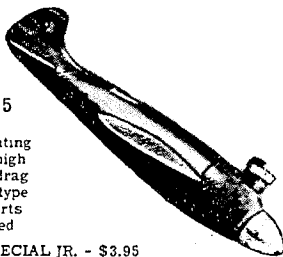


### DMECO SPECIAL

Wingspan: 24 inches Length: 26 1/2 inches \$7.95

Built for speed and incorporating many advancements. New type high speed airfoil, with the low lift-drag ratio - ready formed cowl, new type drop off landing gear, all wood parts precut, liquids and wheels included.

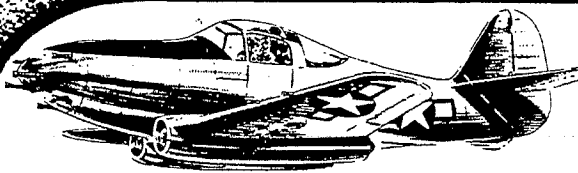
DMECO SPECIAL JR. - \$3.95



### BLACK WIDOW

Wingspan: 37 inches Length: 30 inches \$12.50

A 1/2 in to 1 foot scale replica of the dreaded Pacific fighter. The model duplicates the tri-cycle landing gear that increases its stability in take-offs and landings. There is ample room in the booms for installation of twin engines for added speed and eye appeal.



### TEATHER STREAK

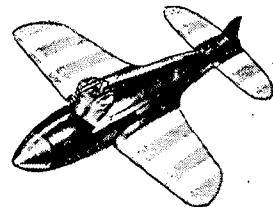
Scale: 3/4 in. Wingspan: 24 inches \$3.50

An unusual scale control line model. Designed after Bell's early 1944 Jet Propelled job. An experimental type kit complete with cements and dopes, but less hardware and power unit.

### ORBIT

Wingspan: 14 inches Length: 21 1/2 inches \$6.95

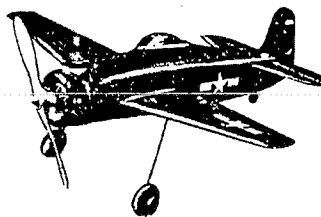
Easy to assemble, comes as two pre-formed halves. Molded wing, fuselage and tail. Fiberplastic construction is eight times stronger than conventional models.



### BEARCAT

Wingspan: 26 3/4 inches Length: 20 inches \$6.95

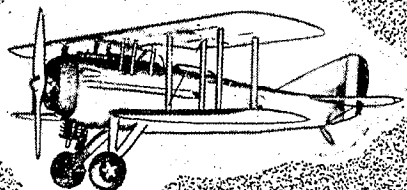
This model duplicated one of the Navy's most maneuverable fighters at a scale of 3/4 inch to 1 foot. Keel constructed plank-fuselage, ready cut stabilizer and rudder, transparent plastic sheet and sponge rubber wheels.





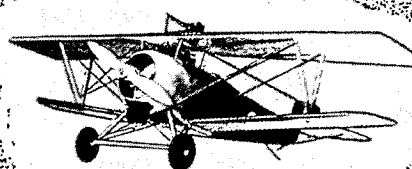
# World War I "CRATES"

Build one of these flying scale copies of famous World War I fighters and you'll want an entire squadron. Scaled 1 inch to the foot, they take class A, B or small C ignition or "diesel" engines. For fun in sport flying and "1sts" in stunt and scale events try one of the famous "Fighting Five."

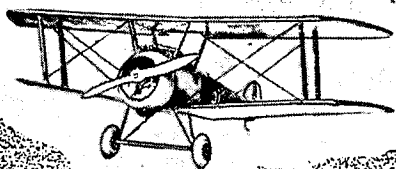


Above -  
SPAD 13C.1  
Wingspan: 26½ in.  
Length: 20 in.

The Famous  
**"FIGHTING  
FIVE"**  
\$3.50 EACH



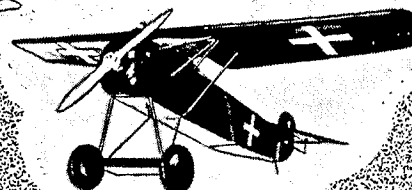
Above -  
NIEUPORT 17C.1  
Wingspan: 27 in.  
Length: 17½ in.



SOPWITH CAMEL - Wingspan: 28 in., Length: 18 in.



Above -  
FOKKER DVII  
Wingspan: 28 in.  
Length: 22 in.



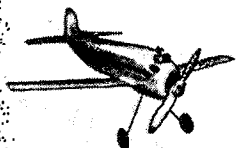
FOKKER DVIII - Wingspan: 26½ in., Length: 18 in.

Illustrated or listed here are some of the latest newcomers to the control line kit field. We would like to have shown photos of each one but the amount of time required would have held up printing of the Controlog.

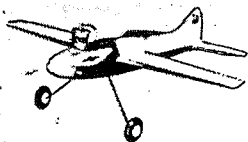
One thing you can be sure of - no matter which model you choose you'll have many hours of contented enjoyment first assembling and

then flying your aircraft model - be it a World War I "Crate" or a super speed job.

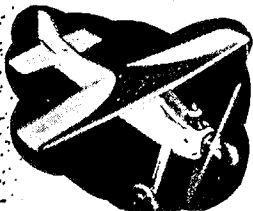
The greatest appeal for U-Control models is that you don't need an excessively large area in which to fly, they're easily transportable, and best of all - you are the pilot for every maneuver. Start yours today!



THE BEE - \$3.95

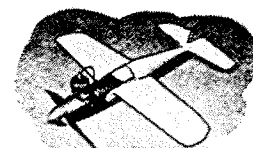


THE "400" - \$4.95

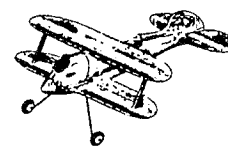


PAUL MANTZ JR. - \$3.50

A-26 INVADER-----	\$15.00	PARAGON-----	6.95
ART CHESTER RACER---	3.95	PRESTOLINER-----	5.95
BUTCH-----	3.65	RYAN "ST" TRAINER---	8.50
BI-LINE-----	4.50	SILVER STREAK-----	15.00
CLIFFS TRAINER-----	2.95	SKYCHIEF-----	6.95
COMANCHE-----	9.95	SKY PRINCE-----	5.50
CRUISER-----	10.00	SKY STREAK-----	1.95
DRAGON FLY-----	1.95	SNORKY-----	2.25
DRONETTE-----	3.50	SPLITZ-----	6.50
EIGHT-BALL-----	6.95	STUNT KING-----	6.95
FAIRCHILD P T-19-----	5.45	SUPER SOLUTION-----	2.25
FLYING MANIAC-----	6.95	SUPER SONIC-----	8.95
GAY WIDOW-----	6.95	TOPPER II-----	2.25
GLENN CURTISS BIPLANE-	6.50	TOPPER III-----	3.00
JAP ZERO-----	9.95	TORNADO-----	18.75
JUNIOR CRUISER-----	5.95	TRIMMER-----	3.95
KNIGHT-MARE-----	\$ 5.00	TYPHOON-----	10.95
KNIGHT TWISTER-----	7.75	WOM-BAT-----	6.95
LEMANCO SPECIAL-----	5.95	WREN-----	6.95
TRAINEE-----	3.50	RYAN FIREBALL-----	3.95



P.D.Q. ANSWER - \$2.00

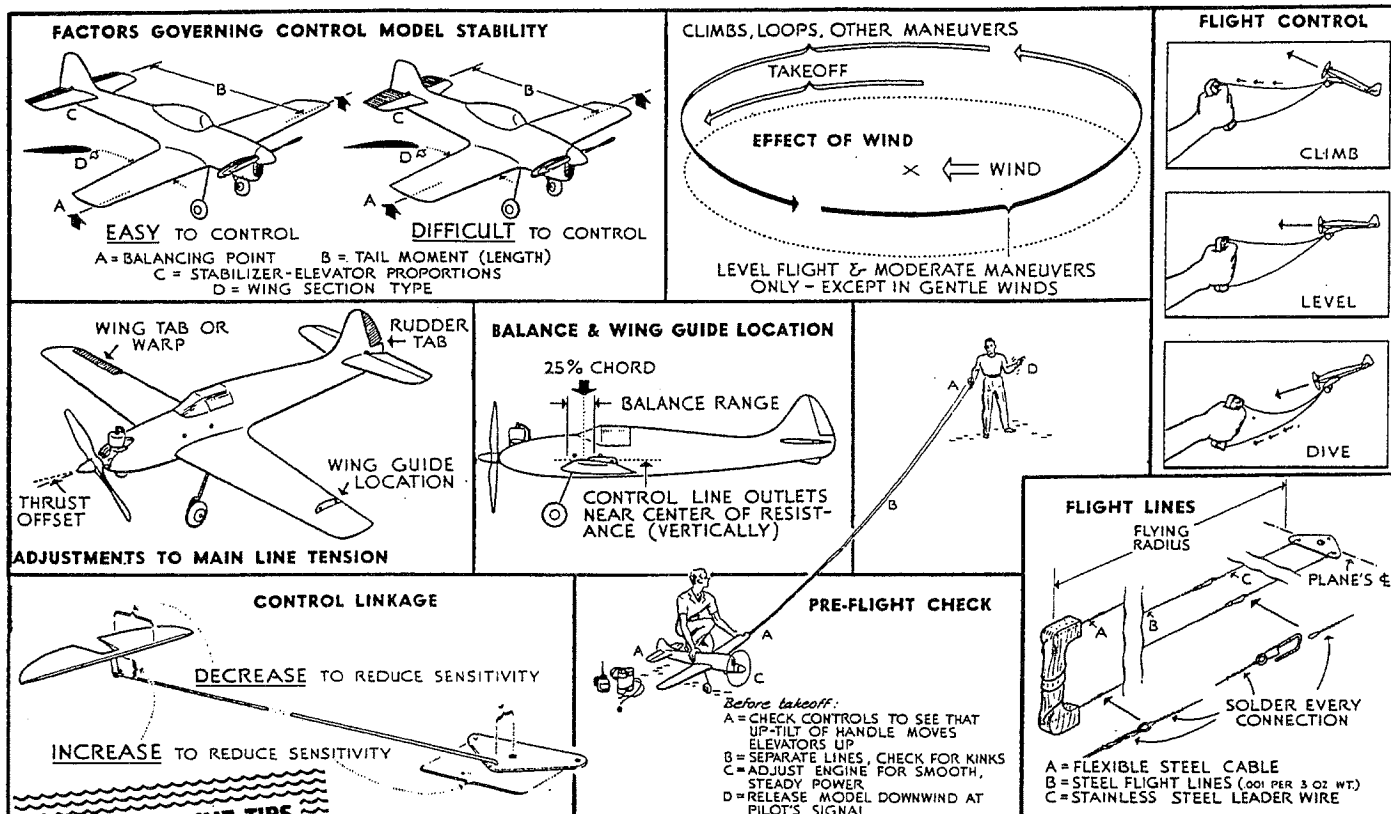


GRAYHOUND - \$3.95



PAUL MANTZ SPECIAL - \$4.95





by H. A. Thomas

Reprinted through courtesy of "Air World" magazine.

**P**REFLIGHT adjustments share equal importance to the pilot's skill and experience in all control-line flying. Design factors, of course, are of fundamental importance; a model of faulty design can be too much of a handicap for even the best "pilot."

Simply stated, the design of a control model ought to include: 1. Good proportions, 2. An adequate tail moment arm, 3. A stabilizer exceeding the elevators in area, 4. A stable wing section, and 5. A center of gravity location toward the wing leading edge. (Regarding wing sections, we can simply state that those having a slight upturning on the lower entering edge have been found to be consistently more stable and more easily controllable than those without.)

Taking for granted that you have a model of good flight potentialities—a popular kit type, perhaps—we will outline the preflight adjustments which may aid you in handling it successfully.

Flying anti-clockwise, a model ordinarily needs only slight trimming to maintain adequate line tension. Moving the wing guide slightly rearward to produce a very slight yaw is a favorite method of

many builders. Often this is all a fast plane will require. A tab offset to turn the plane outward is a good test-flight precaution. Offsetting the thrust line is seldom, if ever, required. The wing ought to be warp-free or slightly warped to hold the inner wing up. Never use extreme adjustments; let the speed of the model govern the amount of tab setting; the higher the speed, the finer the adjustment.

Balance is of utmost importance as your first experience with a tail-heavy model will quickly demonstrate. Nose-heaviness can be tolerated to some extent but tail-heaviness invariably brings out the worst in any model. If we tried to condense this entire text into one sentence, it would be something like: *Make certain that the model is not tail-heavy.* From the leading edge, about 25 per cent of the chord distance is a good location for the balancing point.

With the model now seeking to fly level and tending to hold the flight lines tautly, we will mention the bellcrank linkage which governs our control over it. The accompanying sketch points out the lever arms and how their relative lengths dictate control sensitivity. Most experienced "pilots" prefer a not-too-sensitive system, which means: Leave the elevator horn fairly long, the spacing of the bellcrank holes fairly far apart, and the push rod hole quite near the pivot center. Elevator area ties in

with these factors, too, in deciding how quickly the model is to respond to our control handle movements.

In the interests of safety, a sketch has been included to show the flight lines and their terminals. Incidentally, the Academy of Model Aeronautics recommends that no strings, cords, or swivels be used and that the lines be sufficiently strong to withstand a pull-test of ten times the model's weight. Never use lines of less than .008 diameter—.012 to .014 are best for class C models and the new braided lines are highly recommended.

The milder the breeze, the better are your chances of "soloing" successfully. In wind, the model at a constant airspeed is altering its ground speed plus and minus the wind velocity in each circuit. Picture it this way: Flying in a 15 mph. breeze is identical to flying in calm air from the top of an auto which is moving at 15 mph! It is at once apparent that the difficult part of the circle is the upwind portion where the tendency to drift inward opposes the model's outward tension on the lines. Since control is entirely dependent on line tension, the takeoff and other critical parts of the flight should be made on the safer downwind side.

In preparing the model for take-off, make a sort of ritual of checking the line attachments to see that controls have not been accidentally

reversed. Glance also at rudder tab or other adjustments and separate the flight lines. Smooth, constant power is most desirable in control flying; use fresh flight batteries and adjust the mixture carefully. Finally, when all is ready, the assistant awaits a final signal from the pilot before releasing the model.

Flying technique varies with the individual and with the type of model. A tail-down takeoff is safest, one in which the model rolls on three points with elevators up and leaves the ground in this attitude. On becoming airborne, controls must be quickly neutralized to prevent stalling. Bear in mind the importance of flying speed and become accustomed to the natural tendency of the model to settle a bit on the downwind side and to balloon as it heads into the wind. Never move the handle without being ready to reverse it with a quick neutralizing movement.

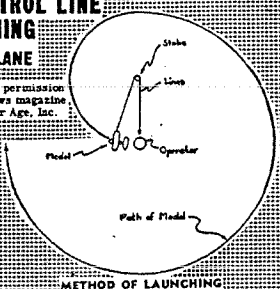
Do not risk an accident by maneuvering the model violently when it is near the end of its fuel supply. At the instant the engine stops, lower the nose and establish a normal glide. Near the ground, slowly flare the glide out until the elevators are full up at the landing.

Control-line flying is based on natural reflexes and most people learn it quickly—Learn your plane's characteristics, maintaining airspeed; remember the wind direction and velocity.

## ONE-MAN CONTROL LINE LAUNCHING

by D. E. LANE

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METHOD OF LAUNCHING

**T**HIS is a method of launching a control line model by the flier himself. It has several advantages; the model starts from the center of the circle, enabling last moment correction of engine adjustment; there are no extra lines or devices on the perimeter of the circle to cause difficulties with landing, etc. Having considered many types of devices, I was quite astounded when my wife proposed a plan which worked from the start with no hitches whatsoever.

Simply place a stake at half the radius of the circle from the center. It should be smooth have a flat cap projecting approximately 2" beyond its top (this can be made of plywood and attached by a screw) and should be firmly driven into the ground with perhaps 8" remaining above ground. With the plane at center of the circle, pull the lines out, around the stake, then lead back to the handle which may be secured near the plane by a peg or screwdriver stuck into the ground. To operate, start and

adjust the engine, disconnect boosters, and maintain a firm grasp on the plane, take the handle, check the controls, and when ready release the plane. A slight amount of down elevator must be maintained until the ship has completed one-half revolution about the stake and is proceeding with the lines running direct from the flier to the plane. In such a distance the plane will have gathered considerable speed and can be taken off in a normal manner. Note that the plane suffers no change in direction.

Further, as an improvement, the stake may be altered by placing around it a tin can—that is, the stake should be driven through suitable holes in the ends of the can so the lines do not undergo such an acute bend. The can should have a slight flange soldered to the top to prevent the lines from slipping off. A fruit juice can of 46 oz. size is good for lines 50 ft. or longer.

A few further hints:  
1. Do not use this method on a ship not having considerable ground stability.

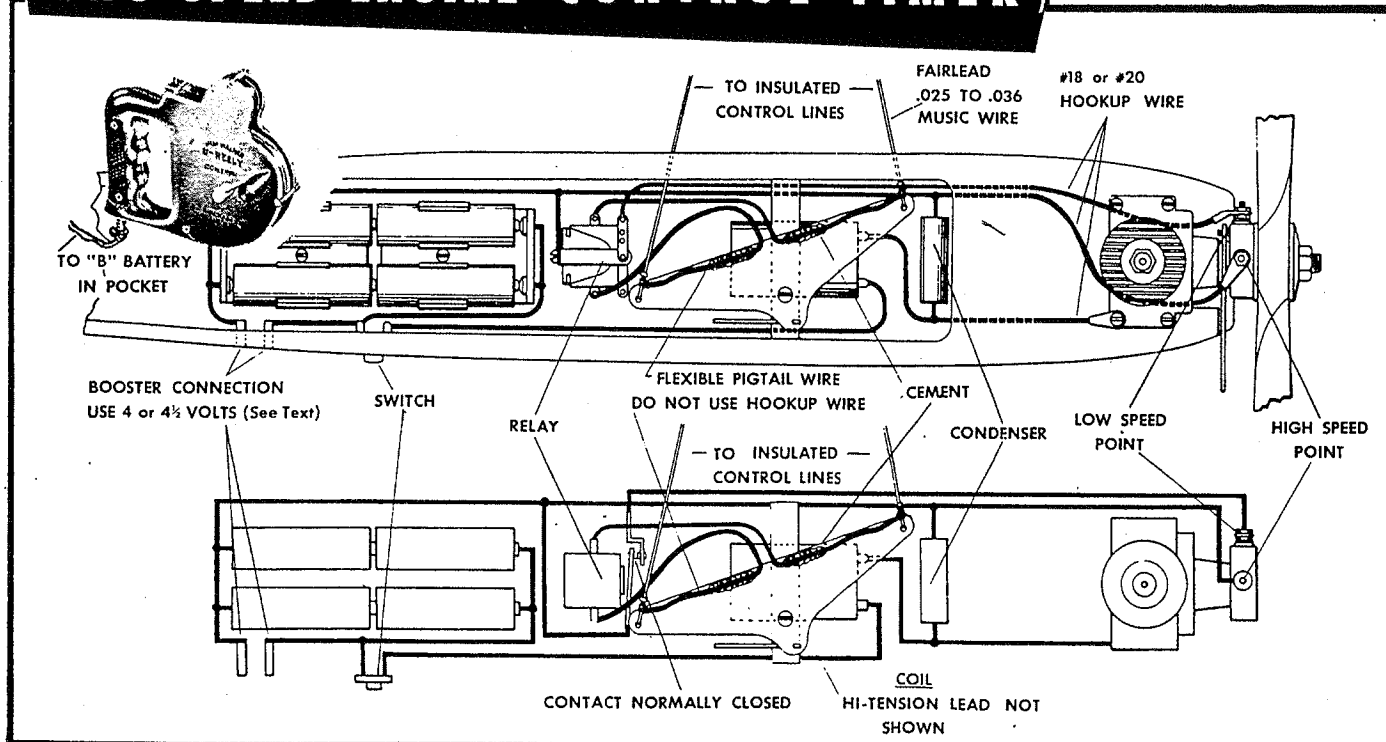
2. Avoid excessively rough fields.  
3. Most of all, be certain there are no tough weeds within the half of the smaller circle described by the ship.

It is a good idea for the operator to remain in a crouching position until the lines have cleared the stake. As to placing of the model with relation to the wind, it is in many cases dependent upon the modeler's desires. With proper turning gear, the plane should not tend to turn in along the shorter circle so that if a downwind take-off is desired, as it is by many, the components could be situated so as to have the wind coming from left of the illustration.

To return the plane to starting position, merely replace the handle over the peg at the center, carry the plane around the perimeter of the circle so as to intercept the stake with the lines and return the plane to its starting position. Also, this allows the modeler to keep tools, etc., close at hand. The stake itself is not high enough to interfere with any maneuver of the plane.



# TWO-SPEED ENGINE CONTROL TIMER



**DETAILED INSTRUCTIONS FOR INSTALLING THE O & R TWO-SPEED ENGINE TIMER** (provided by Jim Walker): The high speed point makes contact at all times, and slow speed is obtained by delaying the firing time through the slow speed point. Notice in the drawing that the slow speed point is normally connected to the high speed point, and high speed is obtained by energizing the relay, which in turn disconnects the slow speed point.

The pigtail leads from the bell crank to the relay

should be of indoor radio aerial wire or similar type. Since flying wires average one ohm per foot, the relay should be 1,000 ohms, or more. Here is a table of relays and voltages recommended:

- A. Leach Relay 1,280 ohms, 22 1/2 or 30 volts.
- B. Price Relay (shown in diagram) 1,800 ohms.
- C. Sigma and other type sensitive relays:  
2,000 ohms, 22 1/2 to 45 volts  
5,000 ohms, 45 volts  
8,000 ohms, 45 to 67 1/2 volts

Note that 4 1/2 volt boosters are specified. You will find that most of your ignition troubles disappear, if you use 4 1/2 volts for boosters, and that the life of your flight batteries will be increased 5 to 8 times.

The batteries are mounted in two Austin pen cell type boxes with one end of each removed and fastened to 1/4" plywood. Also shown is a photograph of the newest U-Reely Control handle with two-speed relay control switch button. Follow these specifications for greater pleasure in control line flying.

## Try Control Line Modeling - America's Newest Hobby-Sport!

We are pleased to present for the first time a complete round up of powered U-control planes.

Here are all the finest kits - products of more than 50 manufacturers - for your building and flying pleasure!

The Controlog is your introduction to the newest sport - tethered flying! Look over these models, select the ship that suits your taste, engine preference and pocketbook. If you can drop in and discuss your choice with us - if not, when ordering by mail, give a second choice.

Because there are more than 100 models listed, we expect that at times we may be short of several types. You will always find in stock, however, the top-notchers. In the event any prices fluctuate, kits will be sold at prices prevailing at time of delivery.

Remember, too, that specifications are subject to change as manufacturers constantly strive to better their kits, add a few items, or modify the design slightly when constant use by thousands of flyers indicates a better method of construction or adjustment.

It's fun to build and fly control line models! And it's easy, too - many of these kits are prefabricated, ready for assembly, require no tools, and can be built on your kitchen table. You get double pleasure: constructing a sturdy, sleek, speedy model then going out and learning to operate it like a real pilot.

Not only can you fly in speed trials and set local and national records, but you can soon become proficient at stunting and precision flying where you duplicate every maneuver of a full-size plane ( loops, figure 8's, inverted flight, spot landings, etc. ) and add a few new ones of your own.

You'll find kits for every size and every type of motor: gasoline, "diesel", compression ignition and CO<sub>2</sub>. Don't miss the fascinating, thrilling experience of the first time you take a model off, put it through its paces, and glide it gently down for a three point landing.

And with the new two-speed motor controls, you can "gun" your engine, take the model off by itself, perform intricate, precision maneuvers, then glide down for a dead-stick, or power-on landing!

Yes, it's America's latest hobby - sport - one for young and old alike and one where the ladies shine. Get in the flying circle - once you try your hand at U-control flying you'll want to build more than just one model. Soon you can be operating an entire squadron!

We would be remiss if we did not take this opportunity to mention the wonderful job model aero manufacturers of the country are doing in bringing out high quality kits at lowest possible prices. Material shortages, high labor costs, difficulties of obtaining certain fine accessories do not deter them. They strive constantly to perfect a better model, give the greatest value.

In the final analysis, it is you, Mr. Model Builder, who determines what kits are produced, what designs are evolved. Concerns labor night and day to supply you with what you want. They always welcome your suggestions and constructive comment. So if you like a particular model, let your dealer and the manufacturer know. If there is something you think should be changed, speak up - the entire industry listens to you.

When you do complete your model and go out to fly have regard for the rights of others. Follow the Academy of Model Aeronautics' safety regulations. They were established to protect you as well as insure the future of the sport. If you are not a member of the A.M.A., we urge you to join now.

Best wishes for fair winds and fine flying!

### ACADEMY OF MODEL AERONAUTICS 1025 CONNECTICUT AVE. WASHINGTON 6, D. C.

I hereby agree to fly my models in a safe and sane manner as prescribed by the A.M.A. Please enroll me as a- ( ) Gas Model Member- I enclose \$1.00  
( ) Rubber Model Member- I enclose \$0.50

NAME (print) \_\_\_\_\_ AGE \_\_\_\_\_

ADDRESS \_\_\_\_\_ CITY \_\_\_\_\_

STATE \_\_\_\_\_ Signed \_\_\_\_\_

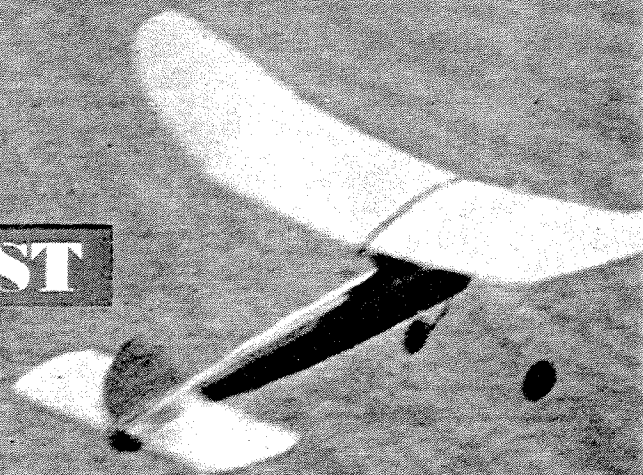
*Fly with  
the Experts!*  
**Join  
NOW**





**PLYMOUTH FIRST**

**INTERNATIONAL MODEL MEET**





# 1947

THE FIRST INTERNATIONAL MODEL PLANE MEET WAS JUST ABOUT THE BIGGEST AND BEST EVER HELD IN THIS COUNTRY. THE SINCERE THANKS OF EVERY MODEL BUILDER IS EXTENDED TO PLYMOUTH MOTORS FOR ITS FINE CONTRIBUTION TO MODEL AVIATION



● Thanks to their sponsor, Don Newberger and Lou Mahieu, traveled to the meet in real style. Your editor really appreciated the ice box full of beer.



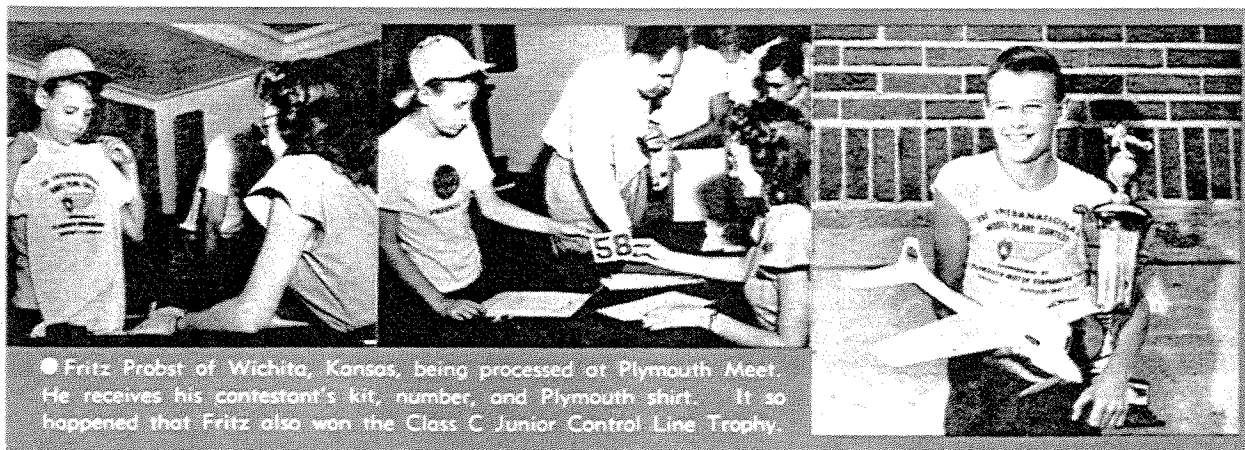
● Sunny California was well represented by Bob Holland, Frank Greene, and Ted Gillet in the various rubber events.



● It was truly an International meet; here are the Honolulu entrants (L to R) D. Thompson, J. M. O'Dowda, P. K. Hills, and H. D. Porter.

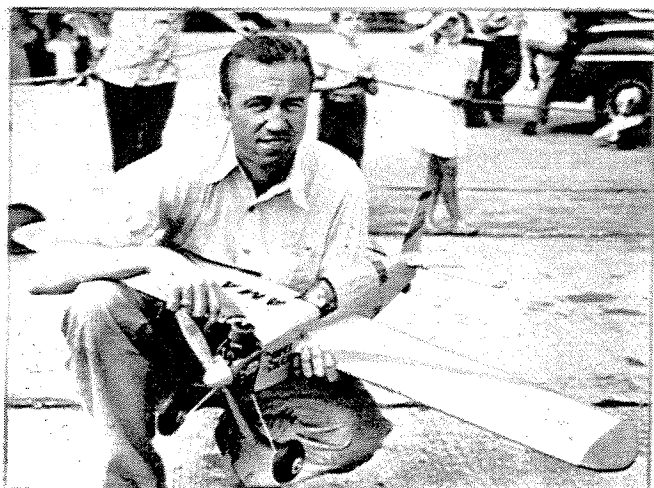


● Old-timer Frank Ehling, of New Jersey, has lost none of his skill when it comes to packing in the turns on his stick job.



● Fritz Probst of Wichita, Kansas, being processed at Plymouth Meet. He receives his contestant's kit, number, and Plymouth shirt. It so happened that Fritz also won the Class C Junior Control Line Trophy.





● Air Trails trophy for the Open Stunt event was won by this Super-Cyclone-powered job of Jim Saftig who hails from California.



● Jim Cahill, two-time winner of the Wakefields, has finally come back to the wars with this fine, indoor stick job.



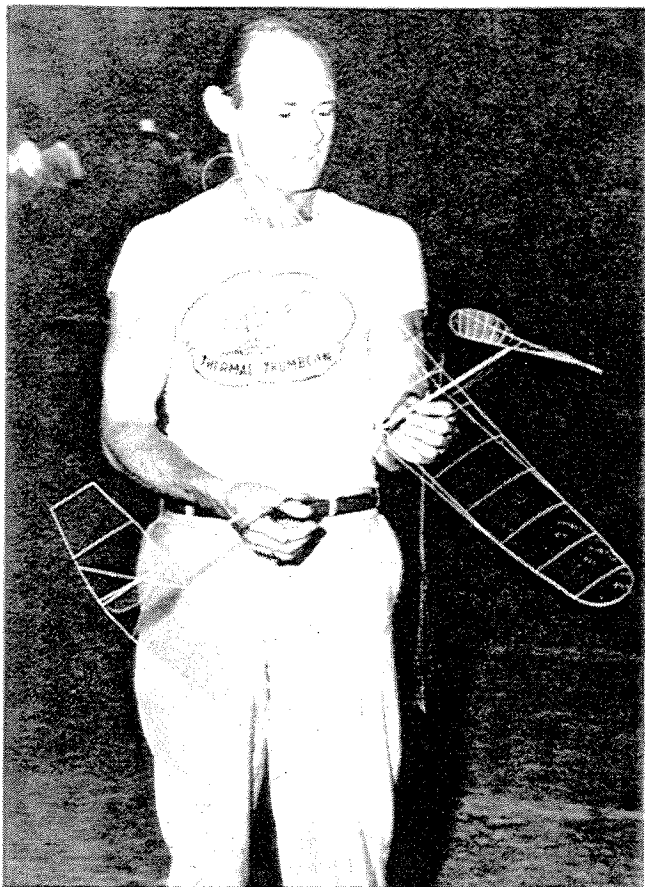
● Grandpappy of aeronautics Bill Stout, helps Russ Nichols of the A.M.A. tell top from bottom on this control-line entry.



● Joe Kitchens, of Santa Ana, Calif., open speed ev. winner demonstrates efficient pylon at meet. also won the Air Trails trophy at the Nation







● Shades of 1935! Here's Bill Atwood who won two places in the indoor event. This stick job won third prize in the open class.



● Cabin event in the rubber section had a good many entries, as shown by processing line. Wakefield champ Dick Korda at tail end.

● Les McBayer's two control liners have the quaint names of Wee Lassie (side winder) and Lesgo. Both are rudderless.



● For a bang-up closing, the Plymouth banquet was tops. Note the impressive array of trophies.



# PLYMOUTH MEET HIGHLIGHT OF '47

## FIRST INTERNATIONAL MEET A SPLEN-

## DID CONTRIBUTION TO MODEL AVIATION

**T**HE first international model airplane meet sponsored by the Plymouth Motor Company—in fact, its first aeromodeling contest of any type—was held in Detroit, Mich., August 13th through 16th.

By any standards it was an extremely well run meet with many worthwhile prizes; considering that it was Plymouth's first venture into the realm of model aviation, mere words cannot do justice to the very excellent affair. Merrill Hamberg was director.

The competition was truly international with flyers from Canada, Cuba, and Hawaii. Company representatives from distant points were in attendance, too, and should the auto concern continue in the field of air-model promotion, it is to be expected that another such meet will see modelers from all parts of the globe where American motor cars are in demand—which is pretty much like saying that almost every nation should be represented at the 2nd International meet—if and when . . .

In many respects old timers attending the meet were carried back to the 1937, '38 and '39 Nationals, also held in Detroit, because the Plymouth meet headquarters were in the same hotel, the Fort Shelby. The contestants' meetings were held in the same spot, the Spanish Room, and the firecrackers-and-bomb group from Brooklyn, N. Y., Newark and Elizabeth, N. J., were back at work after an absence of eight years!

In general, the contest was run off very smoothly. There was the usual first-day processing lines at the outdoor site at Selfridge Field, but this was straightened out and everything ran like clockwork from then on. Actually, the contest got underway with indoor flying in the State Fair Ground's colosseum. What the building lacked in height, the sponsors made up in ample timers and good scoring systems. Steve Corbett, director of recreation for Detroit and director of the last National contest in Detroit, handled the public address system at the indoor meet and did an excellent job introducing all the "old timers" who put in appearances at the contest.

As announced previously, the Plymouth folks limited participation in the meet to about 500, and it is estimated that between 80 and 85 per cent of the entrants were "sponsored" by local Plymouth, DeSoto, or Chrysler dealers: their traveling and living expenses were paid by local auto agents. A large number of contestants were provided with extra funds so they could travel on to Minneapolis after the meet and take in the Nationals.

Contestants arriving at the meet registered at contest headquarters in The Shelby and each was provided with a white helmet and T-shirt bearing an announcement of the meet. It is expected

these hats and shirts will be highly prized by the entrants and will show up at meets throughout the country for some seasons to come.

For each day's flying a motorcade of busses carried flyers, their models and equipment out to the scene of the day's fray. At the outdoor events at spacious Selfridge Field, two Greyhound busses were in constant service running between field-meet headquarters and the remote free flight site. In addition to this shoe-saving service Army jeeps aided in retrieving far-flying models, with the result that a large percentage of craft were returned to the owners promptly enough so the full number of official flights could be made.

Control-line flying was done on the ample apron in front of the Selfridge Field hangars. High winds plagued the modelers much of the time and one afternoon's activity was cut down by a cloudburst. However, rain alone could not dampen the enthusiasm of the modelers and soon after the rain all were back flying their best.

So many well known modelers and designers were in attendance at the meet, and so many interesting events transpired, it is almost impossible in limited space to touch on any but the very "high" highlights. The calibre of models observed at the contest was extremely high. By far the best looking models were those flown by Frank Cummings, Jr., of Los Angeles. Mr. Cumming's rubber powered jobs were so beautiful, it seemed almost criminal to fly them. A fellow Californian, Ray Acord, also of Los Angeles, made the most spectacular free flight time, more than 96 minutes, with his Class B ship in the open age category.

The dinner which concluded the Plymouth meet was the most impressive ever held at any model meet. There was no usual head table. Each table had a host whose name was presented to each diner by means of a place card; the host made sure everyone at the table met everyone else. The winners were not seated at the same time as the remainder of the guests—they came in afterwards and occupied the "winners' circle" which was set off in the center of the ballroom by pillars bearing victors' wreaths connected by large blue ribbons.

Upon entering the victors were given a tremendous ovation, and after appropriate ceremony the blue ribbons were cut, thus severing the "winners' circle" and making the guests, winners and good losers alike, one big happy group. By having a standardized type of cup award—various sizes for various places, plus generous cash prizes—a most impressive display of cups was obtained.

First place winners in the various classes according to age were as follows:

Indoor stick models, Junior: Richard Tarjany, Wyandotte, Mich.—755.1 sec.

Indoor stick models, Senior: George Haroutunian, Chelsea, Mass.—980.6 sec.

Indoor stick models, Open: Merrick S. Andrews, Forest Hills, N. Y.—966.3 sec.

Indoor cabin, Junior: Richard Tarjany, Wyandotte, Mich.—251.6 sec.

Indoor cabin, Senior: Carl Brewer, Detroit, Mich.—662 sec.

Indoor cabin, Open: Edward Naudzius, Detroit, Mich.—795 sec.

Outdoor cabin, Junior: Jack Cooke, Chicago, Ill.—489.1 sec.

Outdoor cabin, Senior: Herbert Kothe, Omaha, Nebr.—618.6 sec.

Outdoor cabin, Open: James Ryan, Cleveland, Ohio—1325.4 sec.

Outdoor stick, Junior: Richard Tarjany, Wyandotte, Mich.—570.7 sec.

Outdoor stick, Senior: E. Morosky, Detroit, Mich.—824.2 sec.

Outdoor stick, Open: Joseph Pedreira, New Orleans, La.—845.6 sec.

Free Flight gas-A, Junior: W. Trumble, San Diego, Cal.—1033.5 sec.

Free Flight gas-A, Senior: William Thomas Jr., Daytona Beach, Fla.—852 sec.

Free Flight gas-A, Open: John Etherington, Black River, N. Y.—1004.4 sec.

Free Flight gas-B, Junior: Jason Hayward, Tucson, Ariz.—1635.9 sec.

Free Flight gas-B, Senior: Jack Norris, Lakewood, Ohio—1707.4 sec.

Free Flight gas-B, Open: Ray Acord, Los Angeles, Calif.—5767.8 sec.

Free Flight gas-C, Junior: Bebe Barron, Springfield, Va.—463.5 sec.

Free Flight gas-C, Senior: E. Keck, Rochester, N. Y.—666 sec.

Free Flight gas-C, Open: J. Oless, Easton, Pa.—939 sec.

Control Line "A," Junior: James Singleton, Oak Ridge, Tenn.—93.1 mph.

Control Line "A," Senior: William Thomas Jr., Daytona Beach, Fla.—99.2 mph.

Control Line "A," Open: Don Newberger, Long Beach, Calif.—99.2 mph.

Control Line "B," Junior: W. MacKerrac, San Francisco, Calif.—107.9 mph.

Control Line "B," Senior: V. Feist, Houston, Texas—108.2 mph.

Control Line "B," Open: Tom Trent, Knoxville, Tenn.—122.3 mph.

Control Line "C," Junior: F. Probst, Wichita, Kansas—109.6 mph.

Control Line "C," Senior: J. Williams, Houston, Texas—122 mph.

Control Line "C," Open: J. Kitchens, Santa Ana, Calif.—126.9 mph.



**New! Revolutionary!**  
first application to small engines

## The ARDEN GLOW PLUG

Designed for ARDEN engines

Replaces your spark plug.

Eliminates batteries, coil, condenser, engine timer, wiring—and resulting ignition troubles.

Your engine will start easier, and

will produce equal or greater power output.

Only 85 cents

Ask your supply dealer or write for information



ACTUAL SIZE

**MICRO-BILT INCORPORATED**

DANBURY, CONNECTICUT

THERE'S A *long* AND *SHORT*  
TO THIS **NEW ARDEN FIRST**

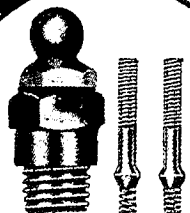
THE ARDEN GLOW PLUG—an engineering achievement that has clicked with modelers throughout the nation—is now available with both long and short threaded sections.

*plus*

a GLOW PLUG ADAPTER which permits their use with Class C engines having the larger conventional 3/8" diameter plug opening.

**85¢** FOR 2  
REPLACEMENT ELEMENTS

Available in packages of either 2 hot or 2 cold Glow Plug elements.



HOT COLD

Next came 3/8" plug adapters which certainly hastened the demise of the larger older engines.

Finally came the replaceable elements which were to tailor the plug performance to a particular fuel being used.

In 1947, Ray Arden formally introduced his Arden Glow Plug that changed our world of modeling forever .... Many engine manufacturers had no idea that this Glow Plug was a prediction of their impending demise simply because old ignition engines couldn't stand up to the pressures generated by the fuels being developed for use by some of the more modern racing engines and 'Ardens' in particular.

(Although, much easier than using Hasselbach's Liquid Dynamite fuels !)



# THE OLAT

91st Year—Official County Paper

OLATHE, JOHNSON COUNTY,

# NATIONAL MODEL



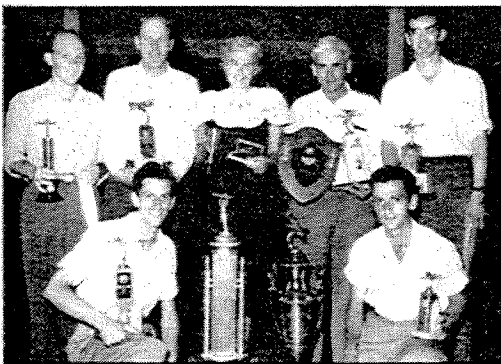
● Two Navy boys amend the warning sign slightly to indicate that model planes have taken over runways at Naval Air Station.

**T**HE most perfect National meet in the history of American aeromodeling, the 17th National Championship Model Airplane Contest, was held on August 4, 5, 6, 7 and 8, under the sponsorship of the Olathe, Kan., Chamber of Commerce and the Olathe Earl Collier Post 153, American Legion.

Actively cooperating was the U.S. Naval Air Station at Olathe, where all the outdoor flying events were held. Indoor events were held in the Municipal Auditorium at Kansas City, Mo.

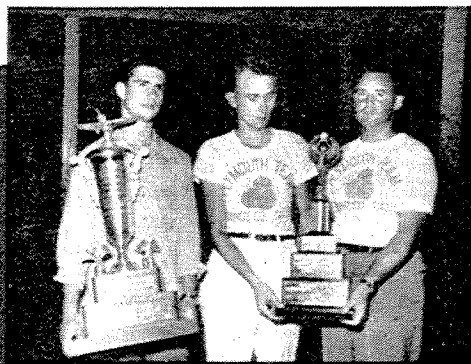
The contest was highlighted with a visit by Rear Admiral Richard F. Whitehead, Chief of Naval Air Reserve Training. Capt. Campbell Keene, Commanding Officer of the Olathe Naval Air Station, gave his full support to the meet as did all the men based at the huge Navy field.

National Championship honors went to handsome Bob Holland, 33, of Sunland, Calif. Ace-flyer Holland



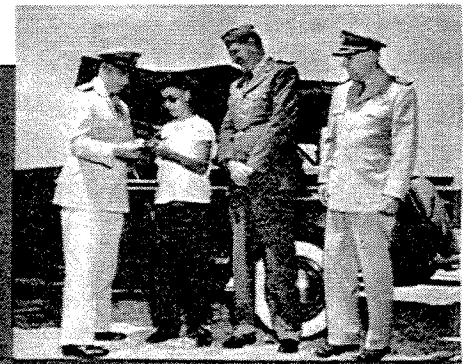
● Fred Megow Champion Club trophy (l. ctr.) won by Oakland Cloud Dusters.

● Harry Rice, Irv Ohlsson, Jack Norris, Bill Fox & Norval Hale—O&R winners.



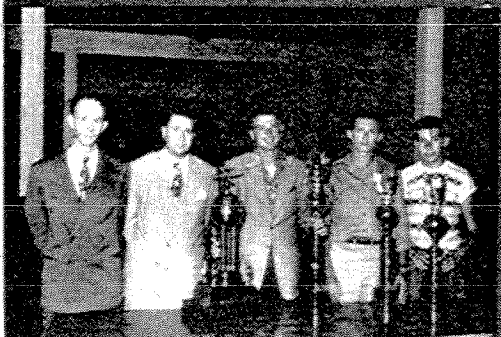
● Air Trails Trophy speed winners: Parker Hubert, senior D; Wallick & Thomas, open D.

● Navy helps: Olathe sailor holds H. deBolt's (himself an ex-gob) 1st place Speedwagon.



● Rear Adm. R. F. Whitehead, left, inspects Steve Jordan's record Cl. B ship.

● The Army wuz there, too: Msgr H. G. Ponder of Keesler Field Mod. Plane Club.





# THE MIRROR

KANSAS, THURSDAY, AUGUST 5, 1948

Ten Pages

No. 32

## MEET UNDER WAY

racked up an impressive number of wins: 2nd in indoor stick, open; a place on the 1948 American Wakefield team; 3rd in rubber-powered flying scale; 1st in R.O.W. models, plus other lesser places.

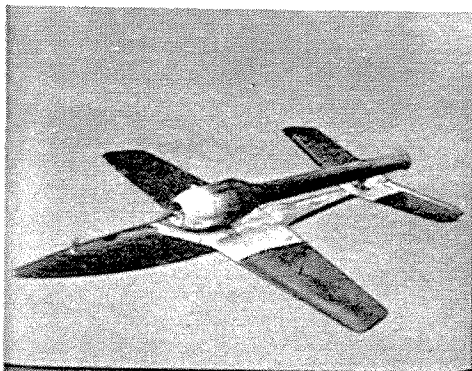
Top place in the club competition was taken by the Oakland, Calif., Cloud Dusters whose 7-"man" team consisted of Pete and Mike Demos, Joe Bilgri, Dick Schumacher, Manuel Andrade and "Pop" and "Mom" (H.S.) Robbers.

The age-category champs were as follows: Bob Holland, first in open class; Charles Sotich, Chicago, Illinois, first in junior division; and Jack Norris, Lakewood, Ohio, first in senior competition.

Several new national records were set. A complete breakdown of winners, including the types of models they flew will appear in subsequent issues of *Air Trails*. An enlarged "Sketchbook at the Nationals" will be presented in December.

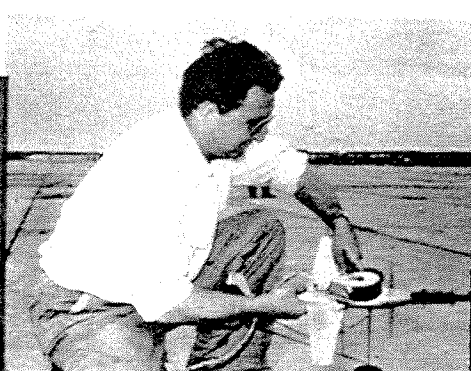


● Tom Poor, Olathe Chamber of Commerce, presents Exchange Club National Champ trophy to Bob Holland of Sunland, Calif.



● Jet job by Harold deBolt, Williamsville, N. Y., won 1st place with 133.3 mph.

● Charles Sotich, right, was Jr. champ; Larry Erickson, Omaha, Neb., runner-up.



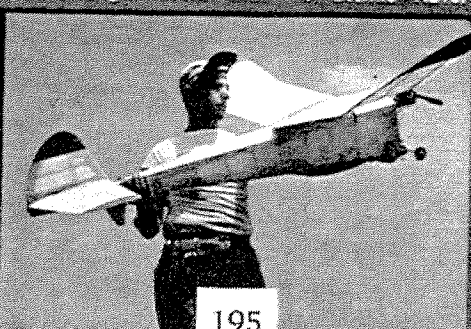
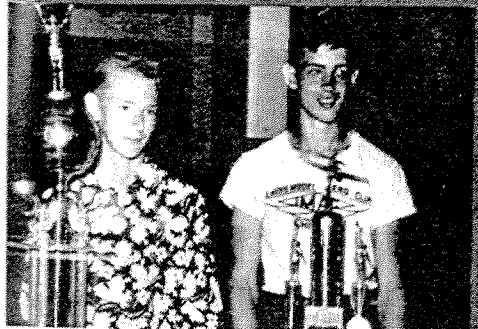
● Don Newberger (1st in Class C speed, open) and Lew Mahiew's Class C Invader speed ship.

● Jerry Brafman, Hicksville, N. Y., 1st in class D free-flight event with his Cosmic Rave.

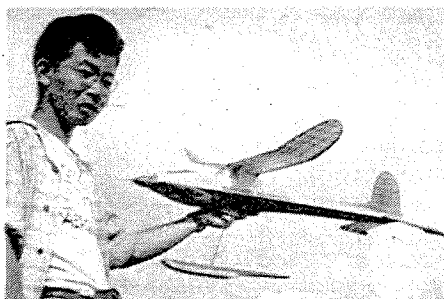


● Herb Kothe, Omaha, Neb., took first (\$500) in PAA's weight lifting contest.

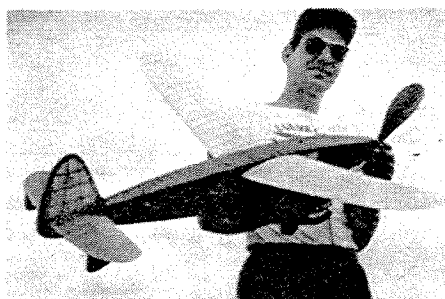
● Jim Walker, 1st in r-c, given U-control "Stupidity Award" by Peggy Roddy.







● Fudo Takagi of Chicago and single float R.O.W. rubber entry. Note floatavators.



● Chet Lanzo and his English-type Wakefield model. Lanzo flew well in r-c too.



● Dale Dorst, right, Olathe, Kan., was contest manager. Did outstanding job.



● F. R. Foxworthy, Indianapolis, Ind., placed 3rd in r-c event with twin-rudder controls.

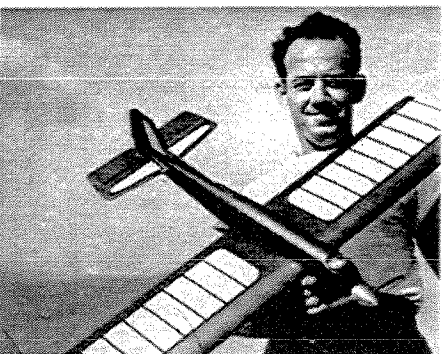


● Oakland Cloud Duster Manuel Andrade's multiple tungsten braced indoor stick entry.



● Micro-Bilt provided this sound truck. Ray Arden, in white, surrounded by his admirers.

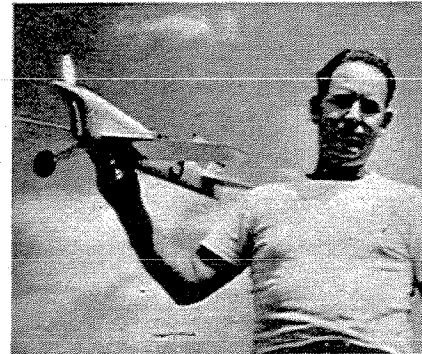
● Genial Johnny Clemens, Dallas, Tex., and one of his beautiful control-line stunts.



● Former Wakefield champ Jim Cahill. This airfoil-fuselage model put him on '48 team.



● Les McBrayer, Pasadena, Calif., and junior-type Goodyear U-control racer.



## DOPE CAN

"MY ONLY GRIPE," SAID ONE ENTRANT, "IS THAT I HAVE NO GRIPE. THIS IS ONE CONTEST THAT IS REALLY WELL RUN." SUCH WAS THE GENERAL FEELING ABOUT THE FINEST OF ALL NATIONAL MEETS



CAN you imagine a town of 5,062 folks where 500 turn out to erect snow fencing for the National contest? That was Olathe, friends. We have no way of knowing where or when the 18th National Model Airplane Meet will be held, but this year's outstanding meet will really give the '49 sponsors something to shoot at. After two post-war competitions that were not all that they might have been (in '46, of course, Wichita volunteered to take on the meet at the last moment after it had been cancelled out of Chicago, so all honor is due that city), it was a refreshing change to encounter a contest that was so very good from start to finish that the contestants themselves could hardly believe the whole thing was a reality.

Months ago *Air Trails* detailed some of the arrangements. The final setup was even better than the early releases would lead you to believe. For those who wished to stay close to the Naval Air Station on which the meet was held, there were facilities for sleeping 1,000 in a big Navy gym—adjoining the gym was the largest swimming pool in the midwest!

Continued —



Continued

Linen cost for those using the big "bunk room" was a big 35¢! Three Navy meals (the chow was excellent) cost only \$1 per day. In all respects the contestants were well treated, well fed, and well supplied with ample timers—all in Navy uniform and all assigned to work at the meet all week long.

The hospitality of Olathe (pronounced Olath-ah) was overwhelming. Even the mayor, H. K. Robinson, was out on the fence-erecting detail, and he proclaimed officially the period of the meet as National Model Airplane Week. Tom Poor, president of the Olathe Chamber of Commerce personally placed model meet signs and welcoming banners on all the lamp posts in the friendly little community. Perhaps one reason for the town's knowing how to play such an excellent host is that it is located on the old Sante Fe trail and has been accustomed to welcoming strangers for hundreds of years.

The first big batch of contestants flew in. Ohlsson & Rice's silvery DC-3 landed more than a dozen of the west coast's best builders and more than 100 of their planes the night before registration.

The flying area was so vast the contest was run off as a series of simultaneous events—each under the direction of an outstanding contest director with a full crew of processors and recorders (AMA leaders members) and with a team of Navy enlisted and commissioned personnel as timers. The timers had been pre-trained and knew well one end of a stop watch from another as well as a contestant's tale of woe from the truth.

L. L. ("Cookie") Cooke of Kansas City, Mo., was in charge of all control-line flying—stunt, speed, precision and scale. Tom Wardlaw, also of Kansas City, originally scheduled to handle the free-flight events, had to withdraw after TWA had assigned him to its Constellation school (Tom is a TWA "captain" pilot). His shoes were ably filled by "Red" Hillegas of Cleveland, Ohio, who was drafted into service just a few days before the meet.

Boeing engineer Jim McClelland of Wichita, Kan., contest director for the '46 Nats, handled the indoor events, and "June" Pierce of St. Joseph, Mo., directed the radio-control flying with the able assistance of M. J. "Mike" Thomas of Pittsburgh. Lt. Harry Vogler, USAF, put in an appearance at the meet after many years' absence in the air force, and was promptly assigned the job of handling the rubber-powered flying scale event. Harry worked so hard on this he worked himself right into the Navy hospital, but recovered in time to preside at the presentation of scale awards in the big recreation hall on August 8.

Frank Nekimken of American Legion headquarters in Indianapolis, Ind., acted as contest supervisor. He was ably assisted by Fred Wallace, Kansas Dept. Commander of the Legion, and Edward C. Marshall, commander of the Olathe American Legion Post #153. Val Sher-

rard, president of the Mid-States Model Aeronautical Association, handled recording and did a magnificent job.

One of the few models in the Pan American Airways payload contest especially designed for that event was the 1st place job built and flown by Herb Kothe of Omaha, Neb. Many of the "PAA-load" event entrants discovered that two "passengers" weighing a total of 1 pound were considerably more than they bargained for. It is our guess that this event will catch on quickly throughout the country if PAA keeps sponsoring a payload event—not only nationally, but on a local, state and regional basis, too.

Has anybody any new ideas on how the myriad events at the Nationals can be combined or simplified? It's impossible for any contestant to get three official, well-planned flights in even half the events. Why doesn't the AMA contest board figure out a system whereby Class A free-flight can compete against Class D—and so on down through the various categories?

As a suggestion, how about a power loading of 80 oz. per cubic inch displacement for A, 95 for B, 110 for C, and 125 for D, permitting all classes to be flown against one another?

Bob Holland, '48 National champ, wonders if Class A (0-.10), B (.10-.20) and C (.20-.30) couldn't be used for free-flight only; classes D (.30-.50) and E (.50-.65) for control-line. As the free-flight jobs get bigger and bigger, transportation and storage becomes a problem. In the speed events, he points out, the bigger ships get the greatest play and seem to be the most popular.

Frank Cummings, '47 National champ, couldn't make the Olathe meet. As we go to press we receive word of a run of bad luck he had at the Plymouth meet in Detroit which culminated in his stepping into a gopher hole while chasing a model thus wrenching a leg badly.

The Model Industry Association held several meetings in Kansas City, but so much was going on at Olathe that only a handful of MIA members were able to attend. Most of the industry boys were able to get out to the competition; quite a few competed, including Harold deBolt, Anthony Grish, Carl Goldberg, Wally Simmers, Jerry Brofman, Bill Atwood, and Johnny Clemens.

Mr. Atwood continues to display his skilled hand in the indoor field. It is heartening to see a well known engine manufacturer giving a comparatively little known category such a boost by his active support and participation.

Bob Holland who took first in the rise-off-water flying, received considerable attention—or, rather, his models did—from other entrants. Bob's ships were all beautifully constructed and the covering was dyed a brilliant red which enabled timers to keep his ships in sight for a longer period than models not so vividly colored.

One of the most remarkable turnouts in the meet was for the towline glider event. Evidently plenty of modelers are continuing their interest in this event which achieved considerable attention during the war when rubber and motors were hard to get. If the event draws in the future as it did this year it may soon become one of the biggest events in the National picture.

Along the same lines, indoor flying saw some very fine performances in the hand-launched glider categories. Flights of more than a minute were turned in consistently by the top place flyers in an arena which one would expect not suitable for that type of competition.

There were the usual registration, processing and waiting-for-timer lines at the National meet, but these moved along speedily much to the contestants' joy. Flights could be taken quite early in the day if one desired, and more than one contestant was astonished to see Dick Korda completing his third official Powerhouse flight in one gas event before most of them had even requested a first official for the day. Dick is evidently one of those early-to-fly-means-early-to-bed boys.

The Navy painted white the top wings of a TBM dive bomber and lettered an announcement of the meet on each one. The wings were then left in folded position. Each day this plane was towed to the main intersection leading to the field and served as an excellent road sign. Inasmuch as the plane probably cost something close to \$115,000, it was obviously the most expensive model meet sign in the history of aeromodeling.

A great deal of the credit for the splendid meet is due the personnel of the U.S. Naval Air Station—without the facilities of the field and the all-out cooperation of the men stationed there, the meet could not have been the success it was.

Probably no National contest has ever boasted the indoor flying facilities that were available at the Municipal auditorium in Kansas City, Mo. Plush lined seats awaited those who tired of heaving indoor gliders around or those who wearied themselves cranking the mammoth indoor motors (one loop of 1/16" T-56 rubber 16" long)!

Jack rabbits abounded on the free-flight field the first day of the outdoor event, but after taking a good, long look at the average bleary-eyed contestant and his "new look" monstrosity in the gas category, the rabbits wisely went underground for the remainder of the contest.

You might well claim that the meet was "out of this world." Take the hydro events, for instance. They were held on a pond right on the air station. Gently sloping banks formed a natural amphitheatre where the spectator could loil at his ease while watching the R.O.W. boys founder around shaking water out of engines and disclaiming responsibility for float designs.



# OFFICIAL 1948 NATIONALS WINNERS

## NATIONAL CHAMPION

Robert L. Holland, Sunland, Calif.

## CLUB CHAMPION

Oakland Cloud Dusters

## SENIOR NATIONAL CHAMPION

Jack Norris, Lakewood, Ohio

## NOVICE NATIONAL CHAMPION

Charles Sotich, Chicago, Ill.

## JUNIOR NATIONAL CHAMPION

William Fox, Boulder, Colo.

## PAA-LOAD EVENT

(Class B Free Flight Gas—best single

flight JR. or SR.) 1. Herbert Kothe 361.0; 2. Fred Whiting 233.4; 3. David Thomas 144.5

## WAKEFIELD ELIMINATIONS

Junior—1. Jack Butler 16.36; Senior—1. Tom Corvett 336.47; 2. Charles Dorsett 16.36; 3. David Thomas 168.66. Open—1. R. Schumacher 274.33; 2. Dick Korda 273.47; 3. James Bunton 272.67.

## INDOOR H.L. GLIDER

Junior—1. Charles Sotich 44.0; 2. Ronald Truelson 40.0; 3. Jack Butler 33.0. Senior—1. Angelo La Castro 54.8; 2. Dennis Rushing 54.3; 3. Don Kennedy 53.1. Open—1. Michael Demos 1:03.0; 2. Raymond Good 1:02.0; 3. Manuel Andrade 1:00.7.

## INDOOR STICK

Junior—1. Charles Sotich 8:56.8; 2. Jack Butler 4:01.0; 3. Chris Ross 1:00.5. Senior—1. Don Kennedy 22.23.0; 2. Erwin Rodemsky 17:36.0; 3. Carl Redlin 15:10.6. Open—1. Bill Atwood 25:00.1; 2. Robert Holland 24:32.0; 3. Henry Cole 23:42.0.

## INDOOR CABIN

Junior—1. Jack Butler 0:15.0; 2. Charles Sotich 0:09.0; 3. Fred Andrews 0:05.0. Senior—1. George Xenakis 6:19.0; 2. Don Kennedy 2:38.8. Open—1. Walter Erbach 16:26.0; 2. Peter Demos 14:17.0; Bill Atwood 14:16.2.

## MULVIHILL OUTDOOR STICK

Junior—1. Harry Snavely 385.1; 2. Louis Roemer 214.6; 3. Charles Sotich 182.3. Senior—1. Peter Nishanian 908.0; 2. Wm. Erlich 808.8; 3. Robert Bates 695.0. Open—1. Bob Bienenstein 821.3; 2. Robert Holland 802.5; 3. J. D. Breedlove 730.3.

## STOUT OUTDOOR CABIN

Junior—1. Ronald Truelson 264.6; 2. C. W. Edgar Jr. 193.2; 3. Harry Snavely 181.4. Senior—1. Wm. Erlich 747.8; 2. Richard Tarjany 592.6; 3. Carl Redlin 568.4. Open—1. Manuel Andrade 785.9; 2. Sid Jepson 678.2; 3. Joe Matulis Jr. 641.8.

## TOW-LINE GLIDER

Junior—1. Ronald Truelson 147.3; 2. Jack Butler 108.9; 3. Charles Sotich 68.9. Senior—1. Bill Fox 610.3; 2. Richard Enseki 484.4; 3. Bill Crany 317.0. Open—1. Carl Lindsey 771.5; 2. David Kneeland 630.8; 3. F. J. Lilly 511.1.

## FLYING SCALE (RUBBER POWERED)

1. Paul Gilliam 70.8; 2. Chester Lanzo 67.8; 3. Robert Holland 67.1.

## CO2 EVENT

Junior—1. Larry Erickson 295.0; 2. Gene Smoyer 233.7; 3. Charles Sotich 224.6. Senior—1. Erwin Rodemsky 448.6; 2. Mike Stephens 296.5; 3. Robert C. Jones 295.9. Open—1. Merl Shammo 697.3; 2. Bob Bienenstein 644.2; 3. R. J. Dunham 599.3.

## OUTDOOR H. L. GLIDER

Junior—1. Bob Gelvin 248.2; 2. Charles Sotich 152.0; 3. Jack Butler 101.4. Senior—1. Carl Haas 239.0; 2. Henry Savage 234.9; 3. Gene Templemeyer 215.4. Open—1. Dennis Davis 324.8; 2. Michael Demos 233.2; 3. Joseph Macay 229.8.

## RADIO CONTROL

1. Jim Walker 193; 2. George G. Trammell 179; 3. F. R. Foxworthy 164.

## FREE FLIGHT GAS CLASS A

Junior—1. Bob Gelvin 491.7; 2. Thomas Moffit 431.3; 3. Maurice Pollock 358.0. Senior—1. Jack Norris 838.8; 2. Jason Haywood 762.0; 3. Dick Tarjany 737.7. Open—1. Merl Shammo 1134.9; 2. E. H. Aikman 773.0; 3. Fred Miller 771.4.

## FREE FLIGHT GAS CLASS B

Junior—1. Larry Erickson 865.0; 2. Lawrence Goodell 395.5; 3. Richard Tremps 394.0. Senior—1. Jack Norris 727.9; 2. Bill Fox 719.0; 3. Norval Hale 681.3. Open—1. Richard H. Arland 848.4; 2. J. E. Vance 845.5; 3. Frank Vollrath 825.1.

## FREE FLIGHT GAS CLASS C

Junior—1. Jack Butler 398.5; 2. Vernon Weber 320.2; 3. Jim Keller 211.6. Senior—1. Wm. Burgess 1000.3; 2. Larry Lohkamp 502.2; 3. Donn Dietrich 480.6. Open—1. Wm. H. Parmenter 775.0; 2. Harold Tremps 641.3; 3. Richard K. Enseki 603.7.

## FREE FLIGHT GAS CLASS D

Junior—1. Vernon Weber 664.12; 2. Larry Erickson 600.0; 3. Steven Carter 358.3. Senior—1. Dave Reber 1184.2; 2. Andrew Bauer 750.3; 3. Fred Whiting 711.2. Open—1. Jerry Brofman 1112.9; 2. Don Butcher 741.2; 3. Wm. Parmenter 671.3.

## R.O.W.—ONE CLASS

1. Bob Holland 489.8; 2. Lew Mahiew 403.6; 3. Andrew Tagliafico 284.9.

## U-CONTROL CLASS A SPEED

Junior—1. Bob Carnes 86.5; 2. W. Young 78.3; 3. Warren Kurth 76.3. Senior—1. Dick Rigny 98.9; 2. Jack Norris 90.9; 3. Jack Breen 87.4. Open—1. H. D. Debolt 108.4; 2. R. F. Swenson 96.8; 3. Jim Clem 92.8.

## CLASS B SPEED

Junior—1. Elwyn Hill 118.4; 2. Steven Jordan 111.8; 3. Dave Webb 108.4. Senior—1. Maurice Stanglin 128.6; 2. Stanley Grish 126.8; 3. John Williams 126.8. Open—1. Stanley Grish 138.5; 2. James McElry 124.1; 3. Manley & Hudson 124.1.

## CLASS C SPEED

Junior—1. Bobbie Krider 130.4; 2. Elwyn Hill 122.5; 3. Leonard Boesken 120.0. Senior—1. Maurice Stanglin 130.4; 2. Richard Rigney 130.4; 3. Sam Beasley 125.0. Open—1. Don Newberger 136.4; 2. Babe Dunning 136.4; Manley & Hudson 134.3.

## CLASS D SPEED

Junior—1. Eddie Joe Schwarz 138.5; 2. Wayne Young 135.3; 3. Jerry James 130.4. Senior—1. Hubert Parker 140.6; 2. Raymond Shearer 139.5; 3. Bob Behrens 135.3. Open—1. Wallick & Thomas 151.3; 2. Don Newberger 146.3; 3. Babe Dunning 138.5.

## SPEED U-CONTROL JET POWERED

(One Age Class)

1. H. Debolt 133.3; 2. Frank Leshek 132.4; 3. Merle Koekerneck 127.7.

## U-CONTROL SCALE

Junior—1. Larry Queisert 193; 2. Sonny Buckley 134. Senior—1. Dale Kim 301; 2. Mark Altman 300; 3. Alfred Schulz 291. Open—1. J. C. Yates 380; 2. Roy Mayes 327; 3. Murray Hamilton 320.

## PRECISION STUNT EVENT

Junior—1. Davis Slagle 369.5; 2. Lawrence Goodale 342.0; 3. David Webb 340.0. Senior—1. Bob Arnett 388.5; 2. David Carley 372.0; 3. Rodney Larsen 364.5. Open—1. Jim Saffig 382.5; 2. J. C. Yates 376.0; 3. H. M. Bourgeois 369.0.

## CONTROL LINE NOVELTY STUNT

(One Age Class)

1. Davis Slagle 249.5; 2. Leon Shulman 212; 3. Clifford W. Schaible 171.0.

U-CONTROL ISN'T  
Full CONTROL  
WITHOUT



TWO-SPEED

## ENGINE CONTROL

### FOR YOUR FIRST FLIGHT:

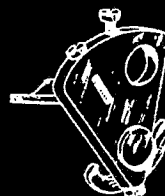
Worried about being able to control the model? Red Wing ENGINE CONTROL lets you land or take-off when you want to!

### FOR THAT NEW SCALE JOB:

You've seen planes glide in for a landing at strange fields then give it full power then pull up and around for another approach--you can do it too, with a Red Wing ENGINE CONTROL!

### FOR THAT NEW STUNT SHIP:

Be able to power stall, make precision landings, unassisted take-offs for additional points with your engine idling or wide open. Red Wing ENGINE CONTROL makes all this possible.



ONLY

\$1.95

COMPLETE

NOTHING ELSE  
TO BUY

NO WIRING, SHORT CIRCUITS, OR EXPENSIVE BATTERIES AND RELAYS TO WORRY ABOUT. THE RED WING ENGINE CONTROL IS MECHANICAL.

IT'S SIMPLE - IT'S FUN!

The Red Wing ENGINE CONTROL mounts on the intake tube of the engine, with a cord link to the bellcrank. The attachment screw and the cord line are provided.

### TO FLY UNASSISTED:

Leave the plane on the ground in take-off position with the engine idling. Walk out, pick up the control handle give it full up in a flip motion, returning immediately to neutral and the plane is revving up, taking off.

### TO LAND AND TAKE-OFF:

Simply move the control out with a sudden motion, about six inches, then pull it back. The control will flip to idling. Land the ship, then give it full up on the control to take off again.



PULL  
POWER



IDLING

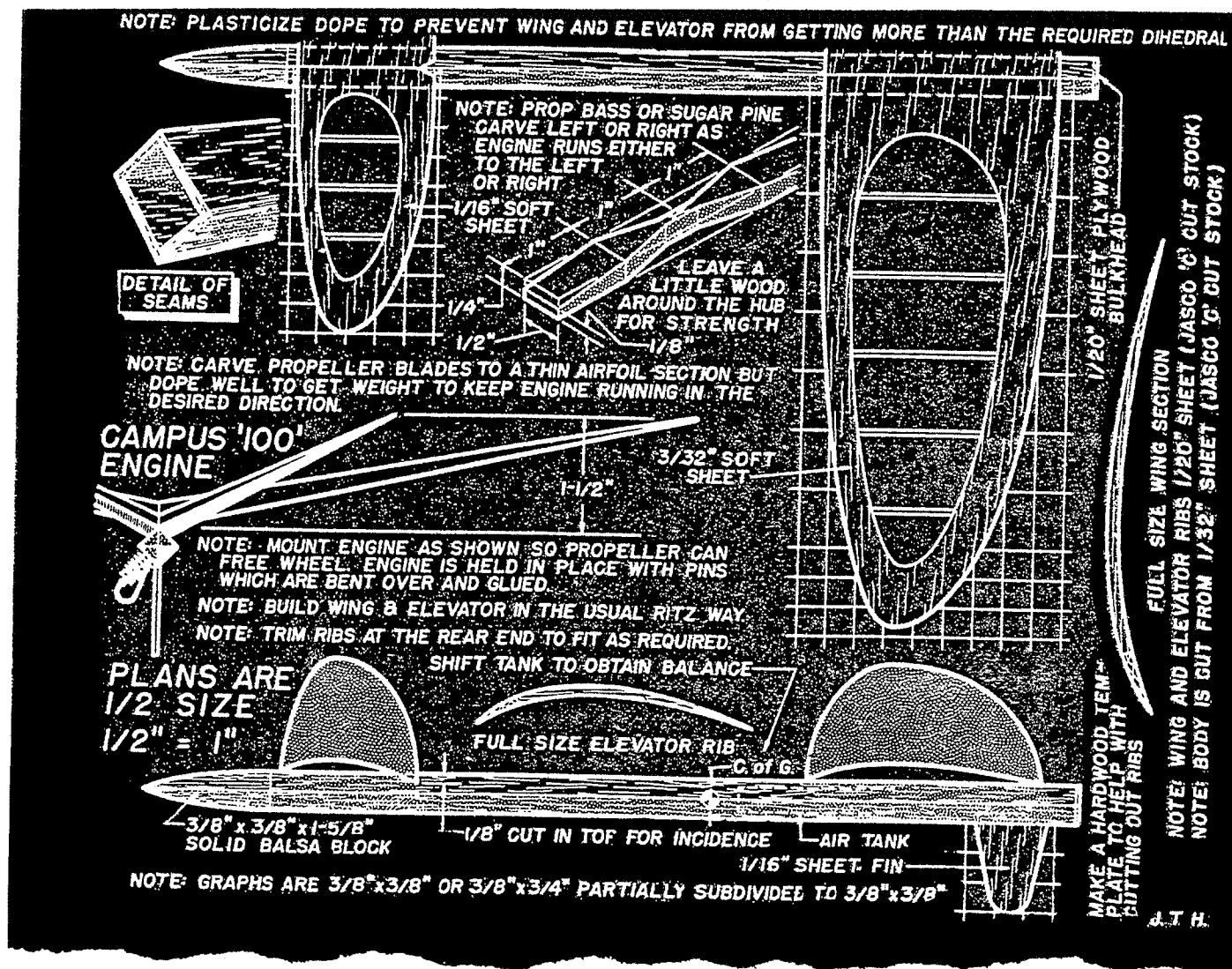
The Red Wing ENGINE CONTROL is adjustable to your 'feel' of flying--there's nothing to learn.

SEE IT AT YOUR DEALER'S  
Dealers: Write for jobber's name

ATLANTIC AIRCRAFT INC.

213 Washington St.  
West Warwick, Rhode Island





# DIOXIDE DARLING

Powered by an ultra-miniature CO<sub>2</sub> engine mfg. by Bill Brown of 'Brown' engine fame, and still being produced 50 Years later!

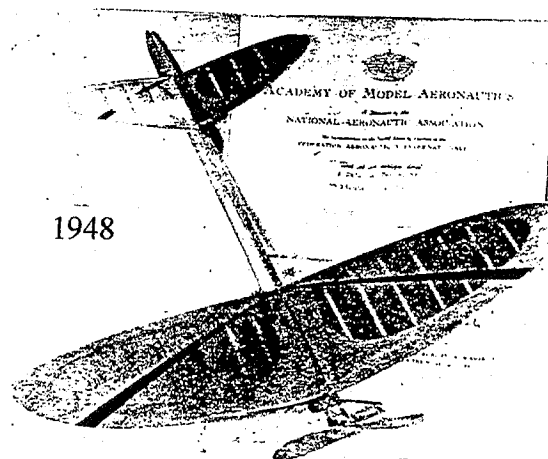
DESIGNED AND FLOWN BY FRANK EHLING

BUILD A COPY OF THIS REMARKABLE RECORD JOB THAT DID BETTER THAN 23 MINUTES ON 3 FLIGHTS

LAST July word flashed through model circles that unpredictable Frank Ehling of Jersey City, N. J., had done the unpredictable again. This time he established a new national record for carbon dioxide gas powered craft of 23 minutes, 14 seconds. This 3-flight total bettered the previous record by more than 8 minutes!

This record breaking canard pusher is presented above in half-size plan form. The model is so simple (the mark of a good designer) that the drawings are self-explanatory.

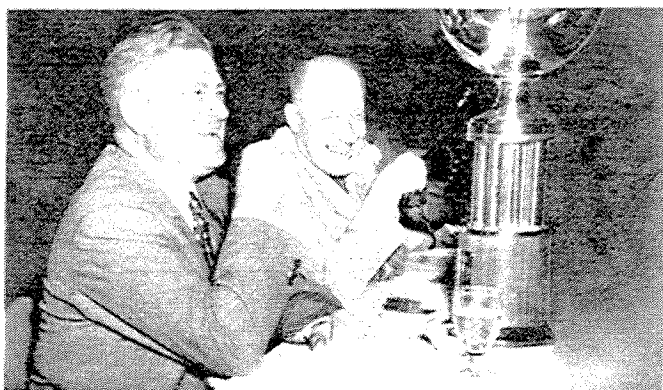
Total weight of the craft with engine is only 9/16 ounce. Lightest grade indoor balsa is used throughout.



This is a sample of the interest in miniature models

 AIR TRAILS PARADE OF WINNERS—Another National Record Holder





● K. T. Keller, Chrysler Corp. president and Brig. Gen. R. C. Candee reacting to skit at victory dinner.



● Sandra Pinckney gets girls award from DeSoto pres. Bleicher.



● Frank L. Cummings, Los Angeles, Calif., sweepstake winner in open class (over 21) with C.I. A.

● Jack Hudspeth, 14, Portland, Ore., junior class point champ congratulated by C. D. Frank Sposite.



● Martin Bainbridge given sportsmanship prize by R. Somerville.

● Open stunt winner Lou Andrews gets grip from AT's Al Lewis.





# PLYMOUTH

1948 - 2ND

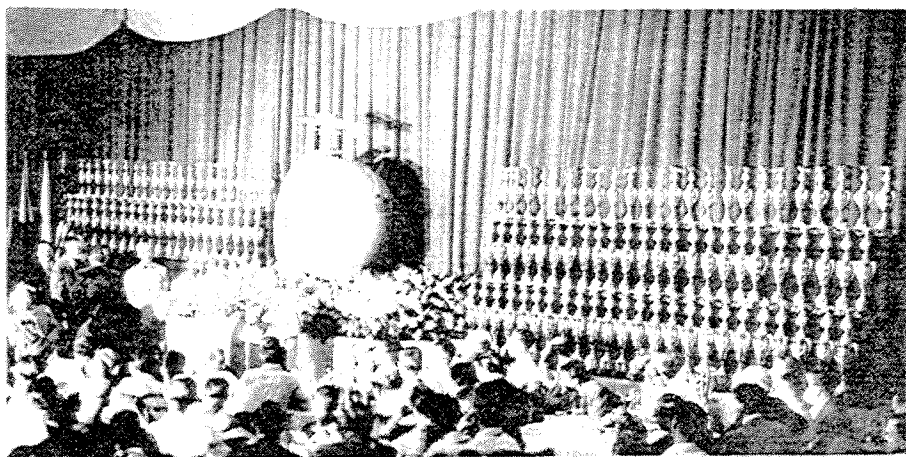
## *International*

# CONTEST

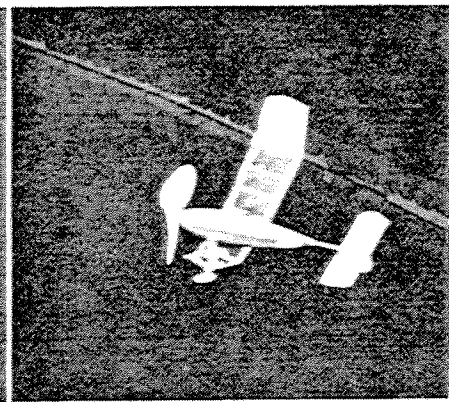
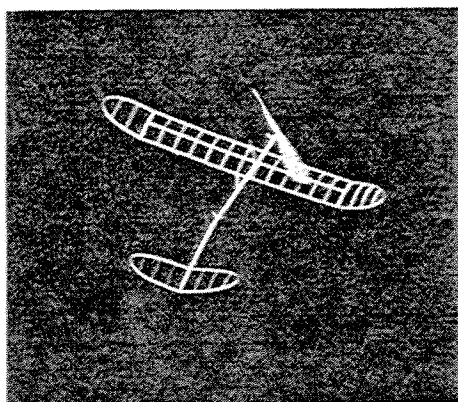
THE Plymouth Motor Corporation ran off its second International Model Plane Contest in Detroit late in August and in all respects it was a true international competition. In addition to a hand-picked entry list of 500 American flyers, aeromodelers represented Canada, Alaska, Hawaii, Cuba, Mexico, Belgium and the Canal Zone. About 97% of the U.S. contestants were sponsored by local Plymouth, DeSoto or Chrysler dealers.

More than 140 trophies were presented to winners together with \$7,875 in cash. In spite of the attractive money awards a high degree of sportsmanship was displayed and the meet even produced one chap, 14-year-old Martin Bainbridge of Watertown, Mass., who was such a straight shooter that a special award was secured for him to signify his outstanding honesty.

The first two days of the meet saw free-flight rubber and gas models operating at Newport Field in Flat Rock, Mich., an auxiliary Navy airfield. Then the competition moved into the University of Detroit's football stadium for a thrill-packed three days.

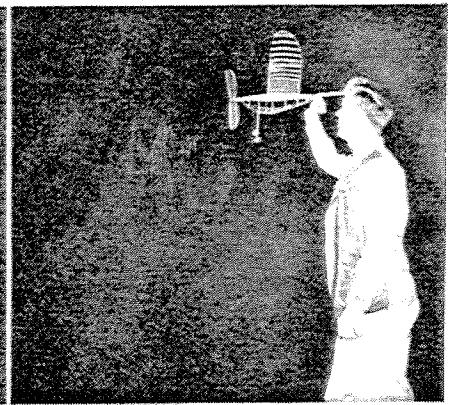
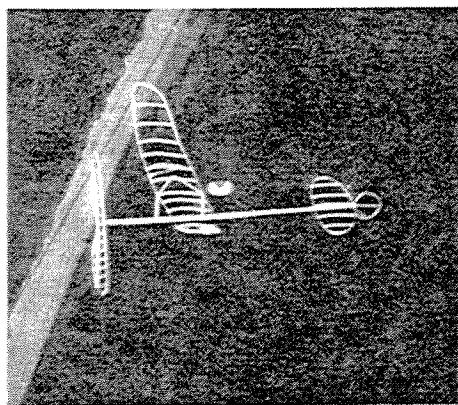


● Display of permanent cups at dinner drew "oh's" and "ah's."

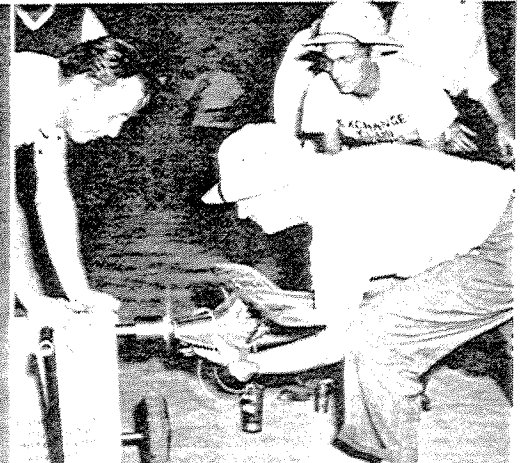


● Left: Hank Cole's V-tail Class C indoor stick in flight. Right: John Ward, Akron junior, flew this paper commercial.

● Below, left: Bill Atwood's 1st place (open) stick did 21:15. Right: Harold Stofer, Indianapolis, with Cl. B r.o.g. ship.



● Stinson scale model c.l. event was flown at night. Below: an entry takes off. Right: George Earl, Detroit, open winner, fires up.

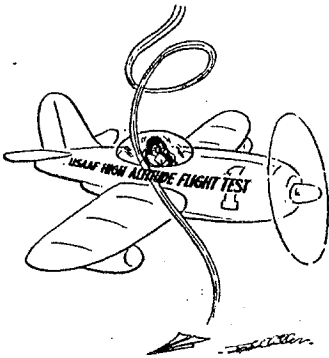




## PLYMOUTH MEET

Success nearly ruined the control-line events. So many entrants turned out to fly in all categories (indoor and outdoor, rubber and gas, free-flight and control-line) that there was a spectacular jam-up in the stadium of modelers waiting to take official flights. This was lessened somewhat by an extension of flying hours each evening and finally continuing the control-line events an extra half-day so as many fellows as possible could fly. We feel reasonably sure that in subsequent meets the Plymouth officials will be well prepared for the onslaught and be able to handle without difficulty all flights.

The overcrowding resulted from the fact that many entrants who qualified in but one or two events locally to gain admission to the international finals showed up at Detroit with models for almost every category.



This taxed the facilities established for the contest and indicated that emergency methods would have to be adopted to handle all the activity. In addition to an extension of flying time steps taken included opening up additional circles on the U. of D.'s baseball diamonds, utilizing kleig lights

which had been set up to light the sky over the stadium at night as ground illumination for the extra circles outside the stadium, and the creation of an extra half-day of control flying at semi-improved grounds just outside Detroit.

It was refreshing to see how contestants and officials alike pitched in to help when jam-ups occurred. The general feeling was, "Don't kill the timer, he's doing the very best he can."

In all other respects the contest was quite a show. Good crowds turned out to see the flying in the stadium and stayed on late at night cheering the stunt flyers as well as the jet and speed contestants. The jets made a spectacular showing under the floodlights and after some trouble the first afternoon taking off on medium-long grass, most of the jet addicts removed landing gears and dollies and slid their ships into the air. Highest time in jet was made by Robert M. Thor of Minneapolis who flew as a team with H. H. Lundquist with a good time of 141.34 mph (considering the climatic conditions and the take-off facilities). This was more than 3 mph faster than the next best jet score

Top men in each of the age categories ended up as follows: Jack Hudspeth, Portland, Ore., took the junior high point trophy; Donald G. Hobel, Buffalo, N.Y., captured the senior high point trophy; and Frank L. Cummings, Los Angeles, Calif., limped off with the open high point award. Cummings, 1947 National meet champ, stepped into a chuck hole while chasing a free-flight model at the Newport field and had to continue the contest with an ankle and foot in a cast.

The open class top place award again showed the fine sportsmanship qualities displayed by many entrants. Originally it was announced that Bob Holland, Sun-

land, Calif., the 1948 National meet champ, had won the prize, but he suggested a re-check be made having figured that Cummings nosed him out. This proved to be the case and Holland relinquished the prize in favor of fellow Californian Cummings.

Young Bainbridge, already mentioned, protested an early compilation which had him in second place in an outdoor category with a time he felt he had not racked up. A recomputation showed him to be correct and he dropped out of the money awards. R. C. Somerville, general sales manager of Plymouth, made a special presentation of an extra added trophy to Martin in recognition of the latter's sportsmanship. We're happy to report that contestants and officials alike gave the Watertown lad the greatest ovation at the victory dinner.

Lewis J. Andrews, manufacturer of the well-known Trixter kits, copped the *Air Trails* perpetual stunt trophy with some mighty fancy flying. His Trixter Invert Junior model featured two-speed control for a compression ignition engine and enabled him to perform to perfection. Sandra (Skippy) Pinckney who received national recognition as "Miss Model Aviation" in the September issue of *Air Trails* was awarded the girls' high point trophy for best all-round performance among the feminine flyers.

An analysis of winning ships will appear in an early issue of this magazine. Not only will times be given but much pertinent data on types of models, motors and props used, as well as detailed descriptions which should do much to assist readers in duplicating winning performances.

Our special appreciation goes to H. B. Heberling, assistant general sales manager for Plymouth, and to James (Handsome Jim) McCandless of Plymouth News Bureau.



8 Years later (see pg. 62), famous cowboy star Gene Autry still had a great interest in all aviation. We see him catching up on the latest angles of model plane work. Also shown, examining a Micro Diesel mounted in a deBolt 'Dmeco Bipe'. Gene also owns a full-size 'Beechcraft' and has added up over 2500 hours of flying time!



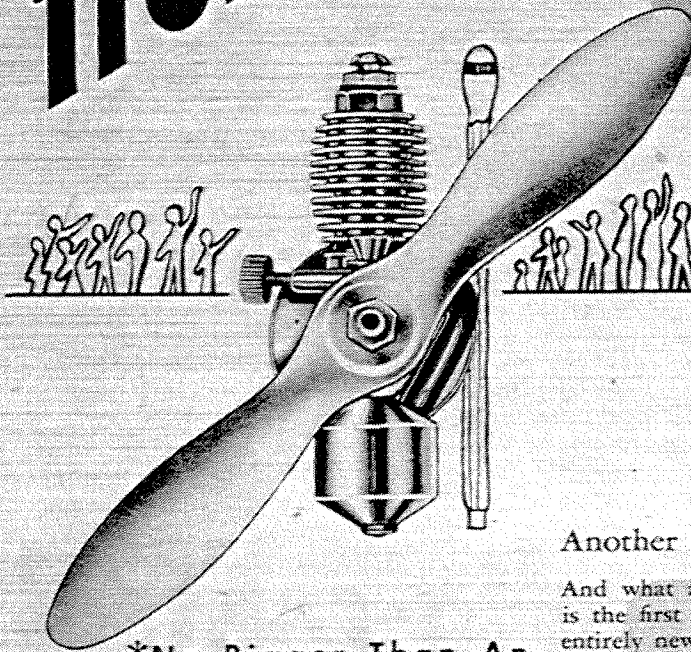
January 1949 Air Trails

Here it is

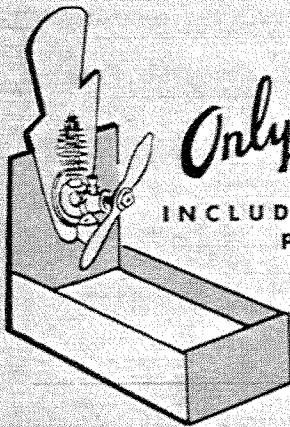
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And what a first! The revolutionary new INFANT Torpedo is the first engine of its size on the market. It opens up an entirely new field of modeling undreamed of only a few short months ago. Now you can fly indoors or out . . . your backyard or in the wide open spaces . . . anywhere. And the price, including a sturdy stamped aluminum prop, is only \$7.95. What a BUY!

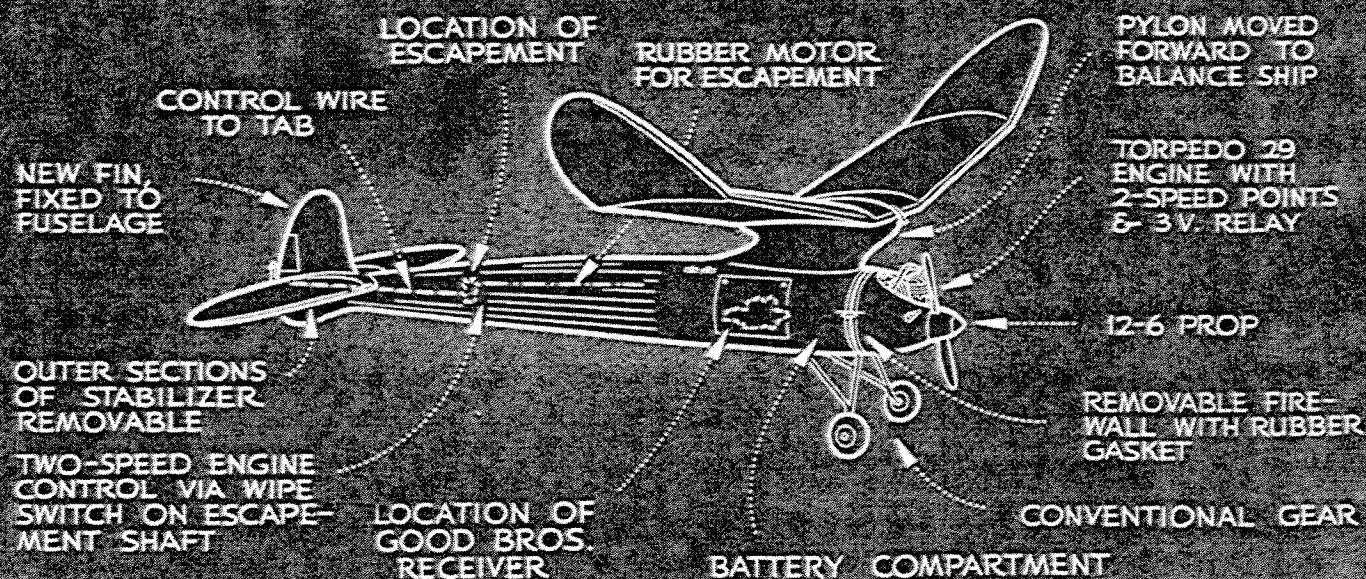
And what a BABY . . . so small you can cradle it in the palm of your hand . . . yet it's the easiest to start little engine you have ever seen. The new K & B INFANT Torpedo . . . one ounce of power and performance. This exciting engine has a new type radial easy-to-install mounting, readily adaptable to rubber band and CO. kits now on the market. It's a 2-cycle rotary valve, K&B Hotpoint-Plug ignition type engine. Bore is .281"; stroke .331" and the displacement only .020 cu. in. Little, yes, but the INFANT will turn up better than 10,000 RPM.

And, of course, each INFANT is factory tested and carries the same familiar Torpedo guarantee. What a BABY! What a BUY!

*First shipments to dealers are on the way right now . . . but some may be delayed because of heavy seasonal mailing. However, all dealers should have INFANTS in stock before Christmas.*

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## MODIFICATIONS TO SAILPLANE FOR RADIO-CONTROL

*You don't have to be a genius to...*

# ...fly radio-control!

## 1949

Forget all this mumbo-jumbo about how difficult r-c operation is supposed to be—the only stumbling blocks are outdated Federal rules

By C. O. WRIGHT

THE large increase in radio-control entries at the Olathe Nationals last year indicated expanded interest in radio-control for free-flight and proved the event is out of the "genius" class. This season should find even more of the fans in the field. With lightweight receivers on the market, technical difficulties are at a minimum, and the job is largely one of model building. The experienced free-flight gas builder can easily convert one of his successful D jobs to radio or build a radio job following his favorite design. The completed ship should weigh five pounds or less, and should fly well on any good 29 motor with a twelve-inch-diameter, six-inch-pitch prop.

The editor asked for a report on a Sailplane radio-control model which son Bob and I flew with mixed success at Olathe to score tenth place. Let me hasten to say that we are the most amateurish beginners in

radio-control and I am reporting on our experience not for the Jimmie Walkers and Goods, but with the hope that some of the inexperienced who have been hesitating to get their feet wet may jump into radio-control, for it is not too difficult and is a lot of fun.

Our observation convinced us that much failure with radio-control is due to poor ships, unworthy of flight with or without radio in the first place. We therefore selected our favorite D ship, the Sailplane. With no significant alterations, the radio was installed with two-speed motor timer. At first we used a DeLong 29 motor. Long motor run warped the piston, and the night before we left for Olathe we substituted a K&B Torpedo 29 with a two-speed timer installed. (This shift was made with the encouragement and general supervision of Russ Nichols who was in town, planning the AMA business sessions at Olathe.)



The Sailplane, weighing five pounds complete with all batteries, radio and two-wheel gear, performs so well on a 29 motor that we would not recommend a motor of larger size. On full speed the ship has a good climb and a nice rise off the ground, while on low speed motor timer point it loses a little elevation. With a larger motor, vibration might well be more serious, climb too steep, and low speed motor might not result in desirable loss of altitude. Leave the larger, more heavily powered ships to the experts.

The ship was started during the Thanksgiving holidays in 1947 and completed on Christmas week after Bob had returned from college in California. Our experience with the flight characteristics of the ship has been all that could be desired. Constructed and balanced as shown on the plans, it flew without important adjustment, and the low power prevented critical performance. Our grief has been with the radio where we are very inexperienced. A defective sensitive relay on the receiver, now corrected, prevented good control at Olathe, but the ship survived three flights without damage when control was lost.

The accompanying drawings show exactly how we installed the Good Brothers receiver in the Sailplane fuselage, placing the batteries in the front compartment, back of a removable firewall. The pylon was moved forward to balance the ship, and a conventional

of the detachable elevator is shown. While the construction is simple, it must be done accurately and carefully. After the elevator cementing has thoroughly set, the parts are separated with a thin razor blade, cutting the leading and trailing edges. Soap or parafine on the dowels makes for easy working.

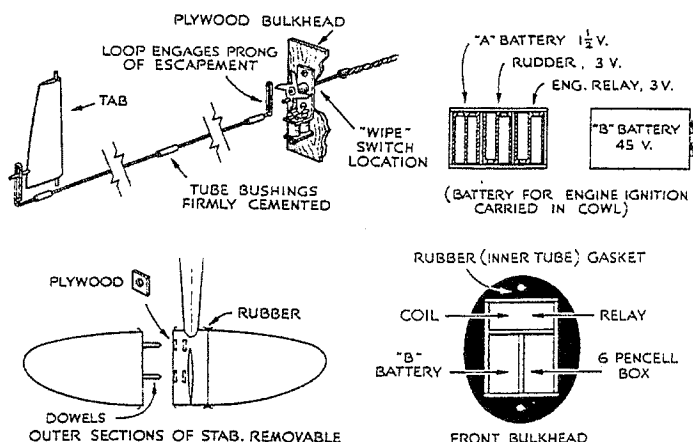
We used a two-speed motor timer operated by a conventional three-volt relay. A simple wipe switch was installed on the rubber motor shaft of the rudder escapement mechanism so that every other neutral position closed the switch, resulting in "low" motor on every other neutral rudder position. A very small condenser, smallest available, was thrown across the points of the wipe switch to guard against interference with effective antenna length.

The Sailplane with the 29 motor produces a somewhat deliberate response to the signals, and the inherent stability of the design makes rapid stunting difficult. The slow action, however, is an advantage for the beginner, who may increase tab size or movement as he gains in experience and desires more snappy performance.

So much for our Sailplane r.c. experience. I hope it will encourage many of you to try your hand at this interesting and satisfying form of model aviation. And, remember—you don't have to be a genius...

Dr. Walter Good, chairman of the Academy's contest board (and with his brother William, three time winner of the National radio-control championship) and the writer are concerned over the difficulties that lie in the path of the would-be radio-control flyer. We drew up the statement that follows which concerns desirable modification of radio-control FCC regulations.

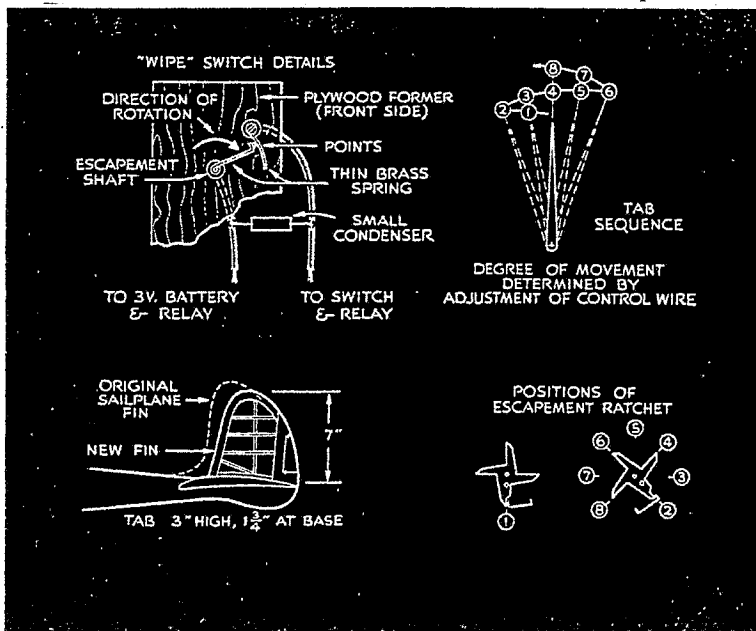
It is evident that quite a few modelers have written to the Commission urging that the rules be liberalized. As president of the Academy of Model Aeronautics I urge you to continue with the campaign in your area and do the following: (1) get your local model clubs to send communications to Washington; (2) send these letters to the Secretary and the members of the FCC; (3) send similar letters to the Congressmen and Senators from your state; (4) if convenient, send me a copy of the letters you are writing so we can centralize the drive from my office and follow up.



two-wheel gear was attached to the fuselage, but not to the firewall. We used a compromise rudder size, about half way between the larger area on the early plans and the smaller area on the last Sailplane kits sold. The height of the rudder used is seven inches. The tab is roughly triangular in shape with  $1\frac{3}{4}$ " at the base and 3" at the altitude.

The removable firewall serves several purposes, chief of which are to offer access to the radio batteries, and to allow for a rubber gasket (made from inner tube stock) between the fuselage and firewall to dampen out motor vibration. Without this rubber gasket, motor vibration resulted in a flutter in the rudder tab.

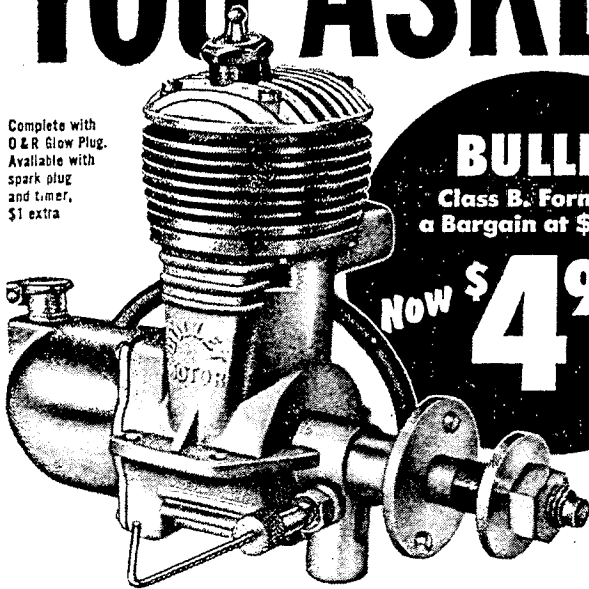
We found it wise to attach the rudder permanently to the fuselage and to make each side of the elevator removable for easy transportation. The construction





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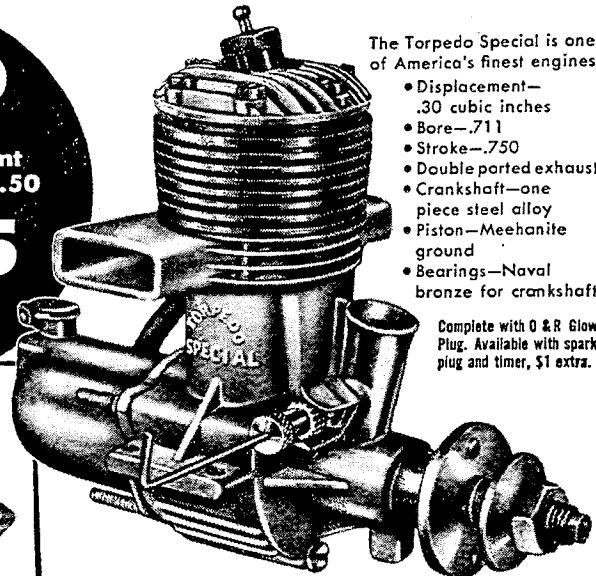
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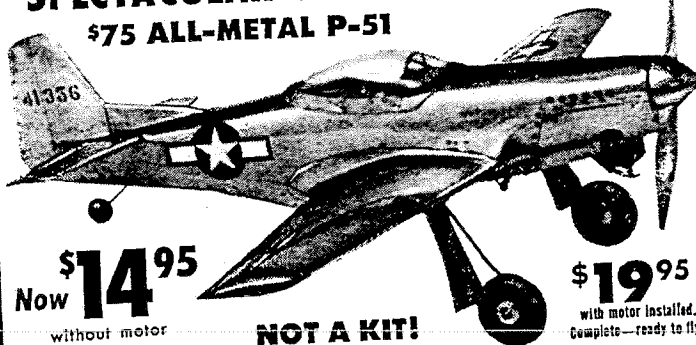


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without motor

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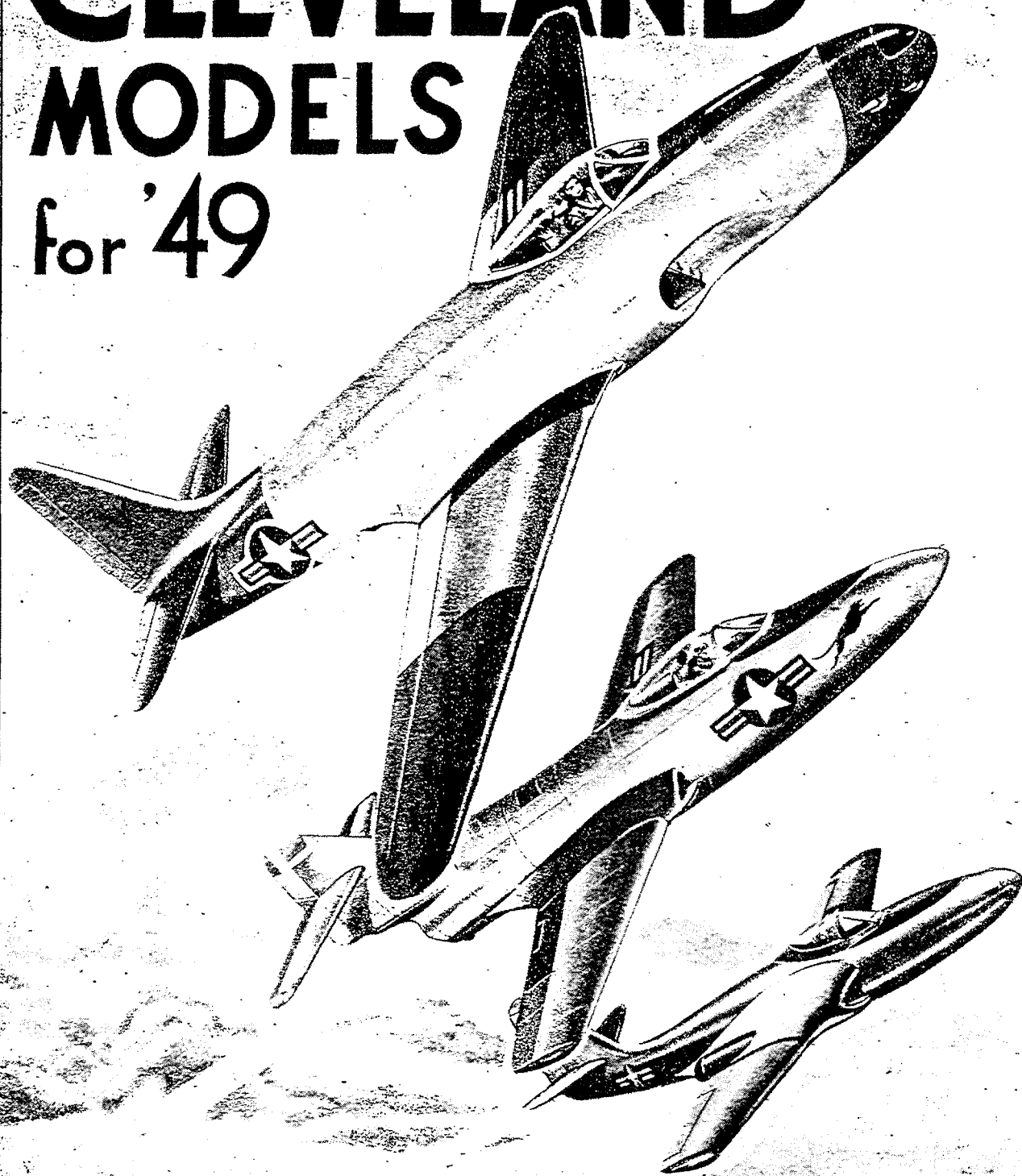
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1949

NOW THE PRICE REDUCTIONS HAD BEGUN FOR ENGINES NOT DESIGNED TO RUN WITH GLOW PLUG & ALCOHOL FUELS.



# CLEVELAND MODELS for '49



PRICE 5c



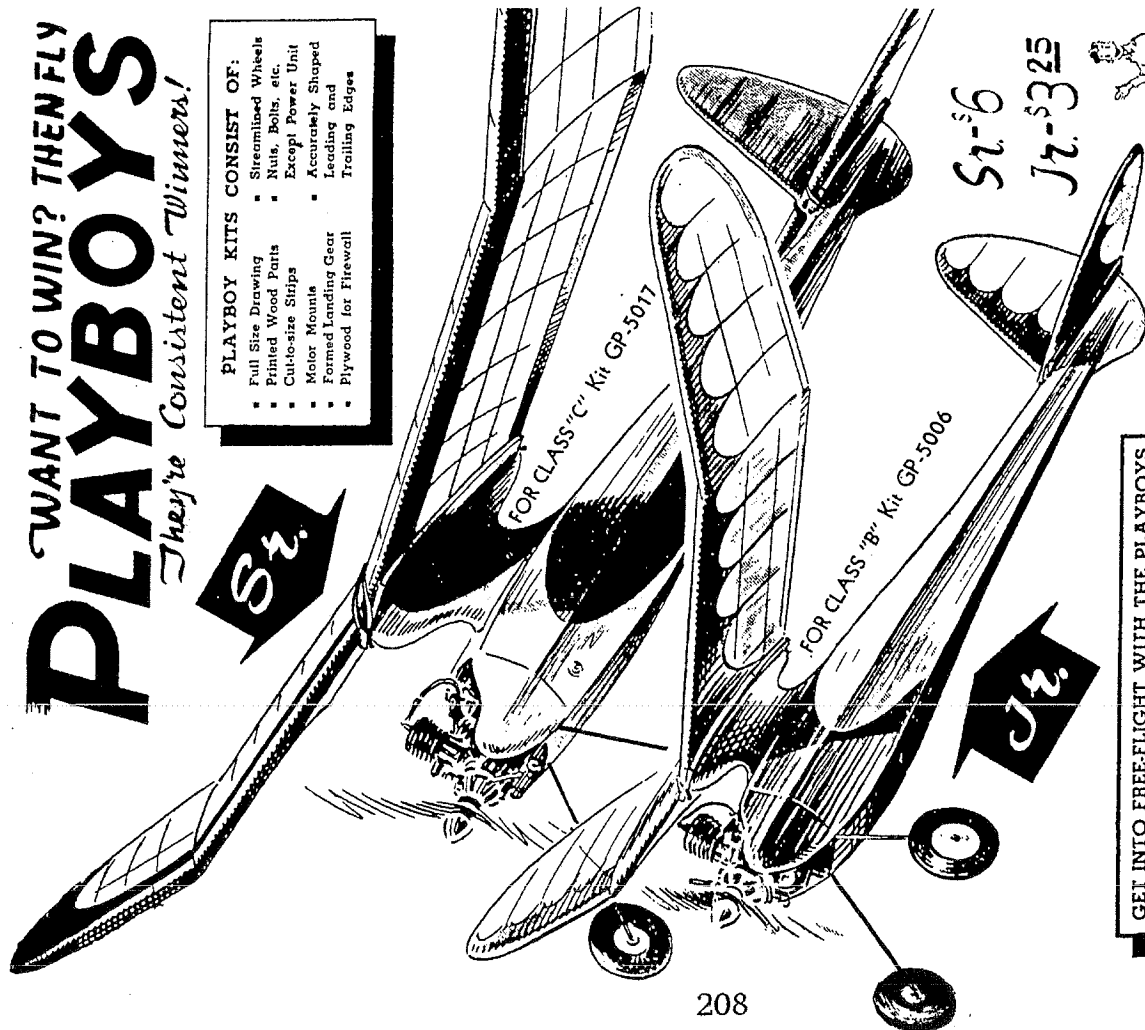


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## GET INTO FREE-FLIGHT WITH THE PLAYBOYS

The two superb "Playboys" shown zooming their way into the blue, are fine examples of the very best in free-flight gas models. They are simple in construction, reliable in performance, and have collected many prizes on the field. Moderate Playboy prices are an open invitation to all who are air-minded, and the new low prices of gas motors bring this splendid phase of modeling within the reach of all. Get into the swim with the "Playboys" now. All-weather models, they can be flown the year round, and can be seen climbing the skies in winter and summer. Easily outfitted with pontoons or skis, they rise off water or snow as well as land.

## THE FUN OF FREE FLIGHT

Free flight models offer the greatest thrills, variety and interest to be had in modelling. Never two flights alike! They are the only of the models which really fly in the true sense of the word. They are a superb opportunity for developing skill, and teach the most about building the model. The truly air-minded boy will want to build a free-flight, and control fans have a new sport waiting for them.

52-56  
J2-5325



## Luscombe SILVAIRE 1-1/4" Scale Gas Model

In tune with the recent trend toward scale models, we offer you this superb gas model of the sleek, air, popular Silvaire. It may be flown free-flight with Class A, B or C motors, or as a control line job, with A, B, or C motors. Featuring light but rugged construction, and exact reproduction of the real thing, this model will cause admiration on any model flying field. Kit complete with exception of liquids and power unit. \$3.00

SPAN - 43"

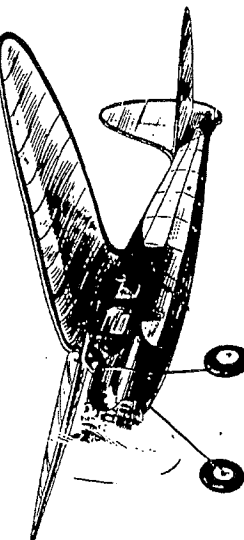
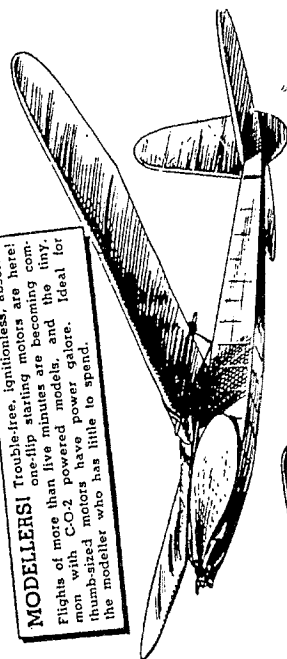
*Just the thing!*

## C-O-2! - THE NEW WAY TO FREE-FLITE

### THE NEW THERMALIER

Here is an old favorite pre-war rubber flyer that has been modified for C-O-2 power as well. Its 35" wingspan is just right. It is a beautiful flyer in all respects and is simple to build, order yours today. Kit is "dry", and does not contain motive power. KIT E-14, only ... \$1.00

**MODELLERS!** Trouble-free, ignitionless, absolute C-O-2 starting motors are here! Flights of more than five minutes are becoming common with C-O-2 powered models, and the tiny, thumb-sized motors have power galore. Ideal for the modeller who has little to spend.

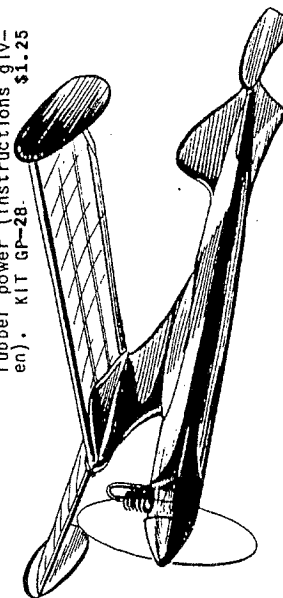


### THE BABY FLEETSTER

This beautiful 32" wingspan model has caused excitement wherever shown. It is designed specifically for C-O-2 motors, and the flights are spectacular and realistic, looking just like a real airplane. The kit is complete with the exception of motor and liquids. If you don't have a C-O-2 motor yet, you can build this model for rubber power (instructions given). KIT GP-28. \$1.25

### LANCER - AN AMAZING PERFORMER

This 32" span model is almost "supercharged"! It may be flown with either rubber or C-O-2 motors, and is a straight-up climber with a long, buoyant glide. The advanced design features low-wing tip loss, high streamlining, and ruggedness. The plans are clear, and a reasonably fast builder can complete it in one day's time. KIT GP-31 only ..... \$1.00



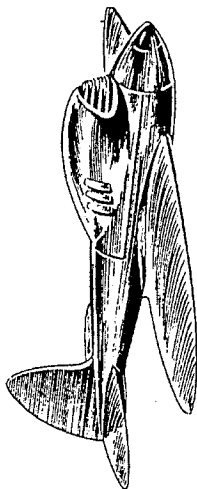
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## TOPPER I

Here, at last, is something radically new in control line flying! A 15" span Topper for OK's tiny, powerful C-0-2 motor! This model weighs only four ounces ready to fly, and though very fast, is so small and light in weight, it can be flown in the smallest room, and solves the problem of rainy weather line flying. A balsa fuselage band-sawed to outline shape is supplied. Wings and cowls are also band-sawed to outline. Construction time is very short due to its simplicity and small size. Build one and give the boys in your model group a new flying thrill! Kit GPL-25 \$1.00

## TOPPER II

This 16" wingspan model is as near the absolute zenith in looks, performance and SPEED as we have been able to make it. It is also engineered in kit form so that quick, easy assembly is possible. Wings are tapered, stabilizer and rudder are cut to outline. Fuselage is of planked construction. Massive solid balsa blocks supplied for cowl carving. This plane can be flown for sport with A, B, or C engines. \$2.25

## TOPPER III

This 20" wingspan model is an exact duplicate of Topper II in all except size. This plane will take all B and average C motors, and will even accommodate the large C's... Hornet or McCoy for that extra flash of speed. The kit is the same as Topper II, employing the same type construction, but is slightly larger. It is equally easy to build. When you build one, you're sure to build the other. \$3.00

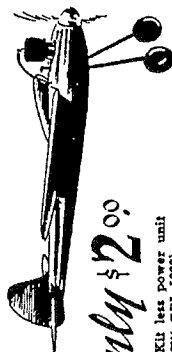
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Latest in control liners. Sleek, speedy, easy-to-build with practical and workable construction. Its tricycle landing gear may be eliminated for greater speeds. For Class "B" or small "C" engines. Span 25" Dry Kit GPL-5024, less power \$4.00



Only \$2.00

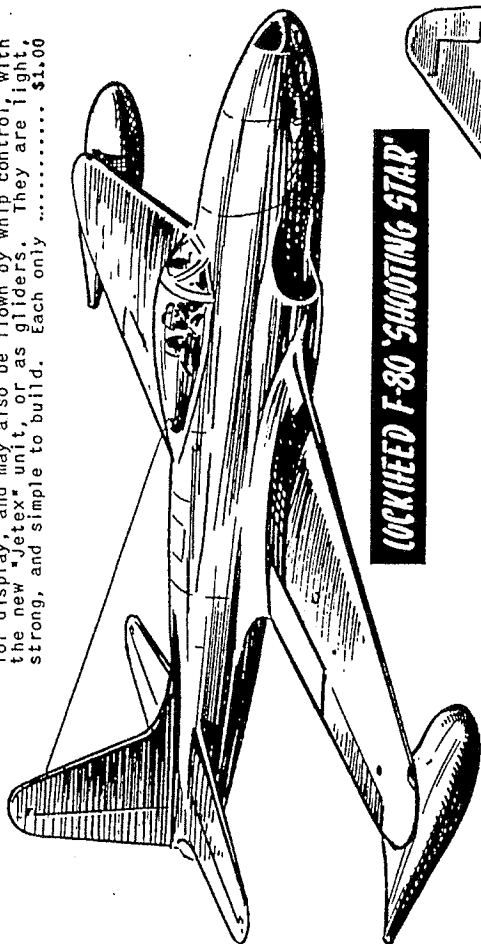
Dry Kit less power unit  
Kit GPL-5025b

You'll find real fun building this 18" span job now, especially with its newly added landing gear and solid balsa wings. Truly a Deluxe kit of this well known easy-to-build control line model.

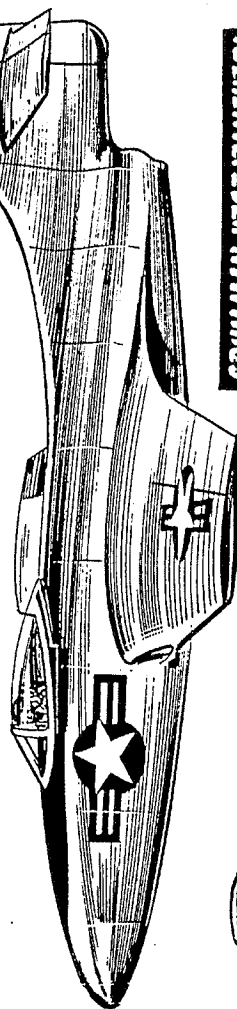
Deluxe Tether  
**SHARPIE**

# MAMMOTH \$1 JET MODEL VALUES

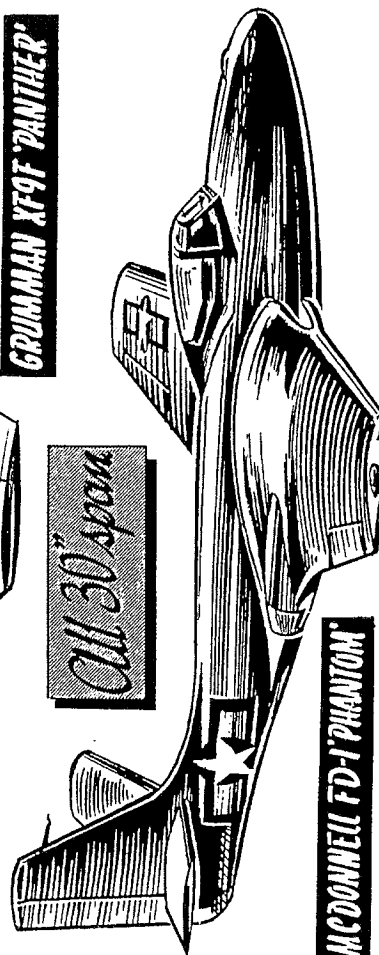
**MODELS!** These three beautiful, accurate Army and Navy jet models are 30" wingspan, dry kits (no liquids). They are fine for display, and may also be flown by whip control, with the new "Jetex" unit, or as gliders. They are light, strong, and simple to build. Each only ..... \$1.00



LOCKHEED F-80 'SHOOTING STAR'



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Call 30" span

## BEAUTIFUL SCALE JETS - REAL FLIERS

The modeling crowd will not be left behind in exploring what can be done with jets. The Army's super-fast F-80 (formerly P-80) is now their standard jet fighter, the Navy's Grumman Panther, which is the jet offspring of the long

line of Grumman carrier fighters, and the twin-jet McDonnell Phantom, also a carrier jet fighter, are carrying forward our policy of preparedness. The models are made with the familiar "half shell" type construction (as often employed in prototype practice) and make the finest jet models you can find.

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### EACH KIT ONLY \$2.00

**LOCKHEED P-38 'LIGHTNING'**

for:  
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FREE-FLITE**

for:  
**GAS,  
C-O-2,  
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**NORTHROP P-61 'BLACK WIDOW'**

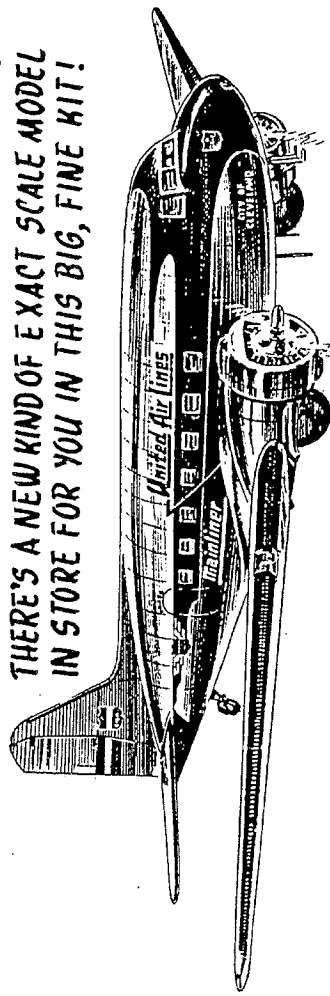
## THE ORIGINAL 3 FT. "T" MODELS

All T kits contain the famous C-D type full-size drawings, packed with instructions. All printed curved wood plates, wood strips cut to exact size, cement, tissue, insignia, wheels, propeller parts, etc., etc. These are dry kits. This line of all 36" wing span aircraft are quite similar to our 30" IT kits. They nicely suit builders who wish larger size contest models and those who simply wish to build them in industrial training classes or for their own pleasure. With less detail than the SF group of kits, they were designed to give exceptional flights.

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# The Scale Model Supreme!

### WHAT THE NEW DC-3 KIT CONTAINS!

This 70% model not only has all scale positions of wing, oil tank and tail ribs as employed on the full-size ship, but also includes a complete set of instructions for construction, as well as a partial list of the most important kit parts. All curved parts are printed on 32 sheets of 3"x18" C-D quality balsa wood; all necessary dowels and balsa wood for highly stressed parts; tapered leading edges; all necessary balsa wood for the fuselage; all necessary wire and sufficient cement; plenty of covering tissue; cement and colored dopes and two large completely detailed drawings giving you all the information you need to build this model. It's the only model, which you can silver color according to kit SF-185.

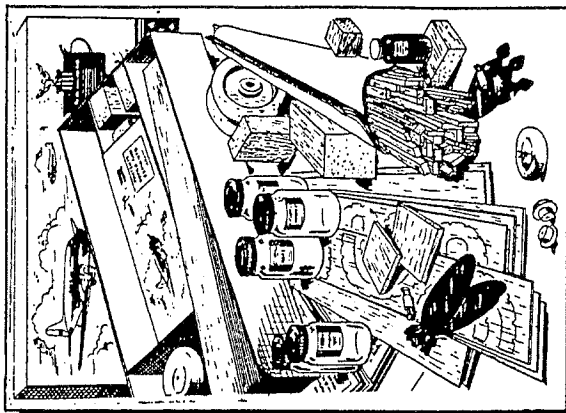
**\$14.50**

**GET BETTER ACQUAINTED WITH C-D'S**  
For the benefit of new modelers, we would like to call attention to the fact that we are the oldest "same management" manufacturers of model airplane kits in the world.

Our dominance in this field has been a result of the product we turn out. It is characterized by uniform high quality of materials, completeness of instruction, flight-engineering, and by full and accurate details faithfully reproduced on our plans.

Our line embraces not only the latest type racing, commercial and military airplanes, but also the history-making models of World War I, which still captivate the fancy of modelers everywhere, as well as gas and C-O-2 powered contest and sport models.

We continually strive to keep our kits up to date. When new power units, such as the amazing C-O-2 motor and "Jetex" appear, we test it and add the benefit of our ex-



perience to our kits in order that the CLEVELAND modeler may lead the field.

Now that you know what we do, won't you let us hear from you! If you have suggestions on what models you want to build, but do not find them in our line, let us know. If you try something experimental or entirely new and successful, let us know about this too. We always like to hear of the accomplishments of all modelers in both contest and sport flying.

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# MARTIN MARAUDER B-26



# NORTH AMERICAN MITCHELL B-25

**MARTIN B-26 "MARAUDER"** — Deadliest bomber in the world. Really more a pursuit plane than a bomber, as all of those who have ever named it will attest. Has such a high wing loading when motor "bunk" it is practically impossible to glide in. Our boys who fly them jokingly refer to them as having a gliding angle of "about 90 degrees — straight down." It is the world's fastest medium bomber, widely used on all fighting fronts where it has run up high scores in plenty of action. A plane every real model builder will want in authentic scale form. Model span is 48 1/2".

C-D MASTER Flying Model kit No. SF-135 ..... \$9.50

**CRASH THE MODEL BUILDING WORLD WITH THESE BOMBERS!**

**NORTH AMERICAN B-25 "MITCHELL"** BOMBER — B-25's were the first planes to bomb Tokyo — in that history took off from led by Major General Jimmie The Mitchell has been used for all types of work — and is known as the most heavily armed plane in the world. It is today's Mitchell carries a 15mm. (2") cannon in left lower side of nose, as well as four 50 cal. machine guns in blisters below wings. It has two more on each side of waist and two more in tail and — all in addition — has seen action. Model span is 56".

C-D MASTER Flying Model kit No. SF-125 ..... \$9.50

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# See: DISPLAY, CONTROL, GAS, DIESEL

# CLEVELAND NORTHROP P-61 'BLACK WIDOW' NIGHT FIGHTER

An Excellent Basic Design For A Twin-Motored Tether Gas Job

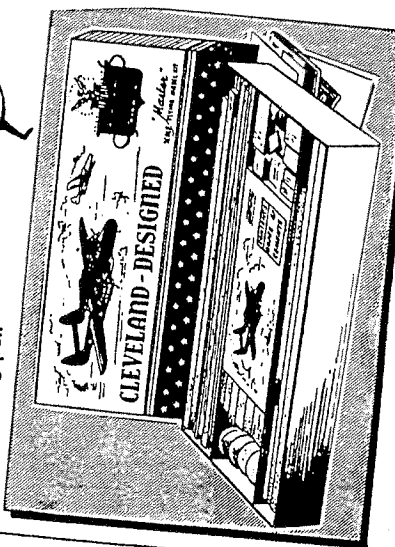


14 50

# Model This Outstanding Radar-Equipped World War II Plane

The A.A.F. P-61 was the first plane in the world to be completely designed from the start as a night fighter. It is radar-equipped, and can "pick out" the enemy with concentrated fire power of four 20 mm. and four 50 mm. machine guns. This giant fighter is as big as a medium bomber, and has everything required for the toughest night fighting. Our 49 1/2" super-detailed model not only has all scale positions of wing, aileron and tail ribs as employed on scale version as well, but every bulkhead in important detail, such as adding arrangement, etc. is a partial list of the most many printed parts: All curves, parts on balsa wood; plenty of C-D quality precision smooth cut firm balsa strip; pre-necessary stressed parts; tapered leading edges; all necessary balsa bi-edges; turned cowlings; wire and sufficient celluloid; material for scale propellers and dummy engine for fronts; plenty of covering material; cement and colored dopes; and two large complete detailed drawings giving you all the information necessary to build a beautiful model. MFM Kit SF-155.

49-1/2" Wingspan

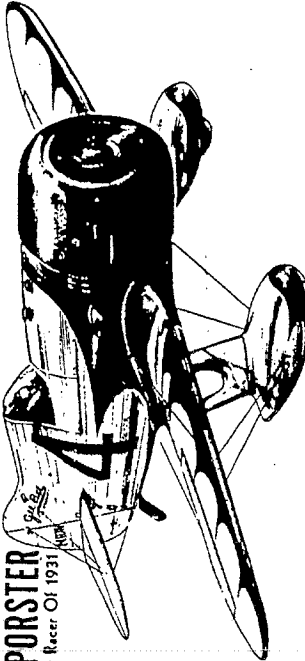


**CLEVELAND MODEL & SUPPLY COMPANY** 4506-12 Lorain Ave., Cleveland 2, Ohio, U.S.A. Quality Display, Party & Hobby Supplies Lightning Service "Since 1919" Avoid Errors! Read Instructions Before Ordering



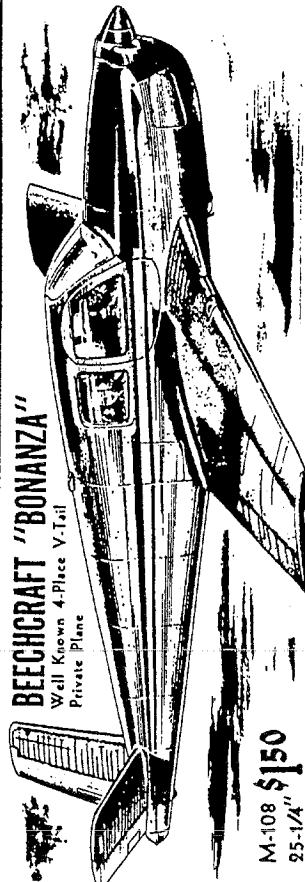
# Cleveland Master Models - The Finest

**GEE-BEE SUPER SPORSTER**  
Bayle's Thompson Trophy Winning Racer Of 1931



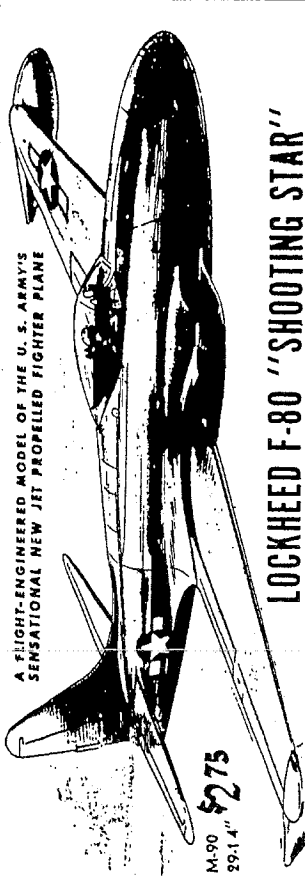
M-17  
17-3/4" \$175

**BEECHCRAFT "BONANZA"**  
Well Known 4-Place V-Tail Private Plane



M-108 \$150  
25-1/4" \$150

**A FLIGHT-ENGINEERED MODEL OF THE U. S. ARMY'S SENSATIONAL NEW JET PROPELLED FIGHTER PLANE**



M-90  
29-1/4" \$275

**LOCKHEED F-80 "SHOOTING STAR"**

**INTRODUCING OUR NEW MASTER "M" MODELS**

These fine models are direct descendants of our world-famous CLEVELAND-DESIGNED "SF" line of 3/4" scale models, which older modelers can attest were always "the world's finest models". We felt there was a definite demand for super-detailed models at a lower price, so here they are!

These kits contain high quality select material, they contain the same super-detailed, fully instructional, clear, precise and authentically accurate plans for which the "SF's" became world-famous.

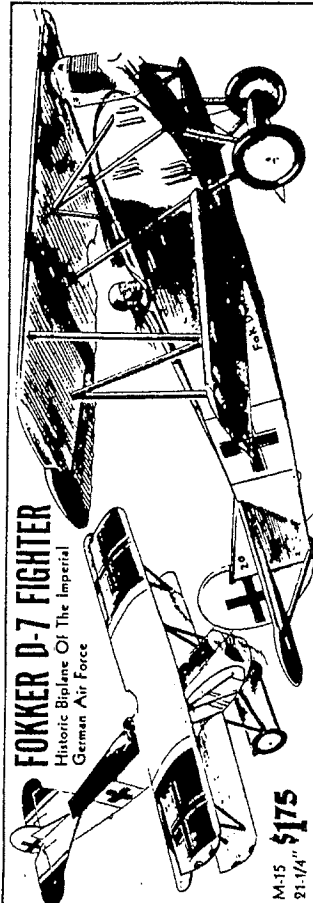
These models are flight-engineered for the utmost in flight performance. Our type construction, which has always set a standard of excellence in modeling is carried into this new line. Even for the most complicated designs, it is simple and rugged, not involving any super-complicated methods. Consequently, our style of construction is well liked by beginning modelers for its simplicity and experts like it for its exactness.

The curved wood parts are clearly printed on the correct texture of balsa sheet. Rubber motive power and bottles of dopes

**CLEVELAND MODEL & SUPPLY CO. Cleveland 2, Ohio** Avoid Errors! Read Instructions Before Ordering

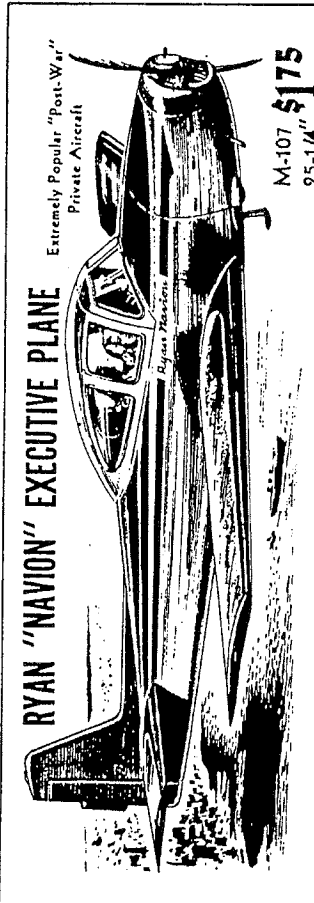
# 3/4" Scale Flying Models Ever Made!

**FOKKER D-7 FIGHTER**  
Historic Biplane Of The Imperial German Air Force



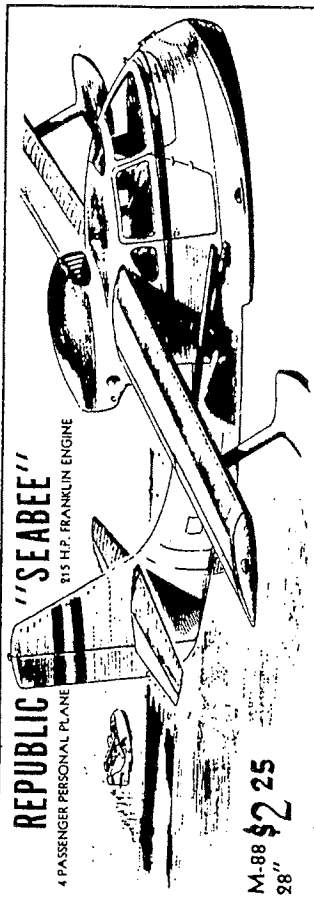
M-15  
21-1/4" \$175

**RYAN "NAVION" EXECUTIVE PLANE**  
Extremely Popular "Post-War" Private Aircraft



M-107  
25-1/4" \$175

**REPUBLIC "SEABEE"**  
4 PASSENGER PERSONAL PLANE 815 H.P. FRANKLIN ENGINE



M-88 \$225  
28"

and cement are not supplied as they cannot be stopped from deteriorating while in the kit. This has enabled us to lower our price and still give you a 3/4" scale kit that is identical in quality with our previous "SF" numbers.

We plan to feature many types, such as old World War I models, the famous Thompson Trophy winners of the past and older commercial racing and private planes, as well as the "headline" airplanes of today. We would appreciate comments on how you like our new "M" kits and would fur-

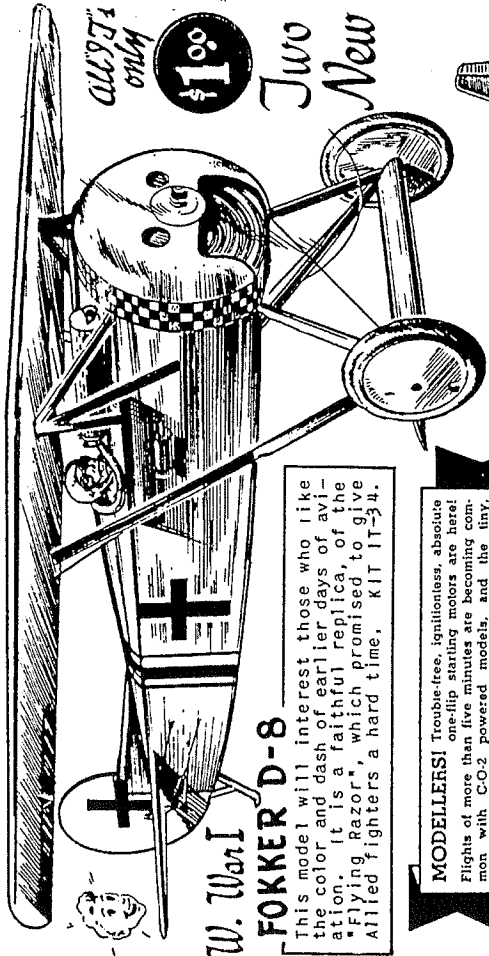
ther appreciate knowing which planes you would like us to design.

These models fly beautifully with C-0-2 motors, and most contain full instructions for their installation and operation. They are excellent for rubber flying, and of course our reputation for the last word in beauty and detail of finish need not be enlarged upon. Jet models in this line may be flown as gliders, or by whip-control. They may also be powered with the new English "Jetex" engine, or with several C-0-2 jets.

**CLEVELAND MODEL & SUPPLY CO. Cleveland 2, Ohio** Avoid Errors! Read Instructions Before Ordering



# Buy-Build-Fly These One Dollar Flight



*all 97¢ only*

**\$1.00**

**Two New**

**W. War I FOKKER D-8**

This model will interest those who like the color and dash of earlier days of aviation. It is a faithful replica, of the "Flying Razor", which promised to give Allied fighters a hard time. KIT IT-54.

**MODELLERS!** Trouble-free, ignitionless, absolute one-clip starters are here! Flights of more than five minutes are becoming common with CO-2 powered models, and the tiny, thumb-sized motors have power galore.

**QUIN DARTON**

This model is a real beauty. An excellent flyer for those who would like to try a low-wing free-flight or a snappy control-liner. KIT IT-107

## STINSON VOYAGER

An "old reliable" type of design that is simple, strong, and stable. Powered with C-0-2, it is a dead ringer for the real thing. Also for rubber power, and Class "A" control line gas. KIT IT-98

## ERCO ESCOUPE

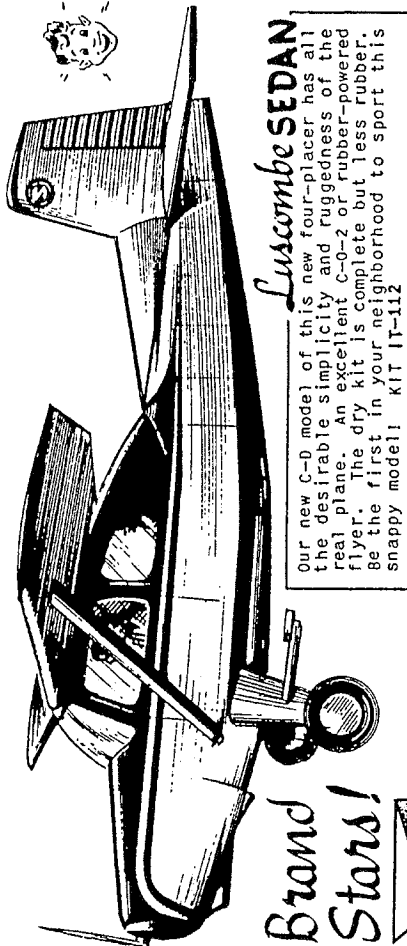
An unbelievably stable low-winger, which is just as reliable as the real plane. Try this sleek twin-rudder flyer for a really stable aerodynamic layout and for real beauty. Excellent for beginner or expert. KIT IT-103

## PIPER CUB

The perennially popular Cub is one of our very best flyers, as the scale wing section, with its undercamber is excellent for models. A strong, stable, good-looker. KIT IT-94

Another \$1.00 "IT" model, the 36" Span Douglas DC-3 is listed on page 14.

# Engineered 30" Scale Flying Models!



**Brand Stars!**

**Luscombe SEDAN**

Our new C-0 model of this new four-placer has all the desirable simplicity and ruggedness of the real plane. An excellent C-0-2 or rubber-powered flyer. The dry kit is complete but less rubber. Be the first in your neighborhood to sport this snappy model! KIT IT-112

These 30" (DC-3 - 36") "IT" models are extremely versatile, being just the right size for free-flight with rubber, C-0-2, or diesel motors, for control line, diesel or gas motors

## LUSCOMBE SILVAIRE

A real slicker! This durable, lightweight model flies very well with rubber or C-0-2. Enjoy its simple construction and smooth, graceful flights. IT-106

These kits all come dry (without cements and do not contain motive power.)

**GLOBE SWIFT**

This outstanding beauty goes well on your mantel, hanging in your "den" or in flight. Try it and see. For rubber or C-0-2. KIT IT-96

## AERONCA CHIEF

This trim, efficient lightplane has been in great demand. Its design almost guarantees fine flying, and is very pleasing in appearance. An excellent choice for rubber or C-0-2... KIT IT-109

## BEECHCRAFT BONANZA

Here is a design that is rapidly proving its worth in the lightplane field. It is an excellent replica of the real plane, and makes an ideal free-flight-er, and an attractive control-liner. The characteristic "V-tail" is simple to adjust. KIT IT-108



# TWO FAMOUS STINSONS



## Americas Most Famous Radio Control Model

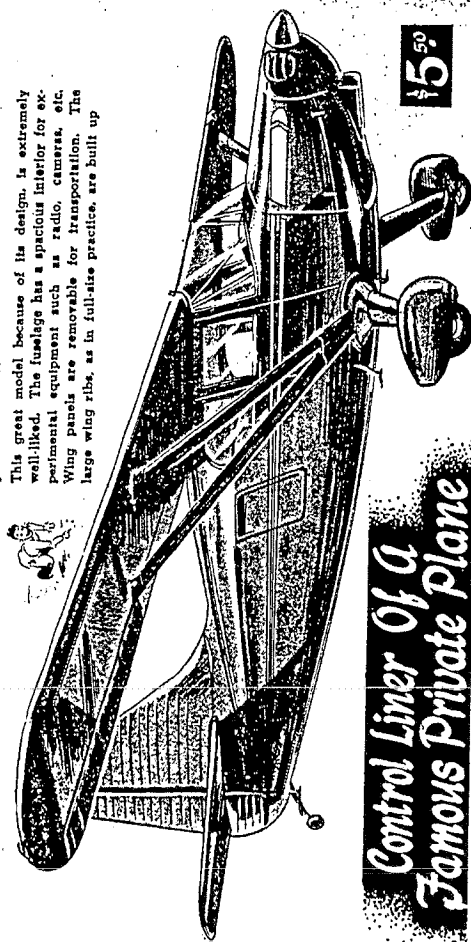
Many books and articles have featured this model to the point where it has become America's most popular radio control design — so we have re-designed and improved it and now it is better than ever! The kit includes two large full-size drawings, turned cowl front, turned firewall, turned balsa wheels, routed out and band-sawn to shape wheel shoes, band-sawn wing tips, shaped spars, landing gear parts etc. The parts include formed wire landing gear, band-sawn plywood parts, printed balsa sheet, hard balsa stripwood, nuts, bolts, washers, screws, sheet aluminum, brass, celluloid, etc. Dry Kit (no cement) GP-58b.

\$17.50

## Reliant

Models of this plane have been flown successfully both in free flight and tether control and by radio control. for they can carry over 5 lbs. of equipment, camera, etc. Engines of Class "C" and up to 5 cylinders are recommended, although it has even been flown with Glas "A" engines, because it is of such light design basically, yet well stressed.

This great model because of its design, is extremely well-liked. The fuselage has a spacious interior for experimental equipment such as radio, camera, etc. Wing panels are removable for transportation. The large wing ribs, as in full-size practice, are built up



\$15.50

## Control Liner Of a Famous Private Plane

This beautiful Stinson Flying Station Wagon model can be flown as a control liner with A, B, or C engines, or as a free-flight model. The kit contains a full sized construction drawing, 33 x 45 inches, and another sheet of drawings, 33 x 45 inches, as much information regarding the full size airplane as could be crammed into it. It includes accurate data on the wing slots, full sized templates for laying out even the corrugations on the ailerons, flaps, rudder, fin, and elevators, etc. Many clear photographs of the prototype

CLEVELAND MODEL & SUPPLY COMPANY  
4506-12 Lorain Ave., Cleveland 5, Ohio, U.S.A.



## Flying Station Wagon

have been included in the assembly drawings. As a control liner job, it is an outstanding performer that somehow almost gives you the thrill that comes only with free-flight models. In addition to ample and precise instructional material and plans, the kit contains many band-sawn parts for the various curved assemblies, such as the wing ribs, those (which are also routed out), the motor mount, stabilizer and elevators. This complete kit also contains power unit, or dope and cement. GP-14

# CLEVELAND'S MODEL AIRPLANE COURSE

A Basic Model Building Aviation Course For Individual Or Classroom Industrial Training

Knowing the dire need for a really good, yet extremely simple line of models for the "green" beginner wishing to learn "aviation through models", whether he works alone or in a classroom, this new line was created. Th beginner seeking a good line of industrial training models need no longer feel slighted, as though he were being "sucked around like a foot-ball because of the usual lack of interest in the beginner.

By discarding some of the better known yet less desirable models and methods, through a process of elimination, we now offer two "ABC" kits from which even six year old children have successfully built at least some of these models. However, they are not too well recommended for children below eight years of age. Ten years would be the better age limit. Veterans of any age being rehabilitated need not feel that these are only for children, for everyone learning how to build models must go through the stages to quickly grasp the necessary fundamentals. Both kits are "dry" containing no cement. There is no rubber in it at present.

Each Kit 35¢



## C-D BEGINNER'S KITS

The first kit contains two paper gliders, one of paper and wood construction, one built-up tissue covered, and one 17" wood contest glider. Kit MAC-I 35¢

The second kit contains a 9" hand launched built-up model, a 12" hand launched built-up (but may be made into r.o.g.), and an 18" built-up r.o.g. model. Kit MAC-II 35¢

(We cannot fill dealer, school, or retail orders for these kits. See your dealer or jobber.)

Both kits and our film below have A.V.A. Approval. The educational content of the film is approved by Academy Model Aeronautics, division of National Aeronautic League International.



# VISUAL AID FOR CLUB & CLASS BEGINNERS LEARN FASTER BY SEEING HOW IT'S DONE

CLEVELAND'S INDUSTRIAL TRAINING SOUND FILM

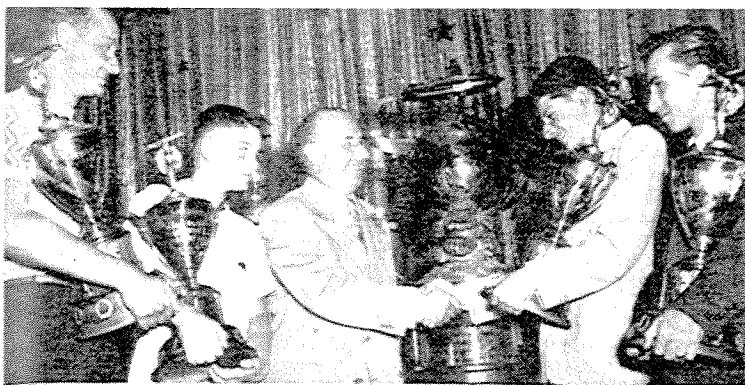
Proving our intense interest in getting beginners (including veterans being rehabilitated) off to a better start, we have produced at considerable expense a motion picture "called" known as AVIATION THROUGH MODELS, Part I. This film will assist veterans, beginners, and instructors alike, to understand the "reasons why" of model building.

Our Technical Advisors in producing this valuable educational sound film, are men of wide experience in aviation, model, and educational fields. This film shall be available for loan in public libraries in larger cities, veterans' hospitals, schools, and other educational institutions. The price of this slow burning film (when sufficient film stock is available) will be \$35.00 complete with reel and can, to any individuals or organizations wishing to purchase a copy outright. This cost covers materials and handling only, but does not cover any of the cost of its production.



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Quality Models and Hobby Craft Supplies - Since 1919 "LIGHTNING SERVICE" Avoid Errors! Read Instructions Before Ordering





● High point champions with R. C. Somerville, Plymouth gen'l sales mgr.: Schuette, Open; LaVon, Novice; Davis, Jr.; D'Alesandro, Sr.



● James W. Richmond, 21, Terre Haute, Ind., congratulated by D. S. Eddins, president of Plymouth, for taking jet speed event.



● Stanley J. Grish, 20, St. John, Ind., won 3 trophies in control-line speed flying event.

1949



● Erwin E. Rodemsky, 19, Detroit, won 1st in indoor cabin microfilm flying, in senior class.



● Frank V. Claire, Ridgewood, Ohio, was top man in open division Class C U-control event.



● Sid Tanabe, 24, Cleveland, was high man in open division of Class D U-control speed.



● A first in outdoor stick open rubber was won by Carl Lindsey, 25, from Kansas City, Mo.

# Plymouth's 3rd Internationals

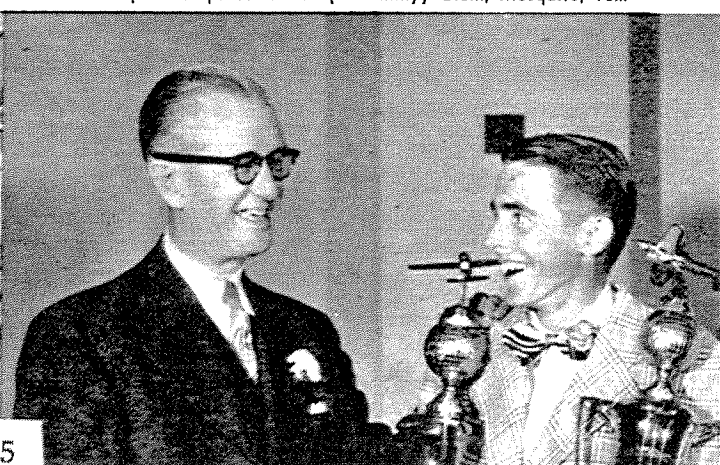
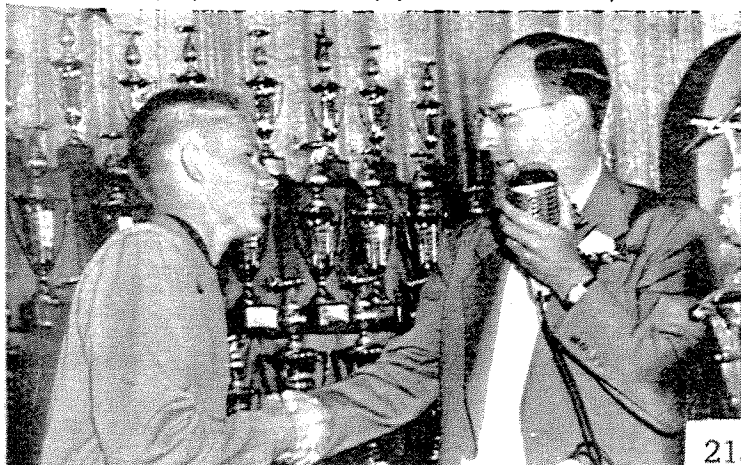
**Detroit is scene of best contest to date sponsored by the motor concern. More than 500 from 48 states fly.**

**THE** Third International Model Plane Contest held in Detroit, Mich., August 22 through 29, and sponsored by the Plymouth Motor Corporation, was the largest and most successful meet the motor concern has ever put on.

Although total registration was held down to 515, a greater number of flights was made than ever before. Every state was represented as well as Alaska, Canada and Cuba. Contestants were sponsored by 3,697 participating dealers. Almost half a hundred flew in the new Plymouth Novice class for contestants 13 and under but not yet 14. Seven girls participated who qualified in state, regional and local Plymouth—*Continued*

● Top control-line stunt entrant, James E. Snyder, 18, Bellwood, Ill., (left) won Air Trails trophy. Ed. Al Lewis makes presentation.

● B. K. Steele, ass't general sales manager of Plymouth, awards control-line speed trophies to Jim (Whammy) Clem, Mesquite, Tex.







● Dennie Davis, San Diego; 1st in A and D free-flight open class with his excellent San de Hogan designs.



● Vincent Burton, New Orleans, Karl Spielmaker, Grand Rapids, Mich., Dave Baker, Long Beach. Baker placed in outdoor cabin.



● Tom Baker, Kings Mountain, N. C., set world's record with this 4-lb. jet; won A speed Open.

**T**HE 7-day Plymouth contest was held at three sites. Outdoor flying was run off at Selfridge Field AFB; the indoor addicts flew in the State Fair Coliseum, while all the control-line competition was centered in the athletic field at Belle Isle Park which is on an island in the Detroit River.

Control-line facilities this year were excellent. As many as seven circles were in operation at one time. The growth of the Plymouth local and state qualifying contests can be seen from the following figures. In 1947, 58 local meets were run off; in 1948 slightly more than 200 were held, together with three state contests. This year 23 state and 176 local events were conducted with 1,425 more Plymouth dealers participating than last year.



● Robert Rada, Berwyn, Ill., was high point man in Stinson flying scale event with a total of 213.3 points.



● Mulvihill trophy winner Bob Bienenstein, Detroit, huffing & puffing on indoor cabin. He placed 2nd in open event with 822.2 seconds.



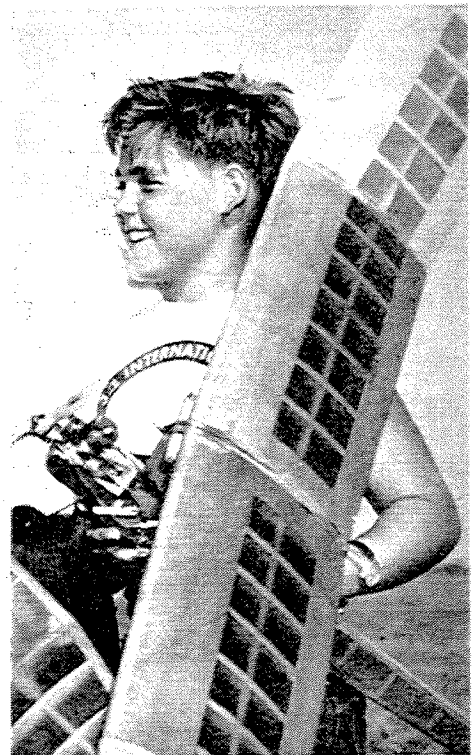
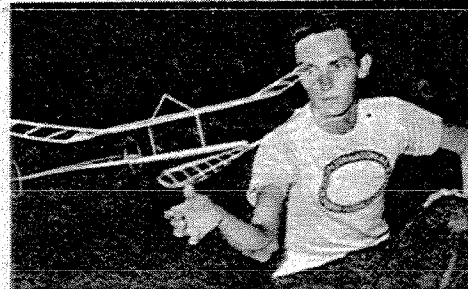
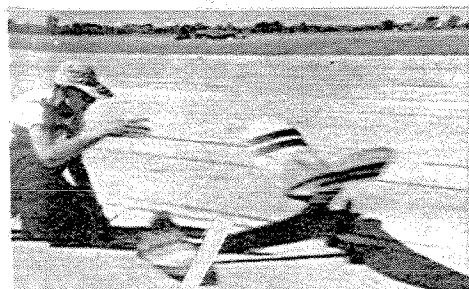
● Little Rocket trio: Warren Tomme, Raymond Shearer, and Eddie Schwarz all scored victories in speed event.

● The first official flight of the meet was made by John R. Easton, who came from New Toronto, Ont., Canada.

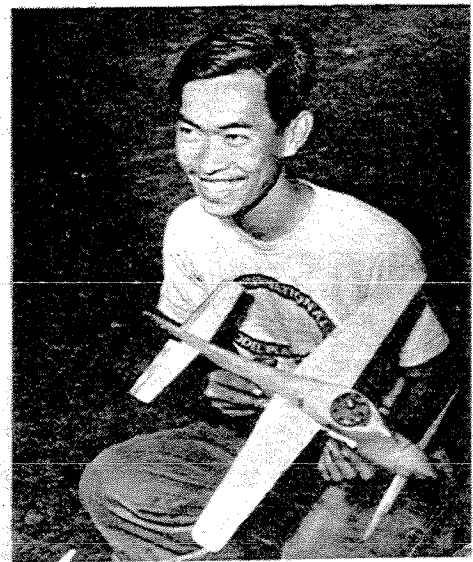


● Von R. Christiansen, Salt Lake City, took 1st in junior Class C free-flight, and flew a 1,060-square-inch monster in Class D event.

● Don Kennedy, Burbank, Calif., with indoor stick model which won 2nd place in open class event with flight time of 1,136.4 sec.



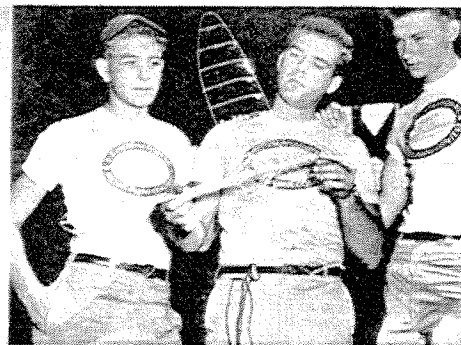
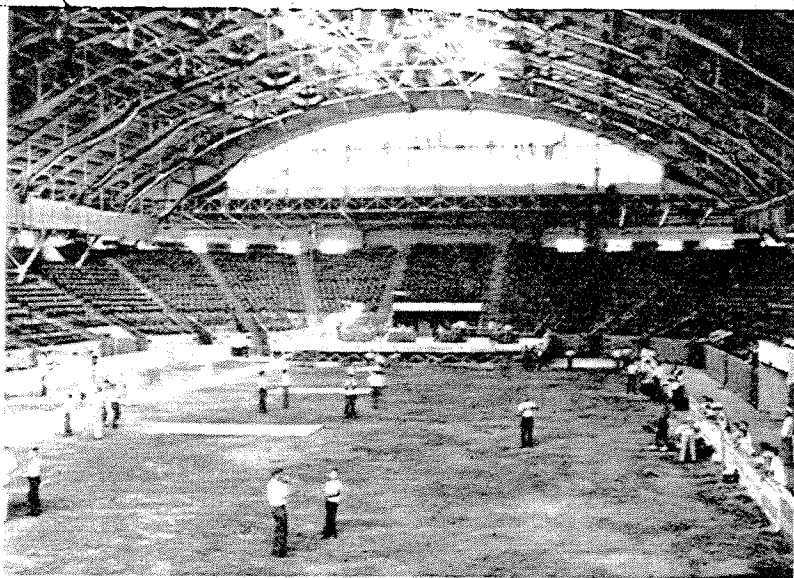
● Peter Guy, Binghamton, N. Y., one of Novice winners. 1st in Cl. D speed, Geo. Fong, N. Y. C.



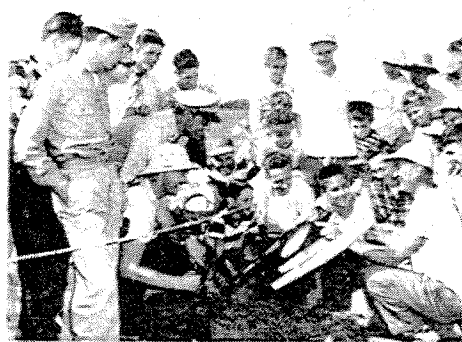




# PLYMOUTH'S THIRD INTERNATIONALS (continued)



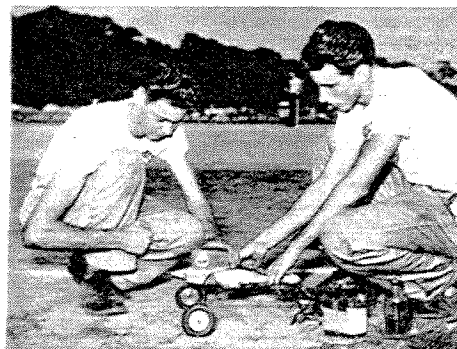
● Three Californians: Don Hollfelder, Oakland, Joe Foster, San Jose (both won in indoors), with Don Robbers.



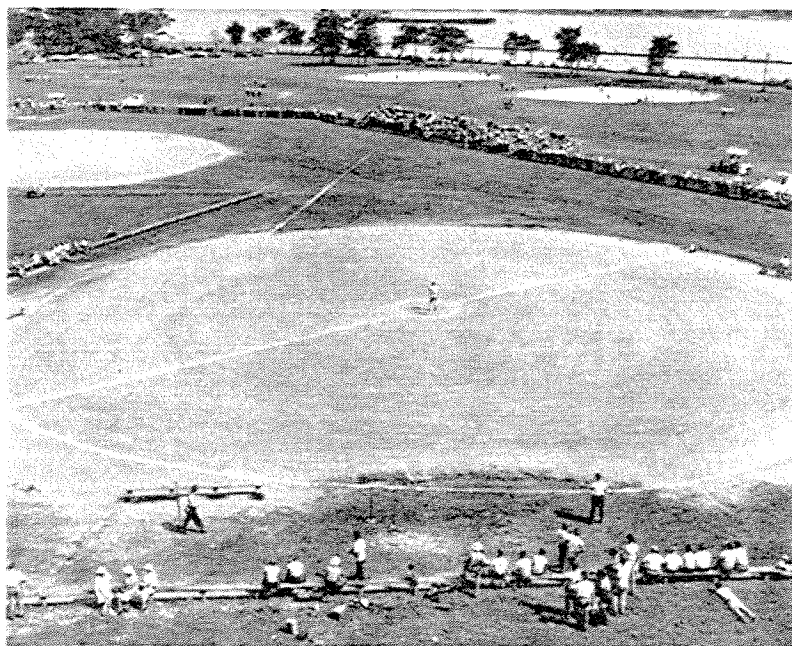
● Jim Walker, Portland, Ore., entertained spectators and contestants with r.c., here shows float Fireball.



● Matty Sullivan of Sullivan Products, provided all control-lines used at meet; here he makes up line sets.



● Eugene Stiles, Alameda, Calif., set free-flight speed world record in qualifying meet. Charles Hallum, right.



● Ed Broom (l.), Minneapolis, placed in free-flight B; Gene Tempelmeyer took 2 places in outdoor stick, cabin.

● Nathan Rambo III, Wynnewood, Pa., 3rd in sr. stunt with semi-scale Curtiss Swift; won elimination meet.





# 3rd Plymouth Meet

competitions. When six days of competition had ended and all the flights scored the top age champions were:

Novice—Henry D. LaVon, 12, Tacoma, Wash.

Junior—Herbert L. Davis, 15, Birmingham, Ala.

Senior—Anthony D'Alesandro, 17, Philadelphia, Pa.

Open—Charles Schuette, 24, Los Angeles, Calif.

Winners of the top trophy awards were James W. Richmond, 21, Terre Haute, Ind., who captured the magnificent Plymouth jet trophy with a speed of 139.16 mph; James E. Snyder, Bellwood, Ill., top stunt flyer (417 points) who was awarded the Air Trails perpetual and permanent trophies; and Robert O. Rada, 18, Berwyn, Ill., who won the Stinson perpetual and permanent trophies with a total of 213.3 points. There were 150 permanent trophies awarded together with U. S. savings bonds totalling \$8,750. Each contestant received a handsome plaque as testimonial of his or her participation in the 3rd Internationals.

Sylvia J. Lanzo, 13, of Berea, Ohio, was proclaimed the girls' high point champion and presented with the De Soto "People and Places" magazine trophy. Miss Lanzo is the daughter of Chester Lanzo who is still an active contest flyer, although over-age for the new Plymouth classifications of Novice, up through 13; Junior, 14 through 15; Senior, 16 through 20; and Open, 21 through 25.

Considering the length of the contest and the many different flying sites utilized, the best way to report the affair is to take it day by day. On Monday, August 22, contestants poured into the Fort Shelby Hotel, which was meet headquarters. Registration took place all day long, going along very smoothly, and broke off only long enough for a meeting of contestants and officials at 8 P. M. When registering, entrants were presented with a blue "T" shirt which bore the meet insignia on the front and the contestant's name and city and the name of his sponsoring dealer on the back. A blue helmet also was given out, together with a contestant's participation plaque and a red pilot's-type visored cap imprinted "Mechanic." So popular were these mechanic's hats that many flyers without helpers wore them instead of the helmet.

The next day, Tuesday the 23rd, saw the opening of official outdoor flying at Selfridge Field, the Air Force base 25 miles from Detroit. Buses transported contestants and gear from the Shelby. Novice entrants flew towline gliders and combined class A-B free-flight gas. All other contestants flew outdoor stick models and Class A and C free-flight gas jobs. Strict rise-off-ground rules were enforced; many gas jobs failed to clear the concrete runways properly due to faulty gear. Mostly the wheels were too small, or the three point suspension was poor.

Fair skies and little wind favored the contestants. A fleet of retrieving trucks supplied by Chrysler, Dodge and De Soto dealers were kept on the go as models drifted in the general direction of Lake St. Clair. Many ships received a dunking; a large number of these were fished out of the drink and flew again.

In addition to Air Force personnel helping out, Cadets of the Civil Air Patrol handled field traffic. First day's flying was slow in starting when an F-80 had to make an emergency gear-up landing, but towards the end of the day's flying timers and processing personnel (all Plymouth employees in Detroit or in the field) were begging entrants to take flights. This abundance of flying time and contest officials was evident all through the contest. Six thousand flights were recorded this first day.

The second day at Selfridge Field saw Class B and D free-flight models in the air, together with outdoor rubber-powered cabin ships. Novice contestants flew either stick or cabin rubber jobs in a combined event. Weather was not nearly so good as on the preceding day. The wind was 15-20 mph and gusty. Hurricane warnings along the East Coast resulted in one runway held open for emergency landings of military aircraft being flown westward from Atlantic Coast bases.

When the free-flight events ended it was no surprise to find that Dennis (San De Hogan) Davis of San Diego, Calif., had copped a 1st in A and D with his fine designs. In the A-B-C-D age group line-ups a junior placed highest in A, a senior in B, an open flyer in C and a senior in D which seems to indicate that those 15 and over are pretty much on a par. Von R. Christiansen, Salt Lake City, won Junior C free-flight with 1108.8 sec., flew models designed by an older brother. Von's 1,060-sq.-inch D job was considerably larger than himself!

Thursday, August 25, produced a complete change in locale and flying events. Indoor addicts found themselves in the State Fair Coliseum for indoor stick and cabin flying. Novice modelers flew small paper-covered stick models. Sylvia Lanzo beat all the boys in this event. The control-line can went out to the athletic field at Belle Isle Park which is located on an island in the Detroit River. No one could complain about lack of facilities at either site. Seven circles were in almost constant operation at Belle Isle. Stunt contestants were able to fly from short-cut grass while speed entrants operated from the center of rolled baseball diamonds which had been treated to keep the dust down.

The first 3 places in the indoor microfilm cabin and stick event were almost a three-way tie. Michigan modelers took 6 places, while Philadelphia and California grabbed 5 apiece. Massachusetts contestants took the other two. What happened to the Chicago or New York contestants has not yet been explained. But it is pretty evident that the only places where indoor activity still has a hold are Chicago, Lakehurst, N. J. (for Philadelphia and N.Y.C. enthusiasts), Detroit, Boston and Los Angeles and Oakland, Calif.

"Tony" Becker of Philadelphia was the only indoor flyer to win two 1sts in his or her age category. He racked up the longest flights in stick (1,289.8 sec.) and cabin (965.4 sec.) and had the satisfaction of seeing other top place modelers use his designs.

Jet flying produced nothing new or startling. A greater percentage of modelers completed all their official flights than ever before. Weather conditions here, too, worked to the disadvantage

of contestants. Don Block, of Minneapolis, Minn., the senior division winner, had painted a shark's face on his jet much to the amusement of spectators and flyers.

The top stunting performance by Snyder was accomplished with a Stunt-wagon. He was the only contestant to score more than 400 points (417). Bob Dailey, the National meet stunt winner, captured the open event with 398 points, flying his own design ships. Fred Sage, 6, was the youngest of the high place stunt contestants and his performance left little to be desired. By the time he is an "expert" of 8 or 9 he should be unbeatable.

Monday was a day of rest and sight-seeing for contestants. A trip through the vast Plymouth plant was taken by a large number of flyers. That evening saw the victory banquet at the Masonic Temple. It was by far the finest presentation ceremonies ever held for model aviation. Winners again this year marched into a victory circle in front of an impressive display of hardware. After an excellent dinner and entertainment period, the awarding of trophies got underway. It went off surprisingly fast considering the large number that had to be given out.

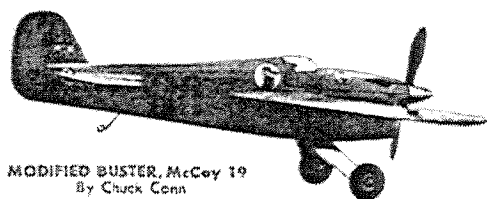
THE Belle Isle battle was divided into Class C speed and the first of 4 days of stunt flying. In C speed the Little Rocket (Air Trails, Oct. 1948) crowd of Little Rock, Ark. (Tomme-Shearer-Schwarz) gave evidence of what they intended to do in the contest. On Thursday the '49 Little Rocket designs (see Sketchbook, this issue) won a 1st and 2nd, and before the meet was over the ships were to garner eight 1st, 2nd, or 3rd places. Surprisingly enough, Class C speed was the only speed event in which Stanley J. Grish (St. John, Ind.) and Schuette didn't score one of their 1st, 2nd or 3rd places. Each placed once in those win columns.

Friday was the first all-control-line day with everything concentrated at Belle Isle. Class A speed and stunt was the bill of fare. Thomas P. Baker, 20, of Kings Mountain, N. C., who earlier in the meet had set a new international F.A.I. jet speed record over a circular course of 144.83 with a 4-pound Dyna-Jet powered model, made high "A" time of 112.03 mph. Warren J. Tomme, 14, Little Rock, Ark., took junior A speed (as he had C speed the previous day and as he was to take D speed on Sunday) with 108.78 mph.

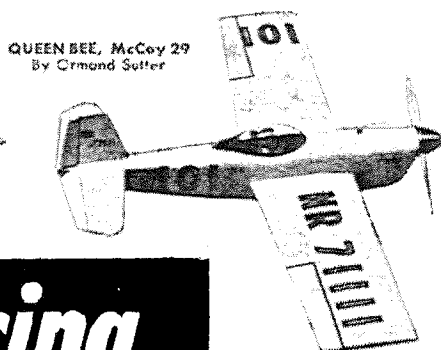
Saturday was B-speed, stunt, jet and Stinson flying scale model day. Sara Mitchner was top novice flyer in B speed with 99.52. Again the ladies were first! The Little Rock trio continued its devastating advance: Shearer took a first, Schwarz won a 2nd, Tomme took a 3rd place. High time of the day was Raymond Shearer with 125.39 mph.

"D-day" was Sunday, the last day of competition. In addition to Cl. D speed, the stunt competition and the jet flying ended, and the Stinson scale models made their qualifying flights. The outstanding performer in the big speed event was George G. Fong, 20, of Bronx, N. Y. His Dooling-powered job featured streamlined cowlings, but left the engine head exposed. He used no rudder but extended the vertically flattened aft end of the fuselage almost 2 inches beyond the stabilizer. Fong's time of 141.23 was very good since atmospheric conditions worked against the speed flyers all through the meet.

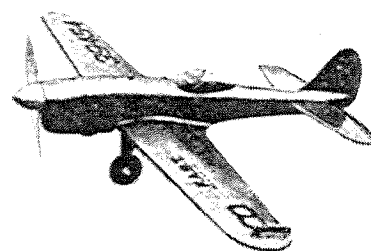




MODIFIED BUSTER, McCoy 19  
By Chuck Conn



QUEEN BEE, McCoy 29  
By Ormond Sutter



GOLD FISH, McCoy 29  
By Leighton Conrad

# Team Racing in Action

Here's an updated report on the  
biggest thing to hit U-control since  
Jim Walker put lines on a model.

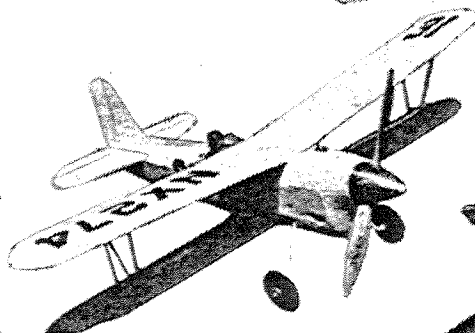
WITH motors roaring, four racing planes line up waiting the starter's green flag to send them on their way for the Feature Race. The pilots raise their hands, the flag drops, and the racers roll across the ground and into the air. Lap after lap they go, passing and re-passing, juggling for position. Now a plane runs out of fuel and lands. The pit crew swarms over it, refueling, cranking the engine and sending the plane roaring back into the race to regain lost laps. The fast planes are up and down several times, while others fly more slowly to conserve precious fuel and make fewer pit stops. Now the finish approaches and as the starter waves the checkered flag to the winner, the pilot cuts the engine and brings his plane in to land. The sight of the pilot carrying his racer off the field in his hands suddenly reminds you that this has been a race of model airplanes. Yes, this is Team Racing, the newest event in model aviation.

Although the idea of direct racing competition for model airplanes was not new, it remained for the First All Speed Team (FAST Club) to actually work out a complete set of rules for such an event. In creating this event four goals were kept in mind: (1) encourage the building of more realistic models; (2) actually race several models at a time in the same circle; (3) minimize the advantage of a "hot engine"; (4) increase spectator appeal.

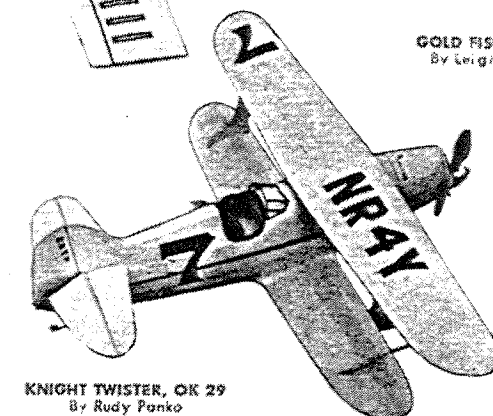
1949



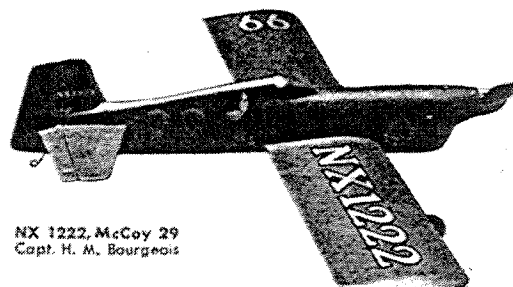
OLE SLIPPERY by Bud Kosby  
idea from AT sketch



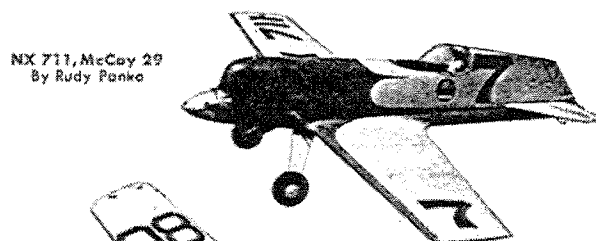
SPARROW HAWK, K&B Turp  
By Granger Williams



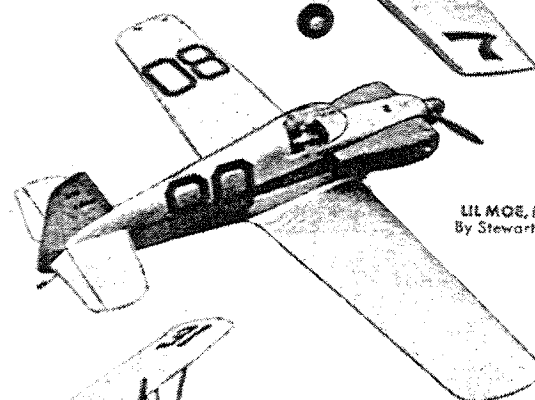
KNIGHT TWISTER, OK 29  
By Rudy Panko



NX 1222, McCoy 29  
Capt. H. M. Bourgeois

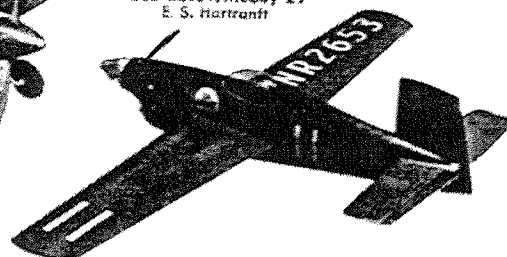


NX 711, McCoy 29  
By Rudy Panko



LIL MOIE, McCoy 19  
By Stewart MacArthur

OLD BETSY, McCoy 29  
E. S. Hartrant





## **MORE REMINISCING BY WALT GRIGG**

..... one of THE Major Model Airplane Kit Collectors in the U.S. (Ed.)

It is 1941 - Rhyne Hardware Stores' entrance faces East, toward the Courthouse square in Newton North Carolina ... I open the screen door and enter the store. My sense of smell is flavored by a combination of leather, gun oil, seed, plant food and, of course, the oiled sawdust on the wood floor .... a combination most soothing.

The Comet kits are shelved to my right, about halfway inside the store .... I let one of the clerks know my wishes and he pulls a kit from the stack and places it on the counter .... ver-r-r-y carefully I open the end flap from the box, easing the contents out, unfolding the plan.

My imagination builds the model immediately and I'm enraptured by its' flight.

"Uh, well, I ah .... could I look at the Spad ?"

Boy, is it hard to pick just one ! .... and just as hard to get the contents of the 'looked-over' kit back into the box .... without mangling something.

Rhynes' was special .... none of the other places would let a kid look over the insides of the model kit.... but Mr. Gabriel, the owner, had a son who built models a bit .... so kids got a fair shake if they behaved.

After all this, I may decide I don't want either kit .... sometimes I wouldn't have a red cent, but still wanted to look.

Also, in the looking department, right next to the kits, was a beat up old 1851 Colt Navy Revolver .... first Civil War gun I'd seen .... fascinating ! .... I "looked" a lot of the rusty finish off this over the next 20 years and Mr. Gabriel never did sell me the pistol, .... his son still has the Colt, but, no old Comet kits. .... great memories !

'Till next time, **Walt Grigg**'

### **MANY THANKS TO:**

Vicki, my wife, for her help and patience  
John Schneider, ex Air Trails Photographer  
Walt Grigg, 'THE' Kit and Catalog Collector  
John Worth, AMA Celebration of Eagles '96  
Leon Shulman, the 'Forever Young Modeler'  
Dave Thornburg, "Do You Speak Model Airplane" (book)  
Charles Mackey, "Pioneers of Control Line Flying" (book)  
Dan Vincent, for his graphics work  
Stu Richmond, for his writing and moral support  
David Baker, SAM 1066 and his enthusiasm  
Dick Kidd, R/C Modeler, and his moral support  
Air Trails Magazine (dec.), and their contributors  
Frank Zaic, who led the way  
All those who have written us in support of our Golden Age Books

### **FINAL NOTES**

Walt Grigg has provided his knowledge and loaned much of the information contained within these Volumes which I have absorbed and re-edited to show modelers an early cross-section of our hobby within specific time frames.

How well we've succeeded will be echoed by passing the word to others, and to us.

Most of the modelers appearing in these volumes have been written about in many other publications .... some scattered to the four winds .... however, we have tried within our own parameters to reproduce many or most of them here as:

**"The Magnificent Modelers and Their Flying Machines"**



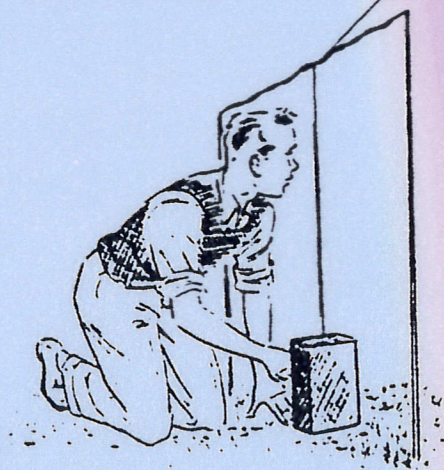


**Free Flight**



**U - Control**

**From 1949 - NEW BEGINNINGS**



**Radio Control**